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James McGillivray

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***'PYRATES' OF THE LYCEUM:
BIG PHARMA, PATENTS, AND ACADEMIC FREEDOM
IN NEOLIBERAL TIMES***

JAMES CAMERON JEPSON DUFF MCGILLIVRAY

**A DISSERTATION SUBMITTED TO THE FACULTY OF GRADUATE
STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY**

**GRADUATE PROGRAMME IN LAW
OSGOODE HALL, YORK UNIVERSITY
TORONTO, ONTARIO**

April, 2017

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ABSTRACT

Academic freedom and freedom of expression are threatened by the corporatised university. As neoliberal policies embed themselves in *all* aspects of public (if not private) life, freedom of expression and academic freedom are being degraded and denigrated in the university, in the popular press, in the law, and in public life. The influence of intellectual property rights and proprietary claims surrounding patents are muzzling freedom of thought by corporate interests. Universities and the freedom of academic researchers to explore their fields have become casualties on this neoliberal battlefield. This political economy seeks to expose the free market contagion involved with patents, intellectual property, and the university in our postmodern neoliberal era. This is an era that proclaims itself as a “new normal:” this argument aspires to advance a patently problematic discourse to counter this “brave new world” and the *intellectual psycho*-pharmacology and ideology of neoliberalism.

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1 CHAPTER ONE – INTRODUCTION

1.1 Introduction

He had discovered a great law of human action, without knowing it – namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to obtain.

Mark Twain¹

Finally, there came a time when everything that men had considered as inalienable became an object of exchange, of traffic and could be alienated. This is the time when the very things which till then had been communicated, but never exchanged; given, but never sold; acquired, but never bought; virtue, love, conviction, knowledge, conscience, etc.; when everything, in short, passed into commerce. It is the time of general corruption, of universal venality, or, to speak in terms of political economy, the time when everything, moral or physical, having become a marketable value, is brought to the market to be assessed at its truest value.

Karl Marx²

Old pirates, yes, they rob I

Bob Marley³

Academic freedom and freedom of expression are threatened by the corporatised university. As neoliberal policies embed themselves in *all* aspects of public (if not private) life, freedom of expression and academic freedom are being degraded and denigrated in the university, in the popular press, in the law, and in public life. The influence of intellectual property rights and proprietary claims surrounding patents are muzzling freedom of thought by corporate interests. Universities and the freedom of academic researchers to explore their fields have become casualties on this neoliberal battlefield. This political economy seeks to expose the free market contagion involved with patents, intellectual property, and the university in our postmodern neoliberal era.

¹ S.L. Clemens (a.k.a. M. Twain), “The Adventures of Tom Sawyer” in *Mark Twain* (London: Chancellor Press, 2001) at 20.

² K. Marx, *The Poverty of Philosophy* (New York: International Publishers Inc., 1963) at 34.

³ R.N. Marley, “Redemption Song” in *Uprising* (New York: Island Records, 1980) at Track 10.

This is an era that proclaims itself as a “new normal.”⁴ this argument aspires to advance a patently problematic discourse to counter this “brave new world”⁵ and the *intellectual pyscho-pharmacology* and ideology of neoliberalism.

The political economy of intellectual property is power⁶ or, perhaps, a warm gingerbread cake⁷ “of power placed within the people’s grasp.”⁸ It is a power that can redefine the meaning and value of “one.”⁹ It is a “magical language,”¹⁰ an “alchemical process,”¹¹ that constructs the Faustian contract¹² necessary to shape our past, shape our

⁴ M.A. El-Erain, *Navigating the New Normal in Industrial Countries* (Washington: International Monetary Fund, 2010) at 12.

⁵ A. Huxley, *Brave New World* (London: Harper Perennial Modern Classics, 2006).

⁶ See: M. Foucault, “Truth and Power” in *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, (ed.) C. Gordon (New York: Pantheon Books, 1980). It should be noted that Foucault, to degrees and with a Nietzschean twist, and, in later life, sympathised openly with the project of neoliberalism. See: D. Zamora, “Interview: Can We Criticize Foucault? (2014) Jacobin – Online, at:

<https://www.jacobinmag.com/2014/12/michel-foucault-responsibility-socialist/> (last visited December 25, 2014). Perhaps, as Zamora suggests, Foucault “actively contributed to [the welfare state’s] destruction... and... he did so in a way that was entirely in step with the neoliberal critiques of the moment.” D. Zamora, “Foucault’s Responsibility” (2014) Jacobin – Online, at: <https://www.jacobinmag.com/2014/12/foucault-interview/> (last visited December 26, 2014). Also, see: D. Zamora, *Critiquer Foucault: Les années 1980 et la tentation néolibérale* (Bruxelles: Grande Bibliotheque, 2014). Also, see: M.C. Behrent, “Liberalism Without Humanism: Michel Foucault and the Free-Market Creed, 1976-1979” (2009) 6(3) *Mod. Intellectual Hist.* at 545. Also see: J. Baudrillard, *Forget Foucault* (New York: Semiotext(e), 1983).

⁷ See: M. Rose, “The Author as Proprietor: Donaldson v. Becket and the Genealogy of Modern Authorship” in *Of Authors and Origins: Essays on Copyright Law* (eds.) B. Sherman & A. Strowel (Oxford: Clarendon Press 1994) at 24. According to Rose, a popular joke in 1774 was that a schoolboy who had pinched a gingerbread cake in the shape of a letter claimed that the House of Lords had ruled that letters were common property.

⁸ A. de Tocqueville, *Democracy in America* (trans.) A. Goldhammer (New York: Library of America, 2004) at 5.

⁹ *Smith & Nephew PLC v Convatec Technologies Inc., & Anor* [2013] EWHC 3955(Pat) (12 December 2013). This case involves a wound dressing product and the meaning and measurement of a salt solution and what percentage of the solution ought to be covered by the patent. The Court of Appeal, using the grade-school method of rounding numbers up or down, concluded that “one” includes anything greater than or equal to 0.5 and less than 1.5; a novel approach in interpretation considering the exactitude of the concept of “one.” One can only wonder if 0.4 equals zero? Also, see: S. Conor, “What exactly does ‘one’ mean? Court of Appeal passes judgement on thorny mathematical issue” *The Independent*, June 28, 2015, at: <http://www.independent.co.uk/news/science/what-exactly-does-one-mean-court-of-appeal-passes-judgement-on-thorny-mathematical-issue-10350568.html> (last visited July 2, 2015).

¹⁰ D. Graeber, *Debt: The First 5,000 Years* (Melville House: Brooklyn, 2011) at 343.

¹¹ H.C. Binswanger, *Money and Magic: A Critique of the Modern Economy in the Light of Goethe’s Faust* (Chicago: Chicago University Press, 1994) at 1.

¹² *Ibid.* Also, see: J.W. von Geothe, *Faust* (New York: Frederick A. Stokes, 1890). Also, see: M. Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (New York: Penguin Books, 1988) at 79.

present, and shape our future.¹³ To paraphrase one observer, on the creation and dissemination of knowledge, the power of “political economy does much to determine the ends and means of... education and research”¹⁴ in the university. Until now, “[u]niversities... [have been] parasitic institutions..., [and generally] they don’t produce commodities for profit.”¹⁵ That said, in the “new era of globalisation”¹⁶ and the political economy and political programme of ‘utopian neoliberalism,’¹⁷ although hindered by its democratic *impedimenta*,¹⁸ Canadian universities (like all universities) have become a coveted resource and target for private acquisitions, interests and “the market.”¹⁹ Just as Twain observed that you only have to make something difficult to obtain to be desired, control over higher education is sought-after by private interests because it is public, an enormous untapped and secure revenue stream, and under, relatively speaking, *pliable* ‘democratic’ control.²⁰ That is to say, potentially, they can be tinged by the “neoliberal

¹³ As George Orwell puts it: “Who controls the past controls the future: who controls the present controls the past...” G. Orwell, *Nineteen Eighty-Four* (Harmondsworth: Penguin, 1949) at 199.

¹⁴ H.W. Arthurs, “Law and Learning in an Era of Globalization” (2009) 10 Ger. L.J. 629, available at: <http://www.germanlawjournal.com/article.php?id=1111> (last visited April 1, 2014).

¹⁵ N. Chomsky, “Academic Freedom and the Corporatization of Universities” University of Toronto (Scarborough), April 6, 2011, at: <http://www.youtube.com/user/uoftscarborough#p/c/0/Q97tFyqHVLs> (last visited May 1, 2014).

¹⁶ See: D. Drache & M.S. Gertler, “Preface” in *The New Era of Global Competition: State Policy and Market Power* (eds.) D. Drache & M.S. Gertler (Montréal and Kingston: McGill-Queen’s University Press, 1991). To some critics, globalisation has been or become a “Dickensianizing” historical process involving all global cities. See: M. Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (New York: Verso, 2000). Also, see: P. McLaren & R. Torres, “Racism and Multicultural Education: Rethinking ‘Race’ and ‘Whiteness’ in Late Capitalism” in *Critical Multiculturalism: Rethinking Multicultural and Antiracist Education* (ed.) S. May (London: Falmer Press, 1999) at 46.

¹⁷ P. Bourdieu, “Neo-liberalism, the Utopia (Becoming a Reality) of Unlimited Exploitation” in *Against the Tyranny of the Market* (trans.) R. Nice (New York: The New Press, 1998) at 94.

¹⁸ See: M. Blyth, “Global Trumpism: Why Trump’s Victory Was 30 Years in the Making and Why It Won’t Stop Here” *Foreign Affairs*, November 15, 2016, at: <https://www.foreignaffairs.com/articles/2016-11-15/global-trumpism> (last visited January 5, 2017).

¹⁹ In Canada, universities represented approximately 1.6% of gross domestic product in 2007. O.E.C.D., *Education at a Glance 2011: OECD Indicators* (Paris: O.E.C.D. Publishing, 2011) at 230. According to the latest report from the Parliamentary Budget Officer, total spending on *all* post-secondary education in Canada amounts to 2.8% of G.D.P.; it is a \$35.1 billion industry. See: J.-D. Fréchette, *Federal Spending on Postsecondary Education* (Ottawa: Office of the Parliamentary Budget Officer, 2016) at 7.

²⁰ For example, see: R. Fife & S. Chase, “Drug firm executive helps organize cash-for-access fundraiser featuring Bill Morneau” *The Globe and Mail*, October 25, 2016, at:

regime [that possess] ...a mysterious Midas touch [that] commodifies knowledge about everything from life forms to mythic heroes.”²¹ According to this logic, the knowledge produced by universities must be, in at least two senses, *touched*. Thus, knowledge must be directly or indirectly subjected to the “universal venality” of the market and silenced or kept in the dark of all but its *most* “inconvenient facts.”²²

To degrees, corporations and their control over higher education has become an essential instrument (and a potentially lucrative one) to covet and accumulate further

<http://www.theglobeandmail.com/news/politics/drug-firm-executive-helps-organize-cash-for-access-fundraiser-featuring-bill-morneau/article32509138/> (last visited October 25, 2016). Also, see: R. Fife & S. Chase, “Trudeau defends cash-for-access fundraising” *The Globe and Mail*, October 25, 2016, at: <http://www.theglobeandmail.com/news/politics/trudeau-defends-cash-for-access-fundraising/article32523956/> (last visited October 25, 2016). As Fred Block might ascribe to Trudeau, “neoliberalism with a human face.” See: F. Block, “Disorderly coordination: the limited capacities of states and markets” in *Institutions and the Role of the State* (Cheltenham: Edward Elgar Publishing Limited, 2000) at 54.

²¹ G. Caffentzis, “A Critique of Commodified Education and Knowledge (From Africa to Maine)” A Russell Scholar Lecture, University of Southern Maine, February 12, 2008, at: http://www.commoner.org.uk/wp-content/uploads/2008/04/caffentzis_critiqueeducation.pdf (last visited April 4, 2016).

²² G. Orwell, “The Freedom of the Press, Appendix I,” in *Animal Farm* (Harmondsworth: Penguin, 2007) at 99. This term comes from what was in the original proposed preface for *Animal Farm*. At the time, it was suppressed by the original publisher. Orwell is decrying the “sinister fact” that self-censorship in the United Kingdom eliminates the need for official state prohibitions on freedom of expression. It is a position that can be globally extended to public intellectuals and academics in most liberal democracies. See: N. Chomsky, *Rogue States: The Rule of Force in World Affairs* (London: Pluto Press, 2000) at 125. Also, see: N. Chomsky, “Lecture 2: Containing Internal Aggression” in *On Power and Ideology* (Montréal: Black Rose Books, 1990) at 53. “In fact, what we often find is that the intellectuals, the educated classes, are the most indoctrinated, most ignorant, most stupid part of the population... [because they] internalise the propaganda and believe it.” Also, see: H. Furness, “Jesus Christ would be banned from UK universities today, says Oxford professor” *The Telegraph*, May 30, 2016, at: <http://www.telegraph.co.uk/news/2016/05/30/jesus-christ-would-be-banned-from-uk-universities-today-oxford-p/> (last visited September 19, 2016). According to Timothy Garton Ash, “you may know that in the new counter-terrorism legislation, the securocrats in the Home Office are trying to impose on universities a so-called prevent duty, which would call on us to prevent even non-violent extremists speaking on campus.... Now non-violent extremists? That’s Karl Marx, Rousseau, Charles Darwin, Hegel, and most clearly Jesus Christ, who was definitely a non-violent extremists [sic].” Also, see: A. Ali, “Campus censorship ‘an epidemic’ at UK universities as Aberystwyth, Edinburgh and Leeds named among ‘most ban-happy’” *The Independent*, January 18, 2016 at: <http://www.independent.co.uk/student/news/campus-censorship-an-epidemic-at-uk-universities-as-aberystwyth-edinburgh-and-leeds-named-among-most-ban-happy-a6818896.html> (last visited September 19, 2016). Also, see: A. Ali, “Jesus Christ would be prevented from speaking at Britain’s universities, says Oxford academic” *The Independent*, May 31, 2016, at: <http://www.independent.co.uk/student/news/jesus-christ-would-be-prevented-from-speaking-at-britain-s-universities-says-oxford-academic-a7058056.html> (last visited September 19, 2016). Also, see: Staff, “Journalist Chris Hedges Barred by University of Pennsylvania Over Israel Dig” *Forward*, December 28, 2014, at: <http://forward.com/news/breaking-news/211736/journalist-chris-hedges-barred-by-university-of-pe/> (last visited September 16, 2016).

wealth in the expanding knowledge economy. According to one assessment, business and industry, which tend to represent various organisations such as the Canadian Foundation for Innovation, want to furnish “direct way[s] of ensuring that state funds will reward those initiatives [through an engagement with universities and their research capacities] ...that bring [about] greater corporate profitability.”²³ All this, purportedly, is for Canada’s benefit and welfare and its “competitiveness within the global economy.”²⁴

This (critical) miasmatic statement holds that “greater corporate profitability” will “always-already”²⁵ be in the “public interest” and result in the greatest social outcome. Corporate profit will bring about the greatest *natural* good for universities and the public. One might be forgiven if one had certain reservations concerning whether “hope [for the public interest] springs eternal in the... [corporate] breast.”²⁶ In the midst of the

²³ W.K. Carroll & J.B. Beaton, “Globalization, Corporatization and University Governance in Canada, 1976-1996: A Structural Analysis” Paper presented at the XIV World Congress of Sociology, Montréal, July 1998, at 23. Unlike Carroll and Beaton’s generous albeit tepid use of the term “corporatization,” this discussion prefers to spread the terms of capitalism or neo-liberalism interchangeably and decidedly to pick a dalliance with materialism: one that is a socialist critique.

²⁴ *Ibid.*

²⁵ L. Althusser, “Ideology and Ideological State Apparatuses” in *Lenin and Philosophy and Other Essays* (New York: Monthly Review Press, 1972) at 176. Althusser’s point in using the term “always-already” is to illustrate that there is an imaginary relationship that individuals possess to themselves and their beliefs about themselves that contradicts their real conditions and its social construction. For example, when an advertisement appeals to “you” as an “individual” it is merely hailing to “you” in a crowd and making you a “subject.” That is, it has nothing to do with *you*, advertising is constructing the “you” to appeal to and sell the product. Although a useful idea, one has to be somewhat sceptical of Althusser and his ‘structural’ theory. See: L. Althusser, *The Future Lasts Forever* (eds.) O. Corpet & Y.M. Boutang (New York: New Press, 1995). For a rather withering indictment of Althusser and his version of ‘scientific’ Marxism and being “more Marxist than Marx” see: E.P. Thompson, “The Poverty of Theory: Or an Orrery of Errors” in *The Poverty of Theory and Other Essays* (New York: Monthly Review Press, 1978) at 2.

²⁶ A. Pope, *An Essay On Man: And Other Poems* (London: John Sharpe, 1829) at 6. Of course, the endless papers and books yet to be shredded on “corporate social responsibility” might lead the naïve reader to posit that a socially responsible corporation is possible or, at the outside, a possibility. I tend to agree with Milton Friedman that the only social responsibility a corporation has is to make money. See: M. Friedman, “The Social Responsibility of Business is to Increase Its Profits” *The New York Times Magazine*, September 13, 1970, at: <http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html> (last visited September 5, 2014). By definition, that eliminates corporations from being socially responsible.

neoliberal “process of creative destruction”²⁷ and the defenestration of public institutions and programmes, scepticism seems a reasonable initial position. As we know, “[o]ne of the paradoxes of neo-liberalism is that it is not new and it is not liberal.”²⁸ Be that as it may, we must “recognise the novel situation in which we find ourselves... [in and] to analyse it realistically and concretely.”²⁹ That is to say, the confusing concept and process of neoliberalism(s)³⁰ – otherwise known as the “revolt of the haves”³¹ – and its formidable inroads against our current form of democracy,³² against freedom of expression, and against education: this creates a fundamental *legitimation crisis*³³ surrounding public institutions.³⁴ Neoliberal capitalism is figuratively (and literally) “killing democracy”³⁵ and causing a massive societal crisis worldwide. Thus, as Pierre

²⁷ J.A. Schumpeter, *Capitalism, Socialism and Democracy* (New York: Routledge, 2013) at 91. That said, as Paul Samuelson said about his old Harvard economics teacher, “The tortured epicycles of pre-Copernicus Ptolemaic astronomy had nothing on Schumpeter.” P.A. Samuelson, “Summing Up On Business Cycles: Opening Address” in *Beyond Shocks: What Causes Business Cycles* (eds.) J.C. Fuhrer & S. Schuh (Boston: Federal Reserve Bank of Boston, 1998) at 34.

²⁸ N. Chomsky, “Yanis Varoufakis and Noam Chomsky” New York Public Library, April 26, 2016, at: <https://www.youtube.com/watch?v=szIGZVrSAyc> (last visited May 14, 2016).

²⁹ E. Hobsbawm, “The Forward March of Labour Halted?” *Marxism Today*, September 1978, at 286.

³⁰ See: D.M. Kotz, *The Rise and Fall of Neoliberal Capitalism* (Cambridge: Harvard University Press, 2015) at 8-9.

³¹ See: R. Kutterner, *Revolt of the Haves: Tax Rebellions and Hard Times* (New York: Simon and Schuster, 1980).

³² As should be evident, the notion of “democracy” being used in this discussion is an open one; that is, one that sees democracy as a threat to concentrated (corporate) power. See: N. Chomsky, *Detering Democracy* (New York: Farrar, Straus & Giroux, 1991).

³³ The term “legitimation crisis” is a broad philosophical, political and sociological concept that Jürgen Habermas coined to tackle and define a society’s confidence in itself and its governing structures, especially when it begins to enter *crisis* or decline. J. Habermas, *Legitimation Crisis* (trans.) T. McCarthy (Boston: Beacon Press, 1975) at 40. That is, a ‘legitimation crisis’ is signalled by the lack of popular confidence or public trust in institutions, a state’s administrative functions, and/or political parties and leadership. The 2008 fiscal meltdown is but one example of a type of *legitimation crisis* amongst “other” crises. *Brexit* is another. The presidential election of Donald Trump is but another.

³⁴ For an good example of a neo-liberal government’s war on public information and the production of public knowledge, see: A. Kingston, “Vanishing Canada: Why we’re all losers in Ottawa’s war on data” *Maclean’s Magazine*, September 18, 2015, at: <http://www.macleans.ca/news/canada/vanishing-canada-why-were-all-losers-in-ottawas-war-on-data/> (last visited September 25, 2015).

³⁵ R.B. Reich, “How Capitalism Is Killing Democracy” *Foreign Policy*, October 12, 2009, at: <http://foreignpolicy.com/2009/10/12/how-capitalism-is-killing-democracy/> (last visited August 21, 2015). Also see: G. Monbiot, “Neoliberalism – The ‘Zombie Doctrine’ at the Root of All Our Problems” *Common Dreams*, April 15, 2016, at: <http://www.commondreams.org/views/2016/04/15/neoliberalism-zombie-doctrine-root-all-our-problems> (last visited April 17, 2016). Also, see: J. Watts, “Berta Cáceres, Honduran

Bourdieu suggests, the crises in higher education “is in fact one of the most effective means of perpetuating the existing [oppressive] social pattern, as it both provides an apparent justification for social inequalities and gives recognition to the cultural heritage... [of capitalism].”³⁶ For Bourdieu, neoliberalism destroys or attempts to destroy the “social gift”³⁷ of education. It treats this inequality and injustice as self-evident and “as a natural one”³⁸ and as a supposedly self-evident state of affairs. Yet, it is not.

The difficulty is that private gain does not logically necessitate nor materially produce nor increase the so-called public good. It is a situation where the integrity of university research can become vulnerable and be compromised by the market, by a private “person,”³⁹ by a property justification as a ‘cultural heritage’⁴⁰ or guise, or as a ‘benefit’ from a private commercial ‘partnership.’⁴¹ It means that objective and

human rights and environment activist, murdered” The Guardian, March 4, 2016, at:

<https://www.theguardian.com/world/2016/mar/03/honduras-bertha-caceres-murder-environment-activist-human-rights> (last visited June 1, 2016).

³⁶ P. Bourdieu, “School as a Conservative Force: Scholastic and Cultural Inequalities” in *Contemporary Research in the Sociology of Education* (ed.) J. Eggleston (London: Methuen Press, 1974) at 32. Also, see: N. Chomsky, “Interview” in *The Chomsky Reader* (ed.) J. Peck (New York: Pantheon Books, 1987) at 6.

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ In this context, *person* can mean private individual citizens or private corporate *persons*. The Koch brothers and their support for radical free enterprise and libertarian policies are but one example. See: *Citizens United v. Federal Election Commission*, No. 08-205, 558 U.S. 310 (2010). Also, see: M. Bati, “How Much Has Citizens United Changed the Political Game?” The New York Times – Magazine, July 12, 2012, at: http://www.nytimes.com/2012/07/22/magazine/how-much-has-citizens-united-changed-the-political-game.html?pagewanted=all&_r=0 (last visited September 5, 2013). Also, see: *Burwell v. Hobby Lobby Stores, Inc.*, 2014 BL 180313, U.S., No. 13-354. In what can only be describe as a bizarre holding, the United States Supreme Court holds that so-called closely held for-profit corporate ‘persons’ can “conduct business in accordance with their religious beliefs.” Who knew that small “business” was an evangelical procreativity activist Christian?

⁴⁰ See: R. Coombe, *The Cultural Life of Intellectual Properties* (Durham: Duke University Press, 1998) at 86. Coombe suggests that the overwhelming power of ‘corporate speech’ disseminates a dialogic and public relationship between the state and its citizens: thus, without the religious mumbo jumbo, but in line with magical thinking, the transubstantiation or commodification of citizens transforms them into private consumers.

⁴¹ See: J. Westheimer, “Higher Education or Education for Hire? Corporatization and the Threat to Democratic Thinking” (2010 April-May) *J. Higher Ed.* at: <http://www.academicmatters.ca/2010/04/higher->

disinterested research can be the object of private acquisition and objected to by private interests that are modified by their various political and economic interests and “the visible corruption of spiritual and intellectual values.”⁴²

The “public sphere”⁴³ of the university and the democratic rôle it plays in our society generally comes into conflict or resistance with the interest of government and private enterprise’s interest in commodifying research.⁴⁴ Recent government policy has

[education-or-education-for-hire-corporatization-and-the-threat-to-democratic-thinking/#sthash.WRxGZg85.dpuf](#) (last visited April 4, 2014).

⁴² T.B. Veblen, *Higher Learning in America: A Memorandum on the Conduct of Universities by Businessmen* (New York: B.W. Huebsch, 1918) at 36. Free and independent inquiry and research is the hallmark of academic freedom. Yet, as Thorstein Veblen noted, during the formation of the American university teachers union, the power of corporate influence on education is profound. Indeed, even the most neutral of academic research is not free from political and economic influences. For example, the ‘Haldane Principle’ was a long held, though loosely defined, ideal. In the United Kingdom, the ‘Haldane Principle’ held that university research ought to be free from political (and economic?) interference. Viscount Haldane, aside from his enormous contribution to Imperial and Canadian constitutional law, was one of the authors of the so-called “Haldane Report.” Haldane’s principle was pivotal in defining the idea of the independence of university research from political interests in the 20th-century in the U.K., although with questionable effect. See: *Ministry of Reconstruction: Report of the Machinery of Government Committee*, Cd. 9230, 1918 (U.K.). Also, see: Chomsky, *supra* note 15.

⁴³ See: J. Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (trans.) T. Burger (Cambridge: The MIT Press, 1989).

⁴⁴ See: C. Turner, “Stephen Harper’s war on experts” *The Toronto Star*, September 16, 2015, at: <http://www.thestar.com/opinion/commentary/2015/09/16/stephen-harpers-war-on-experts.html> (last visited September 17, 2015). In this discussion, it must be acknowledged that the “muzzling of Canada’s public scientists [and] interference in the development of public science” by the federal government is and has been a persistent problem or pressure point applied by private enterprise and the federal government. See: Press Release, “Federal Unions Come Together Across Canada to Protect Public Science Integrity and the Integrity of the Public Service” *The Institute of the Public Service of Canada*, May 19, 2015, at: <http://www.pipsc.ca/portal/page/portal/website/news/newsreleases/news/05192015> (last visited May 22, 2015). Also, see: I. Semeniuk, “Federal scientists push for protection from political interference” *The Globe and Mail*, May 17, 2015 at: <http://www.theglobeandmail.com/news/national/federal-scientists-push-for-protection-from-political-interference/article24473222/> (last visited June 5, 2015). Unlike university-affiliated scientists, government scientists do not possess the right of “academic freedom.”

⁴⁴ For example, one of the more recent corporate and politically motivated infringements of “academic freedom” is the closure of the University of North Carolina Law School’s Center on Poverty. See: G. Nichol, “Gene Nichol’s statement on closing of UNC poverty center” *The News & Observer*, February 27, 2015, at: www.newsobserver.com/opinion/op-ed/article1247222.html (last visited March 5, 2015). Also, see: R. Fausset, “University of North Carolina Board Closes 3 Centers” *The New York Times*, February 27, 2015, at: http://www.nytimes.com/2015/02/28/us/university-of-north-carolina-board-closes-3-academic-centers.html?_r=1 (last visited March 5, 2015). Also, see: G.R. Stone, “A Deadly Assault on Academic Freedom” *Huffington Post*, February 28, 2015, at: http://www.huffingtonpost.com/geoffrey-r-stone/a-deadly-assault-on-academic-freedom_b_6776322.html (last visited March 5, 2015).

silenced scientists:⁴⁵ and, it has been “a confused and Byzantine approach.”⁴⁶ In this situation, the implicit as well as the explicit implications and assumptions about the independence of the university and of academic freedom⁴⁷ can become an issue, as we’ve heard, because “[s]he who pays the piper can call the tune.”⁴⁸ That is to say, a university’s proprietary policies must be or *assumed* that they must be ‘corporate friendly.’ The policies must strengthen research that is profitable for a “sponsoring partner,” compliant to the *idée fixe* of shareholder value, and in accordance to the terms and conditions of a contributing foundation or corporation. Moreover, according to the trade winds of globalisation, research will be considered irrelevant and the institutes and vessels constructed for such research can be abandoned, scuttled or cannibalised⁴⁹ if they refuse to accommodate or comply with corporate interests.⁵⁰

Unlike the so-called “free press,” where “[f]reedom of the press is limited to those who own one,”⁵¹ universities in Canada are, for the most part,⁵² public institutions that

⁴⁵ A. Boutilier, “Keep ‘unmuzzled’ scientists on tight leash, senior civil servants warn Liberals” The Toronto Star, March 19, 2016, at: <http://www.thestar.com/news/canada/2016/03/19/keep-unmuzzled-scientists-on-tight-leash-senior-civil-servants-warn-liberals.html> (last visited March 20, 2016).

⁴⁶ Editorial, “Frozen out: Canada’s government should free its scientists to speak to the press, as its US counterpart has” (2012) 483 Nature at 6.

⁴⁷ For example, one of the more recent corporate and politically motivated infringements of “academic freedom” is the closure of the University of North Carolina Law School’s Center on Poverty. See: Nichol, *supra* note 44. Also, see: Fausset, *supra* note 44. Also, see: Stone, *supra* note 44.

⁴⁸ M.P. Tilley, *A Dictionary of the Proverbs in England in the Sixteenth and Seventeenth Centuries* (Ann Arbor: University of Michigan Press, 1950) at 541. Also, see: I. Johnston, “Post-Brexit funding gap ‘will threaten impartiality of university research’” The Independent, August 28, 2016, at: <http://www.independent.co.uk/news/science/science-research-brexit-bee-pesticides-bayer-syngenta-universities-a7213936.html> (last visited September 16, 2016).

⁴⁹ In a sense, one could argue that the dilemma that universities face is similar to the classic legal case surrounding cannibalism and distress on the high seas, see: *Regina v. Dudley and Stephens* 14 Q.B.D. 273 (1884).

⁵⁰ K. Bakx & P. Haavardsrud, “How the University of Calgary’s Enbridge relationship became controversial: ‘Most damningly it smacks of us being apologists for the fossil fuel industry,’ one academic warned” CBC News, November 2, 2015, at: <http://www.cbc.ca/news/canada/calgary/university-calgary-enbridge-sponsorship-1.3286369> (last visited November 13, 2015).

⁵¹ A.J. Liebling, “The Press” (New York: Ballantine, 1964) at 30.

⁵² L. Dueck, “Trinity Western affair a trial of Canadian civility and tolerance” The Globe and Mail, Dec. 11 2014, at: <http://www.theglobeandmail.com/globe-debate/trinity-western-affair-a-trial-of-canadian-civility->

serve *a*, or, *the* reputed “public good.”⁵³ In addition, universities provide one of the few spaces where people and ideas are beyond or tentatively outside “the market.” To some, this independence is a necessity. Moreover, to some, the value of academic freedom might be considered to be sacrosanct.⁵⁴ Indeed, these blinkered and naïve “scriveners”⁵⁵ of the “ivory tower”⁵⁶ go so far as to hold that academic freedom, within reason, “ought to be protected all the time everywhere.”⁵⁷ What can one do with these idealists and romantics and their nonsense with “such stuff as dreams are made...”⁵⁸ Possibly, these are the ‘dreams that exceed our grasp’⁵⁹ but perhaps they are also the dreams worth fighting for.

[and-tolerance/article22041303/](#) (last visited November 29, 2014). This is an issue of a *private* religious university barring individuals to a potential law school who do not practice “fundamental” so-called Christian values.

⁵³ See: P.A. Samuelson, “The Pure Theory of Public Expenditure” (1954) 36(4) R. Econ. & Stats. at 387.

⁵⁴ H.W. Arthurs, “Academic Freedom: Where and When?” in Notes for Panel Discussion, Annual Conference of AUCC, Halifax, N.S., October 5, 1995, at: https://www.crowefoundation.ca/documents/Academic-Freedom-When-and-Where_Arthurs-AUCC-Conference-October-5-1995.pdf (last visited May 22, 2014).

⁵⁵ H. Melville, *Bartebly, the Scrivener: A Story of Wall Street* (London: Hesperus, 2007).

⁵⁶ As is common knowledge, the original reference to an ‘ivory tower’ comes from the Song of Solomon. Like most of the Bible, the Song of Solomon is a questionable and, at times, a beautiful piece of literature that sings of loss, love, and smashing one’s enemies’ babies on the rocks. See: Song of Solomon, 7:4, in *The Holy Bible* (New York: The World Publishing Company, 1962) at 598. Also, see: A. Hodges, *Alan Turing: The Enigma* (New York: Simon & Schuster, 1983) at 117. According to Hodges, “The tower of the Graduate College [at Princeton] was an exact replica of that of Magdalen College Oxford, and it was popularly called the Ivory Tower, because of the benefactor of Princeton, [William Cooper Proctor, was] the Procter [in the Gamble] who manufactured Ivory Soap.” That said, the “ivory tower” has some virtues. For a practical, albeit, at times, reactionary and disillusioned account of being an educator in the industrial and post-modern caldron of the ‘ivory tower system’ and the necessity for constructing a “route to spacious thinking,” see: ‘Professor X’, “In the Basement of the Ivory Tower” *The Atlantic*, June 1, 2008, at: <http://www.theatlantic.com/magazine/archive/2008/06/in-the-basement-of-the-ivory-tower/306810/> (last visited December 1, 2014).

⁵⁷ Arthurs, *supra* note 54.

⁵⁸ W. Shakespeare, *The Tempest* (London: MacMillan Education, 1982) at 117.

⁵⁹ Albeit, it is not “heaven,” but it is a fate better than hell. See: R. Browning, “Andrea del Sarto” in *Select Poems of Robert Browning* (New York: Maynard, Merrill, & Co., Publishing, 1892) at 31.

In what has been termed “a new gilded age of wealth and power”⁶⁰ – or a new era of market fundamentalism – our neoliberal age and era is that of globalisation⁶¹ (and certainly not ‘internationalisation’ nor the spirit of the *Internationale*).⁶² In neoliberal times, the power of the market has transformed and reshaped our notions of democracy, equality and citizenship.⁶³ To some, the nation has, like the worker in a factory run by computers and robots, become redundant. Moreover, as one critic has observed, neoliberalism, aside from abhorring a vacuum, it “abhors democracy and views public and higher education as a toxic civic sphere that poses a threat to corporate values, power, and ideology.”⁶⁴ Yet, the culture and cultural space of the university make it one of the few remaining institutions that encourage and entertain alternate and non-conforming voices and ideas. This means that the greater prominence and aggressive positions of corporations in university affairs could pose “possible dangers to university

⁶⁰ R. Reich, “Antitrust in the New Gilded Age” Robert Reich April 16, 2014, at: <http://robertreich.org/post/82938136466> (last visited April 18, 2014). Also, see: P. Krugman, “Why We’re in a New Gilded Age” The New York Review of Books, May 8, 2014 at: <http://www.nybooks.com/articles/archives/2014/may/08/thomas-piketty-new-gilded-age/> (last visited April 18, 2014).

⁶¹ Generally, neoliberalism and globalisation are the milieu of our current political and economic system. It is a form of capitalism that supports national and global policies of: financialisation; privatisation; and, deregulation. See: R.D. Wolff, “Capitalist Crisis and the Return to Marx” in *Capitalism’s Crisis Deepens: Essays on the Global Economic Meltdown* (Chicago: Haymarket Books, 2016) at 4. It is a political system, at least in the developed world, and to extend Harvard historian Charles Mair’s description, that is no longer an “empire of production, but now triumphant as an empire of consumption.” See: C.S. Maier, *Among Empires: American Ascendancy and Its Predecessors* (Cambridge: Harvard University Press, 2007) at 239. Also, see: N. Chomsky, “Neoliberalism and Global Order” in N. Chomsky, *Profit Over People: Neoliberalism and Global Order* (New York: Seven Stories Press, 1999). In an extreme example of neoliberal globalising hubris, one observer has gone so far as to claim that “we are all Thatcherites now.” See: D. Cameron cited by N. Watt, “Thatcher funeral: ‘we are all Thatcherites now’ The Guardian, April 17, 2013, at: <http://www.theguardian.com/politics/2013/apr/17/margaret-thatcher-funeral-cameron-respect?guni=Article:in%20body%20link> (last visited May 20, 2014). Also, from a pedagogical perspective, see: P. McLaren, Critical Pedagogy and Class Struggle in the Age of Neoliberal Globalization: Notes from History’s Underside (2005) 2(1) Int’l J. Inclusive Dem. at: http://www.inclusivedemocracy.org/journal/vol2/vol2_no1_mcclaren.htm (May 2, 2014).

⁶² E.E. Pottier, *The Internationale* (Ann Arbor: The University of Michigan Press, 1980).

⁶³ S. Hall, D. Massey & M. Rustin, “After Neoliberalism: Analysing the Present” (2013) 53(2) Soundings: J. of Pol. & Cult.

⁶⁴ H.A. Giroux, “Dystopian Education in a Neoliberal Society” in *Neoliberalism’s War on Higher Education* (Toronto: Between the Lines, 2014) at 30.

autonomy and academic freedom.”⁶⁵ Indeed, if these “waters... need to be sounded,”⁶⁶ then, so too should neoliberal economic policies of government and the private sector be tested that are shaping universities and their future. As such, what will be examined is “[t]he next big target of public money that [financial capital wants to move on and] can go after... [and that] is the education system.”⁶⁷

A tangible and practical example that challenges academic freedom is the corporate involvement in the modern university and its production of knowledge. Neoliberalism appears to manifest itself through various discourses⁶⁸ and, also, articulates itself through the intellectual property policies and regimes present in universities.⁶⁹ As noted, that neoliberalism is not new or liberal,⁷⁰ it nonetheless exerts an “academic chill”⁷¹ or pressure and conditions and places limits on academic freedom and individuals imagined academic freedom. The history of “academic chill” and academic freedom is

⁶⁵ M. Horn, *Academic Freedom in Canada: A History* (Toronto: University of Toronto Press, 1999) at 341.

⁶⁶ *Ibid.*

⁶⁷ N. Chomsky, interview with David Barsamian, “U.S. to World: Get Out of the Way” (Alternative Radio: Cambridge) February 01, 1999.

⁶⁸ See: F. Gaffikin & D.C. Perry, “Discourses and Strategic Visions: The U.S. Research University as an Institutional Manifestation of Neoliberalism in a Global Era” (2009) 46(1) *Amer. Ed. Research J.*

⁶⁹ See: H.A. Giroux, “Neoliberalism, Corporate Culture, and the Promise of Higher Education: The University as a Democratic Public Sphere” (2002) 72(4) *Harvard Ed. Rev.*

⁷⁰ *Ibid.* Also, see: Chomsky, *supra* note 28.

⁷¹ C. Clark, “Top scientists allege U of T academic chill” *The Globe and Mail*, September 06, 2001, at: <http://www.theglobeandmail.com/news/national/top-scientists-allege-u-of-t-academic-chill/article4152673/#dashboard/follows/> (last visited May 1, 2014).

an on-going process and struggle in Canada.⁷² Generally, the corporate university does not condone dissent from its ranks or a questioning of its practices and principles.⁷³

As in other advanced capitalist countries, the Canadian economy and public institutions over the last thirty-odd years have been under sustained “expansionary austerity”⁷⁴ – also known as “austrian” economics or “austerianism”⁷⁵ and recently been termed by economist Yanis Varoufakis as “fiscal waterboarding”⁷⁶ in a “Ponzi austerity”⁷⁷ scheme. In essence, this is a downward ratcheting on public spending and public institutions to ‘balance budgets.’ For universities, it has meant that they are

⁷² See: V.C. Fowke & B. Laskin, “Report of the Investigation by the Committee of the Canadian Association of University Teachers into the Dismissal of Professor H.S. by United College, Winnipeg, Manitoba (1959) 7(3) CAUT Bulletin at: <http://www.caut.ca/docs/default-source/af-ad-hoc-investigatory-committees/report-of-the-investigation-into-the-dismissal-of-professor-h-s-crowe-by-united-college-%281958%29.pdf?sfvrsn=4> (last visited May 1, 2014). This is the first major case defended by the Canadian Association of University Teachers (C.A.U.T.) concerning academic freedom in Canada and is known as the “Crowe Affair.” Also, see: Horn, *supra* note 66 at 220.

⁷³ See: A. Maki, “Tenured Saskatchewan professor fired for opposing restructuring plans” The Globe and Mail, May 14, 2014, at: <http://www.theglobeandmail.com/news/national/education/tenured-saskatchewan-professor-fired-for-opposing-university-restructuring-plans/article18665598/> (last visited May 20, 2014). The “Buckingham Affair” and the firing and re-hiring of a tenured professor garnered Canadian newspaper headlines in the spring of 2014. Buckingham’s open letter, “The Silence of the Deans,” ruffled the feathers of the University of Saskatchewan administration and their ‘business plan’. Also, see: Canadian Press, Staff, “University of Saskatchewan terminates president after fired professor controversy” The Globe and Mail, May 22, 2014, at: <http://www.theglobeandmail.com/news/national/university-of-saskatchewan-president-fired/article18790498/> (last visited May 22, 2014).

⁷⁴ P. Krugman, “Where Are The Austerian Economists?” The New York Times, September 23, 2013, at: http://krugman.blogs.nytimes.com/2013/09/23/where-are-the-austerian-economists/?_php=true&_type=blogs&_r=0 (last visited April 10, 2014).

⁷⁵ This is an obvious a play on the so-called Austrian School of economics and their obsession with slashing government spending and cutting deficits in good economic times and even and especially during recessions. *Ibid.* Also, see: Jas.K. Galbraith & Y. Varoufakis, “Whither Europe? The Modest Camp versus the Federal Austerians” Open Democracy, June 11, 2014, at: <https://opendemocracy.net/can-europe-make-it/james-galbraith-yanis-varoufakis/whither-europe-modest-camp-vs-federalist-austeri> (last visited October, 3, 2014).

⁷⁶ Y. Varoufakis, interview with la Repubblica, “Basta ingerenze qui in Grecia e più tempo sul debito” la Repubblica, January 5, 2015, at: http://www.repubblica.it/economia/2015/01/05/news/yanis_varoufakis_basta_ingerenze_qui_in_grecia_e_p_i_tempo_sul_debito-104320969/ (last visited January 25, 2015). Also, see: A. Czuczka, “Tsipras Says ‘Fiscal Waterboarding’ Holding Greece Back” Bloomberg Business, January 13, 2015, at: <http://www.bloomberg.com/news/articles/2015-01-13/tsipras-says-fiscal-waterboarding-holding-greece-back> (last visited January 20, 2015).

⁷⁷ Y. Varoufakis, *And the Weak Must Suffer What They Must? Europe’s Crisis and America’s Economic Future* (New York: Nation Books, 2016) at 313.

encouraged to resolve their funding shortfalls privately. Universities are encouraged to ‘professionalise’ their administrations,⁷⁸ cease reliance on public funding and government,⁷⁹ and run themselves more like businesses.⁸⁰ In turn, patrons expect their investment to reflect their views. This “new reality [and ideology has been] ...particularly hostile to academic freedom, and we see that hostility in the actions of corporate funders and university administrators often [occur] simultaneously.”⁸¹

Aside from the hostility of the conversation, and although “[d]ebates about academic freedom almost always begin in confusion and end in confusion,”⁸² this dialogue seeks to explore and clarify the connection between academic freedom and the influence placed on universities by the demands of business and the “medical industrial

⁷⁸ T. Tahir, “The irresistible rise of academic bureaucracy” *The Guardian*, March 30, 2010, at: <http://www.theguardian.com/education/2010/mar/30/academic-bureaucracy-rise-managers-higher-education> (last visited November 3, 2014). Also, see: W.N. Renke, “Commercialization and Resistance” in *The Corporate Campus: Commercialization and the Dangers to Canada’s Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Co. Ltd., 2000) at 42. Renke points out that funding pressures mean that administrators “can hardly be blamed for thinking in a business-like way...” considering the straight-jacket they must wear.

⁷⁹ See: C.A.U.T. “Federal Funding of Basic Research” (2013) 13(1) CAUT – Education Review at: <http://www.caut.ca/docs/default-source/education-review/educationreview13-1-en.pdf?sfvrsn=2> (last visited April 2, 2014). Also, see: Ministry of Training, Colleges and Universities, *Conditions and implementation provisions associated with tuition increases in 1998-99 and 1999-2000* (Toronto: Ministry of Training, Colleges and Universities, 1998). Also, see: H. Mackenzie & M. Rosenfeld, “University Funding Cuts: Shortchanging Ontario Students” (Ottawa: Canadian Association of University Teachers, 2002). Also, see: T. Lewin, “Public Universities Relying More on Tuition Than State Money” *The New York Times*, January 24, 2011, at: http://www.nytimes.com/2011/01/24/education/24tuition.html?pagewanted=all&_r=4& (last visited March 1103, 2014).

⁸⁰ R. Iosue, “Colleges And Universities Should Operate More Like Businesses” *Forbes Magazine*, August 16, 2011, at: <http://www.forbes.com/sites/realspin/2011/08/16/colleges-and-universities-should-operate-more-like-businesses/> (last visited September 26, 2014).

⁸¹ J.L. Turk, “The Canadian Corporate-Academic Complex” *Academe* (Washington: American Association of University Professors, 2010) at: http://www.aaup.org/article/canadian-corporate-academic-complex#.Uu_03vZRauI (last visited April 3, 2014).

⁸² S. Fish, “Academic Freedom Vindicated in Brooklyn” *The New York Times*, February 11, 2013, at: http://opinionator.blogs.nytimes.com/2013/02/11/academic-freedom-vindicated-in-brooklyn/?_php=true&_type=blogs&action=click&module=Search®ion=searchResults&mabReward=csebias%3Aw&url=http%3A%2F%2Fquery.nytimes.com%2Fsearch%2Fsitesearch%2F%3Faction%3Dclick%26region%3DMasthead%26pgtype%3DHomepage%26module%3DSearchSubmit%26contentCollectio%3DHomepage%26%3Dqry213%23%2Facademic%2520freedom&_r=0 (last visited April 10, 2014).

complex.”⁸³ In this instance, what is at stake or in jeopardy is the academic freedom of medical researchers in the university. Medical researchers can represent a litmus test for part of the corporate influence flowing through a university and the “increasing privatisation of academic research.”⁸⁴ Similar to the ‘sensitive’ artist, independent researchers and scientists tend to “keel over like canaries in poison[ed] coal mines”⁸⁵ when their academic freedom and ethics are put up against pecuniary interests. That depiction may be changing. Nonetheless, it is the subject of academic freedom in the university that is at stake: this is a situation where “researchers who are discovering and refining the ideas that will fuel tomorrow’s economy”⁸⁶ must come to terms with who they are and what they will do to achieve their personal and professional goals.

As we lethargically depart the interregnum and era of the welfare state and learn to embrace the tenterhooks of neoliberalism, globalisation, and the “machines of loving grace,”⁸⁷ we are finding that the new reality of the “neo-rentier”⁸⁸ class is becoming

⁸³ See: S. Wohl, *The Medical Industrial Complex* (New York: Harmony Books, 1984).

⁸⁴ Johnston, *supra* note 48.

⁸⁵ K. Vonnegut “Physicist, Purge Thyself – Address to the American Physical Society” Chicago Tribune Magazine, June 22, 1969, at 44.

⁸⁶ MaRS, “About Us – MaRS Innovation” (Toronto: MaRS Centre 2014) at: <http://marsinnovation.com/about/members/> (last visited May 1, 2014).

⁸⁷ R. Brautigan, “All Watched Over By Machines of Loving Grace” in *All Watched Over By Machines of Loving Grace* (San Francisco: Communication Publishing, 1967). As one should note, the ‘new world’ of computing and so-called ‘social networks’ and ‘communication revolution’ ought to be taken with a grain of salt. That is to say, if we “lean in” in any serious way, the Potemkin ‘global village’ of ‘cyber utopia’ possesses a tendency to implode. For a ‘liberatory’ example on cyber-utopia and feminism, see: S. Sandberg, *Lean In: Women, Work, and the Will to Lead* (New York: Random House, Inc., 2013). Needless to say, the “lean in” theory is rather more than suspect to any critical feminist. See: K. Losse, “Feminism’s Tipping Point: Who Wins from Leaning in?” Dissent Magazine, March 26, 2013, at: http://www.dissentmagazine.org/online_articles/feminisms-tipping-point-who-wins-from-leaning-in (last visited December 14, 2014). According to Losse, “Sandberg’s revolution is not asking corporations to renovate their operations to eliminate sexism. Rather, [the] revolution in *Lean In* is a battle to restructure the self.” Also, see: S. Faludi, “Facebook Feminism, Like It or Not” (2013) 23 *The Baffler*, at: <http://www.thebaffler.com/issues/no-23> (last visited December 14, 2014). According to Faludi, Sandberg’s notion of a powerful feminist self is a very neoliberal “uppermost echelon” self; one subsumed in an “an online like-a-thon” of “feel-good options” and an ‘identity politics’ based on corporatism and consumption. As Faludi sadly points out, attending one of Sandberg’s motivational talks one finds oneself in an “atmosphere... [which is part] TED-Talk-cum-tent-revival-cum-Mary-Kay-cosmetics-convention.” Also,

pronounced, dominant and, truculently and petulantly, *more* demanding.⁸⁹ In the shadow of the post “sub-prime crisis” and the “Great Recession,” we are seeing a return of the repressed⁹⁰ and a “re-return”⁹¹ to a form of ‘invisible’ bare-knuckles capitalism reminiscent of the past or what has been termed as a “plutonomy.”⁹² The rich are getting richer and our new corporate leaders want the university to produce “‘just in time’ knowledge”⁹³ to reproduce the “[e]ntitled mediocrity [that has become] ...the operating principle of corporate America.”⁹⁴ They want a society where “employees... gain knowledge *now*, immediately, not on the plodding terms set by the ivory tower of

for a perceptive commentary on *leaning in* and women moving “up the corporate jungle gym,” see: L. Burnham, “Lean In and One Percent Feminism” Portside, March 26, 2013, at: <http://portside.org/2013-03-26/lean-and-one-percent-feminism> (last visited December 14, 2014). Also, see: E. Favilli, “Silicon valley is more Flintstones than Jetsons when it comes to women” The Guardian, February 28, 2015, at: <http://www.theguardian.com/commentisfree/2015/feb/28/silicon-valley-is-more-flintstones-than-jetsons> (last visited March 1, 2015).

⁸⁸ M. Hudson “The Road to Debt Deflation, Debt Peonage, and Neofeudalism” (2012) Levy Econ. Inst. of Bard College, Working Paper No. 708, at 1. As Hudson puts it, this class of individuals have introduced “a neo-rentier economy that is bringing economic growth to a halt” and is a type of “neo-serfdom” and precisely what 19th century industrial capitalists and classical economists tried to abolish.

⁸⁹ See: T. Piketty, *Capital in the 21st Century* (trans.) A. Goldhammer (Cambridge: Harvard University Press, 2014). Piketty suggests that as “rents” outstrip *real* economic growth we are re-entering or re-living a type of *Belle Époque* – a return to an era of vast economic and social inequality. Aside from Piketty’s fundamental errors, for example he confuses speculative income and wealth for productive capital, his deeply flawed book at least got policy makers and the public talking about the structural inequality of the ‘free market.’ For correctives to Piketty’s thesis, see: Jas.K. Galbraith, “Unpacking the First Fundamental Law” (2014) 69 World Econ. Rev.; Y. Varoufakis, “Egalitarianism’s Latest Foe: A Critical Review of Thomas Piketty’s Capital in the Twenty-First Century” (2014) 69 World Econ. Rev.

⁹⁰ Of course, this loosely refers to Freud’s psychoanalytic notion as to tracing the origins of adult behaviour in relation to childhood trauma. Yet, in our sense, it means a return or a re-return to a renewed age of the robber barons.

⁹¹ See: F. Nietzsche, *The Gay Science: With a Prelude in Rhymes and an Appendix of Songs* (trans.) W. Kaufman (New York: Random House, 1974) at 230. Nietzsche generally uses the term “eternal recurrence” to refer to this perpetual state of existential ennui.

⁹² As a pre-recession Citigroup memo suggested, a return to a “Plutonomy” is a situation where “rising tides [are] lifting [all] yachts.” It is essentially a memo about creating a society that permanently entrenches and stabilises power and wealth with what has been termed the “one percent.” See: Citigroup, “Leaked Citibank Memo: The Plutonomy Symposium Rising Tides Lifting” September 29, 2006, at: <https://app.box.com/shared/9if6v2hr9h> (last visited December 20, 2014). Although that memo is pre-recessionary, its objectives appear to be consistent with current practices. See: N. Chomsky, “Plutonomy and the Precariat” in *Occupy* (New York: Zuccotti Park Press, 2012) at 32.

⁹³ B. Johnson, P. Kavanagh & K. Mattson, “Introduction: Not Your Parents University or Labor Movement Anymore” in *Steal This University: The Rise of the Corporate University and the Academic Labor Movement* eds.) B. Johnson, P. Kavanagh & K. Mattson (New York: Routledge, 2003) at 2.

⁹⁴ W. Deresiewicz, “The Disadvantages of an Elite Education” The American Scholar, June 1, 2008, at: <https://theamericanscholar.org/the-disadvantages-of-an-elite-education/#.VMpKUXY8pqw> (last visited December 13, 2014).

yesteryear but the terms set by corporations, providing only enough knowledge for their employees to get their jobs done [and] not to ask fundamental questions about [power and] the society in which they live.”⁹⁵ So, too, corporations want a “somnambulistic efficiency”⁹⁶ from their employees and the extraction of their worker’s knowledge *instantly*. Alas, after the financial crisis of 2008 and government bailouts of the financial sector, it has meant that the leftish and much hoped for “euthanasia of the rentier”⁹⁷ class can only be understood as a pipe dream. As investment guru Warren Buffett observed, “There’s class warfare, all right, [and] it’s my class, the rich class, that’s making war, and we’re winning.”⁹⁸ Accordingly, the corporate class and their rampant “anti-intellectual prejudice”⁹⁹ against the university has only become more strident. The idea of an “occupy” and progressive reconfiguration of society, let alone that of the post-secondary education system, has become a distant and faded aspiration.¹⁰⁰

⁹⁵ Johnson, Kavanagh & Mattson, *supra* note 93 at 2-3.

⁹⁶ R.S.F. Hughes, *The Culture of Complaint: The Fraying of America* (New York: Oxford University Press, 1993) at 41. Also, see: *R. v. Parks*, [1992] 2 S.C.R. 871. As an aside, I recall my late-great criminal law professor, Ron Delisle, attempting to grind this point into my very thick skull. As he knew, somnambulism proved too difficult a concept for the author to *fully* imagine.

⁹⁷ J.M. Keynes, *The General Theory of Employment, Interest and Money* (Sahibabad: Atlantic Publishing, 2006) at 345.

⁹⁸ B. Stein, “In Class Warfare, Guess Which Class Is Winning” *The New York Times*, November 26, 2006, at: http://www.nytimes.com/2006/11/26/business/yourmoney/26every.html?_r=1& (last visited December 14, 2015). Buffet repeated a version of this statement to David Cay Johnston, see: W. Buffet, cited in “Interview - David Cay Johnston: Class War Is Being Waged by the Rich Against the Poor” *Democracy Now*, January 21, 2015, at: http://www.democracynow.org/2015/1/21/david_cay_johnston_class_war_is (last visited January 22, 2015).

⁹⁹ L.H. Lapham, “On Message” *Harper’s Magazine*, October, 2005, at 7.

¹⁰⁰ Anyone who thought the 2008 ‘fiscal crisis’ would change the political dominance of neoliberalism or its historic trajectory have been sadly mistaken. See: J. Taub, *Other People’s Houses: How Decades of Bailouts, Captive Regulators, and Toxic Bankers Made Home Mortgages a Thrilling Business* (New Haven, Yale University Press, 2012). According to Jennifer Taub, there is a 30-year failure to learn from past mistakes. From the savings and loan mania and debacle of the 1980s to the financial crisis of 2008, the chump at the end of the speculation frenzy caught holding the bag is always the public and the victim needing assistance is the *corporate* welfare state. She sees this as a toxic and reoccurring situation where regulators assist speculators and bank officials to secure risky loans that eventually default but are *always* backed by government. The revolving door between government regulators and investment bankers – ‘banksters’ – ensures that the banks and, in the parlance of the day, remain ‘too big to fail’ and “too smug to jail.” M. Taibbi, “Too Smug to Jail: ‘The Economist’ issues a myopic defense of the white-collar criminal” *Rolling Stone*, November 1, 2016, at: <http://www.rollingstone.com/politics/features/too-smug-to->

All the same, even before the recent enviro-like recycling of recessionary tales advocating more austerity and more business-like virtues being installed in the university, some insightful critics saw this complaint about privatisation of professional higher education as a tired refrain of “what goes around comes around.”¹⁰¹ The post-1980s reduction of public funding and public access to post-secondary education has been one of an on-going crisis and decline. This downward trend has been well documented “[a]s universities turn to business models – becoming certification factories rather than [*sic*] institutions of higher learning – [and, thus,] democratic educational ideals are fast becoming obsolete.”¹⁰² To other observers, finally, after over forty years, universities have turned the corner and may be approaching and providing the appropriate level of service required for corporations and to some degree actively thwarting academe’s *leftist* and rampant attack on the free enterprise system.¹⁰³

[jail-w447825](#) (last visited November 2, 2016). Also, see: B. Protes, “Slowing the Revolving Door Between Public and Private Jobs” The New York Times, November 11, 2013, at: http://dealbook.nytimes.com/2013/11/11/slowing-the-revolving-door-between-public-and-private-jobs/?_php=true&_type=blogs&_r=0 (last visited September 20, 2013). Also, see: M. Smallberg, *Revolving Regulators: SEC Faces Ethics Challenges with Revolving Door* (Washington: Project On Government Oversight, 2011).

¹⁰¹ J. Duffin, “What Goes Around, Comes Around: A History of Medical Tuition” (2001) 164 (1) Can. Med. Assoc. J. at 50. In this observation, Duffin examines the cost of mid-19th-century Upper and Lower-Canadian (Ontario and Québec) medical education. It is calibrated to capture the salaries of carpenters as the baseline (a rather New Testament metric, but clever) to assess the cost to educate a physician. She charts the ebbs and flows concerning the cost of a medical education and the related decline of public funding for a medical education. She also tracks the rise of private medical schools and malpractice from the mid 1850s to the 1870s. After the return of public subsidies to run medical school in the last part of 19th and most of the 20th-century, Duffin observes that recent neoliberal funding pressures have tended to favour private funding and personal debt to support medical education in Ontario. The outcomes of this process have yet to be fully realised or assessed: yet, as Duffin points out, it ought to be easy to point out to a child that this is a mug’s game.

¹⁰² Veblen, *supra* note 42.

¹⁰³ For an example of this position, see: L.F. Powell, Jr., memo to Eugene B. Sydnor, Jr., “Confidential Memorandum: Attack of American Free Enterprise (“The Powell Memo”), August 23, 1971, http://reclaimdemocracy.org/powell_memo_lewis/ (last visited April 4, 2014). Prior to Powell’s appointment to the U.S. Supreme Court, he wrote this memo to Eugene Sydnor, chairperson of the education committee for the U.S. Chamber of Commerce. Powell held that the Chamber should advocate and support corporate sponsorship for ‘independent’ free enterprise institutes and the promotion and financial support for university and college faculty who advance corporate interests. Some critics opine that Powell’s memo led to the rise of neoliberal think tanks and discourse in popular culture. To a degree,

As such, universities and researchers are encouraged to seek resources from the private sector to advance knowledge and research.¹⁰⁴ University research facilities are under direct and indirect pressure to produce not merely knowledge but *proprietary* and applied knowledge. In an effort to balance their operating budgets, universities are contracting and ‘jointly’ managing research projects and programmes that fall under intellectual property agreements involving professors, researchers and graduate students. All this in the hope of eventually commodifying research and entering into licencing agreements that will prove profitable to the university and the private sector – that is, legalised *class* enrichment for the patent holder.¹⁰⁵

Indeed, post-secondary institutions are being left with limited options. The offers of corporate partnerships as the most popular solution to balance operating budgets – wittingly or unwittingly – has been integrated and absorbed into the policies and psyche of the modern university. Amongst these views, most are options to facilitate corporate desires for applied knowledge in programmes and advance innovation within the overall project of the university. After all, according to some, the university is situated in the midst of the ‘marketplace of ideas’¹⁰⁶ and encourages (or should encourage) innovation, research, and the development of new technologies for the market. Ultimately, it is ascribed that innovation, new research and technologies developed in the university will

these think tanks have influenced the ascendancy and dominance of neoliberal discourse both in and outside the university. In particular, the neoliberal chatter that we enjoy today in public policy making does have some connection to the efforts and frivolity of Powell and his disciples.

¹⁰⁴ See: J.L. Turk, “Universities must serve the public interest, not private ones” The Record, March 12, 2012, at: <http://www.therecord.com/opinion-story/2600550-universities-must-serve-the-public-interest-not-private-ones/> (last visited March 4, 2014).

¹⁰⁵ See: A. Damon, “Poverty, Unemployment, Enriching the Few: The 2008 Economic Crisis and the Restructuring of Class Relations in America” Global Research, June 4, 2013, at: <http://www.globalresearch.ca/poverty-unemployment-enriching-the-few-the-2008-economic-crisis-and-the-restructuring-of-class-relations-in-america/5337520> (last visited July 1, 2016).

¹⁰⁶ See: *Abrams v. United States*, 250 U.S. 616, 40 S.Ct. 17, 63 L. Ed. 1173 (1919) at 250.

prove to be beneficial for society and adaptable to the new era of globalisation. In doing so, the university becomes the automatic ‘self-adjusting’¹⁰⁷ and ‘pro-active’ – “synergistic” – in the aggressive era of economic transnational global capitalism.¹⁰⁸ Moreover, universities, academic research programmes and researchers must catch up with the ‘new economy’ and reality and promote the “spontaneous interplay”¹⁰⁹ of “technolog[ies that are] advancing exponentially.”¹¹⁰

In this new era, it means that interested domestic actors such as politicians, the university board of governors and university administrators see it as advantageous and inevitable to encourage private sector solutions for the university. Through the spontaneous ‘free market,’ endless innovation will be hypothetically unleashed through the ‘marketplace of ideas’ – through the “free trade in ideas.”¹¹¹ If one opposes this position, one must keep quiet and get out of the way.¹¹² Henry Giroux warns that “higher education in the United States [and Canada] is currently being targeted by a diverse number of right-wing forces who have high jacked political power and have waged a

¹⁰⁷ By ‘self-adjusting’ von Hayek means an “order brought about by the mutual adjustment of many individual economies in a market.” F.A. von Hayek, *Law, Legislation and Liberty, Volume 2: The Mirage of Social Justice* (London: Routledge and Kegan Paul, 1976) at 109.

¹⁰⁸ See R. Palan, *The Offshore World: Sovereign Markets, Virtual Places, and Nomad Millionaires* (Ithaca: Cornell University Press, 2006). Also, see: R. Palan, R. Murphy & C. Chavagneux, *Tax Havens: How Globalization Really Works* (Ithaca: Cornell University Press, 2010).

¹⁰⁹ F.A. von Hayek, “The Trend of Economic Thinking” (1933) 40 *Economica* at 130.

¹¹⁰ According to Jonathan Huebner, the popular notion of exponential technological progress is flawed, problematic, and faulty misreading of history. To Huebner, a physicist, who works at the none *too* (or *not*?) progressive Pentagon’s Naval Air Warfare Center, at China Lake, California, claims that human innovation peaked in 1873. In Huebner’s statistical account, innovation has been declining ever since. See: J. Huebner, “A Possible Declining Trend for Worldwide Innovation” (2005) 72(8) *Technological Forecasting and Social Change*, at 980. Also, see: R. Adler, “Entering a dark age of innovation” *New Scientist*, July 2, 2005, at: <http://www.newscientist.com/article/dn7616-entering-a-dark-age-of-innovation.html#.U1gW7sc5mUI> (last visited March 4, 2014).

¹¹¹ *Abrams v. United States*, *supra* note 106 at 630. The ‘marketplace of ideas’ is traced to Mr. Justice Holmes statement about truth being determined by a “free trade in ideas.” Yet, to say the least, Justice Holmes may be somewhat *too* optimistic about the “free market” determining truth. That said, Holmes is closer to capturing the essence of ‘truth’ when he holds that truth “is an experiment... as all life is an experiment.”

¹¹² Maki, *supra* note 73.

focused campaign to undermine the principles of academic freedom, sacrifice critical pedagogical practice in the name of patriotic correctness, and dismantle[d] the university as a bastion of autonomy, independent thought, and uncorrupted inquiry.”¹¹³

For some, the power of the free market is a panacea for the ills of the world;¹¹⁴ the disease being government interference and regulation and, in our case, the university’s staunch refusal to adapt to the so-called ‘new economy.’ This puts universities in a precarious and potentially perilous position. The position becomes an opposition of interlocutors who fail to press or test the limits. In our case, it is framed in the relation of academic freedom versus the corporate influence and the corporatisation of the university.¹¹⁵

Jim Turk holds that universities, more or less, “aggressively embrace [or are aggressively embracing] corporate values, corporate management practices, corporate labor-relations policies, ...corporate money... [and this is finally causing] faculty associations [to] face troubling challenges [of a troublesome nature].”¹¹⁶ These are the challenges that have been sent to try academic freedom and universities and, having become a marketable value, in neoliberal times, they have been ‘brought to the market to

¹¹³ H.A. Giroux, “Academic Freedom Under Fire: The Case for Critical Pedagogy” (2006) 33(4) *College Literature*, at 2.

¹¹⁴ In the alternative, Ha-Joon Chang has correctly pointed out that: “The free market doesn’t exist. Every market has some rules and boundaries that restrict freedom of choice.” H.-J. Chang, *23 Things That They Don’t Tell You About Capitalism* (London: Penguin Books, 2010) at 1.

¹¹⁵ See: K. Flegel, “The house of the rising sun medical school” (2014) 186(3) *C.M.A.J.* at 232. Also, see: J. Dehaas, “York turns down \$30 million” *MacLeans Magazine*, April 4, 2012, at: <http://oncampus.macleans.ca/education/2012/04/04/york-turns-down-30-million/> (last visited January 29, 2014). Also, see: L. Brown, “Corporate deals seen as dangerous for Canadian universities” *The Toronto Star*, November 20, 2013, at: http://www.thestar.com/yourtoronto/education/2013/11/20/corporate_deals_seen_as_dangerous_for_canadian_universities.html (last visited January 25, 2014).

¹¹⁶ Turk, *supra* note 81.

be assessed at its truest value.’¹¹⁷ And, as it were, these are the wee ‘pygmy judges sent to try us.’¹¹⁸

In neoliberal times, and in terms of this “new” gilded age or *belle époque* (“the illusions of the epoch”) ¹¹⁹ the ideology of individualism, innovation and entrepreneurialism reign supreme. Yet, these “ruling ideas”¹²⁰ are wielded by individuals who do so “as thinkers... [and] as producers of ideas... that regulate the production and distribution of the ideas of their age.”¹²¹ Specifically, they do not transcend the ideas of their age: they do not stand outside of history. They merely iterate or re-iterate their ideas composed in a language that is embedded in neoliberalism. Robert McChesney has noted that: “Neoliberalism is the defining political economic paradigm of our time [and] it refers to the policies and processes whereby a relative handful of private interests are permitted to control as much as possible of social life....”¹²² To political economist David Harvey, neoliberalism is a process consisting in the “restoration of class power”¹²³ and, thus, an inherently anti-democratic project.

The neoliberal ‘vision’ of the state is that it is a lumbering, antiquated and bureaucratic dinosaur. As an institution, the state interferes with the free market. The state regulates and, in doing so, causes market failures and inefficiencies in economic growth and development. According to neoliberal visions, the state provides little while

¹¹⁷ Marx, *supra note 2*.

¹¹⁸ W. Smith, *A Dictionary of Greek and Roman Biography and Mythology: Earinus-Nyx* (Oxford: J. Murray, 1880) at 257.

¹¹⁹ K. Marx & F. Engels, *The German Ideology: With Selections from Parts Two and Three, Together with Marx's "Introduction to a Critique of Political Economy"* (New York: International Publishers, 1970) at 57.

¹²⁰ *Ibid* at 64.

¹²¹ *Ibid*.

¹²² R.W. McChesney, “Noam Chomsky and the Struggle Against Neoliberalism” (April 1999) 50 *Monthly Rev. Press* at 40.

¹²³ D. Harvey, “Neo-liberalism and the Restoration of Class Power” in *Spaces of Global Capitalism: A Theory of Uneven Capital Development* (London: Verso, 2006) at 7.

the entrepreneurs, shareholders and innovators take the risks to bring new and needed products and commodities to the market. Indeed, it is commodity production, sales and promotion that is held to be the *real* measure of the “public” welfare.

The traditional rôle of the university is typically viewed as being an independent source of critical thought and research. Armed with academic freedom, researchers and academicians are deemed to be above or beyond the fray of commercial considerations or constrain. In the context of research physicians, large pharmaceutical corporations and university-affiliated hospitals have a unique relationship in the halls of higher education. Unlike other corporate players, biopharmaceutical companies must rely on the experimental expertise developed by medical research facilities in universities and its teaching hospitals. As such, one principle challenge to academic freedom is the conflict of interest surrounding researchers and corporate and privately sponsored research that are involved in the production of knowledge in the university.

Today the pharmaceutical industry uses the terms “thought leader” or “key opinion leader” – KOL for short – to refer to influential physicians, often academic researchers, who are especially effective at transmitting messages to their peers. Pharmaceutical companies hire KOL’s to consult for them, to give lectures, to conduct clinical trials, and occasionally to make presentations on their behalf at regulatory meetings or hearings.¹²⁴

Thus, the pharmaceutical-industrial complex has a vested interest in shaping the production of knowledge in universities and, in turn, this can and does have a direct impact on academic freedom.

This has partly involved a transformation of the culture surrounding the modern university. Universities and university culture, from undergraduate to graduate

¹²⁴ C. Elliott, “The Secret Lives of Big Pharma’s ‘Thought Leaders’” The Chronicle of Higher Education, September 12, 2010, at: <http://chronicle.com/article/The-Secret-Lives-of-Big/124335/> (last visited April 10, 2014).

programmes, have become objects of conquest for modern corporations. As the dominant “special interest” in society (sometimes confused with the national interest?) corporations, aside from being “ingenious device[s] for obtaining individual profit without individual responsibility,”¹²⁵ embody a long held sensibility that the first Chief Justice of the United States, John Jay, held: that “[t]hose who own the country ought to govern it.”¹²⁶ What’s more, the same could be said concerning those who think they *really* own – or *privately* contribute to – universities and university research. Opposed to this position is the utopian belief that “[u]niversities must serve the public interest, not private ones.”¹²⁷

Even more disturbing, the corporatisation of the university and university culture is increasingly being accepted as an inevitable aspect of the new academic “reality.”¹²⁸ This is a reality that poses real impasses and problems for various social and intellectual minorities whose interests and work are situated outside of the dominant corporate paradigm. Also, to degrees, this means that power in the university will govern by or through confusion and the “universal venality” of the market rather than by a more democratic and rational debate amongst peers.

1.2 Scope and Organisation of this Study

The scope and organisation of this discussion, aside from a slight illustrative detour at the beginning, will follow a rather traditional investigative structure to discuss academic freedom in neoliberal times. The modest goal is to orient the reader to the

¹²⁵ A. Bierce, *The Devil’s Dictionary* (New York: Dover Publications, Inc., 1993) at 19. Also, see: Taibbi, *supra* note 100.

¹²⁶ J. Jay cited by F. Monaghan, *John Jay: Defender Against Kings and Peoples* (New York: Bobbs-Merrill, 1935) at 323. Also, see: L.H. Lapham, “Ignorance of Things Past: Who Wins and Who Loses When We Forget American History” *Harper’s Magazine*, May 2012, at 30.

¹²⁷ Turk, *supra* note 104.

¹²⁸ See: J. Washburn, *University Inc.: The Corporate Corruption of Higher Education* (Cambridge: Basic Books, 2006).

complex problems that confront medical researchers in the highly charged and lucrative political economy confronting modern pharmaceutical development and the university. The objective is to present a political economic way of thinking about the traditional legal and economic reasoning surrounding intellectual property. Current economic or neo-classical economic reasoning reduces most legal issues surrounding intellectual property to “the market,” to ‘market forces’ or to ‘market outcomes.’ This discussion seeks to unseat this convention. In its place, the interdisciplinary nature of political economy is seen as a holistic approach to comprehending the problems confronting academic freedom in neo-liberal times, the current phase of “platform capitalism,”¹²⁹ the “share-the scraps economy,”¹³⁰ and the “Nikefication”¹³¹ and “uberization”¹³² of labour. Indeed, a political economy approach to intellectual property and the university seeks to reveal how there is a shadow cast upon academic freedom by the not so ‘invisible hand’ of the market.

As indicated above, Chapter One is a broad introduction to the issues of academic freedom, neoliberalism and ‘big pharma.’ Its purpose is to orient the reader to “the lush standards of the pharmaceutical industry [such as they are that] ...rank... [it] second only

¹²⁹ G.F. Davis, *The Vanishing American Corporation: Navigating the Hazards of a New Economy* (Oakland: Berrett-Koehler Publishers, Inc., 2016) at 145. As Davis points out, “platform capitalism” is a far more “accurate term than the ‘sharing economy’” in describing the current form of ‘app’ driven capitalism. He is also clear to indicate this is just another form of parasitism that attempts to do an end-run around the older form of 20th-century industrial and regulatory capitalism. Also, see: E. Morozov, “Where Uber and Amazon rule: welcome to the world of the platform” *The Guardian*, June 7, 2015, at: <https://www.theguardian.com/technology/2015/jun/07/facebook-uber-amazon-platform-economy> (last visited October 28, 2016).

¹³⁰ R.B. Reich, “The Share-the-Scraps Economy” *Robert Reich Blog*, February 2, 2015, at: <http://robertreich.org/post/109894095095> (last visited February 13, 2017).

¹³¹ G.F. Davis, “What Might Replace the Modern Corporation? Uberization and the Web Page Enterprise” (2016) 39 *Seattle U. L. Rev.* at 202.

¹³² *Ibid.*

to the military-industrial complex companies in profitability.”¹³³ A critical political economy approach allows for a constant thread to be used to link and discuss the law surrounding intellectual property, society, and the university.

Chapter Two introduces two instances surrounding the drug erythropoietin (EPO) to establish ‘cultural materialism’¹³⁴ as the theoretical foundation for this inquiry into intellectual property, the patent system and the university. At first blush, a cultural materialist examination into intellectual property and patents can appear as an abstract subject. Indeed, this approach, method and investigation could appear as *too* obscure and esoteric. When one understands that patents influence the discrete “practice of everyday life,”¹³⁵ then one can understand the enormous economic power they wield.

Patents are not merely a license bestowing a right for a limited period. Patents also exist as financial instruments¹³⁶ used to increase shareholder value¹³⁷ and accumulate capital. As such, intellectual property can be a very *devious* instrument brandished by the ‘invisible hand’ of the market. As instruments of corporate (and class) power and ownership over the productive assets of society, patents and intellectual property can be decisive *existential* weapons used to create and broaden inequality and destabilise the democracy of the modern state. In a more innocent time, Mr. Justice Brandeis claimed that we had to make an existential choice. Our choice comes down to the fact that “[w]e

¹³³ D.C. Johnston, *Free Lunch: How the Wealthiest Americans Enrich Themselves at Government Expense and Stick You With The Bill* (New York: Portfolio, 2007) at 583.

¹³⁴ R. Williams, *Culture and Society* (London: Pelican, 1961) at 285. “Cultural materialism” is about the centrality of cultural practices and criticism that allow us to understand the social and political production and reproduction of society. As Williams puts it: “The idea of culture is a general reaction to a general and major change in the condition of our common life. Its basic element is its effort at total qualitative assessment.... General change, when it has worked itself clear, drives us back on our general designs, which we have to learn to look at again, and as a whole.”

¹³⁵ See: M. de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 1984).

¹³⁶ R.D. Wolff & S.A. Resnick, *Contending Economic Theories: Neoclassical, Keynesian, and Marxian* (Cambridge: The MIT Press, 2012) at 264.

¹³⁷ A. Gibbs & B. DeMatteis, *Essentials of Patents* (Hoboken: John Wiley & Sons, 2003) at 203.

may have democracy, or we may have wealth concentrated in the hands of a few, but we can't have both.¹³⁸ Or, more recently, as David Cay Johnston puts it, in terms of funding democratic institutions and in accordance to the logic and process of globalisation:

Corporations are busy moving intellectual property such as patents, trademarks and the title to the company logo to entities organized in tax havens like Bermuda. These corporations then pay royalties to use their own intellectual property, allowing them to convert taxable profits in the United States [and Canada] into tax-deductible payments sent to Bermuda and other havens that impose little or no tax. You pay for this through higher taxes, reduced services or your rising share of our growing national debt. You also pay for it through incentives in the tax system for companies to build new factories overseas and to reduce employment in America, [Canada and Britain].¹³⁹

By understanding this context, then, hopefully, the materiality and impact of a political economy of intellectual property becomes apparent.¹⁴⁰ Similar to the “metal bashing”¹⁴¹

¹³⁸ Mr. Justice Brandeis cited R. Lonergan (a.k.a. Edward Keating), “Mr. Justice Brandeis, Great American” in *Mr. Justice Brandeis, Great American: Press Opinion and Public Appraisal* (ed.) I. Dillard (St. Louis, Modern View Press, 1941) at 42. This quote is generally sourced to Brandeis, but skepticism exists as to whether he said it. See: P.S. Campbell, “Democracy v. Concentrated Wealth: In Search of a Louis D. Brandeis Quote” (2003) 16 Green Bag 2D at 251-256. According to Campbell, as the definitive source and as the archivist of Brandeis’s papers, at the Louis D. Brandeis School of Law, “He definitely did not say it. Or maybe he did.” Campbell concludes that if Brandeis didn’t say this quote verbatim, then “at least it is a Brandeisian one.”

¹³⁹ D.C. Johnston, *Perfectly Legal: The Covert Campaign to Rig Our Tax System to Benefit the Super Rich* (New York: Portfolio, 2003) at 14. Also, see: Oxfam, “Broken at the Top: How America’s dysfunctional tax system costs billions in corporate tax dodging” Oxfam America, April 14, 2016, at: http://www.oxfamamerica.org/static/media/files/Broken_at_the_Top_FINAL_EMBARGOED_4.12.2016.pdf (last visited April 16, 2016). Also, see: H. Sheffield, “Fifty biggest US companies stashing \$1.3trn offshore: Coca-Cola, Walt Disney, Alphabet (Google) and Goldman Sachs all implicated in Oxfam report” *The Independent*, April 14, 2016, at: <http://www.independent.co.uk/news/business/news/fifty-biggest-us-companies-stashing-13trn-offshore-a6983256.html> (last visited April 16, 2016). Also, see: T. Talaga, “Canada willingly makes tax deals with tax havens: Billions of dollars are moving out of Canada – nearly all tax free – with 92 tax treaties signed” *The Toronto Star*, June 18, 2016, at: <https://www.thestar.com/news/world/2016/06/18/canada-willingly-makes-tax-deals-with-tax-havens.html> (last visited June 19, 2016). Also, see: H. Stewart, “Facebook paid £4,327 corporation tax despite £35m staff bonuses” *The Guardian*, October 11, 2015, at: <https://www.theguardian.com/global/2015/oct/11/facebook-paid-4327-corporation-tax-despite-35-million-staff-bonuses> (last visited October 13, 2016).

¹⁴⁰ In other words, as Yogi Berra said: “You can observe a lot by watching.” L.P. Berra, *The Yogi Book* (New York: Workman Publishing, 1998) at 9.

¹⁴¹ J. Bell, “Gentle Men of Steel” (1984) 1435/1436 *New Scientist* at 56.

industries of a different era,¹⁴² the investment and financial industries¹⁴³ and the economic influence they hold over the development of intellectual property have become a powerful and dominant force in our modern economy.¹⁴⁴ Indeed, modern corporate power represented here by ‘big pharma’ has its capacity to turn “patients into commodities like barrels of oil,”¹⁴⁵ has become an imposing force that shapes our society

¹⁴² Arguably, this is not a different era; in terms of the Canadian economy, it is merely an era of resource extraction and industry and domestic manufacturing being ‘off-shored’ to ‘developing economies’ under globalisation.

¹⁴³ The banking and financial sectors of our economy are industries that Doug Henwood has accurately and curtly refers to as “the power of creditor over debtor... and why [and how] some should profit from the disguised labor of others.” D. Henwood, *Wall Street: How It Works and for Whom* (New York: Verso, 1997) at 310. In the neoliberal era, aside from the 2008 crisis, the subject of the shysterism and ‘banksterism’ involved in the municipal and international banking system is one that is rarely probed in popular media. See: D. Enrich, “U.K. to file fraud charges in Libor probe” *The Globe and Mail*, June 18, 2013; D. Enrich, “Regulators step up Libor probes” *The Globe and Mail*, June 21, 2013; M. Taibbi, “Why is Nobody Freaking Out About the LIBOR Banking Scandal?” *Rolling Stone*, July 3, 2013, at: <http://www.rollingstone.com/politics/blogs/taibblog/why-is-nobody-freaking-out-about-the-libor-banking-scandal-20120703#ixzz2ckIyFIO2> (last visited July 10, 2013); and, H. Sheffield, “Libor: three former Barclays traders found guilty in benchmark rate rigging trial” *The Independent*, July 4, 2016, at: <http://www.independent.co.uk/news/business/news/libor-trial-barclays-traders-convicted-rate-rigging-fraud-pabon-mathew-merchant-a7118886.html> (last visited July 4, 2016). Also, see: Z. Rodionova, “Panama Papers: Credit Suisse and HSBC dismiss claims” April 5, 2016, at: <http://www.independent.co.uk/news/business/news/panama-papers-credit-suisse-and-hsbc-dismiss-claims-a6969011.html> (last visited June 25, 2016); C. Milmo, “Panama Papers: British banks ordered to divulge details of their dealings with Mossack Fonseca law firm” *The Independent*, April 7, 2016, at: <http://www.independent.co.uk/news/uk/crime/panama-papers-british-banks-ordered-to-divulge-details-of-their-dealings-with-mossack-fonseca-law-a6973906.html> (last visited June 25, 2016); and, P. Cockburn, “How the corruption revealed in the Panama Papers opened the door to Isis and al Qaeda” *The Independent*, April 8, 2016, at: <http://www.independent.co.uk/voices/how-the-corruption-revealed-in-the-panama-papers-opened-the-door-to-isis-and-al-qaeda-a6975476.html> (last visited June 25, 2016). Also, see: T. Jeory & J. Stone, “Theresa May’s husband is a senior executive at a \$1.4tn investment fund that profits from tax avoiding companies” *The Independent*, July 12, 2016, at: <http://www.independent.co.uk/news/uk/politics/theresa-may-philip-may-amazon-starbucks-google-capital-group-philip-morris-a7133231.html> (last visited July 13, 2016).

¹⁴⁴ See: H. Maurer, *et. al.*, “Report on Dangers and Opportunities Posed by Large Search Engines, Particularly Google” (Graz: Graz University of Technology, 2007) at http://www.iicm.tugraz.at/iicm_papers/dangers_google.pdf (last visited December 20, 2014). Also, see: T. Gara, “The Numbers Behind BlackBerry’s Patent Goldmine” *The Wall Street Journal*, August 26, 2013, at: <http://blogs.wsj.com/corporate-intelligence/2013/08/26/the-numbers-behind-blackberrys-patent-goldmine/> (last visited September 27, 2014). Also, see: P. Brickley, “Nortel \$4.5-Billion Patent Sale to Apple, Microsoft, Others Approved” *The Wall Street Journal*, July 11, 2011, at: <http://www.wsj.com/articles/SB10001424052702303812104576440161959082234> (last visited September 27, 2014). Also, see: A.L. Landers, “Patent Valuation Theory and the Economics of Improvement” (2010) 88 *Tex. L. Rev.* at 163. Landers is quick to point out that there is an indeterminacy in valuing patents undergoing litigation, but, for our purposes, we are more concerned with the valuation given a patent by the market: that is, in Marx’s sense that it be “brought to the market to be assessed at its truest value.”

¹⁴⁵ S. Brozak, “Retrophin, Gilead, And Our Healthcare Values” *Forbes*, September 12, 2014, at: <http://www.forbes.com/sites/stephenbrozak/2014/09/12/retrophin-gilead-and-our-healthcare-values/> (last

and, also, shaping academic freedom in the university. After all, “the famously lush standards of the pharmaceutical industry... ranks second only to the military-industrial complex companies in profitability.”¹⁴⁶

Hence, to anchor this discussion on the commodification of academic freedom, this investigation begins with: a passing examination of the case of Lance Armstrong, the former cycling “champion;” the life of Eugene Goldwasser and his discovery and the isolation of EPO; and, an overview of problems present in pharmacological research in the university and the commercialisation of university research and the commercialisation of the university. Much ink has been spilt over the incentive system present in patent regimes (and indubitably will be again). Yet, naïvely this investigation seeks to base the *debate* within a critical historical tradition.¹⁴⁷ This inquiry seeks to, partially, dislodge and question the heavy anchor of liberal and neoliberal politics and economics that encumbers a critical political economy of information and intellectual property. This starting point attempts from a historical and cultural materialist perspective to understand the legal reasoning behind the scientific progress, academic freedom and public policy

visited January 15, 2015). Also, see: L. Dearden, “Martin Shkreli: Pharmaceuticals CEO who raised HIV drug price by 5,000% ‘also hiked cost of pill taken by children with incurable kidney disease’” *The Independent*, September 23, 2015, at: <http://www.independent.co.uk/news/people/martin-shkreli-pharmaceuticals-ceo-who-raised-hiv-drug-price-by-5000-also-hiked-cost-of-pill-taken-10513645.html> (last visited September 25, 2015). Also, see: L.A. Johnson, “Notorious ‘pharma bro’ Martin Shkreli quits Turing Pharmaceuticals” *The Toronto Star*, December 18, 2015, at: <https://www.thestar.com/news/world/2015/12/18/hated-pharma-boss-martin-shkreli-used-web-of-lies-to-defraud-investors.html> (last visited January 9, 2017). Also, see: J. Kasperkevic & A. Holpuch, “EpiPen CEO hiked prices on two dozen products and got a 671% pay raise” August 24, 2016, at: <https://www.theguardian.com/business/2016/aug/24/epipen-ceo-hiked-prices-heather-bresch-mylan> (last visited August 29, 2016). Also, see: A. Pollack, “Mylan Tries Again to Quell Pricing Outrage by Offering Generic EpiPen” *The New York Times*, August 29, 2016, at: http://www.nytimes.com/2016/08/30/business/mylan-generic-epipen.html?_r=0 (last visited September 16, 2016). Also, see: C.Y. Johnson, “Why treating diabetes keeps getting more expensive” *The Washington Post*, October 31, 2016, at: <https://www.washingtonpost.com/news/wonk/wp/2016/10/31/why-insulin-prices-have-kept-rising-for-95-years/> (last visited November 2, 2016).

¹⁴⁶ Johnston, *supra* note 133 at 583.

¹⁴⁷ As Marx eloquently put it: “*a ruthless criticism of everything existing.*” K. Marx, “Letter to Arnold Ruge” in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton and Company, 1978) at 13.

surrounding patents and intellectual property. In combination, these can all distort what is in the public interest; specifically, when dealing with pharmaceutical research. In examining the “physics envy”¹⁴⁸ assumptions of neo-classical economics, “enclosure” and ‘history from below,’ it is argued that it is crucial to link and conceptualise the self-appointed “knowledge economy” (as if the notion and ideology of an economy have not “always-already” been about an exchange of information) within the context of the much older notion of a ‘gift economy.’¹⁴⁹ In doing so, this discussion tries to see the history of intellectual property through the eyes of a general political economy and ground the birth of patents in its historical and materialist origins. By unpacking – not “deconstructing”¹⁵⁰ – neo-classical economics (and their neoliberal variants), this chapter seeks to provide the theoretical foundations to critically upend the neo-classical and neoliberal economic apple cart that has led to so many conundrums in understanding pharmaceutical patents and their implications on public health.

Chapter Three re-thinks and unpacks theoretically the last thirty odd years of neoliberalism. These thirty-odd years comprising the rise of neoliberalism have been momentous. It has been a time marked by numerous transformations: the ‘financialisation’ of the economy; the “collapse of communism;” the rise of the halcyon days of “market triumphalism” through the Clinton era; the dismantling of the welfare

¹⁴⁸ M. Schabas, “What’s So Wrong with Physics Envy?” in *Non-Natural Social Science: Reflecting on the Enterprise of More Heat than Light* (ed.) N. de Marchi, (Duke University Press, 1993) at 45. Schabas puts an interesting feminist spin on “physics envy” pointing out the inherent male bias in conventional economic thinking: that is, an obsession with numerical measurement.

¹⁴⁹ See: M. Mauss, *The Gift: The Form and Reason for Exchange in Archaic Societies* (trans.) W.D. Halls (New York: Norton, 1990). Also, see: Graeber, *supra* note 10.

¹⁵⁰ Generally, “deconstruction” and the term “deconstructing” are used in a ham-fisted way in popular culture. The eloquence of Jacques Derrida’s work and his indelible contribution to philosophy has yet to be fully acknowledged in the relative few years since his death. Moreover, the incipient relativism that popular culture has abused Derrida’s work is staggering. Hence, this discussion attempts to avoid such appropriations or intellectual enclosures that would use this term or practice/praxis.

state; the reshaping of education policies and university governance in neo-liberal terms; and, the era of technological and informational “utopianism” (that is, the revolution of information technologies and their impact on social relationships). To comprehend this process, one must understand “where we are coming from.”¹⁵¹ It is submitted that this requires a partial examination of property and its legacy and its relationship to the intangible qualities that we have granted intellectual property and the assumption that economic incentives produce great art or great inventions.

Chapter Four is a methodological overview of the rise of the modern state, its various forms of regulation and the social relationship of knowledge in and outside of the university. It circumscribes the rise of industrial development as part of the modes and means of production that arose from the scientific revolution and the standardisation of knowledge and its dissemination through the university system. A brief review of the rise of the regulatory system is rendered to give the reader a sense of the *ad hoc* origins of these systems and how they have helped – to a greater or lesser degree – advances in public health and disease control. In addition, an overview of the rise of antibiotics is reviewed to demonstrate that, arguably, the greatest hurdle in modern medicine has been achieved and that it was done without the assistance or incentive regime of the patent system. Moreover, it was public resources and the openness of the university that produced such success and that these accomplishments would have been unachievable under “free enterprise” and the current patent regime.

In Chapter Five, evidence presented addresses the particular types of problems that university researchers are confronted within pursuing scientific and pharmaceutically

¹⁵¹ R.N. Marley & N.G. Williams, “Buffalo Soldier” in *Confrontation* (Kingston: Tuff Gong Studio, 1983) at Track 2.

funded research. A summary of the rise of “academic capitalism” is provided to contextualise the problems that have affected (afflicted?) the university system and the impact this influence has had for academic freedom. A general overview of medical research issues is provided to contextualise two relatively recent and important cases as to pharmaceutical research and academic freedom. They are Canadian cases: the case of Dr. Nancy Olivieri; and, the case of Dr. David Healy.

Olivieri is briefly reviewed to situate the conflict between ethical obligations, contractual obligations, and the influence and conflicts of interest that arise with corporately sponsored funding in drug research. Olivieri’s case is a complex affair: it involves many players, both individual and institutional.¹⁵² This portion attempts to peel back the layers of influence present in the incentive system. The Healy affair is an employment issue that consists of his hiring and firing prior to taking up his positions at the University of Toronto (U. of T.) and the Centre for Addiction and Mental Health Research (C.A.M.H.). Healy’s case was the first lawsuit brought in an Ontario court and in Canada alleging breach of “academic freedom.”¹⁵³ It is significant in that the Healy affair is demonstrative of the *chill effect* when a researcher is critical of the corporate interests behind university research funding. In Healy’s case, he was critical of fluoxetine (trade-name Prozac) and other selective serotonin reuptake inhibitors. Healy had appeared as an “expert witness in US lawsuits against drug companies... [for]

¹⁵² Here is a partial list of some of the institutional players involved in the Olivieri affair and some will appear elsewhere in this discussion: College of Physicians and Surgeons of Ontario (C.P.S.O.); Food and Drug Administration (F.D.A.); University of Toronto (U. of T.); Hospital for Sick Children (H.S.C.); Medical Advisory Committee (M.A.C.); Research Ethics Board (R.E.B.); Canadian Medical Protective Association (C.M.P.A.); American Society of Hematology (A.S.H.); National Institute of Health (N.I.H.); Canadian Association of University Teachers (C.A.U.T.); Health Professions Appeal and Review Board (H.P.A.R.B.).

¹⁵³ O. Dyer, “Doctor sues university for breach of academic freedom” (2001) 323 B.M.J. at 770. Healy was not only suing for breach of academic freedom but also for breach of contract. Also, see: J.G. Wright, “Clinicians and patients’ welfare: where does academic freedom fit in?” (2004) 329 B.M.J. at 795.

patients' families [who] argued that selective serotonin reuptake inhibitors contributed to suicides and murder-suicides committed by their relatives.”¹⁵⁴ Perhaps, Healy's “academic freedom” was against some drug companies' best interests.

The incentive scheme in the patent system, which underlies many intellectual property patents, is parasitic. The patent system and how capitalism affects academic freedom and a doctor's ethical obligations are put in jeopardy by it. Ultimately, both the Olivieri and Healy cases suggest that the neoliberal incentive regimes introduced to universities during the 1980s, 1990s and early 2000s, at least as it pertains to the pharmaceutical patent system, should be understood as a corrupting influence and, perhaps, hopefully, a spent force. Yet, as this argument advances, even as a spent force it still presents a danger to academic freedom and to common sense.

In the Conclusion, in this denouement, there is a modest proposal. A proposal, to degrees, that has been resurrected by economist Joseph Stiglitz. Stiglitz's recommendation is, for our purposes, viewed as a ‘gift-like’ solution: and, as a way to create a possible “rough-and-ready way to solve the problem.”¹⁵⁵ Stiglitz's suggests that we create a reward system – a prize¹⁵⁶ – as an alternative to the so-called meritorious ‘patent first’ system. The patent system has its place. That said, the current system in the pharmaceutical industry seems present to consistently collude to produce destructive results when promoting private profit at the expense of public health. As, Stiglitz

¹⁵⁴ *Ibid.*

¹⁵⁵ Graeber, *supra* note 10 at 36.

¹⁵⁶ J.E. Stiglitz, “How Intellectual Property Reinforces Inequality” The New York Times, July 14, 2013, at: <http://opinionator.blogs.nytimes.com/2013/07/14/how-intellectual-property-reinforces-inequality/?hp> (last visited July 15, 2013).

suggests, this system “reinforces inequality.”¹⁵⁷ Along with government refinancing of higher education, the prize system is recommended as one of the more rational, intelligent, and ethical processes to advance future pharmaceutical and medical research – one that directly and indirectly *supports* academic freedom. This study suggests that our recent history of “evidence b(i)ased medicine”¹⁵⁸ be tossed into the dustbin.¹⁵⁹ Past university and pharmaceutical research demonstrate its value as public, collective and shared work. So, too, will this past habit also ensure its future. To some, academic freedom, democracy, human health and welfare are not easily commodifiable. To others, it is. This discussion suggests that we ought not promote knowledge as a “marketable [and speculative] value”¹⁶⁰ of a stock.¹⁶¹ Rather, the creation and communication of knowledge and its pursuit is a universal and assiduously persistent human characteristic that supersedes and transcends the market. Upon reflection, the freedom to pursue knowledge could be construed as a right: a human right worth promoting, perfecting and preserving in and of itself.¹⁶²

¹⁵⁷ *Ibid.* Also, see: J.E. Stiglitz, “Ebola and Inequality” Project Syndicate, November 10, 2014, at: <http://www.project-syndicate.org/commentary/ebola-highlights-inequality-by-joseph-e--stiglitz-2014-11> (last visited November 29, 2014).

¹⁵⁸ H. Melander, *et. al.*, “Evidence b(i)ased medicine – selective reporting from studies sponsored by pharmaceutical industry: Review of studies in new drug applications” (2003) 326 B.M.J. at 1171–1173.

¹⁵⁹ See: M. Bakunin, *From Out of the Dustbin: Bakunin’s Basic Writings, 1869-1871* (ed.) R.M. Cutler (Ann Arbor: Ardis Publishers, 1985).

¹⁶⁰ Marx, *supra* note 2.

¹⁶¹ In its origins, a stock is an accounting method where a “tally stick” with notches on it would be split in two between the debtor and the creditor to indicate who owed what to whom. Graeber, *supra* note 10 at 48. “The creditor would keep one half, called “the stock” (hence the origin of the term “stock holder”) and the debtor kept the other, called “the stub” (hence the origin of the term “ticket stub”).” In Shakespearean terms, a stock “‘twas mine, ‘tis his, and hath been slave to thousands.” W. Shakespeare, *Othello* (Victoria: Insight Publications, Ltd., 2011) at 111.

¹⁶² *Universal Declaration of Human Rights*, GA Res 217A (III), UN GAOR, 3rd Sess., Supp. No. 13, UN Doc A/810 (1948) 71, Art. 19; *Universal Declaration on the Human Genome and Human Rights*, 11 November 1997, Art. 12(b).

2 CHAPTER TWO – A CONTEMPORARY CASE

2.1 The Case of EPO

All for ourselves and nothing for other people, seems, in every age of the world, to have been the vile maxim of the masters of mankind.

Adam Smith¹⁶³

All the wealth you make is taken, by exploiting parasites.

Joe Hill¹⁶⁴

[India's compulsory license is] essentially, I would say, theft.... [W]e did not develop this product [Nexavar] for the Indian market, let's be honest. We developed this product for Western patients who can afford this product.... It is an expensive product....

Marijn Dekkers
Bayer Chief Executive Officer¹⁶⁵

[The neoliberal state's] nobility... has made the public good a private good, has made the 'public thing' *res publica*, the Republic, its own thing.

Pierre Bourdieu¹⁶⁶

The theoretical point of departure that guides this investigation as to the state of intellectual property, patent law and university research builds on a number of key themes and ideas in the contemporary literature of critical political economy¹⁶⁷ and intellectual property. The argument advanced draws heavily on the larger field of Marxian political economy. Yet, in terms of the law, intellectual property in many ways

¹⁶³ A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, (London: Alex. Murray & Co. 1872) at 326.

¹⁶⁴ J. Hill, "Workers of the World Awaken!" in *Rebel Voices: An IWW Anthology* (ed.) J.L. Kornbluh (Oakland: PM Press, 2011) at 143.

¹⁶⁵ K. Gokhale, "Merck to Bristol-Myers Face Threats on India Patents" Bloomberg Businessweek, January 28, 2014, at: <http://www.businessweek.com/news/2014-01-21/merck-to-bristol-myers-face-more-threats-on-india-drug-patents#p2> (last visited January 29, 2014).

¹⁶⁶ Bourdieu, *supra* note 17 at 25.

¹⁶⁷ Generally, the definitions of a "critical political economy" and "political economy" are used interchangeably in this discussion. That said, and as noted, it is rooted in Marx's letter to Ruge and his commitment to a "*ruthless criticism of everything existing*," no matter where it might lead.

seem to escape the earthly bonds that seek to ground historical materialism and property relations as forms of *social* relationships.

History or histories are not given. History or histories are always written from a perspective and are not drop forged or found fully formed. As such, histories are always constructed from partial glimpses, perspective and impurities; and, thus, by definition, are imperfect. As Lewis Lapham puts it: “History is work in progress, a constant writing and rewriting as opposed to museum-quality sculpture in milk-white marble.”¹⁶⁸ As a limited starting point, it seems reasonable to commence this inquiry into pharmaceutical research and academic freedom with the following yarns. The ensuing examples are where we can see that human beings can and do make history but, as a wry observer noted, they do not make as they please.¹⁶⁹

2.2 Flying Too Close To The Sun

To separate labor from other activities of life and to subject it to the laws of the market was to annihilate all organic forms of existence and to replace them by a different type of organization, an atomistic and individualistic one.

Karl Polanyi¹⁷⁰

Where the bee suck, there suck I.

William Shakespeare¹⁷¹

To “begin the beguine”¹⁷² concerning the succour of performance-enhancing drugs, in the late summer of 2012 the sports world and cycling community was, by its

¹⁶⁸ Lapham, *supra* note 126 at 29.

¹⁶⁹ K. Marx, “The Eighteenth Brumaire of Louis Bonaparte” in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton and Company, 1978) at 437. Or, to paraphrase Edward Saïd and Marx: “Just as human beings make their own history, they also make their cultures and ethnic identities... [and laws, but not necessarily as they choose]. E. Saïd, “Movements and Migrations” in *Culture and Imperialism* (New York: Vintage Books, 1993) at 336.

¹⁷⁰ K. Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1944) at 163.

¹⁷¹ W. Shakespeare, *The Tempest* (New York: Double Day, Page & Company, 1903) at 178.

loose standards, ‘rocked by scandal.’ The ignominy sold in the media saw the testicular cancer survivor and cycling champion, Lance Armstrong, give up the proverbial ghost and fight against accusations of blood doping by the United States Anti-Doping Agency (U.S.A.D.A.).¹⁷³ Armstrong was a cyclist who had a record seven consecutive *Tour de France* victories between 1999 through 2005. He retired after his seventh *Tour de France* triumph. Armstrong chose to come out of retirement and returned to competitive cycling in January 2009. It was during this “comeback,” between 2009 and 2010, Armstrong produced suspect urine and blood samples and the U.S.A.D.A. charged him with using banned drugs. One of the drugs Armstrong was accused of using was the performance-enhancing drug EPO.

Armstrong subsequently challenged the U.S.A.D.A. in U.S. federal court. He claimed his right to due process had been violated and that the U.S.A.D.A. was not seized with jurisdiction over the matter. Armstrong’s suit was subsequently dismissed on August 20th, 2012. On August 23rd, 2012, Armstrong stated that he would no longer fight the accusations and the U.S.A.D.A. proceeded against him and cycling associations and federations began to strip him of his various titles.¹⁷⁴

Like Icarus, Armstrong had flown too high; he had flown too close to the sun. He had melted his hero’s wings and had fallen back to earth. On the surface, this sports story seems to have little or nothing to do with the theories surrounding political economy, intellectual property rights, patents, pharmaceutical research, academic freedom and the corporatisation of the university. Yet, it does.

¹⁷² C. Porter, “Begin the Beguine” in *Begin the Beguine* (New York: Bluebird, 1938) at Side B.

¹⁷³ J. Vertuno, “Armstrong ‘done’ with defending legacy from agency” National Post, Saturday August 25, 2012, at S2.

¹⁷⁴ *Ibid.*

2.3 Armstrong and Erythropoietin: Commodify Yourself?

Armstrong was diagnosed with testicular cancer at the beginning of October 1996. His testicular cancer metastasised and Armstrong subsequently had tumours on and in his lungs and brain. After surgery to remove the diseased testicle, an orchiectomy, Armstrong's surgeon gave him a less than a forty percent chance of survival. Armstrong underwent extensive chemotherapy and received his last treatment on December 13th, 1996. According to Armstrong, he underwent a less toxic chemotherapy that included a cocktail of drugs that included etoposide, ifosamide and cisplatin.¹⁷⁵ One of the principle side-effects of most cancer treatments involving chemotherapy is anaemia. Anaemia is typically a failure of the kidneys and the rôle they play in red blood cell production.

To stimulate red blood cell production, many cancer patients are commonly given a synthetic form of erythropoietin. Erythropoietin is a natural occurring glycoprotein hormone produced in the kidneys. Although Armstrong fails to mention whether he received EPO as part of his chemotherapy, with tumours in and on his lungs and brain, one could not be faulted for assuming that EPO was part of his therapy. Subsequently, Armstrong's cancer went into full remission and he recovered. He began his first cycling "comeback" in January 1998. A little over a year and a half later, he had won his first yellow jersey at the *Tour de France*. Armstrong's success, like many cyclists, was fuelled by performance enhancing drugs.¹⁷⁶ And, the rest is history. That said,

¹⁷⁵ See: L. Armstrong & S. Jenkins, *It's Not About the Bike: My Journey Back to Life* (New York: Putnam, 2000).

¹⁷⁶ See: J. Macur, "Lance Armstrong, cycling team, ran 'most sophisticated doping program in sport': Report" *The New York Times*, October 11, 2012, at: <http://www.thestar.com/sports/article/1268926--lance-armstrong-cycling-team-ran-most-sophisticated-doping-program-in-sport-report> (last visited October 12, 2012). Also, see: J. Hall, "Michael Barry, Lance Armstrong's teammate from Toronto, admits to doping" *The Toronto Star*, October 10, 2012, at: <http://www.thestar.com/sports/article/1268990--michael-barry-canadian-cyclist-admits-to-doping> (last visited October 10, 2012). Also, see: S. Gordon, "Canadian cyclist Ryder Hesjedal says he 'chose to wrong path'" *The Globe and Mail*, October 31, 2013, at:

Armstrong's recent troubles with the U.S.A.D.A. and a lifetime ban from the sport appears to be permanent.

2.4 Livestrong™ – Nice Work, If You Can Get It

There is little doubt that Armstrong's "branded" career in cycling had a personal and public benefit. Armstrong's successful participation in cycling after his recovery from cancer became a prototypical "American success story."¹⁷⁷ Armstrong bravado was, to some, endearing in the face of the fatalism that often accompanies a diagnosis of cancer.¹⁷⁸ Remarkably, it was good to see a 'bad boy' from Texas make good and, to boot, do good. To put some flesh on these bones, Armstrong's personal recovery and cancer charity, Livestrong, has inspired many people. As of the autumn of 2012, Livestrong had amassed over \$470 million for cancer research.¹⁷⁹ Armstrong's recent troubles have put his charity, its legal status, and his own standing in jeopardy. Between the U.S. government and potential suits by sponsors, all of Armstrong's interests have been put into question.¹⁸⁰

http://www.theglobeandmail.com/sports/more-sports/danish-cyclist-claims-he-taught-ryder-hesjedal-how-to-use-epo/article15159312/?utm_source=Shared+Article+Sent+to+User&utm_medium=E-mail:+Newsletters+/-E-Blasts+/-etc.&utm_campaign=Shared+Web+Article+Links (last visited November 2, 2013).

¹⁷⁷ See: H. Alger, *Ragged Dick; or, Street Life in New York with the Bootblacks* (Sioux Falls: Nu Vision Publications, 2008) at 54. According to Alger's hero, Ragged Dick "I mean to turn over a new leaf, and try to grow up 'spectable.'"

¹⁷⁸ D. Smee & S. Sreenivasan, *Totally American: Harnessing the Dynamic Duo of Optimism and Resilience to Achieve Success* (Los Angeles: Holy Moly Press, 2009) at 91.

¹⁷⁹ D. Heitner, "The Livestrong Foundation Will Live On Despite Lance Armstrong's Demise" *Forbes Magazine*, November 14, 2012, at: <http://www.forbes.com/sites/darrenheitner/2012/11/14/the-livestrong-foundation-will-live-on-despite-lance-armstrongs-demise/> (last visited December 2, 2012).

¹⁸⁰ T. Nitti, "Is The IRS Investigating Lance Armstrong's Livestrong Foundation?" *Forbes Magazine* November 21, 2012, at: <http://www.forbes.com/sites/anthonymitti/2012/11/21/is-the-irs-investigating-lance-armstrongs-livestrong-foundation/> (last visited December 2, 2012). Also, see: B. Schrotenboer, "Lance Armstrong fights government questions about sex life" *The Toronto Star*, July 2, 2015, at: <http://www.thestar.com/sports/2015/07/02/lance-armstrong-fights-government-questions-about-sex-life.html> (last visited July 4, 2015). Apparently, the U.S. government is suing Armstrong for \$100 million for fraud of the U.S. Postal Service.

According to Forbes Magazine, Armstrong's net worth was estimated to be \$125 million.¹⁸¹ Up until the recent scandal, Armstrong was rumoured to be earning approximately \$10 to \$20 million dollars per year. In the lieu of this accumulation of wealth, Armstrong's personal fortune has been reviewed by potential litigants and actions are proceeding.¹⁸² Less likely are possible criminal charges facing Armstrong that range from mail fraud, the illegal possession and transportation of controlled substances across borders, and, the unlicensed administration of controlled substances.¹⁸³

In early 2013, Armstrong was interviewed by media doyenne Oprah Winfrey. During the interview, Armstrong admitted that he had injected so-called performance enhancing drugs.¹⁸⁴ After the interview and subsequently asked to testify under oath before the U.S.A.D.A., Armstrong declined.¹⁸⁵ Aside from the years of future litigation

¹⁸¹ J. Clark, "Who Cares About Doping, The Armstrong Brand Is Stronger Than Ever" Forbes Magazine, August 31, 2013, at: <http://www.forbes.com/sites/johnclarke/2012/08/31/who-cares-about-doping-the-armstrong-brand-is-stronger-than-ever/> (last visited September 4, 2013).

¹⁸² Reuters Staff, "Lance Armstrong fails to have doping damages lawsuit thrown out: Ex-teammate Floyd Landis and US government seek more than US\$100m from cyclist stripped of seven Tour de France titles" The Guardian, June 20, 2014, at: <http://www.theguardian.com/sport/2014/jun/20/lance-armstrong-fails-to-have-doping-damages-lawsuit-thrown-out> (last visited June 21, 2014). Also, see: J. Stempel, "Lance Armstrong must face U.S. doping lawsuit, judge rules" The Globe and Mail, June 19, 2014, at: <http://www.theglobeandmail.com/sports/more-sports/lance-armstrong-must-face-us-doping-lawsuit-judge-rules/article19254770/> (last visited June 21, 2014).

¹⁸³ W. Fotheringham, "Timeline: Lance Armstrong's journey from deity to disgrace" The Guardian, March 19, 2015, at: <https://www.theguardian.com/sport/2015/mar/09/lance-armstrong-cycling-doping-scandal> (last visited February 27, 2017).

¹⁸⁴ J. Litke, "Lance Armstrong admits doping to Oprah Winfrey" The Toronto Star, January 17, 2013, at: http://www.thestar.com/sports/2013/01/17/lance_armstrong_admits_doping_to_oprah_winfrey.html (last visited January 18, 2013). Also, see: J. Peck, *The Age of Oprah: Cultural Icon for the Neoliberal Era* (Boulder: Paradigm Publishers, 2008): at 25. Peck's overview concerning the culturally saturated space of neoliberal economics and society is an imaginative and insightful examination. It is also a damning critique of the virtue of "positive thinking" and finding a "mind cure" for everything. In this context, it places the neoliberal icons of Winfrey and Armstrong in a rather repugnant light.

¹⁸⁵ J. Macur, "Armstrong Refuses to Meet With U.S. Anti-Doping Agency" The New York Times, February 20, 2013, at: http://www.nytimes.com/2013/02/21/sports/cycling/lance-armstrong-again-refuses-to-meet-with-usada.html?_r=0 (last visited February 23, 2013).

that will whittle away at Armstrong's personal fortune, this seems to be the final word on his career.¹⁸⁶ EPO had run its course with Armstrong.

2.5 Eugene Goldwasser

2.5.1 The Rubber Hits The Road

By comparison, Eugene Goldwasser, a University of Chicago biochemist, led a life full of tenacious intelligence and grit. It lacked the limelight of Armstrong's meteoric cycling career, celebrity and wealth. Yet, Goldwasser's dedicated labour made his life if not a work of art¹⁸⁷ then an epic sojourn. Goldwasser lacked the Icarus-like hubris of Armstrong, but not the passion. In his life, Goldwasser possessed the strength represented by "the loneliness of the long-distance runner."¹⁸⁸ What Goldwasser's "road work" or research career lacks in publicity, it made up for in his commitment and his determination as a scientist. His achievements in the discovery of EPO are closer to that of a Homeric hero, the marathon of Pheidippides or the trials of Job rather than another drug-fuelled 'yellow jersey'¹⁸⁹ for Armstrong.

Unlike the numerous *Tour de France* victories of Armstrong, and only to have his titles stripped away, Goldwasser's place in history as one of the pioneering researchers in

¹⁸⁶ J. Macur, "Government Joins Suit Against Armstrong" The New York Times, February 22, 2013 at: <http://www.nytimes.com/2013/02/23/sports/cycling/justice-department-will-join-lawsuit-against-armstrong.html?pagewanted=all> (last visited February 23, 2013).

¹⁸⁷ O. Wilde, *The Artist As Critic: Critical Writings of Oscar Wilde* (ed.) R. Ellman (Chicago: University of Chicago Press, 1982) at 380. As Wilde put it: "It is through Art, and through Art only, that we can realize our perfection; through Art, and through Art only, that we can shield ourselves from the sordid perils of actual existence."

¹⁸⁸ See: A. Sillitoe, *The Loneliness of the Long Distance Runner* (New York: Knopf, 1960).

¹⁸⁹ See: E. Goldwasser, *A Bloody Long Journey: Erythropoietin (Epo) and the Person Who Isolated It* (Bloomington: Xlibris Book Publishing Company, 2011) at 12. According to Goldwasser's self-effacing assessment: "I am not a 'great' scientist; I did not originate any lasting, important concepts in biology, and the less important ones I have written about have gone nowhere.... Looking at my colleagues, I know that I'm not in the very first rank; I'm better than many but not as good as the best."

isolating EPO is secure.¹⁹⁰ Goldwasser's groundwork concerning the discovery of EPO did not win him lucrative patents or endorsement contracts. He never profited from patenting his work. He never won the Noble Prize, though his work has been viewed as revolutionary as the discovery of antibiotics or insulin.¹⁹¹ To some observers, Goldwasser life's work and efforts improved the quality of life for millions.¹⁹² Indeed, for patients of cancer, and people who suffer from anaemia due to renal failure, Goldwasser's work and labour made the quality of their lives immeasurably better.

2.5.2 Tour de EPO: The Long and Winding Road to EPO's Discovery

In 1955, Goldwasser became the recipient of a grant from the Atomic Energy Commission. The purpose of the grant was to fund research into ways to increase red blood cell production in humans. In the context of the Cold War and in the shadow of the nuclear bomb, Goldwasser set out on a project that he estimated would take him a few to several months. The object of his investigation was to isolate a substance essential to the synthesis of human red blood cells. The task took longer than several months. Remarkably, it took Goldwasser two years to isolate the kidney as the source organ responsible for triggering red blood cell production.

What Goldwasser had discovered was that he could induce anaemia in lab rats by removing their kidneys. But, as luck would have it, the factor or hormone responsible in the kidneys remained comparatively hard to find as the recently discovered "God

¹⁹⁰ See: A. Pollack, "Eugene Goldwasser, Biochemist Behind an Anemia Drug, Dies at 88" The New York Times, December 20th, 2010, at: http://www.nytimes.com/2010/12/21/health/21goldwasser.html?_r=0 (last visited January 3, 2011).

¹⁹¹ M. Ramirez, "Dr. Eugene Goldwasser, 1922-2010: Biochemist behind lifesaving drug, father of EPO" The Chicago Tribune, December 21, 2010 at: http://articles.chicagotribune.com/2010-12-21/features/ct-met-goldwasser-obit-1222-20101221_1_epo-new-drug-key-hormones (last visited January 3, 2012).

¹⁹² C. Kung & T. Lappin, "A Tribute to Gene Goldwasser for Experimental Hematology" (2011) 39 Exper. Hematology at 506-507.

particle.”¹⁹³ The search for the substance that stimulated red blood cell production proved elusive. The search would be as frustrating as locating *the* fabled needle in a haystack of needles.

Over twenty odd years, Goldwasser would pursue EPO from the laboratory to stockyards, to abattoirs and, then, back again. In the midst of filing granting applications and teaching at the University of Chicago, Goldwasser’s life work would produce little or no results concerning EPO. It meant that Goldwasser toiled away almost two decades squeezing sheep kidneys and running blood experiments and brought him no closer to the isolation of the elusive substance EPO. There would be glimmers of EPO’s presence, but its isolation would remain enigmatic and inscrutable.

In 1973, Goldwasser received a letter from a Japanese researcher, Takaji Miyake, based out of Kumamoto University. Goldwasser’s published papers on anaemia and his trudging through kidneys and blood samples were familiar to Miyake. Recent research indicated that reliable traces of EPO could be found in urine. Miyake informed Goldwasser that he had a number of genetically disordered patients who suffered from aplastic anaemia and offered to collect their urine samples for Goldwasser. For the next two years, Miyake collected 2,550 litres of urine from his patients. In 1975, Goldwasser and Miyake met in the Palmer House hotel in Chicago. It was there that Miyake presented Goldwasser with the distillation of 2,550 litres of dried urine. Miyake had

¹⁹³ See: L.M. Lederman & D. Teresi, *The God Particle: If the Universe Is the Answer, What Is the Question?* (Boston: Houghton Mifflin, 2006). Lederman never liked the term “God particle.” The name was insisted by his publisher. Rather, Peter Higgs, the physicist who proposed the existence of the particle, preferred to call it the “Goddamn particle” because it was so ‘Goddamn hard to find!’ See: J. Randerson, “Father of the ‘God Particle’” *The Guardian*, June 30, 2008, at: <http://www.guardian.co.uk/science/2008/jun/30/higgs.boson.cern> (last visited September 5, 2011). Also, see: I. Sample, “Higgs boson scientists share physics Nobel prize” *The Guardian*, October 8, 2013, at: <http://www.theguardian.com/science/2013/oct/08/nobel-prize-physics-peter-higgs-boson-francois-englert> (last visited October 12, 2013).

made a present of it; and wrapped the small container carrying the distilled urine sample in fine Japanese silk – “[a] *furoshiki*, the ritual covering for gifts given to special friends and colleagues.”¹⁹⁴

It was from Miyake’s *gift* of urine that Goldwasser was able to achieve his breakthrough in isolating eight milligrams of pure human EPO.¹⁹⁵ After 22 years of searching for EPO, Goldwasser recalled that “[w]e finally had something we could work with.”¹⁹⁶ Still, after this long search for the ever-elusive EPO, Goldwasser, then, commenced the search for a drug company that he could work with to develop EPO for potential drug trials. This proved to be almost as daunting as the discovery of EPO. In fact, Goldwasser’s attempt to attract interest in EPO was a Sisyphean task. During the late-1970s, Goldwasser had tried and failed to interest smaller pharmaceutical firms in Chicago and the American mid-West as well as larger firms like Abbott Laboratories.¹⁹⁷ To the business executives running pharmaceutical firms, there was no market for the drug that Goldwasser was developing. It had no utility. It had no commercial value.

2.5.3 DNA, Goldwasser and the Development of Biotechnology

In 1953, James Watson and Francis Crick, building on the (unsung) work of others,¹⁹⁸ unlocked the structure of deoxyribonucleic acid (DNA).¹⁹⁹ This was like

¹⁹⁴ M. Goozner, *The \$800 Million Pill: The Truth Behind the Cost of New Drugs* (Berkeley: University of California Press, 2005) at 18.

¹⁹⁵ T. Miyake, C.K. Kung & E. Goldwasser, “Purification of Human Erythropoietin” (1977) 252(15) *J. Bio. Chem.* at 5558.

¹⁹⁶ E. Goldwasser, quote by Goozner, *supra* note 194 at 18.

¹⁹⁷ Goozner, *supra* note 194 at 18-19.

¹⁹⁸ One person’s work that gained little recognition during her lifetime was Rosalind Franklin. It is now fairly well-known that the discovery of double helix structure of DNA would have been impeded without the X-ray diffraction expertise of Franklin. Franklin’s premature death meant that she, amongst others, would never receive Nobel recognition for the discovery of DNA. See: B. Maddox, *Rosalind Franklin: The Dark Lady of DNA* (New York: Perennial, 2003).

¹⁹⁹ See: V.K. McElheny, *Watson and DNA: Making a Scientific Revolution* (Cambridge: Basic Books, 2004).

discovering the Rosetta Stone for the development of life on earth.²⁰⁰ The unravelling of DNA's double helix has led to many insights into genetics and improvements in human health. The discovery of the structure of DNA ushered in what would eventually be christened the 'biotechnology revolution.'

The development of DNA research unfolded for the following 25 years. But, it was "[i]n the late 1970s and early 1980s... [that a so-called] entrepreneurial revolution swept through the once staid world of academic medical research."²⁰¹ Indeed, "[i]n October 1980 Genentech, founded in 1976 by venture capitalists and scientists, was the first dedicated biopharmaceutical company to do an IPO."²⁰²

As observers noted concerning computational and computer collaboration,²⁰³ public and socially subsidised biotech research was consistently encouraged by state policy to 'partner' with private enterprise. Yet, what the "biotech revolution" did, and what will be advanced later in this discussion, was reconfigure the business surrounding research activities in the academy and change the research concerns, patterns of development and the behaviour of scientists. According to Merrill Goozner, university researchers changed their expectations:

Dreams of Nobel glory were gradually replaced by dreams of high-tech riches, and a [growing] number of new biotechnology firms [were] eager to jump on... [Goldwasser's] discovery.... [Yet, it is important not to forget that t]he core technologies of biotechnology were themselves

²⁰⁰ As the Human Genome Project came to fruition, President Clinton stated that: "Today we are learning the language in which God created life. We are gaining ever more awe for the complexity, the beauty, the wonder of God's most divine and sacred gift." President W. Clinton, "Text of the White House Statements on the Human Genome Project" The New York Times, June 27, 2000, at: <http://partners.nytimes.com/library/national/science/062700sci-genome-text.html> (last visited September 14, 2008).

²⁰¹ Goozner, *supra* note 194 at 20.

²⁰² W. Lazonick & M. Mazzucato, "The Risk-Reward Nexus: Innovation, Finance and Inclusive Growth" (November 2012) Policy Network, at: www.policy-network.net (last visited August 20, 2013) at 12.

²⁰³ K. Robins & F. Webster, *Times of the Technoculture: From the Information Society to the Virtual Life* (London: Routledge, 1999) at 5.

products of university-based scientists who used public funding in the United States and in England to foment a revolution.²⁰⁴

What had traditionally been viewed as creating knowledge and scientific understanding, of solving problems in human biology, overnight turned into ways to profit from them. The problems of solving disease became business strategies in the 1980s – what could be called the propertisation and commodification of research. As Goozner notes, “Goldwasser’s protracted search for Epo coincided with a turning point in medical history.”²⁰⁵ And, it was reshaped by the rise of neo-classical economics in American politics. Nonetheless, this logic also evolved in the shadow of a militarised economy of the “cold war.” Similar to most post-World War II technological developments in America, it was government funding that subsidised and bridged most research programmes through universities. The “classic” notion of a 19th-century inventor like an Edison, Tesla or Bell was out dated or a romantic anachronism. Today, inventions and their patents can only be viewed as products of collaborative efforts and generously and publically received funds. As Noam Chomsky noted: “Virtually every dynamic component of the modern economy, from computers and the Internet to the biology-based industries, is to a considerable extent an outgrowth of [publicly funded] university research....”²⁰⁶ Nonetheless, the private sector and its business ideology advance that these technological advancements had been the product of so-called entrepreneurial and private innovation – *not* the “entrepreneurial state.”²⁰⁷ In reality, this corporate strategy surrounding post-war funding was “one of the many ways in which costs and risk [of

²⁰⁴ Goozner, *supra* note 194 at 20.

²⁰⁵ *Ibid.*

²⁰⁶ N. Chomsky, cited H. Siddiqui, “Chomsky and Said stir the soul,” *The Toronto Star*, June 18, 2000 at A13.

²⁰⁷ See: M. Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (New York: Anthem Press, 2013).

private business were] socialized in what is misleadingly described as a free-enterprise market economy.”²⁰⁸ Or, as economists Mariana Mazzucato and William Lazonick note, “there is a growing body of research [that] shows... [that] it is taxpayers who often set the stage for venture capital investments by funding the riskiest investments in the ‘knowledge economy’ – in areas such as the internet, biopharmaceuticals and clean technology.”²⁰⁹

According to Goozner, Goldwasser’s attempt to find a partner and manufacture EPO is an example of what is wrong with basic research and its application. In 1980, Goldwasser approached a California-based company, Applied Molecular Genetics. Applied Molecular Genetics, which would eventually be renamed Amgen, agreed to assist Goldwasser. Their research team acquired a sample of Goldwasser’s purified EPO: a supply of EPO that “had taken... [Goldwasser] nearly a quarter century to find.”²¹⁰ With the new technology of recombinant engineering, the gift of some of Goldwasser’s EPO, Amgen was able to identify and isolate the gene that produced EPO and patented the gene.²¹¹ During the 1980s, Amgen patented EPO and conducted clinical trials on

²⁰⁸ Siddiqui, *supra* note 206. For a recent example of a public “subsidy,” see: S. Manning, “NHS hit for millions by overcharging ‘scam’: Drug companies exploit loophole in the law to hike prices by as much as 2,000 per cent” *The Independent*, July 15, 2013, at: <http://www.independent.co.uk/news/uk/politics/nhs-hit-for-millions-by-overcharging-scam-8708292.html> (last visited July 18, 2013).

²⁰⁹ M. Mazzucato and W. Lazonick, “Innovation: let the good risk-takers get their reward” *The Guardian*, November 29, 2012, at: <http://www.theguardian.com/commentisfree/2012/nov/29/innovation-good-risk-takers-reward> (last visited December 10, 2013). Indeed, Mazzucato and Lazonick go on to point out “that all the radical technologies behind Apple’s iPhone [and other technologies] were publicly funded: the internet, GPS, touchscreen display and even the new voice-activated Siri personal assistant... [were all products developed predominantly with public support].”

²¹⁰ M. Goozner, “Eugene Goldwasser, Discoverer of EPO” *Gooznews*, December 18, 2010, at: <http://gooznews.com/?p=2255> (last visited June 12, 2014).

²¹¹ *Production Of Recombinant Erythropoietin*, US Pat. No. 5441868 A.

dialysis patients and, by 1989, gained Food and Drug Administration (F.D.A.) approval to market EPO under the brand name Epogen.^{TM212}

Epogen made Amgen billions of dollars appropriating Goldwasser's work.²¹³ Amgen did build on Goldwasser's work and, to a degree, as a backhanded courtesy remitted \$30,000 annually to Goldwasser's lab at the University of Chicago. If Goldwasser was going to continue his work, he would have needed ten times that amount or \$300,000 "to continue his sixth decade of work on Epo."²¹⁴ Goldwasser's real desire was to "decipher the kidney's internal mechanisms for producing the [EPO] enzyme... [and make it] possible to repair damaged kidneys."²¹⁵ Had Goldwasser been successful with his next stage of research with EPO, he would have eliminated the need for the drug – needless to say, this would have ended revenue to Amgen and potential revenue for future producers of variants of the drug and would not be in their business interests. As Twain noted, "a certain amount of pride always goes along with a teaspoonful of brains, and that this pride protects a man from deliberately stealing other people's ideas."²¹⁶ Concerning Goldwasser, Amgen was unaware of Twain's observations and apparently lacked a teaspoon or a modicum pride.

When Goldwasser closed down his lab in late-2000, it was due to a lack of funds.

Goldwasser mused that "one percent of one percent of the drug's annual revenues would

²¹² Epogen is also known as Procrit.TM Procrit is a licenced version of Epogen produced by Ortho and marketed to cancer patients. AranespTM is another version and as Marcia Angell puts it "they're all essentially the same substance under different names." See: M. Angell, *The Truth About Drug Companies: How They Deceive Us and What to do About It* (New York: Random House, 2005) at 61.

²¹³ According to one source, Amgen was earning up to \$2 billion a year from the sale of EPO. See: K. Sharp, "Armstrong's fraud paralleled EPO-maker's feud" *Cycling News* November 5, 2012, at: <http://www.cyclingnews.com/features/armstrongs-fraud-paralleled-epo-makers-feud#null> (last visited December 7, 2012).

²¹⁴ Goozner, *supra* note 194 at 37.

²¹⁵ *Ibid.*

²¹⁶ M. Twain, "Unconscious Plagiarism: Speech Delivered at the Dinner Given by the Publishers of The Atlantic Monthly to Oliver Wendell Holmes, in Honor of His Seventieth Birthday, August 29, 1879" (1879) 45 *The Atlantic Monthly Supplement* at 11.

have funded my lab quite handsomely.”²¹⁷ Justifiably, Goldwasser noted that “one percent of one percent” (reminding one of the “Occupy” phrase that emanated from Zuccotti Park in 2011) would have meant that he “could [even afford to] buy a new pair of shoes.”²¹⁸ At the age of 88, “[w]hen his kidneys began to fail shortly after Thanksgiving, Goldwasser opted for hospice care instead of dialysis, a procedure revolutionized by his discovery” of EPO, and died on December 17th, 2010. As Goozner noted:

[Goldwasser’s] discovery has prevented tens of thousands of deaths from tainted blood transfusions and enabled millions of cancer and dialysis patients to live longer and more productive lives. Yet he never won any prestigious awards. And very few people – certainly not the general public, nor the patients he helped – even know his name.²¹⁹

Donald Steiner, a fellow biochemist at the University of Chicago, noted, that Goldwasser’s discovery of EPO is “one of the great contributions to science or medicine of the 20th century....”²²⁰ In acknowledgment of Goldwasser’s effort, Steiner held that Goldwasser’s contribution was “comparable to the discovery of insulin.”²²¹ Yet, at the

²¹⁷ Pollack, *supra* note 190.

²¹⁸ Goozner, *supra* note 194 at 37.

²¹⁹ M. Goozner, “Fond Farewell to the Biotech Industry’s Founding Father” Med City News, December 20, 2010, at: <http://www.medcitynews.com/2010/12/a-tribute-to-the-grandfather-of-the-biotech-industry/>.

²²⁰ D.F. Steiner, quoted by Ramirez, *supra* note 191.

²²¹ *Ibid.* Although Fredrick Banting, Charles Best and, questionably, J.J.R. Macleod are officially credited with the “discovery” of insulin, and winning the 1923 Nobel Prize in Medicine, as in most scientific research there was a considerable amount of unaccredited collective work that led to the “discovery.” According to D.W. Gordon Murray, “Claud[e] Bernard in the nineteenth century in France... used insulin for the treatment of diabetes, both experimentally and clinically, but he had not devised Banting’s ingenious method to get purified insulin.” D.W.G. Murray, *Medicine in the Making* (Toronto: Ryerson Press, 1960) at 25. According to Ian Murray, Nicolae Paulescu published his findings first and patented insulin – what Paulescu called “pancrein” – in 1921. See I. Murray, “Paulescu and the Isolation of Insulin” (1971) 26 (2) J. Hist. of Med. & Allied Sci. at 150–157. Also see: I. Pavel, *The Priority of N.C. Paulescu in the Discovery of Insulin* (Bucharest: Academy of the Socialist Republic of Romania, 1976). Paulescu published his finds on the 22nd of June, 1921, in the *Archives Internationales de Physiologie* of Liege and Paris: Banting and Best’s findings were read for submission just prior to the New Year in 1921 and their findings were subsequently published in the February 1922 issue of the *Toronto Journal of Laboratory and Clinical Medicine*. Banting and Best’s insulin patent was legally recognised and sold to the University of Toronto for \$3. See: Johnson, *supra* note 145. Citing historian, Michael Bliss, Banting and Best sold their patent so cheaply as “a kind of gift to humanity.”

axiomatic end of the day, Goldwasser’s case “shows how private firms rely on public research to come up with important new drugs.”²²² Put baldly, the pharmaceutical industrial complex in the case of EPO remitted very little monetarily or scientifically into the system that supported the research that created EPO.²²³ At the best of times, the pharmaceutical industrial complex typically unjustly enriches itself. The pharmaceutical industrial complex enriches itself in many – if not most – instances at the expense,²²⁴ welfare and health of the public.²²⁵

²²² Goozner, *supra* note 194 at 15.

²²³ For example, the average corporate income tax rate in the U.S. is 35%. Yet, most U.S. pharmaceutical corporations do not pay this rate. Many U.S. pharmaceutical corporations, as with other corporations like Google, are legally headquartered in low-tax offshore havens like Ireland or the Cayman Islands. This loophole allows pharmaceutical corporations to offshore earnings and avoid U.S. tax. In the last four years, Pfizer has conducted 40% of its worldwide sales in the U.S. and has not paid tax due to “losses” on these sales. In 2012, the Securities and Exchange Commission (S.E.C.) issued a letter to Pfizer’s U.S. office asking how it was able to account for losses in the previous four years. Undeterred by S.E.C.’s query into “losses,” Pfizer filed its 2012 taxes as a fifth consecutive year of losses with the Internal Revenue Service. The other nine corporations offshoring profits to avoid paying U.S. tax were: Apple; Merck; Google; Abbott Laboratories; Johnson & Johnson; Citigroup; IBM; and, General Electric. See: J. Smialek & A. Webb, “Stiglitz Calls Apple’s Profit Reporting in Ireland ‘a Fraud’” Bloomberg News, July 28, 2016, at <http://www.bloomberg.com/news/articles/2016-07-28/stiglitz-calls-apple-s-profit-reporting-in-ireland-a-fraud>. A (last visited August 1, 2016). According to Smialek and Webb, “About \$215 billion of Apple’s total \$232 billion in cash is held outside of the country...” Also, see: Citizens for Tax Justice – Staff, “Apple, Microsoft and Eight Other Corporations Each Increased Their Offshore Profit Holdings by \$5 Billion or More in 2012: 92 Fortune 500 Corporations Boosted Their Offshore Stash by Over \$500 Million Each” Citizens for Tax Justice, March 11, 2013, at:

<http://ctj.org/ctjreports/2013/03/apple-microsoft-and-eight-other-corporations-each-increased-their-offshore-profit-holdings-by-5-billion-or-more-in-2012-92-fortune-500-corporations-boosted-their-offshore-stash-by-over-500-million-each> (last visited April 6, 2013). Also, see: H. Cockburn, “Apple tax: EU orders firm to pay Ireland record £1bn penalty over ‘sweetheart’ deal” The Independent, August 30, 2016, at: <http://www.independent.co.uk/news/business/news/apple-tax-ireland-eu-1bn-european-commission-sweetheart-deal-europe-latest-a7216126.html> (last visited August 31, 2016). Also, see: R. Syal & P. Wintour, “MPs attack Amazon, Google and Starbucks over tax avoidance” The Guardian, December 2, 2012, at: <http://www.guardian.co.uk/business/2012/dec/03/amazon-google-starbucks-tax-avoidance> (last visited January 28, 2013). According to Gabriel Zucman, Canada forgoes annually approximately \$6 billion in taxes from tax avoidance and tax evasion. See: G. Zucman, *The Hidden Wealth of Nations: The Scourge of Tax Havens* (trans.) T.L. Fagan (Chicago: The University of Chicago Press, 2015) at 53. For an alternative perspective, see: C. Mortished, “Don’t blame the multinationals for hiding the big tax money” The Globe and Mail, April 20, 2015, at: <http://www.theglobeandmail.com/report-on-business/rob-commentary/rob-insight/dont-blame-the-multinationals-for-hiding-the-big-tax-money/article24027560/> (last visited April 21, 2015). Also, see: R. Cribb & M.C. Oved, “How offshore banking is costing Canada billions of dollars a year” The Toronto Star, April 4, 2016, at: <http://www.thestar.com/news/world/2016/04/04/how-offshore-tax-havens-are-costing-canada-billions-of-dollars-a-year.html> (last visited April 4, 2016). Also, see: N. Shaxson, *Treasure Islands: Uncovering the Damage of Offshore Banking and Tax Havens* (New York: Palgrave MacMillan, 2011).

²²⁴ According to Oxford economist Paul Collier, tax havens and “transfer pricing” allow “miniscule jurisdictions [to] ... become the legal home to trillions of dollars of corporate assets through the unbeatable

2.6 Conclusion

In Goldwasser's case, much of his initial university research on EPO was funded by Atomic Energy Commission and then the National Institutes of Health (N.I.H.). His teaching career and his subsidised laboratory were centred at the University of Chicago (ironically Milton Friedman's stomping ground). For much of Goldwasser's research life, his Homeric and basic research that made the discovery of EPO possible, the corporate entity Amgen did not exist. There was little or no public-private partnership involved in Goldwasser's research and he acted, similar to one critic's assessment of another American nonconformist, as "a deliberately lone guerrilla"²²⁶ in his pursuit of EPO – on the fringe but always publically funded. In Chomskyan terms, it would be wholly misleading to describe Goldwasser's research as flourishing in any sense within a "free-enterprise market economy;" a circumstance that makes Goldwasser's achievements even more remarkable and heroic.

In context, "the 21 most important drugs introduced between 1965 and 1992, 15 were developed using knowledge and techniques from [U.S.] federally funded

attractions of zero taxation plus secrecy." P. Collier, "Helping Africa to become Canada" *The Globe and Mail*, April 20, 2013. at F2. Also, see: R. Turner, *Study on Transfer Pricing in Working Paper 96-10* (Ottawa: The Technical Committee on Business Taxation Committee, Department of Finance, 1996). International laws that were drafted to avoid "double taxation" of corporations have been bent so far that even the Organisation for Economic and Co-operation and Development ironically refers to these laws as promoting "non-double taxation." See: OECD – Staff, "OECD reports new developments in tax information exchange" April 19, 2013, at: <http://www.oecd.org/ctp/oecd-reports-new-developments-in-tax-information-exchange.htm> (last visited May 1, 2013). Also for an amusing case of "off-shoring," a Welsh town is trying to draw attention to the absurdity of current tax laws, see: A. Sherwin, "Crickhowell: Welsh town moves 'offshore' to avoid tax on local business" *The Independent*, November 10, 2015, at: <http://www.independent.co.uk/news/uk/crickhowell-welsh-town-moves-offshore-to-avoid-tax-on-local-business-a6728971.html> (last visited November 11, 2015).

²²⁵ See: S. Ubelacker, "Drug sales reps often skip the side effects, doctor survey finds" *The Globe and Mail*, April 10, 2013, at: <http://www.theglobeandmail.com/life/health-and-fitness/health/drug-sales-reps-often-skip-the-side-effects-doctor-survey-finds/article10981202/?service=mobile> (last visited April 15, 2013).

As the survey notes, sales representatives are legally obliged to disclose the side effects of the drugs they promote to doctors but generally choose not to do so in Canada and the U.S.

²²⁶ R. Miliband, "C. Wright Mills" (1962) *I/15 N.L.R.* at 20.

research.”²²⁷ In other words, three-quarters of the most important drugs developed in the almost three decades in the U.S. were developed by massive public subsidy. Contrary to the established myth of private risk and reward, these innovative drugs were not developed in isolation by maverick and independent pharmaceutical companies. Rather, they were developed by and through public institutions, subsidisation, support and funding.

Goldwasser’s work was a combined project of many publicly funded donations and contributors and was ultimately assisted throughout and by the “kindness of strangers.”²²⁸ Goldwasser’s life and work and the communitarian sensibility surrounding the research into EPO are what made EPO’s discovery possible. Comparatively, the rise and fall of Lance Armstrong symbolise, in all senses, the competitive and individualistic consumption success of faltering neo-liberal economic growth based on innovation models gone awry.²²⁹ In other words, it was the communitarian sensibility present in

²²⁷ Senator Connie Mack, cited in *Congressional Joint Economic Committee* May 2000, on the rôle and benefits of the National Institutes of Health in medical research at: www.mco.edu/research/nih_research_benefits.pdf (last visited November 29, 2008). In Canada, a good example of public funding developing a revolutionary new drug see: R. Nickel & A. Martell, “How a Canadian Prairie city made an Ebola vaccine” Reuters, August 14, 2014, at: <http://www.reuters.com/article/2014/08/14/us-health-ebola-canada-idUSKBN0GE22E20140814> (last visited October 5, 2014). With a nominal amount of public money directed toward Ebola, the National Microbiology Laboratory in Winnipeg has become the world leader in Ebola research. See: H. Branswell, “How a Winnipeg lab became an Ebola research powerhouse: National Microbiology Laboratory in Winnipeg behind innovative, experimental ZMapp Ebola drug” The Canadian Press, September 21, 2014, at: <http://www.cbc.ca/news/canada/manitoba/how-a-winnipeg-lab-became-an-ebola-research-powerhouse-1.2773397> (last visited September 30, 2014). It is also a good example of publicly funded research being sold for private gain at fire-sale prices. See: J. Stanford, “Ebola vaccine story shows folly of free-market drugs” November 3, 2014, at: <http://www.theglobeandmail.com/globe-debate/ebola-vaccine-story-shows-folly-of-free-market-drugs/article21422767/> (November 20, 2014). As Stanford remarks: “the government snatched defeat from the jaws of victory by handing over this important invention to the private sector....”

²²⁸ T. Williams, *A Street Car Named Desire* (Oxford: Heinemann, 1997) at 123. Who knew that Miyake’s gift of the distillate urine to Goldwasser was the most essential and kindest gift of all; one contributing to the discovery of EPO and the relief of millions anaemic patients. It does put into question the expression concerning whether ‘one does or doesn’t give a piss.’

²²⁹ See: R.J. Gordon, “Is US economic growth over? Faltering innovation confronts the six headwinds” (2012) 63 C.E.P.R. Policy Insight.

medical research, not the market, that secured its past success and may still secure its future.

3 CHAPTER THREE – TOWARD A THEORY

3.1 A Theory and Variations On the Theme Concerning the Political Economy of Intellectual Property

3.1.1 On Materialism, Intellectual Property and Its Discontents

From a measured perspective, political economy's value is its ability to develop a synthesis of existing knowledge that links law, politics, economics, history, culture, sociology and anthropology. In doing so, it attempts to advance a cogent critical understanding and knowledge of intellectual property within skeletal muscles – the myology – of capitalism. To degrees, proponents for stronger intellectual property regimes – advocates for increasing “*digital sharecropping*”²³⁰ (or *peonage*?) – obliquely rationalise their position by way of conventional economics, property rights, and the power of the market. Yet, as a forewarning and to paraphrase the late political journalist Alexander Cockburn, proponents for stronger intellectual property rights “fire volley after volley of cliché into... densely packed prejudices... [and] ...never deviate... into paradox....”²³¹ Poignantly, these economic rhetoricians for stronger enforcement and reinforcement of intellectual property commonly support “a constant affirmation of received beliefs.”²³² This logically eliminates the possibility of contradiction, and, wittingly or unwittingly, reinforces the *status quo* that amusingly opposes the *revolutionary* culture of the information age that it often touts or purports to advance versus a culture of uniformity.²³³

²³⁰ L. Lessing, *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (London: Bloomsbury Publishing PLC, 2008) at 243.

²³¹ A. Cockburn, “How to be a Foreign Correspondent” in *Corruptions of Empire: Life Studies and the Reagan Era* (London: Verso, 1988) at 188.

²³² *Ibid.*

²³³ See: N. Postman, “Informing Ourselves to Death” (1990) German Informatics Society at: http://w2.eff.org/Net_culture/Criticisms/informing_ourselves_to_death.paper (last visited September 29,

3.1.2 A Theory of Political Economy and Intellectual Property

Neo-classical economics and economic utility are popularly viewed as the correct economic tools and as self-evident solutions that most people believe we ought to use to understand and develop our technological society. But, as the exceptional economist Joan Robinson framed the issue: “The purpose of studying [neo-classical] economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists.”²³⁴ Similarly, Steve Keen has observed that “economic theory has seen off many attacks, not because it has been strong enough to withstand them, but because it has been strong enough to ignore them.”²³⁵ And, as such, an “education in economics... [is] in fact little better than an indoctrination.”²³⁶ On the other hand, as John King suggests: “economics is unique among the social sciences in having a single monolithic mainstream, which is either unaware of or actively hostile to alternative approaches.”²³⁷ Thus, our strategy of employing political economy as a theoretical point of intervention is to avoid “ready-made-answers.” Following the lead of Canadian political economist Wallace Clement:

Political economy is a holistic approach to understanding society from a materialist perspective. Political economy, at its best, connects the economic, political, and cultural/ideological moments of social life. Rather than seeking explanations through narrowly constructed disciplines, it tries to build from a totality which includes the political, economic, social, and cultural, where the whole is greater than its parts.

2011). Also, see: T. Wu, *The Attention Merchants: The Epic Scramble to Get Inside Our Heads* (New York: Alfred A. Knopf, 2016).

²³⁴ J. Robinson, “Marx, Marshall and Keynes” in *Collected Economic Papers Vol. 2* (Cambridge: MIT Press, 1980) at 17.

²³⁵ S. Keen. *Debunking Economics - Revised and Expanded Edition: The Naked Emperor Dethroned?* (London: Zed Books, 2011) at 43.

²³⁶ *Ibid* at 33.

²³⁷ J.E. King, “A Case for Pluralism in Economics” (2013) 24 *Econ. & Lab. Rel. Rev.* at 17.

Its claim is that to understand each of the political, economic, social and cultural requires contextualization of each with the other.²³⁸

The value of political economy is its ability to develop comprehensive, inclusive and critical accounts of theoretical and practical achievements across multiple disciplines. In doing so, political economy is essential to historically link our knowledge of our current situation and to our understanding of intellectual property.

3.1.3 Intangible or Intelligible Property? – Discourse and Causerie as a Less Than Discrete Unit of Analysis

Intellectual property is an abstraction (as are *all* rights) and it is intangible by definition.²³⁹ Yet, it begs the question what is intellectual property? As a concept and in a post-industrial and post-modern world, intellectual property and its symbolic constituents²⁴⁰ appear to slip the gravitational pull of the material world – of so-called “real” property – and exists as a reflection in a mirror²⁴¹ or, put differently, as a *simulacrum*.²⁴² Hence, from the outset, it would appear that a historical materialist and a critical political economy approach to analysing intellectual property is doomed to failure. Fortunately, for our purposes, the story is far more interesting. Intellectual property is a commodity and an interdisciplinary approach to political economy possesses the possibility to thoroughly interrogate contemporary intellectual property regimes; and, subsequently, their relationship to higher education. Thus, through political economy we

²³⁸ W. Clement, “Political Economy?” in *Understanding Canada: Building on the New Canadian Political Economy* (ed.) W. Clement (Montréal: McGill-Queen’s University Press, 1997) at 3.

²³⁹ See: C.B. Macpherson, *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1992) at 199.

²⁴⁰ See: J. Baudrillard, *For a Critique of the Political Economy of the Sign* (trans.) C. Levin (St. Louis: Telos Press, 1981).

²⁴¹ See: J. Baudrillard, *The Mirror of Production* (trans.) M. Poster (St. Louis: Telos Press, 1975).

²⁴² J. Baudrillard, *Simulations* (New York: Semiotext(e), 1983) at 3. Baudrillard suggests and cites a non-existent passage in *Ecclesiastes* to emphasise his point: “The simulacrum is never that which conceals the truth – it is the truth which conceals that there is none. The simulacrum is true.” Put differently, since most people don’t check the non-existent passage in *Ecclesiastes*, the truth of property is important precisely because it is a myth.

can achieve a better understanding of the structure and system that governs the production of knowledge in the discourse(s) and causerie(s) of intellectual property in late-capitalist society and their impact on the university and academic freedom.

Following Michel Foucault's use of the term *discourse*,²⁴³ Edward Saïd held that "discourse" was a useful concept to analyse and unpack the questionable "science" of "orientalism."²⁴⁴ For Saïd, by examining the discourse of colonialism is to note the inherit ideological process that was used to justify, legitimate, spread, and violently impose European colonialism and "a history of 'governmentality'"²⁴⁵ on "backward" countries – or impose a trustworthiness for or upon the "uncivilised" world.²⁴⁶ These are countries that are currently referred to in 'politically correct' "newspeak"²⁴⁷ as *developing countries*. According to the United Nation's *Standard Country or Area Codes for Statistical Use*, "The designations 'developed' and 'developing' are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process."²⁴⁸ Yet, whether it

²⁴³ One should note that Foucault often took broad advantage of others and their work and rarely cited his influences. For example, the works of Elias Canetti, Aimé Césaire and Norbert Elias preceded and framed many of the themes that Foucault would examine throughout his life's work. See: E. Canetti, *Crowds and Power* (trans. C. Stewart) (New York: Farrar, Straus and Giroux, 1962); A. Césaire, *Discourse on Colonialism* (trans.) J. Pinkham (New York: Monthly Review Press, 2000); N. Elias, *The Civilising Process: The History of Manners* (Oxford: Blackwell Publishing, 2000).

²⁴⁴ E.W. Saïd, *Orientalism* (New York: Vintage Books, 1978) at 203. As Saïd remarks: "[t]he Orient that appears in Orientalism, then, is a system of representations framed by a whole set of forces that brought the Orient into Western learning, Western consciousness, and later, Western empire." In this sentence, Saïd captures rather clearly the instrumentality of Western ambitions.

²⁴⁵ M. Foucault, "Governmentality" in *The Foucault Effect: Studies in Governmentality* (Chicago: The University of Chicago Press, 1991) at 102.

²⁴⁶ E.W. Saïd, "Zionism from the Standpoint of Its Victims" in *The Edward Saïd Reader* (eds.) M. Bayoumi & A. Rubin (New York: Vintage Books, 2000) at 133.

²⁴⁷ See: G. Orwell, "Nineteen Eighty-four" in *The Complete Works of George Orwell* (Hastings: Delphi Classics, 2013) at 2,337.

²⁴⁸ *Standard Country or Area Codes for Statistical Use* (New York: Statistical Services Branch, Statistics Division, United Nations, Room DC2-1620, 2008) at <http://unstats.un.org/unsd/methods/m49/m49.htm#ftn1>. Should anyone question the stages of so-called "development," one need only read Aimé Césaire play on the life and times of Patrice Lumumba. Lumumba is a prime example of what happens when one tries to break with the traditional so-call model of

wants to or not, it does express a judgement. Moreover, similar to the discourse on colonialism, the discourse on intellectual property is situated in the overall ‘development language’ and a teleologically driven European modernising process.

‘Development’ theorist, Eduardo Galeano, reminds us to be cautious in the use of terms like ‘progress’ and ‘development.’ As Galeano wryly observed, the purported ethically neutral language of development models fail to realise that “[u]nderdevelopment isn’t a stage of development, but its consequence....”²⁴⁹ For economist Ha-Joon Chang, neoliberal development advocates laconically fail to understand that “developing” countries that show reluctance to modernise under neoliberal economic recipes and solutions to underdevelopment are exercising democratic freedom. Underdeveloped countries are not merely demonstrating “stupidity in... not accepting such... tried and tested recipe[s] for development”²⁵⁰ but are clearly demonstrating worldly intelligence and resistance to such *folly*.²⁵¹ Put differently, both “right” and “left” neoliberalists modernisers see the market model as the *only* solution to achieve economic progress and modernisation. Indeed, the suggestion is that economic progress and modernisation can only be integrated through a western development model and economic system: one that incorporates not only the West’s technology but incorporates and embodies its central ideas and principles surrounding progress, the rule of law, and ownership. According to Chang, both “right” and “left” neoliberalists provide different sides of the same coin

economic development for “developing economies.” See: A. Césaire, *A Season in the Congo* (trans.) G. Chakravotry Spivak (Greenford: Seagull, 2008).

²⁴⁹ E. Galeano, *Open Veins of Latin America: Five Centuries of the Pillage of a Continent* (trans.) C. Belfrage (New York: Monthly Review Press, 1998) at 285. For a brilliant and determined alternative to the neoliberal “development” mantra, see: H.-J. Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London: Anthem, 2002).

²⁵⁰ H.-J. Chang, “Kicking Away the Ladder: How the Economic and Intellectual Histories of Capitalism Have Been Re-Written to Justify Neo-Liberal Capitalism” (2002) 15 *Post-Autistic Econ. Rev.* at: http://www.btinternet.com/~pae_news/review/issue15.htm (last visited March 14, 2010).

²⁵¹ D. Erasmus, *In Praise of Folly* (London: Reeves & Turner, 1876).

never noticing that it is possible that the coin being offered in the exchange that is flawed.²⁵² That is, that the currency and debt of the modernising promises offered by the West to the world from colonialism, neo-colonialism, industrialisation, private property to intellectual property may be counterfeit; but, as long as it is believed in, it has social credit.²⁵³

3.1.4 Intellectual Property as a Discourse

Foucault's use of the term "discourse" would not be out of place to use in our discussion of intellectual property and as a strategy to understand the 'propertisation,' commodification, ownership and protection of ideas.²⁵⁴ Similar to the discourse of colonialism, intellectual property as a 'discourse' is used to construct, justify and legitimate further expansion of intellectual property's commodity form and its application. The discourse of colonialism can be a useful comparator in trying to understand and discuss the ever-expansive growth of intellectual property. In general, the discourse of colonisation helps to frame, conceptualise and understand the propertising and commodifying discourses of "progress" and "innovation" inherent in intellectual property claims. As an analogy and to paraphrase Saïd: "Without examining... [intellectual property] as a discourse one cannot possibly understand the enormously systematic discipline by which European culture was able to manage – and even produce

²⁵² See: Chang, *supra* note 114.

²⁵³ D. Graeber, *Toward An Anthropological Theory of Value: The False Coin of Our Own Dreams* (New York: Palgrave, 2001). Also, see: Graeber, *supra* note 10 at 48.

²⁵⁴ W.M. Landes & R.A. Posner, *The Economic Structure of Intellectual Property Law* (Cambridge: Harvard University Press, 2003) at 296. "[P]atents protect ideas...." Yet, it must be noted that the *Patent Act*, under s. 27 (8), "no patent shall be granted for any mere scientific principle or abstract theorem." In some sense, this mirrors David Hume's empirical epistemological notions of "simple" and "complex" ideas. A simple idea somehow being a *natural* idea (a "scientific principle or abstract theorem"), a *simple* idea is discoverable. The opposite of a *simple* idea is a *complex* idea, which is the product of human thought, imagination, and work. See: D. Hume, *A Treatise of Human Nature: Book One* (ed.) D.G.C Macnabb (Glasgow: William Collins and Sons, 1962).

– [intellectual property]”²⁵⁵ and the power required to construct intellectual property as a commodity and system and impose it on the world.

3.1.5 Corporate Influence, Property Interests and Academic Freedom

The freedom to seek truth is always tenuous.²⁵⁶ At the beginning of the 21st century, Canadian higher education has been periodically punctuated by complaints and allegations as to how corporate influence has set the terms and conditions as to the conduct of academic inquiry and academic freedom.²⁵⁷ As much as this may appear novel to some observers, it is part of a larger and older debate as to the status of education in Anglo-American institutions of higher learning.²⁵⁸

Perhaps one of the most notable American educational critics, Thorstein Veblen, in *Higher Learning in America*,²⁵⁹ asked the prescient question as to whether higher education should serve private gain or, in the first and last instance, the public good? Veblen found that the threat to the academy was that “the ideals of scholarship are yielding ground, in an uncertain and varying degree before the pressure of business-like exigencies.”²⁶⁰ At the tail end of the First World War, Veblen’s concerns as to

²⁵⁵ Saïd , note 244, *Orientalism* at: 3.

²⁵⁶ Plato, “The Apology” in *The Trials of Socrates: Six Classic Texts* (ed.) C.D.C. Reeve (Indianapolis: Hackett Publishing Co., 2002) at 186.

²⁵⁷ U. Franklin, “What is at Stake? Universities in Context” in *The Corporate Campus: Commercialization and the Dangers to Canada’s Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Co. Ltd., 2000) at 18-19. Also, see: L. Findlay, *Report: Investigation into the Termination of Dr. Ramesh Thakur as Director of the Balsillie School of International Affairs, affiliated with the University of Waterloo, Wilfrid Laurier University, and the Waterloo-based Centre for International Governance Innovation* (Ottawa: Canadian Association of University Teachers, 2010).

²⁵⁸ See: S. Leacock, “Oxford As I See It” *Harper’s Magazine* May 1922, at: 738. As only Leacock can, he strips away the pretensions of an Oxford education and levels it out to being the most prestigious university in the world where one gets the best education possible by being “smoked at” by a Don. “Men who have been systematically smoked at for four years turn into ripe scholars.” Also, see: C.S. Wilder, *Ebony and Ivy: Race Slavery, and the Troubled History of America’s Universities* (New York: Bloomsbury Publishing, 2013). According to Wilder, Harvard, Yale, Princeton, Rutgers, Brown and other founding American universities were (and are?) embedded and implicated in America’s ‘higher education’ projects of genocide, racial subjugation and exploitation of Native and African Americans.

²⁵⁹ Veblen, *supra* note 42.

²⁶⁰ Veblen, *supra* note 42 at 128.

intellectual autonomy, academic freedom and corporate influence on universities fell mostly on deaf ears – or perhaps only on those afflicted with selective hearing. Business interests have historically dogged the operation of the modern university (in Canada it was, initially, the business of religion). Stanley Aronowitz suggests that in America:

Veblen went so far as to argue that since the Morrill Act in 1863 by which Congress for the first time committed the Federal government to support public higher education, primarily with land grants, the business of the university was to provide knowledge and a trained cadre for private industry, especially science and technology of agricultural production. The burden of his claim is that the concept of an autonomous university, revered since the Enlightenment, remained an ideal that was far from the existing situation.²⁶¹

To merely begin and confine the limits of this study to the popular theoretical justifications as to intellectual property and the university would be disingenuous. Intellectual property law is a process. Indeed, labouring on and over issues as to jurisdiction, refining statutory definitions and developing critiques of intellectual property and its impact on higher education, are abundant, but provide little systemic analysis of the underlying culture of capitalism promoting it. In order to theorise intellectual property, and, ultimately, the patent system's impact on higher education, one needs to avoid the extremes that attach to liberal conceptions of ownership, property, and the ownership of knowledge.

3.1.6 Intellectual Property as a Social Relationship

Intellectual property must be understood in its historic sense: its disparate and uneven historical presence and development is the raw material of what comprises human relationships in – and not outside – history. This notion of intellectual property entails historical relationships and communities. As such, it evades the scientific classification

²⁶¹ S. Aronowitz, "Higher Education and Everyday Life" at: http://stanleyaronowitz.org/articles/article_e_el.pdf (last visited July 10, 2008).

of “category” or “structure” that is analytically clear as “self-evident” in law. What is more, it radically questions the objective “facts” that black-letter law actively promotes and (self)reflexively deploys to hermetically seal itself off from self-critical positions: and, thus, from serious scrutiny. Our relationship with intellectual property ought to be a *lingua franca* whose fluency tends or attempts to evade black-letter legal analysis – who owns what in a capitalist economy – and be democratic in the broadest public policy sense. In terms of definitions or ownership, it ought to be clear that black-letter historical analysis resolves little and when “we attempt to stop it dead at any given moment... [we] anatomise its structure”:²⁶² put differently, we fail to keep in mind that the concept of *property* is very much the product of living beings and their relationships. To paraphrase the British historian E.P. Thompson, “[i]f we remember that... [intellectual property] is a relationship, and not a thing, we can not think in this way.”²⁶³ Understanding property and intellectual property as relational and as a human relationship allows us to approach the conundrum of pharmaceutical patents in university research in a novel way and/or at least test its theoretical weakness in a constructive and critical manner.

3.2 Constitutive Discourse, Liberalism(s) and Intellectual Property

3.2.1 Liberalism, Ideology and Discourse

Liberalism(s),²⁶⁴ as in other various forms of political discourse and ideology, bring(s) powerful assumptions and concretises sets of social relations that operate to

²⁶² E.P. Thompson, *The Making of the English Working Class* (New York: Vintage, 1962) at 9.

²⁶³ *Ibid.*, 11.

²⁶⁴ It must be acknowledged that there are just as many forms of “liberalisms” as there are as self-avowed “liberals.” Thankfully, they usually disagree as to what liberalism means other than badly defined terms like ‘the rule of law’, the ‘individual’, democracy and freedom. Nonetheless, liberals have been rather successful over the last two centuries in promoting a spandex-like ideology of work – even if it favours capital, capitalist and the post-modern leisure class versus Tim Horton server, live-in nanny, Walmart “associate” or third-world sweatshop workers. See: K. Weeks, *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries* (Durham: Duke University Press, 2011).

define the scope of property and the operation of ownership. Hence, most general discussions as to the economic dimensions of how late-capitalism structures the growth of intellectual property, and its accompanying scientific and technological revolutions, fail to thoroughly question is the deterministic and one-sided optics being constructed in universities – what some critics perhaps un-ironically refer to as “academic myopia.”²⁶⁵ Commodification has a price. Commodifying academic research has transformed and continues to transform our culture and, of course, academic culture. It appears or attempts to appear as a natural outgrowth of a market society; but, as we know, appearances can be deceiving. This *naturalisation* of intellectual property by capital marks much of the popular and some or much of the informed academic literature on intellectual property.²⁶⁶ However, this view represents a failure and marginalisation of a critical perspective on modernity and fails to question our current system of intellectual ownership. It almost effortlessly and implicitly incorporates the ever-expanding propertisation of the world as inevitable and *natural*. Arguments around “liberalism” and neoliberalism generally ignore – or appear ambivalent to – intellectual property’s importance in the development of the political economy in the “West.” *Critical* intellectual property concerns are generally marginalised in much mainstream ‘globalisation literature.’ Yet, intellectual property frequently appears in global

²⁶⁵ J. Balsille, “Academic freedom at York University? More like academic myopia” *The Globe and Mail*, April 11, 2012, at: <http://www.theglobeandmail.com/commentary/academic-freedom-at-york-university-more-like-academic-myopia/article4107455/> (last visited October 30, 2012). One cannot help but recall Keynes’s remark that Balsille’s type of logic is a “penny-wisdom” that is not worth a dime a dozen. Where this argument concerns universities, it condemns all our futures to be “consigned to the private charity or magnanimity of improvident individuals.” Keynes, *supra* note 97 at 330.

²⁶⁶ See: D. Vaver, *Intellectual Property Rights: Critical Concepts in Law* (New York: Routledge, 2006) at 238. As Vaver observes, the short-lived common law attempt to extend a “natural rights” thesis of intellectual property would require an act of parliament. As Vaver points out, this is an incoherent and inconsistent argument concerning a belief in “nature rights.” Intellectual property only becomes ostensibly a coherent system when justified through statutory acts of parliament and the creation of positive laws.

discussions surrounding international trade agreements in neutral or positive terms. The consequences of the constitutive technologies that flow from intellectual property seldom question the domination exerted by the constitutive framing of intellectual property regimes.

3.2.2 Intellectual Property, Progress and Abstraction

[H]itherto it is questionable if all the mechanical inventions yet made have lightened the day's toil of any human being.

J.S. Mill²⁶⁷

This was perhaps a sad claim to make in Mill's day, but has become a sad fact in our digital age of endless work. Yet, this is a state that is generally viewed as one of modernising progress. In this context, it is generally viewed the benefits of intellectual property are part of a natural or necessary unfolding or progress. That is to say, that there is something inherent in the nature of ownership and propertisation of intellectual works that secures investment and the success of current and future late-capitalism.

The birth of capitalism is a story that has been told and retold. It is often expressed as a progressive movement. From primitive accumulation to technological sophistication, from the pastoral to mercantile, and, then, to industrial forms of production and accumulation. It is rarely portrayed as dystopian and usually in a teleological sense of "progress" inherent in the Enlightenment's perfectibility of human beings. Put differently, human history is seen as simple forms of social interaction developing into more complex or "abstract" forms of social interaction and social reproduction. Hence, proponents of traditional modes of production and extensive

²⁶⁷ J.S. Mill, *John Stuart Mill - The Principles of Political Economy: Chapters on Socialism* (ed.) J. Riley (Oxford: Oxford University Press, 1994) at 129.

ownership over the means of production generally throw their lot in with intellectual property rights “expansionists.”²⁶⁸ These intellectual property rights expansionists see the outcome of property as the natural result of a logical flow of history and the fusion of law and the market as constructing current prosperity and future progress. Postmodern critics would contest this linearity of history as a construct or metanarrative.²⁶⁹ Or, to paraphrase Marx, human beings “make their own history [and technological progress], but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past.”²⁷⁰

3.2.3 Making History and Making Intellectual Property

Like G.W.F. Hegel’s logical error in analysing history, liberal assumptions put the “*IDEA*”²⁷¹ of history and property before the unfolding of *real* history.²⁷² This is similar to putting the property cart before an intelligent horse, a fallacy of *post hoc ergo propter hoc*, or it could be portrayed as perceiving the historical development of intellectual property through the inversion of a prism. Although prisms are wonderful instruments to make us aware of the spectrum and coloured properties of light, they make all objects observed appear upside down. Thus, while it may be useful to dissect the theoretical justifications and criticisms concerning the origins of intellectual property through a legal

²⁶⁸ G.B. Doern & M. Sharaput, *Canadian Intellectual Property: The Politics of Innovating Institutions and Interests* (Toronto: University of Toronto Press, 2000) at 166. According to Doern and Sharaput, in the 1990s, Canadian public policy attempted to resist the strengthening of intellectual property protection from south of the border and, to a degree, retain an open intellectual property dissemination policy (a policy that ultimately failed?).

²⁶⁹ See: J.-F. Lyotard, *The Postmodern Condition: A Report on Knowledge* (trans.) G. Bennington & B. Massumi (Minneapolis: University of Minnesota Press, 1984).

²⁷⁰ Marx, *supra* note 169 at 437.

²⁷¹ *Infra*, note 272. Hegel used capitalisations to emphasis ‘totality.’ Thus, when he writes about the “ABSOLUTE,” “TRUTH,” “KNOWLEDGE” or “HISTORY,” he (maybe yelling but) is emphasising their entirety expressed as an eternal whole – *sub specie aeternitatis*.

²⁷² See: G.W.F. Hegel, *Lectures on the Philosophy of World History* (eds.) D. Forbes, J. Hoffmeister & H.B. Nisbet (Cambridge: Cambridge University Press, 1980).

prism, so we might detect the nuanced and shift in logic in the spectrum and optics of legal cases concerning statutes, to do so would be to see the world of intellectual property upside down. Similarly, Marx's criticism of Hegel was that he inverted the dialectic of history. By misunderstanding the material origins of history and social relations, Hegel stood history on its head. Analogously, for us to understand the modern and most theoretical justifications and criticisms concerning intellectual property, we must understand intellectual property in relation to the material and historical circumstances that created its social relationship in law. These relationships are "always embodied in real people and in a real context."²⁷³ The analysis of intellectual property in the law must "be turned right side up again... [and in doing so] ...discover the rational kernel within... [its] mystical shell."²⁷⁴

Put differently, the *making* of intellectual property is similar to Thompson's historical sense of the *making* of the English working class. Intellectual property is a creation of the state and a creature of statute: yet, it is much more. Intellectual propertisation like the *making* or the creation of the working class is "an active process... [and one] which owes as much to agency as to conditioning."²⁷⁵ Intellectual property is not a structure or a category: it is "something which in fact happens (and can be shown to have happened) in human relationships."²⁷⁶ These relationships are "always embodied in real people and in a real context"²⁷⁷ and, hence, the making of intellectual property is

²⁷³ Thompson, *supra* note 262 at 9.

²⁷⁴ K. Marx, *Capital Vol. 1* (trans.) S. Moore & E. Aveling, (ed.) F. Engels (Moscow: Progress Publishers, 1986) at 29.

²⁷⁵ Thompson, *supra* note 262 at 9.

²⁷⁶ Thompson, *supra* note 262 at 9. One need only to turn to the file sharing on the Internet for empirical evidence of these relationships.

²⁷⁷ *Ibid* at 9.

always complex and the rationalisations and justifications for it are never dull or straightforward, and are, at times, quite exotic and esoteric.

3.2.4 Cultural Materialism and Legal History

This legal study is one grounded in and on the tradition(s) of historical and cultural materialism.²⁷⁸ Self-consciously and hesitantly, this is an investigation which admittedly has already lashed itself to the mast of the often forgotten and sunken “ship of fools”²⁷⁹ of the critical legal studies movement²⁸⁰ and the “new left.”²⁸¹ It is an attempt to understand intellectual property in the context of the overall problem and burden of dialectical materialism rooted in experience.²⁸² As such, one must always be cautious and critical of mechanical forms (orthodoxy) and *formulae* of dialectical materialism and culture.²⁸³ Arguments that reduce complex social processes down to simplistic models of automatism of thought corresponding to action are an utterly – and generally useless –

²⁷⁸ *Ibid.* Also, see: R. Williams, *Culture* (London: Fontana Press, 1981); R. Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977).

²⁷⁹ M. Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason* (New York: Random House Inc., 1965) at 5. As Foucault describes it, the “ship of fools” became a part of the “imaginary landscape of the Renaissance” where the barges plied the waterways of medieval Europe with the unwanted inhabitants of medieval villages. These inmates from nowhere would be involuntarily ‘stowed’ – for a price – to experience a form of incarceration without walls. In modern terms, these individuals would be clinically labelled insane or mentally disabled and now many of them are sanitised to the status and term of the “homeless” of our cities. As an aside, “the ship of fools” sounds like the start of a good lawyer joke.

²⁸⁰ For insightful summaries of this movement see: M. Kelman, *A Guide to Critical Legal Studies*, (Cambridge: Harvard University Press, 1987); D. Kennedy, *Legal Education and the Reproduction of Hierarchy: A Polemic Against the System: A Critical Edition* (New York: New York University Press, 2004); and, R.W. Bauman, *Critical Legal Studies: A Guide to the Literature* (Boulder: Westview Press, 1996).

²⁸¹ For a fascinating history of the “new left” see: D. Thompson, *Pessimism of the Intellect? A History of the New Left Review* (London: Merlin, 2007). Also, see: C.W. Mills, “Letter to the New Left” (1960) 5 *New Left Rev.*; H. Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston: Beacon Press, 1964); S. Hall, “Life and Times of the First New Left” (2010) 61 *New Left Rev.*; and, M. Isserman, *If I Had a Hammer: The Death of the Old Left and the Birth of the New Left* (New York: Basic Books Inc Publishers, 1987).

²⁸² See: I. Kant, *The Critique of Pure Reason* (trans.) N. Kemp Smith (New York: Macmillan, 1929) at 41. Even Kant, a transcendental rationalist, concluded that: “There can be no doubt that all our knowledge begins with experience.”

²⁸³ That is, reducing Marxism to merely the banter of a base/superstructure debate is wholly unsatisfactory to understanding its critical value. Ironically, neo-conservative economists are so *orthodox* in their fundamentalist devotion to econometrics that it seems plausible that they would make a pious Stalinist blush.

one-dimensional²⁸⁴ form of analysis. As Engels noted, “the materialist conception of history has a lot of... [dangerous friends] nowadays, to whom it serves as an excuse for *not* studying history.”²⁸⁵ So too today.²⁸⁶ This is similar to Trotsky’s point (clearly aimed at Stalin) that “an ignoramus, armed with [only] the materialist dialectic... inevitably makes a fool of himself.”²⁸⁷ It is in the penumbra of this sullen shadow, the shadow of the suspicious 2008 ‘fiscal crisis’ and its aftermath, that this investigation finds its historical footing. This is a crisis where one attempts to situate and understand the “push pull”²⁸⁸ that is the materialist “colour field”²⁸⁹ – the dialect of contradiction – and that focuses this investigation into intellectual property.

In an effort to understand and extend Engels, and his observation as to the friends of materialism, who forget or who do not study history, material history is the key to understanding our current situation as to intellectual property. We are told that the ostensibly ‘information-based economy’, ‘knowledge-based economy’ or ‘new economy’ is a radical break from the past. That the information revolution has transformed our world and, in doing so, has created a revolutionary modern ‘information society.’ The basic claim is summed up by sociologist Daniel Bell: “A post-industrial society is based on services... [and w]hat counts is not raw muscle power, or energy, but information.”²⁹⁰ To say the least, this is an overly broad claim and difficult – if not impossible – to

²⁸⁴ See: Marcuse, *supra* note 281.

²⁸⁵ F. Engels, “Letter to Conrad Schmidt” in *Marx-Engels Collected Works* at: http://www.marxists.org/archive/marx/works/1890/letters/90_08_05.htm (last visited October 4, 2008).

²⁸⁶ See: J. Meacham & E. Thomas, “We Are All Socialists Now” *Newsweek* Feb. 16, 2009, at: <http://www.newsweek.com/id/183663?from=rss>.

²⁸⁷ L. Trotsky, *Notebooks, 1933-1935: Writings on Lenin, Dialectics, and Evolutionism* (trans.) P. Pomper (New York: Columbia University Press, 1986) at 11.

²⁸⁸ See: H. Hofmann, *Search for the Real, and Other Essays* (Cambridge, M.I.T. Press, 1967).

²⁸⁹ See: C. Greenberg, “The Crisis of the Easel Picture” in *Art and Culture Critical Essays* (Boston: Beacon Press, 1961) at 154.

²⁹⁰ D. Bell, *The Coming of Post-Industrial Society* (New York: Basic Books, 1976) at 127.

empirically verify. We ought to be wary of claims and language about this information “revolution,” but it would appear we are perpetually seduced by the sirens²⁹¹ of technology and information.

3.2.5 New Economy of Information

The cost of computing has dropped exponentially, but the cost of thinking is what it always was.

Zvi Griliches²⁹²

This was a lesson lost to the former Federal Reserve chair. In the late 1980s, according to Alan Greenspan, and his understanding of the ‘new economy,’ we have entered a new age where ‘materiality’ – material wealth – has been replaced by the value of information. Property and wealth are apparently measured inversely because “if all the tons of grain, cotton, ore, coal, steel, cement and the like that Americans produce were combined, their aggregate volume would not be much greater on a per capita basis than it was 50 or 75 years ago.”²⁹³ A decade later, Greenspan, known as an economist from whom “you could order the opinion you needed,”²⁹⁴ was still convinced that it was information and the free market that was driving this new economic revolution:

²⁹¹ Homer, *The Odyssey* (ed.) I.C. Johnston (Arlington: Richer Resources Publications, 2006) at 234. There is something prescient in this ancient Greek tale as to our relationship with intellectual property, being far from home and lost at sea, and seeking a *true* course towards home.

²⁹² Z. Griliches, cite by R.J. Gordon, “Does the ‘New Economy’ Measure up to the Great Inventions of the Past?” (2000) 14(4) J. Econ. Perspectives at: 72.

²⁹³ A. Greenspan, “Goods Shrink and Trade Grows,” *The Wall Street Journal*, October 24, 2014, at: A1-21. Also, see: D. Henwood, “Marxing Up The Millennium” at:

http://www.leftbusinessobserver.com/LBO_supplements.html (last visited October 2, 2014). As Henwood jocularly points out: “In making his argument, Greenspan apparently ignored the evidence of his own agency’s industrial production indexes, which showed per capita U.S. manufacturing volume up over threefold in the fifty years before he wrote these words, and more than sixfold over the [last] seventy-five years.”

²⁹⁴ M. Mayer, *The Greatest-Ever Bank Robbery: The Collapse of the Saving and Loan Industry* (New York: Charles Scribner’s Sons, 1990) at 140.

We have dramatically reduced the size of our radios, for example, by substituting transistors for vacuum tubes. Thin fiber-optic cable has replaced huge tonnages of copper wire. New architectural, engineering, and materials technologies have enabled the construction of buildings enclosing the same space but with far less physical material than was required, say, 50 or 100 years ago. Most recently, mobile phones have been markedly downsized as they have been improved. As a consequence, the physical weight of our GDP is growing only very gradually. The exploitation of new concepts accounts for virtually all of the inflation-adjusted growth in output.²⁹⁵

Yet, our new information society is not a weightless society. Remarkably, the information, its intellectual property regimes, the material and energy infrastructure that support it are behemoths that appear to be devouring finite resources at exponentially increasing rates. Like the much touted paperless office of the mid-1980s, where computerised information was to replace material information, the uncertain ‘information age’ has proven to have had an enormous material appetite. For example, the massive deforestation of boreal and tropical forests for a rapacious pulp industry indicates that we have not become paperless society.²⁹⁶

Consumer capitalism and its proliferation of phenomena and systems of production and reproduction, whether material or symbolic, require vast amounts of material and physical resources – and vast amounts of cheap labour. Indeed, then, the profusion of commodities made in China, the fashion industry, the public relations industry, the service industry, the media and telecommunication networks are all predicated on the expansion of infinite material production. As Alex Callinicos puts it:

²⁹⁵ A. Greenspan, “Remarks: Market Economies and Rule of Law” 2003 Financial Markets Conference of the Federal Reserve Bank of Atlanta, April 4, 2003, at: <http://www.federalreserve.gov/BoardDocs/speeches/2003/20030404/default.htm> (last visited January 20, 2007).

²⁹⁶ See: A.J. Sellen & R.H. Harper, *The Myth of the Paperless Office* (Cambridge: M.I.T. Press, 2003).

“people do not live by MTV™ [or ‘texting,’ or ‘blogging’ or Facebook™]²⁹⁷ alone, but continue to have mundane needs for food, clothing and shelter... [and this] makes the organization and control of production still the major determinant of the nature of our societies.”²⁹⁸ Truly, as we ‘inform ourselves to death’²⁹⁹ through the Internet,³⁰⁰ MP3s, podcasts, ‘smart’ phones, Twitter, Snapchat, Instagram, Facebook, “likes” and the seemingly endless circulation of ‘wireless’ information and images, we must remain cognizant that it is all contingent on the production and consumption of physical and material energies, material products and “properties” that satisfy “human wants of some sort or another....”³⁰¹

With any luck, a material and dialectical approach to examine intellectual property – if successful – is a strategy, one that is critical of its origins but also of the legal history, legislation and public policy to reanimate the debate around intellectual property. This might be perceived as an unpopular position. Yet, perhaps it is a “better” argument against the empty formalism that characterises far too much dialogue surrounding intellectual property. This is a story – or desires to be a nautical yarn of sorts

²⁹⁷ The whimsical stock evaluation of Facebook after its initial purchase offer (IPO), in May of 2012, shows us the vagaries of the market – which is the only constant about the market. To put it mildly, most pundits were tenderly optimistic about the Facebook’s IPO. See: E.M. Rusli & P. Eavis, “I.P.O./Offerings Facebook Raises \$16 Billion” The New York Times, May 17, 2012, at: <http://dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/> (last visited May 20, 2012). Then again, critics always seem to be correct – at least in hindsight. See: J. Nocera, “Facebook’s Brilliant Disaster” The New York Times, May 25, 2012, at: <http://www.nytimes.com/2012/05/26/opinion/nocera-facebooks-brilliant-disaster.html> (last visited May 27, 2012). For an interesting study on how ‘high-tech’ industries become potentially less innovative after initiating an IPO, see: S. Bernstein, “Does Going Public Affect Innovation?” [2012] Stanford Pap. S. at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2061441 (last visted January 14, 2013).

²⁹⁸ A. Callinicos, *Against Postmodernism: A Marxist Critique* (New York: St. Martin’s Press, 1990) at 148.

²⁹⁹ Postman, *supra* note 233.

³⁰⁰ The untested and perhaps *untestable* claim about the “democratising” force of the Internet could be inverted and viewed as an intensifying effort by techno-neoliberalism that strengthens individual isolation and neutralises individual agency. For an interesting discussion of this possibility, see: A. Taylor, *The People’s Platform: Taking Back Power and Culture in the Digital Age* (Toronto: Random House, 2014).

³⁰¹ Marx, *supra* note 274 at: 43.

– about pirates: one that sets out the Möbius strip or to untie or cut the ‘Gordian knot’³⁰² of what constitutes the “sound” legal reasoning and history that comprise(s) intellectual property. I am painfully aware of and receptive to Thompson’s observation and criticism that the “[m]inds which thirst for a sturdy Platonism very soon become impatient with actual history.”³⁰³ Perhaps, then, at least in the history surrounding intellectual property, there has been far too much impatience³⁰⁴ and *sturdy Platonism*.

3.3 Political Economy and Intellectual Property

3.3.1 An Invisible Hand or a Dead Hand

The Enlightenment is dead, Marxism is dead, the working class is dead... and the author does not feel very well either.³⁰⁵

Political economy is considered by many, at least to those touched by the ‘invisible hand’ of the Chicago School,³⁰⁶ as an arcane theoretical approach to understanding the historic development of intellectual property. As implied, political economy is viewed as less “scientific”, less “modern” or as a less “objective” source to understand the nature of intellectual property. By default, neo-classical economic models

³⁰² As we know, the solution to the problem of the infamous *Gordian knot* was solved in at least one of two ways: either Alexander the Great sliced the impossible knot with a sword; or, according to some, Alexander merely pulled the lynch pin between the impossibly knotted harness and the ox cart. Plutarch, *Life of Alexander* (ed.) A.H. Clough (New York: The Modern Library, 2004) at 19.

³⁰³ E.P. Thompson, “The Peculiarities of the English” in *The Socialist Register Vol. 2* (eds.) R. Miliband & J. Saville (London: Merlin, 1965) at 321.

³⁰⁴ However, should the Gordian knot prove to be too difficult to untie, then, following the lead of Alexander the Great, one solution is to simply cut the knot with a knife.

³⁰⁵ N. Smith, *Uneven Development: Nature, Capital and the Production of Space* (Oxford, Basil Blackwell, 1984) at iii.

³⁰⁶ The “Chicago School” are a similar but disparate collection of neoliberal economists, political scientists, philosophers and jurists. They can loosely be grouped together as the intellectual offspring or followers of “Austrian School.” Some of the more popular members of the Austrian School were: Joseph Schumpeter, Ludwig von Mises and F.A. von Hayek. Generally, Schumpeter, von Mises and von Hayek can be viewed as the sources of “neoliberalism” and, to some degree, “neo-conservatism.” See: J.A. Schumpeter, *History of Economic Analysis* (Cambridge: Oxford University Press, 1996); L. von Mises, *The Theory of Money and Credit* (New Haven: Yale University Press, 1953); and, F.A. von Hayek, *Prices and Production* (New York: Macmillan, 1932); . Also, see: L. Strauss, *What Is Political Philosophy? and Other Studies* (Glencoe: The Free Press, 1959). Generally, Leo Strauss’s political philosophy had a direct impact on the development and trajectory of “neo-conservatism” in America and the abandonment of the ‘American Dream.’ See: R. Jacoby, *The End of Utopia* (New York: Basic Books, 2007) at 179.

have assumed the proper measure for the valuation of intellectual property and the *right* justification for expanding intellectual property rights and its extension.³⁰⁷ Many of the neo-classical models used to measure the value of intellectual property are technically referred to as econometric models. To the uninitiated, or newly converted, confronting the technical or economic academic literature surrounding economic markets is daunting. Much of the work either appears as an oversimplification of the material world or, at its best, a thoroughly incomprehensible set of equations that beg an inexhaustible set of assumptions.

As a term, political economy is used, at times, synonymously with economics.³⁰⁸ As a discipline, it studies resource allocation and the material production of commodities, culture and society in an attempt to determine and measure the aggregate economic and social activity of the state and world economies. Most theories of political economy trace their origins back to and have a common root in the work of Adam Smith and his attempts to understand the ubiquitous notion concerning the ‘wealth of nations.’³⁰⁹

3.3.2 Knock, Knock, Knocking on Modernity’s Door

Smith stands on the threshold of our industrial modernity.³¹⁰ He has one foot firmly rooted in the tradition of the artisanal production of the Scottish Enlightenment.³¹¹ The other is tentatively placed in a world that was to become the social whirlwind – *le*

³⁰⁷ S. Cousineau, “Sanofi head sees potential cures for what ails Canada’s pharma sector” *The Globe and Mail*, June 17, 2013, at: B1. According to Christopher Viehbacher: “You can’t say research and innovation are your absolute priorities and then not protect ideas.”

³⁰⁸ See: M. Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1966). Self-referentially, Milton Friedman generally referred or regarded himself as a *political economist* and muddied the waters surrounding the definition of an “economist” (unfortunately).

³⁰⁹ See: Smith, *supra* note 163.

³¹⁰ See: Berman, *supra* note 12.

³¹¹ For a readable version of this argument and albeit a problematic one, see: A. Herman, *The Scottish Enlightenment: The Scots’ Invention of the Modern World* (London: Harper Perennial, 2006).

tourbillon social – of modernity.³¹² This is the world that we have come to know and evolved into our shared modernity based on industrialisation. In essence, the globalising process has become the autopoietic capitalist economy and, to some, a global *autopoiesis* of law.³¹³

What distinguishes Smith from many of his contemporary philosophers was his ability to trace the development of society beyond the mercantile economy. What Smith anticipated was a newly emerging capitalist economy. This is an economy run as an autonomous and self-regulating process directed by the invisible hand of market forces. Indeed, that the economic market exchanges between individuals could be, presumably, measured and that these exchanges could be viewed as individuals fulfilling necessary actions or performing ‘self-regulating’ acts. Smith’s contribution consists in partly disentangling social history from the mystification of religion³¹⁴ and fusing it with what can only be summarised as the proto-(social)science of anthropology. Smith’s philosophic attempt was to ground our understanding of social discourse and history through a protolithic social scientific model: a social model that could explain historically the creation, development and circulation of wealth in civil society with and, potentially, a cosmological certainty similar to Newtonian physics.³¹⁵

³¹² J.-J. Rousseau, *Emile, ou De l’Education*, 1762, (Paris: Gallimard, 1959) at 551.

³¹³ See: G. Teubner, “Introduction” in *Autopoietic Law: A New Approach to Law and Society* (ed.) G. Teubner (Berlin: Walter de Gruyter & Co., 1987) at 1. To say the least, Teubner acknowledges that this system of self-perpetuating and self-justifying law is a debatable and contentious issue. As he points out, it has the danger of leading to a new form of ‘legal formalism’ infusing legal theory.

³¹⁴ See: A. Smith, *The Theory of Moral Sentiments, Vol. I* (eds.) D.D. Raphael & A.L. Macfie (Indianapolis: Liberty Fund, 1982).

³¹⁵ J. Millar, cited in W.C. Lehmann, *John Millar of Glasgow* (Cambridge: Cambridge University Press, 1960) at 363.

3.3.3 The New Political Economy After Smith

Political economy since the time of Smith has meant many things to many critics.³¹⁶ For Smith, political economy was a natural philosophy that could map the contours of wealth, its history,³¹⁷ and its creation in and through the nation-state. For Marx, political economy was the historical examination of ownership and production.³¹⁸ To Veblen, political economy is driven by conspicuous consumption and is the product of symbolic displays of social status.³¹⁹ For John Maynard Keynes, political economy is about measuring and managing aggregate demand to create the conditions for full employment because the “classical theory of economics has consisted not so much in finding logical flaws in its analysis as in pointing out that its tacit assumptions are seldom or never satisfied, with the result that it cannot solve the economic problems of the actual world.”³²⁰ Lastly, Milton Friedman held that political economy, and specifically the birth of capitalism, was the economic basis for political freedom and liberal democracy³²¹ and that “a society which is socialist cannot also be democratic, in the sense of guaranteeing individual freedom.”³²²

Marx and Engels understood the progressive social dynamism of capitalism and how it reshaped the world and human relationships. Contrary to popular myths, Marx was not anti-capitalist. Both Marx and Engels saw the potential for social transformation

³¹⁶ One only need look at the works of Karl Marx to Milton Friedman to note the difference.

³¹⁷ See: W.L. Taylor, *Francis Hutcheson and David Hume as Predecessors of Adam Smith* (Durham: Duke University Press, 1965). It was through Hutcheson that Smith borrowed the concept of there being a linear “four stage” progression in world history.

³¹⁸ See: Marx, *supra* note 274.

³¹⁹ See: T.B. Veblen, *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions* (London: Macmillan, 1899).

³²⁰ J.M. Keynes, *The General Theory of Employment, Interest and Money* (Cambridge: Cambridge University Press, 1936) at 378.

³²¹ See: M. Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962).

³²² *Ibid* at 7.

embedded in capitalism and beyond. Marx and Engels saw the fast frozen social relationships of the past being dissolved and transformed by 19th-century capitalism: one that would transform the world.

[W]e have intercourse in every direction, universal inter-dependence of nations. And as in material, so also in intellectual production. The intellectual creations of individual nations become common property. National one-sidedness and narrow-mindedness become more and more impossible, and from the numerous national and local literatures, there arises a world literature.³²³

Marx and Engels have a different notion at play as toward “intellectual creations” and their relations to intellectual propriety and property. It is important to remember that in the 18th and 19th-century, *l'enfant terrible* of capitalism opened up the world in a variety of ways. Concomitantly, the solidification and juridification of intellectual property transformed and kept pace with the industrialisation of the 19th-century. As the “world literature” of colonisation and international trade expanded through the 18th and 19th-century, it did so through three broad areas that could “be labelled the arms trade, the slave trade, and the drug trade.”³²⁴

Within this motley cordial of world literature and international trade, there was and is a continuous tension between practitioners and theorists of political economy and economics. According to 19th and 20th-century economists and critics, there was a distinct turn away from the natural and literary philosophy of political economy toward the ‘science’ and numeracy of economics after 1850 in the United Kingdom – and eventually most of the English-speaking world. The principal reason given for the turn away from political economy is that, on its face, it is *political* by its *nature*. On the other

³²³ K. Marx & F. Engels, *Manifesto of the Communist Party: A Modern Edition* (London: Verso, 1998) at 39. Although it is well-known, it is crucial to note that a similar transformation is occurring in the realm of information and “narrow-mindedness” that surrounds the digital world and copyright.

³²⁴ Graeber, *supra* note 10 at 346.

hand, statistically driven ‘economics’ or ‘econometrics’ are – or until recently – were considered or posited as *apolitical*.³²⁵ Moreover, they are/were considered an “objective” and factual understanding of market forces. The turn away from political economy was the result of a number of policy choices: policy choices initiated by British parliamentarians during the 1840s and 1850s. Principle amongst them was the repeal of the Corn Laws.³²⁶ This resulted in the doldrums and docile parliamentary response to the Irish potato famine.³²⁷ The market rationality proposed, and its imposition, were to have direct and tragic consequences for millions in Ireland and eventually outside the British Isles.

3.3.4 The Doldrums of 19th-Century Ideology

According to Gordon Bigelow, it is essential to grasp the paradigm shift that was needed in these middle decades of the 19th-century to establish, effect, and shape the content and values of the British and Anglo-American ‘economic’ mind. According to Bigelow, it was nothing short of a radical transformation.³²⁸ This type of conceptual and ideological revolution required and bordered on a type of ‘religious’ conversion to

³²⁵ The promotion of econometric austerity to confront the “Great Recession” was exemplified by a 2010 paper by Carmen Reinhart and Kenneth Rogoff: two American economists who were widely viewed as sober observers advocating austerity in lieu of the Federal Reserve’s policy of quantitative easing of the money supply. See: C. Reinhart & K.S. Rogoff, “Growth in a Time of Debt” (2010) 100(2) *Amer. Econ. Rev.* at 573. The only problem was that Reinhart and Rogoff could not even do the math (that is, they couldn’t add) to make their own argument follow to make these conclusions. See: T. Herndon, M. Ash & R. Pollin, “Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff” (2013) 322 Working Papers Series – Pol. Econ. Res. Inst. at: http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_301-350/WP322.pdf (last visited June 20, 2014). Also, see: R. Harding, “Reinhart and Rogoff publish formal correction” *The Financial Times*, May 8, 2013, at: <http://www.ft.com/cms/s/0/433778c4-b7e8-11e2-9f1a-00144feabdc0.html> (last visited June 20, 2014).

³²⁶ See: *Importation Act, 1846* (9 & 10 Vict. c. 22). Also, see: F. Engels, “The Corn Laws” in *Marx-Engels Collected Works Vol. 2* (Moscow: Progress Publishers, 1979) at 380. Also, see: F. Engels, *The Condition of the Working Class in England in 1844* (Middlesex: The Echo Library, 2009) at 178.

³²⁷ This political and regulatory docility is a central component of late-capitalist ‘governmentality.’ See: W. Kleinknecht, *The Man Who Sold the World: Ronald Reagan and the Betrayal of Main Street America* (New York: Nation Books, 2009).

³²⁸ See: G. Bigelow, *Fiction, Famine, and the Rise of Economics in Victorian Britain and Ireland* (Cambridge: Cambridge University Press, 2003) at 71.

“economism.” In fact, this was an almost spiritual transformation; one that required a compartmentalisation of economic planning to insulate it from the widespread demands for democratic reform and progressive public social policy.³²⁹

Before the conceptual transformation to our current econometric model, which we take for granted in our society, a numerical revolution – numeracy, numeric literacy as economic ideology – had to supplant political economy. Bigelow holds that:

Whereas numerals in Greek and Latin relied on abbreviations of phonetic names for quantities, the Hindu-Arabic numerals of modern mathematics have no connection to the words or phonetic alphabet of European vernacular. The Hindu-Arabic system was largely unknown in Europe until championed by tenth-century Pope Sylvester II, who studied it as a young man in Spain, but the traditional system of Roman numeral counting was only displaced much later, when Northern Italian merchants in the late fifteenth century found the new system better adapted to the needs of more advanced accounting. Hindu-Arabic numeracy in England is belated by these Italian standards, but by 1600 an English instructional manual could claim... that learning numbers was a foundation of all knowledge....³³⁰

Bigelow and others³³¹ claim that William Stanley Jevons is partly responsible for the conceptual and ideological revolution we know as modern economics. Jevons suggested that political economy should confine itself to being a verifiable “science.” Economics must be an empirical and numerical analysis and science of markets. Jevons held that the ‘politics’ inherent in the phrase “political economy” ought to be stripped or jettisoned from it and we should simply refer to the “dismal science”³³² as economics. This would mean that “economics” would withdraw from anything that could be

³²⁹ See: Thompson, *supra* note 262.

³³⁰ Bigelow, *supra* note 328 at 16.

³³¹ See: D. N. Lehmer, “A Theorem in the Theory of Numbers” (1907) 13(10) Bull. Amer. Math. Soc. 501.

³³² To the best of my knowledge, it is Thomas Carlyle that gave us the term “dismal science” to refer to economics. See: T. Carlyle, “Occasional Discourse on the Negro Question” *The Commercial Review of the South and West, 1850* (New Orleans: J.D. de Bow Review, 1950) at 531. It should be noted that in this document, Carlyle advocated a re-introduction of slavery to the West Indies to regulate and bring down the cost of labour in the sugar industry. It would not be unfair nor unkind to taint most of Carlyle’s work as proto-fascist.

construed as a social science because, according to Jevons, economic “*value depends entirely upon utility*”³³³ and objectivity. Economics would, then, be a mathematical reformulation that could objectively measure actions and reactions in the market. Jevon’s economic world-view rejected the perspective of “classical” economics and its preoccupation with the ‘labour theory of value’³³⁴ because “*our science must be mathematical, simply because it deals with quantities.*”³³⁵

Wherever the things treated are capable of being greater or less, there the laws and relations must be mathematical in nature. The ordinary laws of supply and demand treat entirely of quantities of commodity demanded or supplied, and express the manner in which the quantities vary in connection with the price. In consequence of this fact the laws are mathematical. Economists cannot alter their nature by denying them the name; they might as well try to alter red light by calling it blue. Whether the mathematical laws of Economics are stated in words, or in the usual symbols, x, y, z, p, q, etc., is an accident, or a matter of mere convenience. If we had no regard to trouble and prolixity, the most complicated mathematical problems might be stated in ordinary language, and their solution might be traced out by words.³³⁶

For Jevons, the inherent problem of political economy was that it attempted to understand moral, social and political questions. These problems, according to Jevons, could not be measured. To Jevons, to know or quantify the internal workings of a person’s mind was impossible.

Every mind is thus inscrutable to every other mind, and no common denominator of feeling seems to be possible. But even if we could compare the feelings of different minds, we should not need to do so; for one mind only affects another indirectly. Every event in the outward world is represented in the mind by a corresponding motive, and it is by

³³³ W.S. Jevons, *The Theory of Political Economy* (London: Macmillan and Co., 1879) at 1-2.

³³⁴ As Galbraith suggests: “David Ricardo... gave the world (or gets credit for giving, for there were precursors) the labour theory of value...” J.K. Galbraith, *The Age of Uncertainty* (Boston: Houghton Mifflin, 1977) at 102. As to precursors, Marx gives partial credit to the labour theory of value to Ben Franklin. See: K. Marx, *Value, Price and Profit* (Rockville: Wildside Press, 2008) at 31. Also, see: B. Franklin, “A Modest Enquiry into the Nature and Necessity of a Paper Currency” in *The Works of Benjamin Franklin* (London: Benjamin Franklin Stevens, 1882) at 271.

³³⁵ Jevons, *supra* note 333 at 4.

³³⁶ *Ibid.*

the balance of these that the will is swayed. But the motive in one mind is weighed only against other motives in the same mind, never against the motives in other minds. Each person is to other persons a portion of the outward world—the non-ego as the meta-physicians call it. Thus motives in the mind of A may give rise to phenomena which may be represented by motives in the mind of B; but between A and B there is a gulf. Hence the weighing of motives must always be confined to the bosom of the individual.³³⁷

For Bigelow, it was in the intense caldron of a burgeoning British democracy, with implementation of the *Reform Act*,³³⁸ in 1832, that this new “neutral” and *apolitical* form of economics took shape. Comparatively, Thompson dates the failure of British Jacobinism and the promise of *égalité* three decades earlier for the turn toward “economism”³³⁹ in Britain. Until then, the broad political franchise offered by the *Reform Act* in the United Kingdom appeared as a new phenomenon. It was in this *new* public space that intense public criticism could befall a government and its policies and governance. In our case as to the *Corn Laws*, it was the radical criticism that had to be quelled and a type of “manufacture of consent”³⁴⁰ as to the moral fault of the Irish that had to be created: the reason being the ‘nature’ and ‘just deserts’ of the indolent and slothful Irish that produced and resulted in the tragedy of the potato famine.³⁴¹

Ireland, as a long-standing English colony,³⁴² provided a unique set of historic circumstances for the first modern experimentation with the irregular policies of *laissez-*

³³⁷ *Ibid* at 15.

³³⁸ *Representation of the People Act 1832* (2 & 3 Will. IV, c. 45)

³³⁹ Thompson, *supra* note 262 at 182-183.

³⁴⁰ W. Lippmann, *Public Opinion* (New York: Free Press, 1997) at 158. Also, see: E.S. Herman & N. Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media*, (New York: Pantheon Books, 1988). Also, see: E.L. Bernays, *Propaganda* (New York: H. Liveright, 1928) at 75-76. Bernays would eventually develop this theory into the “engineering of consent.” See: E.L. Bernays, *The Engineering of Consent* (Tulsa: University of Oklahoma Press, 1955).

³⁴¹ See: D. Ferriter & C. Tóibin, *The Irish Famine* (London: Profile Books Ltd., 2001).

³⁴² For an interesting discussion of this issue see: T. McDonough, *Was Ireland a Colony?: Economics, Politics, and Culture in Nineteenth-Century Ireland* (Dublin: Irish Academic Press, 2005).

faire and “free trade.” Ireland’s history of absentee landlords and its landless peasants fuelled an export economy that was driven to provide England with cheap imports of wheat and cattle – in the case of wheat, what would be known in today’s parlance, as a fungible staple or “cash crop.”

During the Irish famine, [Sir Charles Edward] Trevelyan had protested that the country’s “greatest evil” was not hunger, but “the selfish, perverse and turbulent character of the people.” Similarly, [Sir Richard] Temple’s ferocious response to reports of mass mortality in the camps was to blame the victims: “The infatuation of these poor people in respect to eating the bread of idleness; their dread of marching on command any distance from home; their preference often for extreme privation rather than submission to even simple and reasonable order, can be believed only by those who have seen or personally known these things.” Moreover, he claimed that the majority of the famine dead were not the cultivating yeomanry, “the bone and sinew of the county.” But parasitic mendicants who essentially committed suicide: “Nor will many be inclined to grieve much for the fate which they brought upon themselves, and which terminated lives of idleness and too often crime.”³⁴³

As acting Treasury Minister during the Irish and Highland potato famine,³⁴⁴ Trevelyan held that famine was a natural Malthusian “mechanism for reducing surplus population.”³⁴⁵ Or, as Samuel Johnson in an astute observation put it: “to hinder insurrection, by driving away the people, and to govern peaceably, by having no subjects, is an expedient that argues no profundity of politicks.”³⁴⁶ By comparison, in 1877, appointed as a plenipotentiary famine delegate to Madras, Temple implemented the British government’s rabid *laissez-faire* economic policy and he became notoriously known for the “self-proclaimed Benthamite ‘experiment’ that eerily prefigured later Nazi

³⁴³ Davis, *supra* note 16 at 40-41.

³⁴⁴ See: J. Prebble, *The Highland Clearances* (London: Penguin, 1963). Also, see: T.M. Devine, *The Great Highland Famine: Hunger, Emigration and the Scottish Highlands in the 19th Century* (Edinburgh: Donald, 1988). Also, see: J. Hunter, *Glencoe and the Indians* (Edinburgh: Mainstream Publishing Company Ltd., 1996) at 171.

³⁴⁵ C.E. Trevelyan cited J. Hart, “Sir Charles Trevelyan at the Treasury” (1960) 75 Eng. Hist. Rev. at 99.

³⁴⁶ S. Johnson, “A Journey to the Hebrides” in *The Works of Samuel Johnson Vol. IX* (London: Talbot and Wheeler; and W. Pickering) at 94.

research on minimal human subsistence diets in concentration camps.... [In addition,] the ‘Temple wage,’ as it became known, provided less sustenance for hard labor than the diet inside the infamous Buchenwald concentration camp and less than half of the modern caloric standard recommended for adult males by the Indian government.”³⁴⁷ This, in degrees, is the implicit neoliberal logic of much current Austerian economic policies.³⁴⁸

The Irish, regarded as the ‘lowest of the low’ by the English aristocracy and government,³⁴⁹ with the on-set of the famine, were about to experience the forerunner of a type of economic five-year plan – or what the International Monetary Fund defines as ‘structural adjustment programmes.’³⁵⁰ Put differently, this was in effect a precursor to Stalin’s “five-year plan” and his intentional starvation of the Ukraine *oblast* in the 1930s – a plan, in all its irony, designed purportedly to starve them into productivity.³⁵¹

As an incident of national, social and racist engineering in 19th-century Europe, aside from the historic and all too numerous pan-European pogroms against the Jews, the Irish policy was at the time unprecedented.³⁵² According to Bigelow, the British Home Office programme as to the Irish potato famine would prove to shape the ascendance of a type of economic theory and practical policy that would begin to dominant modern economic thought as to the ‘self-regulating market’ and as the rationale to modernise, develop and govern an industrial economy. Indeed the types of public policy and

³⁴⁷ Davis, *supra* note 16 at 38.

³⁴⁸ *Supra* note 74.

³⁴⁹ See: J. Stevenson, *Popular Disturbances in England, 1700-1870* (London: Longman 1979).

³⁵⁰ See: M. Davis, “Planet of Slums” (2004) 26 N. Left Rev.

³⁵¹ As an aside, it is always interesting to note that apologists for capitalism correctly take note the intentional starvation atrocities of Stalin, but blindly refer to their own starvation techniques obliquely as “forces of nature.” See: Davis, *supra* note 16 at 58.

³⁵² In the modern era, this statement must be geographically limited to Europe. See: B.E. Field & K.J. Field, *Racecraft: The Soul of Inequality in American Life* (New York: Verso, 2012). As Barbara and Karen Field point out, ‘enlightened’ European racism isolated and relegated its practice of slavery by colour to its new ‘found’ colonies – albeit, its theories and policies originated in European parliaments and courts. Also, see: S. Schama, *Rough Crossings: Britain, the Slaves, and the American Revolution* (New York: Penguin, 2008).

foundation that would shape and re-shape the socio-economic discourse surrounding the “free trade” debates of 19th and 20th-century, issues around “developed” and “developing” economies, in both Britain and America and, eventually, the world, were laid during the potato famine.

This discourse echoes and reverberates in economic discourse today. In its pursuits for empire, Britain would use its “economic” policies and power to assert its ascendancy as the most advanced industrial economy of the 19th-century and, according to Bigelow, did so through a language stripped clean of the nuanced and tardy moralistic verse of political and social considerations that comprised Smith’s commonwealth of the nation. This embedded moralism stripped from economics the capacity for subjective feelings; this economics forsook the emotions of empathy and sympathy. In its place, as it were, this new economics possesses an evangelical zeal and fanaticism for an objective science based on numeracy.

The new numeracy converted economic poverty and the failure of public policy to the realm of general *individual* failure and sin. Individual fragility and wickedness becomes a “soteriological economics.”³⁵³ These soteriological economics were a popular theory haunting the Victorian era (and perhaps our own) about atonement and fiscal redemption and debt as a sin. It was a “theory of poverty as atonement for sin and wealth as a sign of personal rectitude.” In this evangelical system, “work and profit were understood as spiritual duties, steps toward salvation rather than signs of social good.”³⁵⁴ As such, “[t]he social and philosophical foundations of Smith and Ricardo’s work are largely discarded here, and political economy becomes a patchwork of religious and

³⁵³ B. Hilton, *The Age of Atonement: The Influence of Evangelicalism on Social and Economic Thought, 1785-1865* (Oxford: Clarendon Press, 1986) at 7.

³⁵⁴ Bigelow, *supra* note 328 at 4.

moral precepts.”³⁵⁵ This was to become a state where economics could emerge as a *quasi*-natural science. It was “predicated on the separateness of a thing called ‘the economy’ from other forms of human judgment. This economy must have its own laws and ordering principles, which could be isolated and studied in themselves.”³⁵⁶ The classical economic theory of *laissez-faire*, with its Jevonian dedication to numeracy, came to dominate the late 19th and early 20th-century economic policies of governments and then the “guns of August”³⁵⁷ changed the world.

3.4 The Return of the Repressed

3.4.1 Post-Victorian Economics and the Evolution of a ‘New(ish)’ Economics

Economics is not an evolutionary science....

Thorstein Veblen³⁵⁸

Historically, WW I and after the collapse of world capitalism in 1929, John Maynard Keynes and his theories as to general employment came to dominate economic thought for the next fifty years. As John Kenneth Galbraith suggests, this period saw the unprecedented success of Keynesian economics. In practice, this success was to sow the seeds of the welfare state, but, also, disseminate the seeds of its own ideological destruction.³⁵⁹ The vast expansion of the Keynesian welfare state, in the post-WW II

³⁵⁵ Bigelow, *supra* note 328 at 117.

³⁵⁶ *Ibid* at 3.

³⁵⁷ See: B.W. Tuchman, *The Guns of August* (New York: Macmillan, 1962).

³⁵⁸ T.B. Veblen, “Why Economics is Not an Evolutionary Science” (1898) 12(4) *Quart. J. Econ.* at 374.

³⁵⁹ J.K. Galbraith, *The Culture of Contentment* (New York: Houghton Mifflin Company, 1993) at 179.

“Nothing in the age of contentment has contributed so strongly to income inequality as the reduction of taxes on the rich; nothing, as has been said, so contributes to social tranquillity as some screams of anguish from the very affluent.” Also, see: J.K. Galbraith, *The Good Society: The Humane Agenda* (New York: Houghton Mifflin Company, 1996). Also, see: W.E. Buffet, “Stop Coddling the Super-Rich” *The New York Times*, August 14, 2011, at: <http://www.nytimes.com/2011/08/15/opinion/stop-coddling-the-super-rich.html> (last visited August 16, 2011). Some consider this secular blasphemy coming from America’s second richest person.

period and the “great society”³⁶⁰ of President Lyndon Johnson, set the stage for the backlash of neo-classical economics that occurred in the 1980s – an era we commonly refer to as the commencement of the age of ‘Reaganomics.’ As critic Doug Henwood has put it: “it’s probably more fruitful to think of... [this] period as a return to a pre-World War I style of capitalism rather than something unprecedented, and to rethink the Golden Age of the 1950s and 1960s not as some sort of norm from which the last 25 [or 35] years have been some perverse exception, but [to rethink of] the Golden Age itself as the exception.”³⁶¹ Nonetheless, it was in this so-called Golden Age that massive amounts of government funding was injected into post-secondary education, provided stable funding for scientific research and development, and provided the groundwork for the technological breakthroughs and benefits for high-technology (“high-tech”) and biotechnology (“bio-tech”) society that we enjoy today.

Neo-classical economics arose in response to the post-war economic success of John Maynard Keynes and the policies adopted by the Bretton Woods³⁶² and so-called “Washington consensus.”³⁶³ Yet, as the post-war economic expansion stalled or slowed down, neo-classical economics came to prominence out of the crisis of diminishing rates of return for American corporations at the beginning of the 1970s.³⁶⁴ According to James Kenneth Galbraith, 1970 was a watershed year for economic productivity and full

³⁶⁰ L.B. Johnson, “President Lyndon B. Johnson’s Remarks at the University of Michigan – May 22, 1964” *Public Papers of the Presidents of the United States: Lyndon B. Johnson, 1963-64. Volume I* (Washington: Government Printing Office, 1965) at 704-707.

³⁶¹ Henwood, *supra* note 293.

³⁶² See: A.L.K. Acheson, J.F. Chant & M.F.J. Prachowny, *Bretton Woods Revisited: Evaluations of the International Monetary Fund and the International Bank for Reconstruction and Development* (Toronto: University of Toronto Press, 1972).

³⁶³ J. Williamson, “What Washington Means by Policy Reform” in *The Progress of Policy Reform in Latin America* (ed.) J. Williamson (Washington: Institute for International Economics, 1990) at 9. Also, see: Chang, *supra* 249 at 1.

³⁶⁴ S. Weber & B.W. Jentleson, *The End of Arrogance: America in the Global Competition of Ideas* (Cambridge, Mass.: Harvard University Press, 2010) at 29.

employment. “After 1970, however, the picture changed dramatically, and for the worse.”³⁶⁵ In essence, neo-classical economic theory stepped into this purported breach. It attempted to provide an explanation as to why the economy was slowing down and it found its *casus belli* against ‘big government’ and the welfare state. As we know, it was an attempt to turn back the clock and return to the over-romanticised age of *laissez-faire* and of robber barons, or what Keynes called the return of the “rentier class.”³⁶⁶ This has been an ideological shift toward the “animal spirits”³⁶⁷ of capitalism that has deeply marked our post-1970 era of “free market” economic development.³⁶⁸

Similar to classical economics, neoclassical economics and theory was and is a highly politicised project. Yet, neo-classical economics is a project that implicitly – and, at times, explicitly – claims that it is a neutral science. In a circular manner, it consisted of building elegant – if not, elaborate – numerical models that consisted principally in finding empirical data that supports the theory of the model. In pursuing an explanation – if not its theoretical rationalisation – to further extend intellectual property rights, innovation and investment in new technology are usually viewed from an econometric and utilitarian perspective. Richard Nixon, in 1971, broke ranks with the supply-side econometrics of Republican economists and claimed that “I am now a Keynesian in economics.”³⁶⁹ By going off the gold standard, Nixon helped set the table for the first oil shock of the 1970s and the “stagflation” that surrounded the economic decline at the

³⁶⁵ Jas.K. Galbraith, *Created Unequal: The Crisis in American Pay* (Chicago: University of Chicago Press, 1998) at 81.

³⁶⁶ Keynes, *supra* note 320 at 243.

³⁶⁷ *Ibid* at 162.

³⁶⁸ For a simple and simple-minded examination and hagiography of this phenomenon see: H. Zeiger, *Reagan's Children: Taking Back the City on the Hill* (Nashville: Broadman & Holman, 2006).

³⁶⁹ R.M. Nixon cited in M. Foley, *American Credo: A Field Guide to the Place of Ideas in US Politics* (Oxford: Oxford University Press, 2007) at 227.

close of the Viet Nam War.³⁷⁰ In terms of the stagnation of the North American economy in the 1970s, the liberal jurisprude, John Rawls, comments hold a certain pragmatic truth that neo-classical economists consciously or unconsciously understood: “A theory however elegant and economical must be rejected or revised if it is untrue; likewise laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust.”³⁷¹ It is in this environment that the successful push toward neo-classical policies would begin its successful ten-year march toward acceptance and power in the White House.

The policies of the ‘New Deal’, the ‘Golden Age’ and the ‘Great Society’ were over. They fell by the wayside and the supply-side economic and public policies advocated by neo-classical theorists, such as Milton Friedman, became the norm. This ‘new normal’ would pose as a solution to America’s economic malaise – and, by association, a similar solution to the economic slowdown occurring in Canada. The solution to “stagflation”³⁷² was to have profound effects on how we funded public institutions. It would influence the rates we taxed corporations, the growth of government debt, the decline of public services and, for our purposes, provide the logic to

³⁷⁰ According to Ralph Nader, Nixon was, by default, the last liberal Republican president – possibly the last liberal U.S. president of the last 40 years. See: Ralph Nader cited in C. Hedges “How the Corporations Broke Ralph Nader and America, Too” Truthdig, April 5, 2010, at: http://www.truthdig.com/report/item/how_the_corporations_broke_ralph_nader_and_america_too_201004_05 (last visited May 1, 2010). As Nader put it: “Nixon did things that horrified conservatives. He signed into law OSHA [*Occupational Safety and Health Act*], the Environmental Protection Agency and air and water pollution acts because he was afraid of the people from the rumble that came out of the 1960s. He was the last Republican president to be afraid of liberals.”

³⁷¹ J. Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971) at 3.

³⁷² I. Macleod, British House of Commons Hansard, November 17, 1965, at: 1,165. Also, see: J.K. Galbraith, *A History of Economics: The Past as the Present* (London: H. Hamilton, 1987) at 269.

expand intellectual property rights. This was the fertile soil where the language and seeds of “innovation” would be ideologically (im)planted.³⁷³

3.4.2 Is There a Problem with Econometrics?

If all the economists were laid end to end, they’d never reach a conclusion.

George Bernard Shaw³⁷⁴

The theoretical position advanced here is against standard econometrics of neoliberalism and neoclassical economics. A critical political economy is perhaps the most theoretically sensible, reasonable and cogent approach to analyse and unpack the complex and multi-layered subject of intellectual property. This is a position that rejects the blanket application of “academic econometrics” to justify intellectual property policies. As a unit of analysis, intellectual property does not easily fit into a hermetically sealed and comprehensible subject of economics. Nonetheless, neoliberalism *first principle* ideologically is a commitment to a type of free market that inevitably leads to monopoly capitalism:³⁷⁵ something that as an end result flies in the face of the rhetoric of deregulation, the mind-set of ‘supply-siders’³⁷⁶ and the content and claims of their purported free market ideology. Steve Keen ironically notes that this “naive faith in

³⁷³ See: R.D. Atkinson, *Supply-side Follies: Why Conservative Economics Fails, Liberal Economics Falters, and Innovation Economics Is the Answer* (Lanham: Rowman & Littlefield, 2006). Atkinson’s argument fits nicely into the “knowledge economy paradigm.”

³⁷⁴ G.B. Shaw, cited in B. Vasigh, T. Tacker & K. Fleming, *Introduction to Air Transport Economics* (Surrey: Ashgate Publishing Ltd., 2008) at 7.

³⁷⁵ See: P.A. Baran & P.M. Sweezy, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966).

³⁷⁶ Jas.K. Galbraith, *The Predator State: How Conservatives Abandoned the Free Market and Why Liberals Should Too* (New York: Free Press, 2009) at 29. To hear this from the horse’s mouth, or perhaps the other end, see: J. Wanniski, *The Way the World Works* (Washington: Lanham, 1998). Also, see: D. Martin, “Jude Wanniski, 69, Journalist Who Coined the Term ‘Supply-Side Economics,’ Dies” *The New York Times*, August 31, 2005 at: <http://www.nytimes.com/2005/08/31/business/31wanniski.html> (last visited November 3, 2009).

economic theory has led to outcomes which, had they been inflicted by weapons rather than by policy, would have led their perpetrators to the International Court of Justice.”³⁷⁷

In other words, a critical political economy intellectual property is well equipped to confront and examine the literature on academic and econometric economics. As noted, much of academic economics consists of elaborate mathematical models. As such, the empirical work behind these mathematical models consists in finding consistent data that correctly fits into its model. Arguably, econometrics is the most abstract branch of economics and it is the most *mathematised* example of an under-theorised aspect of economic and financial theory. It is a branch that tries to make the future predictable, but as Stanford economist Ezra Solomon noted: “The only function of economic forecasting is to make astrology look respectable.”³⁷⁸ That said, as complex as economic forecasting can be, one can always rest assured that in the highly complex realm of global late-capitalism and finance that the outcome will always result with “[n]o banker [or lawyer] left behind.”³⁷⁹

3.4.3 Defining Or Definitions of Econometrics

Peter Kennedy notes, there is really no generally accepted definition of econometrics. Remarkably, the “discipline of econometrics has grown so rapidly, and in so many different directions, [so] that disagreement regarding the definition of econometrics has grown rather than diminished over the last ten years.”³⁸⁰ Kennedy’s comment, albeit dated, nonetheless exposes a significant problem for econometrics.

³⁷⁷ Keen, *supra* note 235 at 311.

³⁷⁸ E. Solomon, cited in W.E. Hoadley, *Looking Behind the Crystal Ball: Or, How to Use a Business Economist Successfully* (New York: Vantage, 1988) at 118:

³⁷⁹ R. Cooder, “No Banker Left Behind” in *Pull Up Some Dust* (Los Angeles: Nonesuch Records, 2011) at Track 1.

³⁸⁰ P. Kennedy, *A Guide to Econometrics* (Cambridge: M.I.T. Press, 2003) at 7.

Econometrics and its attempts to develop “statistical techniques appropriate to the empirical problems characterizing the science of economics”³⁸¹ have failed. It should be noted that Kennedy uses the word “science” without any quotation marks and assumes the reader will not question the ontological and epistemological assumptions embedded in it. Indeed, one might even be forgiven for assuming that economics as a discipline ought to be treated as a natural science as opposed to a social science.³⁸²

Current neoliberal discourse constructs the world as inherently self-evident and ‘sensible’: it considers the burdens of the modern economy and econometrics, which places value(s) on intellectual property through a process of purported empirical measurement, as self-evident. This promotes a view that the only model open to legitimate, justify and understand the valuation, the complex disputes and expensive litigation that surrounds intellectual property rights is through the filter of econometrics – an econometric form of ‘legal realism’ possessing neoliberalism’s property assumptions. Through neoliberalism’s looking glass, communal, democratic and public contributions to intellectual property are ideologically marginalised.

3.4.4 Neoliberalism’s Torpid Narrative

What takes centre stage in neoliberalism’s impracticable – if not worn out – narrative is that it is only through the tireless efforts of venture capitalists, shareholders³⁸³ and pension funds – indeed, *financialising* civilisation as we know it – that great

³⁸¹ *Ibid* at 1.

³⁸² For a useful introduction to this problem, or, rather, the contradiction, see: A.M. Kamarck, *Economics as a Social Science: An Approach to Nonautistic Theory* (Ann Arbor: University of Michigan Press, 2002).

³⁸³ It must be noted that terms like “investor,” “shareholder supremacy” and “shareholder value” are used to denote a type of sacred trust in commercial relationships in late-capitalism. Yet, terms like “muppet” appear as closer to the internal opinion of investment brokers at Goldman-Sachs concerning their shareholders. See: G. Smith, “Why I Am Leaving Goldman Sachs” *The New York Times*, March 14, 2012, at: http://www.nytimes.com/2012/03/14/opinion/why-i-am-leaving-goldman-sachs.html?pagewanted=all&_r=0 (last visited April 1, 2012).

advances in technology and innovation occur.³⁸⁴ Put differently, economic security can only be reproduced for future generations if we can secure a rate of profit that can promote and expand intellectual property rights. Hence, the unpredictable position on expanding intellectual property rights is “always-already” a political economy argument.

Yet, this expansive application of intellectual property rights is barely noted in most conventional forms of intellectual property literature. This is an economic argument that is ideologically seen as a normative discourse about progress, equilibrium, and expansion of the “economy.” Expansion for what? Progress? Profit? Knowledge?

The public good? To Bigelow:

Economics, as channeled by its popular avatars in media and politics, is the cosmology and the theodicy of our contemporary culture. More than religion itself, more than literature, more than cable television, it is economics that offers the dominant creation narrative of our society, depicting the relation of each of us to the universe we inhabit, the relation of human beings to God.³⁸⁵

Perhaps, the political economy of intellectual property regimes, as a stream or conduit for technological society and late-capitalism, could be loosely referred to as a “theodicy of our modern culture.”³⁸⁶ It is within this Homer-like “theodicy” that, arguably, intellectual property regimes, since the end of the purported Golden Age of 1950-1973,³⁸⁷ began to restructure their objectives and seek expanding rents – a Freudian “*return of the*

³⁸⁴ Economist Mariana Mazzucato is merciless but synthetically brilliant in her wide-ranging analysis of the ‘new economy’ and the free enterprise ideology that promotes it. She enjoys pointing out that the putative distinction between “private” and “public” sectors is misleading, spurious and potentially disastrous. As she puts it: “[t]here is nothing in the DNA of the public sector that makes it less dynamic than the private sector.” M. Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (New York: Anthem Press, 2013) at 197.

³⁸⁵ G. Bigelow, “Let There Be Markets: The Evangelical Roots of Economics” Harper’s Magazine May 1, 2005, at: <http://www.harpers.org/archive/2005/05/0080538>.

³⁸⁶ *Ibid.*

³⁸⁷ See: C. Kindleberger, “Why Did the Golden Age Last So Long?” in *The Legacy of the Golden Age: The 1960s and Their Economic Consequences* (eds. F. Cairncross & A. Cairncross (London: Routledge, 1992) at 18.

repressed [that] makes up the tabooed and subterranean history of civilization”³⁸⁸ and of Keynes’s “rentier class.” Justifiably, it is in the “tabooed and subterranean” discourse that a critical political economy of intellectual property seeks to understand the processes of “enclosure”³⁸⁹ and eventually intellectual property enclosure. These objections aside, “[u]niversity lecturers plough on... teaching mainstream economics regardless.”³⁹⁰

3.5 The Political Economy of Enclosure

3.5.1 “Don’t Fence Me In”

The political economy of “enclosure” is multifaceted and anecdotal. For historians such as Thompson, the process of English capitalism was an “enormously complex and protracted [process].”³⁹¹ History is not preordained, straightforward or chartable. Like the prison ships headed to colonise Australia from England, where the ships would cross the Atlantic twice before a run to south Australia and Sydney, history is a series of many ‘zigs’ followed by many ‘zags.’ For Thompson, English history was cryptic in that it commenced “with the great monastic sheep farmers of Doomsday.”³⁹² It proceeded and passed “through the enfeeblement of the barons in the wars, the growth of ‘free labour’, the enclosure of the sheep-walks, the seizure and redistribution of Church lands, the pillaging of the New World, the drainage of fens, and, thence, through revolution, to the eventual acceleration of enclosure and the reclamation of wastes.”³⁹³

³⁸⁸ H. Marcuse, *Eros and Civilization: A Philosophical Inquiry into Freud* (Boston: Beacon Press, 1974) at 16.

³⁸⁹ T. More, *Utopia* (Herfordshire: Wordsworth Editions Limited, 1997) at 33-34. According to Thomas More, the definition of “enclosure” is a situation where the powerful and the owners “leave no ground for tillage: enclose all into pastures; they throw down houses; they pluck down towns, and leave nothing standing, but only the church to be made a sheepphouse.”

³⁹⁰ B. McFarlane, *Radical Economics* (London: Croom Helm, 1982) at 64

³⁹¹ E.P. Thompson, “The Politics of Theory” in *People’s History and Socialist Theory* (ed.) R. Samuel (London: Routledge, 1981) at 396.

³⁹² *Ibid.*

³⁹³ *Ibid.*

The first enclosure moment is located within the chary “great charter”³⁹⁴ of English law, the *Magna Carta*, and in the system of forest law imported and established by William the Conqueror – law that acted outside the common law. “The forest has its own laws, based, it is said, not on the Common Law of the realm, but on the arbitrary decree of the King.”³⁹⁵ After 1066, the system of forest law established by William the Conqueror meant that:

[H]e established laws therewith; so that whosoever slew a hart, or a hind, should be deprived of his eyesight. As he forbad men to kill the harts, so also the boars; and he loved the tall deer as if he were their father. Likewise he decreed respecting the hares that they should go free. His rich men bemoaned it, and the poor men shuddered at it.³⁹⁶

All in all, these kinds of complaints appear to be grumblings from a distant past,³⁹⁷ but the arbitrary nature of the property interest vested in the Crown was to affect the development of monopolies, patents and the commons; and, all are vestigially related to our modern experience of intellectual property expansion and limits to our commons.³⁹⁸

3.5.2 History From Below and the Issue of Enclosure – British Marxism and History

³⁹⁴ E. Coke, *The Second Part of the Institutes of the Laws of England* (Bell-Yard: E.&L. Brooke, 1797) at 55.

³⁹⁵ J.R. Maddicott, “Magna Carta and the Local Community” (1984) 102 *Past & Present* at: 72. As a caution, it is the *arbitrary* nature of the ancient forest law decree or grant that must always be kept in mind in when analysing intellectual property.

³⁹⁶ R.T. Davies, *Documents Illustrating the History of Civilization in Medieval England, 1066-1500* (London: Methuen and Company Limited, 1926) at 26.

³⁹⁷ See: J. Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking, 2005) at 487. According to Diamond, we ought to be concerned about the status of our forests because “[d]eforestation was a or *the* major factor in all the collapses of past societies”³⁹⁷ and not something to be ignored in our current “information” driven economy.

³⁹⁸ P. Linebaugh, *The Magna Carta Manifesto: Liberty and Commons for All* (Berkeley: University of California Press, 2008) at 4. According to Peter Linebaugh, “the three ages of history, at least if you divide it up according to hydrocarbon energy sources [are] wood, coal, and oil.” As such, the English forests were the ready supply of hydrocarbon fuel and other resources available to commoners, along with their labour power and “traditional knowledge”³⁹⁸ of the forest, that helped drive the engine of the medieval English economy. Restriction to these resources defines the material development and production of ambiguous “low” technological society compared to oil dependant “high” technological society – technologies that would eventually be patentable.

Thompson's *The Making of the English Working Class* is an irreplaceable study of the impact the industrial revolution had on 18th and 19th-century artisanal workers. Agricultural labourers and artisanal workers provide a unique point of reference as to the development of industrial labour in that the intellectual property they held as a trade or craft-persons were soon to be undone by the new mode and means of production of the late 18th and early 19th-century under industrialisation and mechanisation.

Theoretically and methodologically, Thompson, along with other British Marxist historians³⁹⁹ saw "history from below"⁴⁰⁰ as giving a voice to those silenced literally by the 'great man' theory of history,⁴⁰¹ by the electric dynamo,⁴⁰² and the "storm we call progress."⁴⁰³ This theoretical position leads to very different conclusions as to the history of intellectual property. History from below can *deconstruct*⁴⁰⁴ the monolithic,

³⁹⁹ See: C. Hill, *Intellectual Origins of the English Revolution* (Oxford: Oxford University Press, 2001); Also, see: E.J. Hobsbawm, *Labouring Men: Studies in the History of Labour* (London: Weidenfeld & Nicolson, 1964). Also, see: P. Anderson, *In the Tracks of Historical Materialism* (London: Verso, 1983).

⁴⁰⁰ E. P. Thompson, "History from Below," *Times Literary Supplement*, 7 April 1966, 279-80. Also, see: E.J. Hobsbawm, "History from Below – Some Reflections" in *History From Below: Studies in Popular Protest and Ideology in Honour of George Rudé* (ed.) F. Kranz (Oxford: Oxford University Press, 1988). For excellent American examples of 'history from below' see: H. Zinn, *A People's History of the United States* (New York: Harper Perennial, 1980); and, S. Aronowitz, *False Promises: The Shaping of American Working Class Consciousness* (Durham: Duke University Press, 1992).

⁴⁰¹ See: G.W.F. Hegel, "Hegel to Niethammer – October 13, 1806" in *Hegel: The Letters* (trans.) C. Butler & C. Seiler (Bloomington: Indiana University Press, 1984) at 114. "I saw the Emperor [Napoleon] – this world-soul – riding out of the city on reconnaissance. It is indeed a wonderful sensation to see such an individual, who, concentrated here at a single point, astride a horse, reaches out over the world and masters it."

⁴⁰² Stephen Ányos Jedlik (a.k.a. Jedlik Ányos István) is generally credited as the inventor of the "lightning-magnetic self-rotor," electric dynamo or motor. Unfortunately, he thought that this was too "obvious" and assumed that it must have already been discovered. Jedlik never patented his invention. See: A. Heller, "Anianus Jedlik" 53 (1896) *Nature*. Also, see: J.S. Rigden & R.H. Stuewer, *The Physical Tourist: A Science Guide for the Traveler* (Basel & Boston: Birkhäuser, 2009) at 177. Another example of an infamous inventor who could be viewed as a "great man of history," but who died alone and in poverty, was the electrical engineer Nikola Tesla. Tesla is credited with creating – but truly popularising – the alternating current motor. See: C. Dommermuth-Costa, *Nikola Tesla: A Spark of Genius* (Minneapolis: Lerner Publications Co., 1994).

⁴⁰³ W. Benjamin, "Theses on the Philosophy of History" *Illuminations* (ed.) H. Arendt, (New York: Schocken Books, 1988) at 257.

⁴⁰⁴ The terms "deconstruct" or "deconstruction" are readily banded about in popular culture. Its use typically seems to infer a notion about how to "disassemble" a piece of IKEA™ furniture. In my opinion, this does a great disservice to the work of Jacques Derrida and his protracted political engagement

iconographic or conventional tales of intellectual property to demonstrate that invention, innovation and intellectual production is a collective and social process. Indeed intellectual property can be understood as individual achievements in a larger real collective process in history. This vision becomes possible – as opposed to a strictly *ahistorical*, liberal, individualistic, legal and/or authorial narrative – by recognising the rather simple, pardon the term, *fact* of material reality. A collective, a cultural materialist or a dialectical understanding of history, allows us to see behind intellectual property regimes to acknowledge the larger process(es) of social and cultural formation and transformation.⁴⁰⁵ Put differently, this allows for a new perspective as to the historical forces that took shape under the industrial revolution and allows us to unpack the past and present.

3.5.3 Cultural Materialism as Praxis

Cultural materialism helps us, within limits, to understand how our current intellectual property regimes and peonage are linked to theory and practice. It also provides a window into the first enclosure movement and, to a degree, intellectual enclosure movements of the late-20th and early 21st century. From this perspective, cultural materialism allows us to theoretically examine the form of conventional historical reasoning used to flatten past change and convert it into the works of ‘great’ individual innovators that categorise them as drivers of economic “progress” within

throughout his life. See: J. Derrida, *Points: Interviews, 1974-1994* (Stanford: Stanford University Press, 1995) at 87. Popular culture is generally problematic. According to Derrida: “[T]he first problem of the ‘media’ is posed by what does not get translated, or even published in the dominant political languages, the ones that dictate the laws of receivability, precisely, on the left as much as on the right.”

⁴⁰⁵ Simon Winchester provides an interesting example as to the telegraph and the cultural transformation that electric communication and so-called news gathering had on the world with the eruption of Krakatoa. See: S. Winchester, *Krakatoa: The Day the World Exploded: August 27, 1883* (New York: Harper Perennial, 2004) at 183-195. Also, see: T. Standage, *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century's On-line Pioneers* (New York: Walker and Co., 1998).

modernity. This normative view of history freezes, froze or diminishes other factors, such as government regulation, and sees or envisions that only traditional economic theories and practices of the free market as the sole engines at work in the “progress” of history. Yet, as even a non-Marxist like Polanyi astutely observed: “A belief in spontaneous *progress* must make us blind to the role of government in economic life.”⁴⁰⁶ Indeed, ‘a belief in spontaneous *progress*’ would also make us blind to the rôle that cultural materialism plays in the formation of intellectual property regimes and their influence.

If we do not look at history as the by-product of “spontaneous *progress*”, then, the notion of intellectual property as a social technology becomes a useful concept, that historically shapes us and is shaped historically by us becomes an important avenue of inquiry to explore. Moreover, if economic and technological progress are no longer seen as spontaneous or as the sole catalyst that shapes our historical process(es), then one must adjust much of our understanding as to knowledge and the production of knowledge through different filters (of course, the solution proposed here is that our investigation ought to see intellectual property through the lens of cultural materialism).

This transforms – or ought to transform – our relationship to a “common sense” understanding of knowledge and our conventional (Anglo-American) notions of certainty. To degrees, common sense inexorably has shaped our common law legal mind-set – particularly, as to the issues about the ownership of an expression or in the ownership of an idea. As such, a similar sentiment could – and can – be said to apply to our casual or conventional understanding of the historic development of intellectual property. Yet, this observation allows us to challenge the elements or seeds of

⁴⁰⁶ Polanyi, *supra* note 170 at 39.

intellectual property that were planted during the history of the first enclosure movement, note their influence, and how it has shaped and evolved through history. In Foucault's sense, intellectual property can be seen and understood as a *technology* that shapes our thinking.⁴⁰⁷ Arguably, it is in this sense that many progressive critics in intellectual property circles suggest and argue that we ought to look at the current commodification of ideas and expressions as the “second enclosure movement.”⁴⁰⁸

The quarrel with the standard black-letter approach to intellectual property is that most accounts refuse to challenge its own nature and history of property. Moreover, intellectual property is presumed to be “natural” or as “neutral” as to its economic rôle in the history of capitalism and our current state of late-capitalism.⁴⁰⁹ Consequently, its neutrality as to its own assumptions are actively – even if unconsciously – advanced by most of its proponents, theorists and practitioners. It is commonplace to view property as a ‘naturalised’ concept and, more often than not, seen as a neutral and natural outcome or outgrowth of industrialisation and historical progress. This version of intellectual property refuses to recognise or question its founding principle: aside, that is to say, as to

⁴⁰⁷ In many ways, aside from Saïd and the notion of ‘colonisation of the mind’, Foucault’s use of ‘technologies of the self’ as it relates to sexuality has quite a lot in common with our current intellectual property regimes. See: M. Foucault, *Technologies of the Self: A Seminar with Michel Foucault* (Amherst: University of Massachusetts Press, 1988). The rôle of internalising the discipline of intellectual propertisation is not unlike or dissimilar to Foucault’s argument as to how we internalising our modern notions of sexuality.

⁴⁰⁸ J. Boyle, “Fencing Off Ideas”(2002) *Daedalus* at: 13. Also, see: J. Boyle, “The Second Enclosure Movement and the Construction of the Public Domain” (2003) 66(33) *Law & Contemp. Probs.* Also, see: P. Evans, “The New Commons vs. The Second Enclosure Movement: Comments on an Emerging Agenda for Development Research” (2005) 40 (2) *Stud. Comparative Int’l Development* at: 85. For an interesting cultural overview see: W.F. Patry, *Moral Panics and the Copyright Wars* (Oxford: Oxford University Press, 2009). Also, see: D. Bollier, *Brand Name Bullies: The Quest to Own and Control Culture* (Hoboken: J. Wiley, 2005).

⁴⁰⁹ Vaver, *supra* note 266. Vaver’s correct observation aside, intellectual property is very similar to the *naturalising* idea of money – that is to say, there is a general tendency or a logical inevitability embedded in human reason to apprehend that there is an ‘intrinsic’ power or value hidden within notions of property or a gold coin. See: Graeber, *supra* note 10 at 53. The neutrality of money is a half-baked idea that has persisted since at least the time of David Hume, who passed this distortion onto Adam Smith. Smith’s purported neo-classical followers have also absorbed this idea. See: D. Hume, “Of Interest” in *Essays Moral and Political* (New York: Cosimo, Inc., 2007) at 303.

its *natural* creation as a fundamental element of political economy and as an instrument for state formation. Within reason, intellectual property and the exclusivity of ownership in an expression are largely considered sacrosanct and legally reasonable. Intellectual property – if not natural phenomenon – then is an almost naturalistic phenomenon. Intellectual property, then, is viewed as a natural extension and a logical and rational outgrowth of property *per se*. As sublimated fictions go, this is one of the most powerful tales that percolates through our imagination with a mantra-like recitation to our collective selves that this is a natural outcome of ownership within late-capitalism. Broadly, this is a fiction and, like financial bubbles, seems only to matter when we call their foundations or values into question and this seldom occurs except when our “western” lives are thrown into a crisis. A recent and on-going example of this is the 2008 housing bubble and financial crisis of the global economic system.⁴¹⁰

The argument advanced, here, is that our current intellectual property regimes support and promote an embedded and expansive colonising effect. Within the seeds or logic of late-capitalism’s intellectual property regimes is an agenda that promotes an ever-expanding ‘second enclosure movement.’ Similar to the ‘neo-colonialism’ inherent in material, financial and resource driven project of globalisation – one that continues to undermine human rights and freedoms⁴¹¹ – ever-expanding intellectual property rights and global enforcement surrounding pharmaceuticals become yet another barrier to the

⁴¹⁰ See: R.A. Posner, *A Failure of Capitalism: The Crisis of '08 and the Descent into Depression* (Cambridge: Harvard University Press, 2009). For a more thorough analysis of the 2008 financial crisis see: R.D. Wolff, *Capitalism Hits the Fan: The Global Economic Meltdown and What to Do About It* (Northampton: Interlink Books, 2009). Also, see: Y. Varoufakis, *The Global Minotaur: America, the True Origins of the Financial Crisis and the Future of the World Economy* (London: Zed Books, 2011) at 257-258. Also, see: Kotz, *supra* note 30.

⁴¹¹ A recent example is the law suit filed against the Canadian based mining company, Hudbay, in a Toronto court. See: A. Posadzki, “HudBay won’t appeal ruling bringing Guatemala case to Canada” The Globe and Mail, August 30, 2013, at: <http://www.theglobeandmail.com/news/national/hudbay-wont-appeal-ruling-bringing-guatemala-case-to-canada/article14060058/> (last visited September 1, 2013).

“wretched of the earth”⁴¹² and their needless suffering and death.⁴¹³ In addition, ever-expanding intellectual property rights and global enforcement encumbers colossal amounts of scientific inquiry with endless and useless duplication of research in a race to the patent office. This situation also burdens research with *monumentally* expensive and parasitic litigation – almost a third of most companies “official” research and development budgets.⁴¹⁴ Yet, what becomes the supreme objective – directly or indirectly – in our adversarial system of intellectual property enforcement becomes, arguably, the protection of usury in the interests of a parasitic rentier class in relative perpetuity.⁴¹⁵ Historically, the pre-modern creation or formation of our current intellectual property regimes and rentier class has its origins and antecedents in the first enclosure movement and it is to this era we must first turn.

3.5.4 The Poverty of Enclosure and Its Discontents

There are different histories told as to the creation and nature of the parliamentary enclosure movement in England. The first enclosures were, perhaps, aptly and appropriately “called a revolution of the rich against the poor.”⁴¹⁶ This revolution

⁴¹² F. Fanon, *The Wretched of the Earth* (Berkeley: Grove Press, 2004).

⁴¹³ See: Mr. Justice Edwin Cameron, “The Deafening Silence of AIDS – First Jonathan Mann Memorial Lecture” XIIIth International AIDS Conference – Durban, 9th – 14th July 2000, at: <http://www.tac.org.za/Documents/Speeches/ec10july.txt> (last visited January 20, 2011).

⁴¹⁴ According to an expert witness in a 2004 Schering-Plough case, for every dollar spent in research and development 27 cents is spent on patent litigation. See: “Opening Brief of Schering-Plough Corp.,” WI. 3557974, (11th Cir. June 1, 2004) at 48. Also, see: Senate Judiciary Committee, *Paying Off Generics to Prevent Competition with Brand Name Drugs: Should It be Prohibited, January 17, 2007, Vol. 4* (Washington: U.S. Government Printing Office, 2007) at 20 & 154. Also, see: American Intellectual Property Law Association, “Report of the Economic Survey – 2011” (Rockville: A.I.P.L.A., 2011) at: <http://www.aipla.org/members/Documents/AIPLA%202011%20Report-%20Summary%20102411.pdf> (last visited June 30, 2012).

⁴¹⁵ For an interesting implied argument, one need only to read William Landes and Richard Posner who advocate(d?) for “indefinitely copyright.” Although Landes and Posner split hairs between “relative” and “perpetual” copyright, the point is intriguing although, in the digital age rather moot. W.M. Landes & R.A. Posner, “Indefinitely Renewable Copyright” (2002) 3 (Univ. of Chicago, John M. Olin L. & Econ. Working Paper No. 154 (2d Series)). Also, see: Landes & Posner, *supra* note 254 at 214.

⁴¹⁶ Polanyi, *supra* note 170 at 35.

brought an end to the ancient laws, customs and alliances that had governed England. Enclosure is a term that defined the process in which common forests, fields and pastures were converted into small hedge farms and, eventually, larger consolidated farms. The English enclosure movement, like most land grabs, were private initiatives that gained their foothold through acts of parliament. Whereas the 15th-16th century's 'religious' enclosure movement rationale was used to reorganise agricultural labour and to increase pasture, the 18th and 19th-century extension of the 'industrial' enclosure movement, to some observers, was rationalised to discipline people, as a way to improve farm efficiency, and as a source for the reallocation of agricultural labour for industrial purposes – the reserve army of workers.

The uncertain success of the 15th and 16th enclosure 'revolution' was directed by a crisis in faith and "revelation" that accompanied the Protestant Reformation. The discovery of the 'New World', the introduction of the Guttenburg Bible, and the political pamphleteering that accompanied William Caxton's introduction of the printing press to England⁴¹⁷ turned the world "upside down."⁴¹⁸ The Reformation led to an enormous land grab and plunder against Catholics and Catholic Church in England. It ushered in an era of religious strife that was to linger until the last decade of the 20th-century.⁴¹⁹ Nobles and lords "were literally robbing the poor of their share in the common, tearing down the houses which, by the hitherto unbreakable force of custom, the poor had long regarded as

⁴¹⁷ See: L.R. Patterson, *Copyright in Historical Perspective* (Nashville: Vanderbilt University Press, 1968) at 121.

⁴¹⁸ See: C. Hill, *The World Turned Upside Down: Radical Ideas During the English Revolution* (New York: Viking Press, 1972).

⁴¹⁹ Perhaps one does not need to be reminded, but the religious wars unleashed by Henry VIII are only coming to a resolution through the incredulously named 'Good Friday Agreement' in Northern Ireland: and, this accord is only slightly over a decade old. See: S. Farry, "The Morning After: An Alliance Perspective on the Agreement" in *Peace At Last?: The Impact of the Good Friday Agreement on Northern Ireland* (eds.) J. Neuheiser & S. Wolff (Oxford: Berghahn, 2004).

theirs and their heirs.”⁴²⁰ In doing so, the well-worn traditional fabric of society was being torn asunder. Coupled with the historic labour shortages exerted by the Black Death,⁴²¹ the destruction and deforestation of the great forests of England and the beginning of the “Little Ice Age,”⁴²² the entire social fabric of the English commons was under demographic, environmental, religious and political conflagration.⁴²³ According to Polanyi:

Desolate villages and the ruins of human dwellings testified to the fierceness with which the revolution raged, endangering the defences of the country, wasting its towns, decimating its population, turning its overburdened soil into dust, harassing its people and turning them from decent husbandmen into a mob of beggars and thieves. Though this happened only in patches, the black spots threatened to melt into a uniform catastrophe.⁴²⁴

As Marx succinctly puts it, “the agricultural folk [were] forcibly expropriated from the soil, driven from their homes, turned into vagabonds, and then whipped, branded and tortured by grotesquely terroristic laws into accepting the discipline necessary for the

⁴²⁰ Polanyi, *supra* note 170 at 37.

⁴²¹ The “Black Death” was not one single pandemic, but was a series of pandemics lasting from approximately 1347 to the last major infection in London in 1665. See: S. Moalem, *Survival of the Sickest: A Medical Maverick Discovers Why We Need Disease* (New York: Harper Collins Publishers, 2007) at 8. According to Moalem, after 1347, up to a third to half of the population of Western Europe were killed due to exposure to the plague. Comparatively, Oli Benedictow holds that the death rate was higher, upwards of 60% of Europeans were killed by the plague. See: O.J. Benedictow, *The Black Death 1346-1353: The Complete History* (Woodbridge: The Boydell Press, 2004). Also, see: O.J. Benedictow, “The Black Death: The Greatest Catastrophe Ever” (2005) 55(3) *Hist. Today* at: 42. Benedictow has estimated the Black Death killed 50 million Europeans and warrants that it ought to be labelled the “greatest catastrophe ever.” These numbers are confirmed elsewhere, see: N.E. Cantor, *In the Wake of the Plague: The Black Death and the World It Made* (New York: Perennial/Harpers Collins, 2002) at 76-120. According to Norman Cantor, the Black Death was incorporated into the systemic and on-going persecution of the European Jewry, of women as witches, and of homosexuals and heretics in general. As to Jews, the principle and unfounded charge by mobs of Christians was that Jews poisoned the communal wells and were the cause of the plague.

⁴²² See: B. Fagan, *The Little Ice Age: How Climate Made History, 1300-1850* (New York: Basic Books, 2001). Also, see: B. Fagan, *The Great Warming: Climate Change and the Rise and Fall of Civilization* (London: Bloomsbury Press, 2008). Also, see: Diamond, *supra* note 397 at 12.

⁴²³ J. Blum, *The End of the Old Order in Rural Europe* (Princeton: Princeton University Press, 1978) at 263.

⁴²⁴ Polanyi, *supra* note 170 at 37.

system of wage labour.”⁴²⁵ As cataclysmic and as drawn out as the enclosure movement was, its beginnings would irrevocably change the face, shape and system of property ownership in England and the foundations for intellectual property.⁴²⁶

3.5.5 The Scarcity of Labour and Technical Innovation

Yet, it would also spur a process of technical innovation that was directly related to the scarcity of physical labour after the Black Death.⁴²⁷ The shortage of labour caused by the plague meant that there was an incentive to make medieval technology less labour-intensive. Although it seems self-evident, medieval technology was to make a radical transformation and introduce objects, measurements, and methods that ranged from clocks, guns, eyeglasses and optics, and, for new medical knowledge.⁴²⁸ It helped fuel a new craving for general knowledge: a knowledge that was to become the *trademark* of the European Renaissance.⁴²⁹ Presumably, for our query, it was the historical formation of rights to this knowledge that becomes an essential element.

To the 19th-century reformer and British Hegelian, T.H. Green, commented that when one stopped to examine the history of England, “the blame [as to enclosure]... is really due to the arbitrary and violent manner in which rights over land have been acquired and exercised, and to the failure of the state to fulfil those functions which under a system of unlimited private ownership are necessary to maintain the conditions of a free

⁴²⁵ Marx, *supra* note 274 at 899.

⁴²⁶ E. Hobsbawm & G. Rudé, *Captain Swing*, (New York: W.W. Norton, New York, 1968). As noted, the actual duration of the first enclosure movement is hard to periodise. If we take the geographic area of England, then enclosure began during the reign of Henry VIII and ended in 1707 with the *Act of Union*. Yet, it seems clear that what became the United Kingdom (all Ireland, Wales, Scotland and England), then the first enclosure movement started during the reign of Henry VIII and ending during the reign of Queen Victoria.

⁴²⁷ See: H.A. Miskimin, *The Economy of Early Renaissance Europe, 1300-1460* (Cambridge: Cambridge University Press, 1975) at 10.

⁴²⁸ It ought to be noted that the introduction of these “inventions” were developed differently and unevenly from Asia through to Europe and certainly not from the genius of one European “individual” inventor.

⁴²⁹ See: R.S. Gottfried, *The Black Death: Natural and Human Disaster in Medieval Europe* (New York: The Free Press, 1983).

life.”⁴³⁰ So too, perhaps, with the ‘unlimited private ownership’ that many wish to grant intellectual property.⁴³¹ Green held that “feudalism had... passed in[to] unrestrained landlordism, almost untouched, with its landless countrymen, whose ancestors were serfs... [and] the parents of the proletariat of the great towns.”⁴³² This pattern of state action and legal rationale set a prototype and pattern for future expropriations of common goods. Common goods and their parliamentary transformation into the right of private property were not limited to physical objects. Remarkably, the pattern of expropriation is held to have reached its zenith of abstraction through the development of intellectual property and succeeds by its ambiguity.⁴³³

3.5.6 “Clearing” (Or Cleansing⁴³⁴) as Progress

For some current observers and historians, the parliamentary enclosure movement was a progressive occurrence and development. According to Robert Allen, “[f]ew ideas have commanded as much assent amongst historians as the claim that enclosures and large farms were responsible for the growth in productivity.”⁴³⁵ After the devastation of the plague, and due to a shortage of labour, peasants had greater bargaining power in negotiating fealty and compensation from their landowning masters. This meant the end of serfdom.⁴³⁶ Yet, it also introduced the modern need to accumulate and to consolidate

⁴³⁰ T.H. Green, *Lectures on the Principles of Political Obligation* (London: Longmans, Green, & Co., 1895) at 228.

⁴³¹ Again, see: Landes & Posner, *supra* note 254.

⁴³² Green, *supra* note 430 at 226.

⁴³³ D. Lange, *Recognizing the Public Domain* (1981) 44 L. & Contemp. Probs. at 147.

⁴³⁴ The term “ethnic cleansing” became a media term during the break-up of the former-Yugoslavia. As Noam Chomsky points out: This is what “we call the process when carried out by official enemies.... [Yet, p]eople compelled to abandon hope and offered no opportunities for meaningful existence [by *our* side] will drift elsewhere, if they have any chance to do so” and are not ‘officially’ recognised as being *cleansed*. N. Chomsky, “Blinded by the Truth” *Al-Ahram Weekly*, November 2-8, 2000, at: <http://www.chomsky.info/articles/20001102.htm> (last visited December 10, 2011).

⁴³⁵ R.C. Allen, *Enclosure and the Yeoman* (Oxford: Clarendon Press, 1992) at 2.

⁴³⁶ J.E. Roemer, *Free to Lose: An Introduction to Marxist Economic Philosophy* (Cambridge: Harvard University Press, 1988) at 120.

capital. Thus, one of the purposes of the enclosure movement was to find a new disciplinary technique for or against the masses: its objective was to shift newly gained economic and social power and wealth away from peasants and back to the legitimate owners of capital – in this case, the gentry.

The logic was that the enclosure of the commons would improve productivity and produce an increased surplus of wealth. According to the economic and social historian, Joan Thirsk, an enclosure was an instrument and “method of increasing the productivity... [and the] profitability of land.”⁴³⁷ Without a doubt, this is the link between productivity and profitability – what Marx defined almost 100 years earlier as the “secret of primitive accumulation.”⁴³⁸ Thirsk baldly and optimistically asserts that this deployment of action and “improvement” improves the economy through “all forms of enclosure.”⁴³⁹ Comparatively, and from a relatively *progressive* and somewhat utilitarian point of view, James Boyle concurs: “The big point about the enclosure movement was that it worked; this innovation in [the] property systems allowed an unparalleled expansion of productive possibilities.”⁴⁴⁰

Thirsk, then, is perhaps correct that profitably increases with the enclosure of the commons, but the issue of overall productivity is questionable. Productivity for whom? What kind of productivity? Whose productivity is it? Is the profit accumulated through the questionable fruits or productivity of one’s labour? Is it a communally distributed

⁴³⁷ J. Thirsk, *Tudor Enclosures* (Leicester: University of Leicester, 1958) at 4. Also, see: W.A. Lewis, *Tropical Development, 1880-1913* (Evanston: Northwestern University Press, 1970) at 212. As Lewis puts it, this is a similar tactic used in colonialism where eventually “to exploit... farmers a government would first have to make them productive, which meant introducing cash crops and opening up land with roads or irrigation.”

⁴³⁸ Marx, *supra* note 274 at 667.

⁴³⁹ Thirsk, *supra* note 437 at 4.

⁴⁴⁰ Boyle, *supra* note 408 at 3.

profit? Is it a “trickle-down”⁴⁴¹ or “voodoo”⁴⁴² productivity or profit? Is it truly “profit” achieved through increased productivity or profit achieved through financial speculation or mechanisation? As political economist Susan George notes: “Mechanization [and chemicals] can be expected to increase productivity per worker – but not necessarily per hectare.”⁴⁴³

Rival to Thirsk’s assumption, an increase in profit is not logically linked to an increase in productivity.⁴⁴⁴ It may be that broken landless peasants, forced to labour through a regime of enclosure, simply lacked sufficient bargaining power to demand higher wages. The collective immiseration of landless peasants, in turn, allowed landowners to increase their profitability and claim that enclosure was progress and a way to improve the wastelands.⁴⁴⁵ To some observers, “the enclosure movement usually forms the backdrop for the traditional story of primitive accumulation. Since many economic historians credit the enclosures with promoting an agricultural revolution, opposition to primitive accumulation (in the form of enclosure historically developed)

⁴⁴¹ “Trickle-down economics” became the bulwark and catchphrase of Ronald Reagan’s tangled (mangled?) understanding and policies for the modern American economy. “Trickle-down” is usually traced back to the American satirist Will Rogers. See: W. Rogers, “An Here’s How It All Happened” in *Will Rogers’ Weekly Articles: The Hoover Years 1931-1933 Vol. 5* (ed.) S.K. Gragert (Stillwater: Oklahoma State University Press, 1982) at 207. Rogers meant the “trickle-down theory” to be taken with a grain of rock-salt because “[t]he money was all appropriated for the top in the hopes that it would trickle down to the needy” but never did. Also, see: See: W. Rogers in D.M. Giangreco, *Dear Harry...: Truman’s Mailroom, 1945 - 1953: The Truman Administration Through Correspondence with “Everyday Americans”* (Mechanicsburg: Stackpole Books, 1999) at 6.

⁴⁴² During the 1980 U.S. presidential campaign, George H.W. Bush was noted for claiming that Reagan’s purported “plan” was “voodoo economics.” Aside from the explicit racial epithet, Bush could be forgiven for at least being accurate. See: M. Parenti, *Against Empire* (San Francisco, City Lights Books, 1995) at 158.

⁴⁴³ S. George, *How the Other Half Dies: The Real Reasons for World Hunger* (Harmondsworth: Penguin, 1986) at 318.

⁴⁴⁴ The ‘law of diminishing returns’ or what Marx’s referred to as the “law of the tendency of the rate of profit to fall” (or elsewhere as the “progressive tendency of the general rate of profit to fall”) uncouples the notion of productivity and profit. See: K. Marx, *Capital Vol. III* (ed.) F. Engels (New York: International Publishers, 1958) at 148.

⁴⁴⁵ R. Brown, *Society and Economy in Modern Britain, 1700-1850* (London: Routledge, 1991) at 60.

appears as the futile flailing away at the inevitable progress of human society.”⁴⁴⁶

However, counterexamples as to the productivity exist. For example, prior to the French Revolution:

Even the Physiocrats, vigorous advocates of large-scale commercial farming, acknowledged the productivity of traditional methods of producing food. They estimated that the spade husbandry of the peasants returned twenty to thirty times as much grain as had been planted. Cultivation with the plow returned only six times the amount.... Comte de Mirabeau contended that farmers in a suburb of Paris earned about twenty-eight pounds per year from a single acre of land. The physical output of these market gardeners was nothing short of phenomenal. A Paris gardener, I. Ponce, produced more than forty-four tons of vegetables per acre, not to mention 250 cubic yards of topsoil.... By contrast, in the United States, today's [1997] commercial producers manage to harvest only nineteen tons of onions or thirty-three tons of tomatoes per acre for processing the highest yielding vegetables. Other plants, such as spinach or peppers, only produce four or five tons per acre in the United States.⁴⁴⁷

A more current estimate according to Bernard Taper, in an examination of John Jeavons, and his pioneering work on the application of the scientific method to gardening techniques, found that 2,800 square feet of marginal land could fulfil the needs for a complete diet with a daily effort lasting less than 30 minutes.⁴⁴⁸ According to Scott Burns, he estimated that an hour spent gardening was worth on average \$10 (US), which was over twice the average wage in 1975.⁴⁴⁹ This evidence would appear to contradict Thirsk and Allen's assertions. In particular, Thirsk and Allen appear to underestimate

⁴⁴⁶ M. Perelman, *The Invention of Capitalism: Classical Political Economy and the Secret History of Primitive Accumulation* (Durham: Duke University Press, 2000) at 94.

⁴⁴⁷ *Ibid* at 95. Also, see: G. Weulersse, *La Physiocratie à la fin du règne de Louis XV (1770-1774)* (Paris: Presses Universitaires de France, 1959).

⁴⁴⁸ B. Taper, “Miniaturizing Agriculture” (1979) 80(1) *Sci*.

⁴⁴⁹ See: S. Burns, *Home, Inc.: The Hidden Wealth and Power of the American Household* (Garden City: Doubleday & Company, Inc., 1975). Also, see: National average wage indexing series, 1951-2007, Social Security Online at: <http://www.ssa.gov/OACT/COLA/AWI.html> (last visited May 18, 2009).

agricultural productivity prior to enclosure – at least from today’s perspective and the post-paradoxically named “Green Revolution.”⁴⁵⁰

3.6 The Market before ‘Markets’

3.6.1 An Older View of Market Enclosure

Unlike Thirsk, Allen and Harden, Marx and earlier political economists were still living witnesses or in direct contact with the living victims of the parliamentary enclosure movements of the late 18th and mid 19th centuries. The stories they heard and passed on as to the costs and benefits of enclosure were not trivial academic debates.⁴⁵¹ Philosophers and political economists such as David Hume and Adam Smith also had to give sense to the reasons for the dissolution of the commons, the end of mercantilism and the decline of the absolutist state. Unlike modern neo-classical economists, early political economists were not numerical zealots or evangelicals. Classical economists and their theoretical approach(es) at least attempted to grapple with the *moral* consequences of public policies and political choices. They, at least, understood that history and its discontents were part of the process and *progress* of primitive accumulation. However, compared to the heavy-handed historic legacy of the absolutist state and mercantilism, Hume, Smith and David Ricardo have been (mis?)interpreted as

⁴⁵⁰ This term was purportedly coined by William S. Gaud, U.S. Administrator for the Agency for International Development, Secretary of State, cited in D. Horowitz, *The Abolition of Poverty* (New York: Praeger Publishers, 1969) at 136. The Green Revolution led to an expansion in food production globally. Yet, it has also been held responsible for environmental degradation, exhaustion of arable land, and increased cost of foreign inputs, see: George, *supra* note 443 at 113-119. Also, see: V. Shiva, “The Green Revolution in the Punjab” (1991) 21(2) *The Ecologist*.

⁴⁵¹ Marx, *supra* note 274 at 672-685. Marx remarked how the Duchess of Sutherland could hypocritically entertain the American abolitionist and author of *Uncle Tom’s Cabin*, Harriet Beecher Stowe, while clearing people off the land for wage-slavery and sheep runs. Also, see: K. Marx, “The Duchess of Sutherland and Slavery” *The People’s Paper*, No. 45, March 12, 1853, *Marx-Engels Collected Works Vol. 12* (Moscow: Progress Publishers, 1979). Marx observed that the Duchess of Sutherland’s orders meant that “[a]ll their villages were demolished and burned down, and all their fields converted into pasturage. British soldiers were commanded for this execution, and came to blows with the natives. An old woman refusing to quit her hut was burned in the flames of it. Thus my lady Countess appropriated to herself 794,000 acres of land, which from time immemorial had belonged to the clan.”

offering a neutral and a utopian world-view of ‘the market’ and as a panacea for *all* the ills of *any* age.

3.6.2 “Talking about a Revolution” of ‘Primitive Accumulation’

How one discusses primitive accumulation tells a story. The story one tells generally indicates one’s political leanings or disposition on property. These political leanings are the basis of how one understands, narrates or weaves the tale of the formation of capital and primitive accumulation.⁴⁵² The idea of primitive accumulation, in turn, shapes and moulds our current understanding surrounding property and intellectual property. It is essential to understand the forces at play in the formation of capital, the enforcement of enclosure and the creation of modern property were not neutral events. Without a doubt, how one tells the story of the enclosure movement has profound implications. It shapes how we contextualise history and how one understands the birth of capitalism and its unfolding evolution in what was or became the failed *promised land* of the uncertain ‘new economy.’⁴⁵³

3.6.3 Progress and the Neutrality of Enclosure – A Gendered Space?

Aside from the purportedly ‘empirically’ neutral models claiming higher productivity with enclosure, as Polanyi points out, cultural shifts in production and wealth distribution begin a corrosive disintegration of the social bonds of community that accompany capital formation.⁴⁵⁴ The formation of capital demands that cultural and social bonds and labour capitulate to capital’s demands. Is this a neutral economic space

⁴⁵² S. Federici, *Caliban and the Witch: Women, the Body, and Primitive Accumulation*, (Brooklyn: Autonomedia, 2004) at 73. As Federici contends: “Anti- enclosure struggles continued... through the Jacobean period [and were defined by] ... a noticeable increase in the presence of women.”

⁴⁵³ See: A.C. Pratt, “The New Economy, or the Emperor’s New Clothes” in *Geographies of the New Economy: Critical Reflections* (eds.) P. Daniels et. al. (New York: Routledge, 2007). Also, see: S. Aronowitz & W. Difazio, *The Jobless Future: Sci-Tech and the Dogma of Work* (Cambridge: Harvard University Press, 1997).

⁴⁵⁴ See: Polanyi, *supra* note 170.

or sphere? In *Caliban and the Witch*, Silvia Federici, holds that primitive accumulation is a gendered space.⁴⁵⁵ The *public* and *private* realms of social space are constructions of *difference* (“*différance*”) and *separateness*.⁴⁵⁶ If one looks at the operation of the enclosure movement in its totality (if that is possible), comparative ‘social movements’ of the time become important in measuring the relative freedom – economic or otherwise – that women were able to experience, employ and develop concerning their *own* autonomy. Or, as Marx put it: “Everyone who knows anything of history also knows that great social revolutions are impossible without the feminine ferment. Social progress may be measured precisely by the social position of the fair sex....”⁴⁵⁷

Federici argues that the Spanish Inquisition and its witch-hunts helped the state enclose women’s independent productive and reproductive knowledge, power and consolidate state enforcement of property patriarchy. According to Federici and other critics,⁴⁵⁸ accusations of witchcraft “transformed” women, who were relatively economically independent subjects during the late Middle Ages, and into the

⁴⁵⁵ Federici, *supra* note 452 at 62.

⁴⁵⁶ N. Fraser, “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy” in *Habermas and the Public Sphere* (ed.) C. Calhoun (Cambridge: MIT Press, 1992) at 138, n4. As Nancy Fraser indicates, when it comes to gender neutrality, the notion that law – and the ‘rule of law’ – is an impartial discourse is an observation that requires a level of self-delusion that might challenge the heights attempted by Icarus. A brief etymological analysis of *pubis* and *testify* demonstrate that Roman law excluded women from public life and legal recognition as persons. As we know, this is still an ongoing practical life and death struggle in the lives of women and demonstrates the failure of the criminal justice system. See: “Arlene May – Coroner’s Inquest – Jury’s Verdict and Recommendations,” Inquest into the deaths of Arlene May and Randy Iles, February 16 - July 2, 1998, Coroners Courts, Toronto, Ontario, at: <http://www.owjn.org/archive/arlene3.htm> (last visited June, 10, 2010). To be a “public” person in Rome, one who could “testify” in court, an individual must be a “citizen” of Rome and possess the ‘correct’ *pubis*. As such, to testify in court – with the ‘correct’ *pubis* (that of a male) – would enable men to testify by cupping their *testicles* in their hand and swear, on pain of physical severance, to tell the truth. Perhaps, to the so-called modern legal mind, it is a curious fact or anachronism that one had to swear publicly on one of the most ‘private’ part of the body to tell the truth. Also, see: G. More, “Arguing Equality: Recognising the Traps” in *The Critical Lawyers’ Handbook 2* (eds.) P. Ireland & P. Laleng (London: Pluto Press, 1997) at 116.

⁴⁵⁷ K. Marx, “Letter to Dr. Ludwig Kugelmann” in *Marx-Engels Collected Works, Vol. 43* (Moscow: Progress Publishers, 1980) at 184.

⁴⁵⁸ See: Graeber, *supra* note 10 at 447 n.66.

economically dependent, legally-infantilised chattel,⁴⁵⁹ and the prefigured the landless wage-slave under capitalism. “The basic unit of both production and consumption in the Middle Ages was the household... [and] although men and women shared responsibility for maintaining the household economy, they usually performed different tasks.”⁴⁶⁰

3.6.4 Not an Ideal *Oikonomia*... But?

This was not an ideal situation. Late-medieval women were dependent on but also possessed a relative amount of independence and knowledge through the household economy – *oikonomia*.⁴⁶¹ This economy provided a ‘relative autonomy’ for women compared to the future market-driven societies initiate at the end of the 18th-century. As noted, women’s questionable “progress” through the Renaissance led to the model of landlessness, impoverishment and “improvement”⁴⁶² that would define the creation of

⁴⁵⁹ J. Kelly, “Did Women Have a Renaissance?” in *Becoming Visible* (eds.) R. Bridenthal, C. Koonz & S.M. Stuard (Hoston: Houghton Mifflin, 1977) at 137.

⁴⁶⁰ H. Applebaum, *The Concept of Work: Ancient, Medieval, and Modern* (Albany: State University of New York Press, 1992) at 289.

⁴⁶¹ The original meaning of *oikonomia* – economy – had to do with the management or administration of the household. See: H.E. Daly & J.B. Cobb, *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future* (Boston: Beacon Press, 1994) at 138. Also, see: M. Waring, *If Women Counted: A New Feminist Economics* (London: Macmillan, 1988).

⁴⁶² In the unfolding of history, the *publically* executed witches (midwives) of the late middle ages would reappear in the literary imagination by the relatively romantic, tragic and/or triumphant heroines of 19th-century novels. For examples of this *privately* consumed ‘commodity form’ of ‘ethical’ entertainment, see: C. Brontë, *Jane Eyre* (London: Penguin Books, Limited, 2006). Also, see: J. Austen, *Mansfield Park* (London: Penguin Books, 1996). Much of Austin’s work narrates the struggle of female characters to marry “well” in the context of inheritable property. Also, see: M. Berg, *Wuthering Heights: The Writing in the Margin* (London: Prentice Hall, 1996). Also, see: T. Hardy, *Tess of the D’urbervilles: A Pure Woman* (London: MacMillan and Co., Limited, 1912). Hardy went farther than narratives of marriage by scandalising the “wife-sales” that still occurred in England during the 19th-century. See: T. Hardy, *The Life and Death of the Mayor of Casterbridge: The Story of a Man of Character* (New York: Signet Classic, 1999). In England, women were viewed historically as chattle and wife-sales as a substitute for divorce did occur. See: E.P. Thompson, “The Sale of Wives” in *Customs in Common*, (London: Penguin, 1991) at 428. Also, see: L. Stone, *Road to Divorce: England 1530-1987* (Oxford: Oxford University Press, 1990). Also, see: R.S.F. Hughes, *The Fatal Shore: The Epic of Australia’s Founding* (New York: Vintage Book, 1986) at 252-253. As we know, the road to legal personality in Canada was a long one. Equality was (and is still?) elusive for Canadian women, see: *Edwards v. AG Canada* [1930] A.C. 123, 1 D.L.R. 98 (P.C.). In *Edwards*, Canadian women finally gained constitutional recognition as legal “persons” under the law. As an aside, Laurie Anderson comparing economic progress and the earnings of women’s noted that: “[W]ith... luck, it’ll be the year 3,888 before we make a buck.” See: L. Anderson, “Beautiful Red Dress” in *Strange Angels* (Burbank: Warner Bros, 1989) at Track 6. Also, see: K. Losse, *The Boy Kings: A*

the working class throughout the 19th, 20th and early 21st-century capitalism.⁴⁶³ Indeed, a woman's work is "never done."⁴⁶⁴ and, for that matter, neither is a man's. But for women who tend to do the majority of the work – 'the sweat of their brow' – they may generally own what they produce but usually do not own the land.⁴⁶⁵

Prior to the enclosure movement, individual and collective independence and interdependence were the dominant social norm in Europe:

[S]ome basic estimates indicating that between 1350 and 1500 a major shift occurred in the power-relation between workers and masters. The real wage increased by 100%, prices declined by 33%, rents also declined, the length of the working-day decreased, and a tendency appeared toward local self-sufficiency. Evidence of a chronic disaccumulation trend in this period is also found in the pessimism of the contemporary merchants and landowners, and the measures which the European states adopted to protect, markets, suppress competition and force people to work at the conditions imposed.⁴⁶⁶

Journey Into the Heart of the Social Network (New York: Free Press, 2012). As employee "51" at Facebook, Losse has an interesting understanding as to the autistic-male-screen culture and pretences and artifices of the so-called 'social media' phenomenon. As she points out, underneath the hyperbole, the mediated power at play with Facebook is a socially isolating (alienating?) and testosterone driven medium that is technologically gendered. Also, for an excellent critical insight into the 21st-century high-tech glazer's culture and mentality (transparency?) – the real "glass-ceiling" – of 'neoliberal,' class denying, and non-progressive feminism surrounding technology, see: S. Jaffe, "Trickle-Down Feminism" (2013) 1 *Dissent: A Quarterly of Politics and Culture* at: <http://www.dissentmagazine.org/article/trickle-down-feminism> (last visited January 17, 2013).

⁴⁶³ See: L. Kapp Howe, *Pink Collar: Inside the World of Women's Work* (New York: Avon, 1977); R. Crompton & G. Jones, *White-Collar Proletariat: Deskillling and Gender in Clerical Work* (London: Macmillan, 1984). Also, see: U. Huws, "Reflections on Twenty Years Research on Women and Technology" in *Women Encounter Technology* (eds.) S. Mitter & S. Rowbotham (Routledge: London, 1995). Also, see: N. Fraser, "How feminism became capitalism's handmaiden – and how to reclaim it" *The Guardian*, October 14, 2013, at: <http://www.theguardian.com/commentisfree/2013/oct/14/feminism-capitalist-handmaiden-neoliberal> (last visited October 16, 2013).

⁴⁶⁴ See: S. Strasser, *Never Done: A History of American Housework* (New York: Pantheon, 1982). Also, see: Gordon, *supra* note 229 at 5. According to a 1885 survey, the Carolina's Farmers' Alliance estimated that the "average North Carolina housewife had to walk 148 miles per year while carrying 35 tonnes of water..." for domestic use.

⁴⁶⁵ M. Goheen, "Land and the Household Economy: Women Farmers of the Grassfield Today" in *Agriculture, Women and Land: The African Experience* (ed.) J. Davison, (Boulder: Westview Press, 1988) at 93. Also, see: R. Harms, *Land Tenure and Agricultural Development in Zaire, 1885-1961* (Madison: University of Wisconsin, 1974) at 6.

⁴⁶⁶ See: Federici, *supra* note 452 at 62. Also, see: B. Moreton, *To Serve God and Wal-Mart: The Making of Christian Free Enterprise* (Cambridge: Harvard University Press, 2009) at 54. The separation of public and private spheres of the "market economy" in the 19th-century comprised Victorian values to keep women outside the wage market and tied to the household. As Bethany Moreton explores, the Wal-Mart revolution consisted, in a sense, of a revolutionary breaking the cycle of unpaid labour of domesticity of

Maurice Dobb claims that the economic independence and interdependence of the average peasant to feudal lord before enclosure meant that entries in the registers of the feudal manors consistently recorded refusal of work for the master in the Winchester Pipe Rolls.⁴⁶⁷ One of the most frequent and cited remarks was that “the work [offered was] not worth the breakfast.”⁴⁶⁸ It was this truculent self-sufficiency of the peasantry, even in lieu of the Black Death, that barred the traditional feudal economy from being transformed and being replaced by the wage system and the authoritarian regimes of the absolutist state – a least for a while.⁴⁶⁹

3.7 Polanyi’s Historical Gift

3.7.1 Polanyi, the Gift, and the Problem of the Market

In his ground-breaking work, *The Great Transformation*, Karl Polanyi stands out as one of the great non-Marxist economic historians concerned about the rise of the

agrarian white Christian women. In doing so, Wal-Mart released – freed-up? – Ozarkian women in the 1950s from the unpaid drudgery and servile culture of rural life. This *revolutionary*(?) change transformed their culture of domestic ‘service’ into a new *servile* culture adapted for the low-wage work of a ‘sales-associate’ with America’s largest employer. *De facto*, with the rise of the 19th-century market economy, women became ‘private’ workers of unseen and unpaid domestic labour as well as reproductive labour. See: J.K. Galbraith, *Economics and the Public Purpose: How We Can Head Off the Mounting Economic Crisis* (New York: The New American Library, 1973) at 31. Yet, as Stephanie Coontz’s classic work, *The Way We Never Were*, indicates, 90% of 19th-century working-class households “could not rely solely on a male bread-winner.” S. Coontz, *The Way We Never Were: American Families and the Nostalgia Trap* (New York: Basic Books, 1992) at 109. What is more, it was the unseen and unpaid female labour in the household that reproduced and reinforced the paternal structure of the 19th-century *masculinised* wage system. Coontz has recently introduced the controversial idea that “‘gender-neutral’ work practices and social policies” do not work because they are based on traditional work place models that were masculinised. That is, the current 30 year drop in male earning power in America is partly a result of global corporations clever – albeit ironic – effort to use “gender-neutral” policies to “feminize” the workplace through precarious work, minimal benefits and encourage “the sinking floor” of wage stagnation. See: S. Coontz, “How Can We Help Men? By Helping Women” *The New York Times*, January 14, 2014, at: http://www.nytimes.com/2014/01/12/opinion/sunday/how-can-we-help-men-by-helping-women.html?_r=0 (last visited January 16, 2014).

⁴⁶⁷ A.E. Levett, “Results of the Black Death” (1916) 5 *Oxford Stud. Soc. & L. Hist.* at 157.

⁴⁶⁸ M.H. Dobb, *Studies in the Development of Capitalism* (London: Routledge & Kegan, Paul Ltd., 1946) at 54.

⁴⁶⁹ See: R.D. Wolff & S.A. Resnick, *Economics: Marxian Versus Neoclassical* (Baltimore: The Johns Hopkins University Press, 1987) at 35-32.

economic origins of capitalism. Polanyi's thought provoking analysis of economic history has few parallels. His analysis indicates that the medieval period laid the foundation and set the patterns of development that led to new state systems of governance: namely, systems of "governmentality"⁴⁷⁰ and governance that would transform the pastoral economy of England, establish pre-industrial mercantilism and lead to the development of full-blown industrial capitalism.⁴⁷¹ Polanyi's study of the transition from feudalism to the absolutist-state in the 15th to 16th century captures many of the nuanced features that became known as the first enclosure movement and centralised state regulation of industry and trade. As such, Polanyi's work is useful in that it can help explain the origins, roots and rise of the importance of property and, in particular, intellectual property as a commodity for the 20th and 21st century.

3.7.2 State Formation and the Groundwork for a National Economy

Under the tutelage of Queen Elizabeth, consolidation of the national economy required the violent intervention of the state: a central authority and force who would be willing to begin to impose scarcity, taxes, regiments of questionable self-sufficiency, and introduce a general and subjugating wage system on the populace that must '[r]ender unto Caesar what is his.'⁴⁷² This would bring about an end to an era and epoch that allowed for the tactile and material production of wealth for the common people and convert it into the abstract wage system. Under the strong arm of the law, it would usher in an era that would lay the groundwork toward the "the possibility of capitalistic

⁴⁷⁰ See: Foucault, *supra* note 245. at 87.

⁴⁷¹ See: P. Anderson, *Lineages of the Absolutist State* (London: Verso Editions, 1978).

⁴⁷² See: *The Holy Bible*, *supra* note 56 at Matthew 22:21. Contingent on the translation, this can read as: "So give back to Caesar what is Caesar's, and God what is God's." Or, "Render therefore to Caesar the things that are Caesar's...."

wealth”⁴⁷³ and the creation for a Jevonian economic system of abstraction that represents a “political economy of the [number] sign.”⁴⁷⁴ To clarify, the *political economy of the sign* like many explanations lie “behind the abstraction known as ‘the markets’ [and] lurks [as] a set of institutions designed to maximize the wealth and power of the most privileged group of people in the world... [otherwise known as] the creditor–rentier class of the First World and their junior partners in the Third.”⁴⁷⁵

3.7.3 A Stark Self-Adjusting Utopia

Polanyi’s historical analysis is unlike most static historical renderings of economic history. His insights and his writing and re-writing of the history concerning the origins of the “self-regulating market” are exceptional. Polanyi holds that “the idea of a self-adjusting [or ‘self-regulating’] market implie[s] a stark utopia. Such an institution could not exist for any length of time without annihilating the human and natural substance of society; it would have physically destroyed man and transformed his surroundings into a wilderness.”⁴⁷⁶ To some observers, his portrait remains remarkably accurate.⁴⁷⁷ Polanyi demarcates three types of exchange: “reciprocal”; “redistributive”; and, “the market.” Reciprocal exchange is what has been called by various political economists and anthropologists as a “gift exchange.”⁴⁷⁸ Redistributive exchange is what we know as the actions of government collecting taxes and redistributing these resources

⁴⁷³ Marx, *supra* note 274 at 672.

⁴⁷⁴ See: Baudrillard, *supra* note 240.

⁴⁷⁵ Henwood, *supra* note 143 at: 6-7.

⁴⁷⁶ Polanyi, *supra* note 170 at 44.

⁴⁷⁷ See: M. Blyth, *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century* (Cambridge: Cambridge University Press, 2002).

⁴⁷⁸ See: Mauss, *supra* note 149. Also, see: L. Blaxter, “Rendre Service and Jalousie” in *Gifts and Poison: The Politics of Reputation* (ed.) F.G. Bailey, (New York: Schocken Books, 1971, (1971). Also, see: L. Hyde, *The Gift: Imagination and the Erotic Life of Property* (London: Vintage, 1999).

throughout society, what we also know as the welfare state.⁴⁷⁹ The visceral “market” is what occurs when we go to the corner store and buy milk or other goods. Yet, it is important to note that if we bothered to measure (if that is even possible) the activity and contribution of the redistributive exchange and reciprocal or gift exchange, then it possibly exceeds all market exchanges in the domestic economy.⁴⁸⁰ Moreover, most “self-regulating market” exchanges are not clear exchanges: specifically, they always involve aspects of redistributive and gift exchanges.

3.7.4 Polanyi’s Transformative History

Polanyi’s analysis traces the economic history of the “self-regulating market” and he has a deep concern with the ‘unconscious’ project and ‘technology’ of the free market. Polanyi is sensitive to the fact that the market is a product of human action and that it adds or subtracts bits and pieces of policy and human action together incrementally and that this has the possibly and consequence of unintended designs.

Nonetheless, the exchange that dominates most people’s mind or imagination is ostensibly market exchange. Market exchanges are seen as a “natural” and logical outgrowth of economic progress. At this level, questionable economic “science” functions ideologically and elevates the market so it is construed as the only exclusive form of exchange and engine of and in history – the natural market. This position is similar to the arguments advanced by Friedrich von Hayek,⁴⁸¹ Milton Friedman,⁴⁸² Alan

⁴⁷⁹ This is what Alan Greenspan complained as a statist strategy to “confiscate the wealth of productive members of society to support a wide variety of welfare schemes.” A. Greenspan, “Gold and Economic Freedom” in *Capitalism: The Unknown Ideal* (eds.) A. Rand, et. al. (New York: New American Library, 1967) at 102.

⁴⁸⁰ As a reminder, this is one of Waring’s central and poignant arguments.

⁴⁸¹ See: F.A. von Hayek, *The Road to Serfdom* (London: Institute of Economic Affairs, 2001).

⁴⁸² See: Friedman, *supra* note 321.

Greenspan⁴⁸³ and most supply-side neoliberal economists. These proponents would label capitalism as a “natural” state of affairs and the natural by-product of human behaviour and self-interest.⁴⁸⁴ Despite longstanding research, research that disproves a link between self-interest and creative innovation,⁴⁸⁵ supply-side neoliberal economists condense and refine human achievement and innovation as being the product of “individual” creativity and genius. Yet, a recent example in molecular genetics shows that collaborative efforts – even collaborative efforts by non-geneticists – can help solve complex problems that have stumped experts and traditional *proprietary* models or strategies based upon secrecy.⁴⁸⁶

3.7.5 Constructing the ‘Historicity’ of Self-Interest

Polanyi holds that the proposition that the market economy as being grounded on the emotion of greed, one at the heart of human nature, is misguided. For liberal and neoliberal apologists, although competitiveness may appear as ‘natural’ – as the ‘historicity’ of the ideal of self-interest, of rational calculation, of material acquisitiveness – it is but one aspect of human nature. Claiming that self-interest is the sole and/or principle-driving force of what it means to be human is an artificial construct. Nonetheless, it is a powerful construct. The most glaring problem with mainstream

⁴⁸³ See: Greenspan, *supra* note 479. This is an absurdly funny paper and has Greenspan justifying retention of the gold standard. Arguably, he retained, at least subliminally as some have suggested, this line of reasoning when he was chairperson of the Federal Reserve.

⁴⁸⁴ J.M. Buchanan, *Public Finance in Democratic Process: Fiscal Institutions and Individual Choice* (Chapel Hill: University of North Carolina Press, 1987) at 196. From the 1950s well into the chary era of Reagonomics and the Thatcher Revolution, James Buchanan has been one of its most powerful and influential ideologues/economists. See: J.M. Buchanan, “Post-Reagan Political Economy” in *Reagonomics and After* (eds.) J.M. Buchanan *et. al.* (London: Institute of Economic Affairs, 1989). Also, see: S.R. Letwin, *The Anatomy of Thatcherism* (New Brunswick: Transaction, 1993) at 81-82.

⁴⁸⁵ See: S. Glucksberg, “The Influence of Strength of Drive on Functional Fixedness and Perceptual Recognition” (1963) 63 *J. Exper. Psych.* Also, see: S. Glucksberg, “Problem Solving: Response Competition Under the Influence of Drive” (1964) 15 *Psych. Rep.*

⁴⁸⁶ F. Khatib, *et. al.* “Crystal structure of a monomeric retroviral protease solved by protein folding game players” (2011) *Biology* 18 (10) *Nat. Struct. & Mol.* at 1175.

economics, what is formally known as neoclassical economics or technically known as econometrics, is that its central “invention”⁴⁸⁷ principle or fancy is that it is a *science*.⁴⁸⁸ The fact that the majority of the people of this planet must labour for others, must out of necessity sell their labour power to acquire the means to subsist, is absent from most conventional or neo-classical economics – overlooking a substantial *fact*. Ideologically, for all the ills of “positivistically” motivated science, *natural* science is at least rooted in a material reality. Science is rooted in deep traditions of “doubt,”⁴⁸⁹ verifiability,⁴⁹⁰ and the reproducibility of experiments.⁴⁹¹ According to Yanis Varoufakis, neoclassical economics is a “toxic economics, which, in turn, [is] ...no more than motivated delusions in search of theoretical justification[s]; fundamentalist tracts that acknowledged facts only when they could be accommodated to the demands of the lucrative faith.”⁴⁹² Hence, at its best, conventional economics is a [*quasi*-]social science.⁴⁹³ Indeed, by excluding human labour from their ‘scientific’ study, conventional, neoliberal or neo-classical economists become rather dubious and unreliable *social scientists*.⁴⁹⁴

⁴⁸⁷ As noted earlier, s. 2 of the *Patent Act* holds that an “invention” is “any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.” Conjunctions, disjunctions and commas aside, this definition leaves open a rather broad barn door as to what can be defined as an “invention.” Arguably, the primacy of “self-interest” has been a powerful invention at least since the times of Adam Smith.

⁴⁸⁸ It must be noted that the *Patent Act* provides under s. 27 (8) that “no patent shall be granted for any mere scientific principle or abstract theorem.”

⁴⁸⁹ R. Descartes, *Discourse on the Method* (New York: Cosimo, Inc., 2008) at 14.

⁴⁹⁰ F. Bacon, *Collected Works of Francis Bacon: Philosophical Works: Vol. 3, Part 2* (London: Routledge, 1996) at 348. Bacon uses the term “vitrifiable,” which in modern English means *verifiable*.

⁴⁹¹ See: R. Serjeantson, “Natural Knowledge in the *New Atlantis*” in *Francis Bacon’s New Atlantis: New Interdisciplinary Essays* (ed.) B. Price (Manchester: Manchester University Press, 2002) at 83.

⁴⁹² Varoufakis, *supra* note 410 at 54.

⁴⁹³ F.J. Stilwell & G. Argyrous, “Introduction” in *Economics As A Social Science: Readings in Political Economy* (Sydney: Pluto Press, 2002) at XI. Also, see: Kamarck, *supra* note 382.

⁴⁹⁴ S. Keen, *Debunking Economics: The Naked Emperor of the Social Sciences* (Annandale: Pluto Press, 2001) at 28. “At the profound level, it reflects the extent to which economists are so committed to their preferred [neo-classical] methodology that they ignore or trivialise points at which their analysis has fundamental weaknesses. Were economics truly worthy of the moniker [*‘science’* let alone] [*‘social science’*] these failures would be reason to abandon the methodology and search for something sounder.”

3.7.6 Polanyi's Variation on the Self-Regulating Market

Polanyi adeptly indicates that the rôle of state coercion – under the rule of law – is political and inseparable from the formation and activity surrounding the creation of the self-regulating “free market.” Yet, contrary to this *naturalised* view of human beings as *homo oeconomicus* – “self-interested individuals” or “rational self-maximisers” – one interpellated by the formation of the political state and consumer society, Polanyi's vision possesses a communitarian quality. Neoliberal economists are simply incorrect as to their assumptions about human nature. As Herman Daly, former Senior Economist at the World Bank, and John Cobb note, when examining the problem of *homo oeconomicus*, the logical and social analysis pursued by neoliberal or neo-classical economists is clear:

Economists are no more guilty of the fallacy of misplaced concreteness than other scholars, and economists as a group are not less intelligent, less dedicated, or less thoughtful than others.... [Yet, t]he problem does not arise from personal weakness; it arises from the nature of academic disciplines in general and from the nature of deductive sciences in particular, especially when the formalizations are applied to a subject matter that changes relatively rapidly.⁴⁹⁵

The ‘self-evident’ right of acquisitiveness to private property under neo-classical economics, one that become ideologically sacred, inviolable, and as an inalienable human right under capitalism, transforms human nature and human beings through state action and legitimates the commodification of labour and real estate through these purported fictions. Polanyi indicates that there is nothing inevitable or natural about the presence of a market economy. Human beings ought not to be defined exclusively in terms of self-interest and, somehow, leading inextricably to a market economy. As social animals, as historical beings, human beings have a communal interest in the welfare of and for

⁴⁹⁵ Daly & Cobb, *supra* note 461 at 85.

others. In particular, human beings possess a collective and social interest in their communities and their environment. As Polanyi notes:

While [a] laissez-faire economy was the product of deliberate state action, subsequent restrictions on laissez-faire started in a spontaneous [collective] way. Laissez-faire was planned; planning was not.⁴⁹⁶

To reiterate, Polanyi was exquisitely aware that untrammelled *laissez-faire* would unleash the corrosive actions of the self-regulating market and would annihilate “the human and natural substance of [traditional culture and] society [and] would have physically destroyed man and transformed his surroundings into a wilderness.”⁴⁹⁷ So, are there alternatives?

3.8 Toward a General Economy

3.8.1 Bataille’s Accursed Gift

The notable French sociologist, Georges Bataille developed an alternate theory to competitive markets and human nature as being inherently selfish. Bataille called his theory a “general economy”⁴⁹⁸ – it is also referred to as a *libidinal* economy.⁴⁹⁹ Bataille saw the ideas of Marcel Mauss’s gift economy as an alternate explanation to understand social organisation. Mauss held that societies can only succeed through “stabilizing relationships, giving, receiving, and finally, giving in return.... Goodness and happiness [can then be found] in the peace that has been imposed, in well-organized work, alternately in common and separately, in wealth amassed and then redistributed, in the

⁴⁹⁶ Polanyi, *supra* note 170, 141.

⁴⁹⁷ *Ibid* at 3.

⁴⁹⁸ G. Bataille, *The Accursed Share, Vol. 1: Consumption* (trans.) R. Hurley (New York: Zone Books, 1991) at 25-26.

⁴⁹⁹ See: J.-F. Lyotard, *Libidinal Economy* (trans.) I.H. Grant (London: Continuum, 2004) at 107. Lyotard holds that “every political economy is libidinal... [and, hence,] ...our gloss [is that] ... ‘there is no primitive society’.” Put differently, human culture and “economic” forms are fully born from the half-shell.

mutual respect and reciprocating generosity that is taught by education.”⁵⁰⁰ Mauss, writing in the shadow of the First World War, was well aware that if our society was to avoid such catastrophes, and destruction of wealth or capital, meant there had to be an equitable distribution of the “common store of wealth.”⁵⁰¹

3.8.2 Beyond Econometric Thinking

Building on this, Bataille’s effort in producing a general economy was to achieve a Copernican transformation of ethical and economic thinking – an anti-utilitarian – or anti-econometric – revolution of sorts. Bataille, from *The Notion of Expenditure*⁵⁰² to *The Accursed Share*, attacked the questionable rationality of utilitarian principles at the heart of economic calculation. It is not that Bataille sought to disprove that self-interest is an aspect of human nature, but rather to put it in its place. He sought to demonstrate that self-interest is merely one aspect of human nature. For Bataille:

Economic phenomena are not easy to isolate, and their general coordination is not easy to establish. So it is possible to raise this question: Shouldn’t productive activity as a whole be considered in terms of the modification it receives from its surroundings or brings about in its surroundings? In other words, isn’t there a need to study the system of human production and consumption within a much larger framework?⁵⁰³

This helps explain why our society is structured on material excess and not scarcity. This is a radical departure from the traditional explanation of an economics of scarcity, utility and efficiency.⁵⁰⁴ Bataille’s point persuasively suggests that the basic self-interest principle at the heart of econometrics lacks the explanatory power and force necessary to understand the development of culture, society and human civilisation(s).

⁵⁰⁰ Mauss, *supra* note 149 at 83.

⁵⁰¹ *Ibid.*

⁵⁰² See: G. Bataille, “The Notion of Expenditure” *Visions of Excess: Selected Writings, 1927-1939* (Minneapolis: University of Minnesota Press, 1985).

⁵⁰³ Bataille, *supra* note 498 at 20.

⁵⁰⁴ G. Vaggi & P.D. Groenewegen, *A Concise History of Economic Thought: From Mercantilism to Monetarism* (New York: Macmillan, 2003) at 211.

Remarkably, solely relying on a model of competitive selfishness and the self-regulating market as an explanatory hypothesis for the basis civilisation is so thin as to be anorexic.

By examining ethics, aesthetics, and cultural anthropology, Bataille holds that it is the *accursed share* – the non-remunerable excess of a society – that shapes the internal and external dynamics of society. This is an understanding of human nature where “the *general* movement of life is nevertheless accomplished beyond the demands of individuals [and s]elfishness is finally disappointed.”⁵⁰⁵ It is the social expenditure that comprises Bataille’s theory of consumption. This theory of consumption goes, at least partially, to explaining why we have non-productive arts and sumptuous consumption – this harkens back to Veblen’s spectacles of “conspicuous consumption”⁵⁰⁶ as one of the practices of everyday life.⁵⁰⁷

Bataille uses a number of historic and non-European examples that appear to break with the purely competitive and acquisitive model as the engine of history. One anthropological example Bataille uses is the potlatch of the Pacific Northwest Coast. Under the unreliable laws of supply and demand, as well as through the ‘European gaze,’⁵⁰⁸ the traditional cultural practices of potlatch defied explanation or understanding. As a cultural practice, it completely defied the logic of an ‘acquisitive’ – not inquisitive – ‘western mind.’⁵⁰⁹ For Bataille, in rather typical French fashion, points out that the

⁵⁰⁵ Bataille, *supra* note 498 at 74.

⁵⁰⁶ Veblen, *supra* note 319 at 42.

⁵⁰⁷ See: de Certeau, *supra* note 137.

⁵⁰⁸ See: G. Ciccariello-Maher, “The Internal Limits of the European Gaze: Césaire and Fanon beyond Sartre and Foucault” (2006) 9(2) *Rad. Phi. Rev.* One should be forewarned that this “European gaze” is the same linear “perspective” linked to our way of seeing things and our first modern patent holder, Brunelleschi. See: F.D. Prager, “Brunelleschi’s Patent” (1946) 28 *J. Pat. O. Soc.*

⁵⁰⁹ The lack of cultural understanding as to the purpose of the potlatch led to it being outlawed in Canada. See: *An Act further to amend “The Indian Act, 1880,”* S.C. 1884 (47 Vict.), c. 27, s. 3.

Western reduction of human behaviour to self-interest and utility⁵¹⁰ makes the comprehension of the potlatch inexplicable and unsalvageable to reason:

A world that cannot be loved to the point of death – in the same way that a man loves a woman – represents only self-interest and the obligations of work. If it is compared to worlds gone by, it is hideous, and appears as the most failed of all.⁵¹¹

The legal prohibitions against the potlatch saw it as “hideous” and as a waste.

The potlatch was a ceremony practiced by a number of different peoples in the Pacific Northwest.⁵¹² In this ceremony, the hereditary leaders of a particular house – or clan – would invite guests for a feast from other houses – clans – in and outside of the community. According to Bataille, “[p]otlatch is, like commerce, a means of circulating wealth, but it excludes bargaining.”⁵¹³ The logical problem as Bataille sees it is that:

Classical economy imagined the first exchanges in the form of barter. Why would it have thought that in the beginning a mode of acquisition such as exchange had not answered the need to acquire, but rather the contrary need to lose or squander? The classical conception is now questionable in a sense.⁵¹⁴

Potlatch “[m]ore often than not it is the solemn giving of considerable riches, offered by a chief to his rival for the purpose of humiliating, challenging and obligating him.”⁵¹⁵ It causes the recipient “to erase the humiliation and take up the challenge; he must satisfy the *obligation* that was contracted by accepting. He can only reply, a short time later, by

⁵¹⁰ See: K. Marx, “Letter to Ferdinand Lassalle” *Collected Works, Vol. 12* (Moscow: Progress Publishers, 1979) at 245. In reference to at least one of the forms of utilitarianism, Marx holds that “Darwin’s work is most important... [but o]ne does, of course, have to put up with the clumsy English style of argument.”

⁵¹¹ G. Bataille, “The Sacred Conspiracy” in *Visions of Excess: Selected Writings, 1927-1939* (Minneapolis: University of Minnesota Press, 1985) at 179.

⁵¹² See: R.H. Ruby & J.A. Brown, *Indians of the Pacific Northwest* (Norman: University of Oklahoma Press, 1988. Some of these nations are: Haida; Nuu-chah-nulth; Tlingit; Tsimshian; Kwakwaka’wakw; Nuxalk; and, Coast Salish.

⁵¹³ G. Bataille, *The Accursed Share: An Essay on General Economy, Volumes II - III* (New York: Zone Books, 1991) at 67.

⁵¹⁴ *Ibid.*

⁵¹⁵ *Ibid.*

means of a new potlatch, more generous than the first: He must pay back [the gift] with interest.”⁵¹⁶ It is this cycle of reciprocity that fuels potlatch and serves as a means to redistribute the wealth of a society. The gift and the giving of the gift signify the value of the broader social relationship and the relations created between the giver and receiver – not the use value or exchange value of the good⁵¹⁷ under the “price system.”⁵¹⁸

3.9 The Accursed Gift of Education

3.9.1 The Gift Economy of Education

The law school’s inclusion in the university corporation has the countenance of ancient tradition, ...but in point of substantial merit the law school belongs in the modern university no more than a school of fencing and dancing... and their teachers stand in relation to their students analogous to that in which the “coaches” stand to the athletes.

Thorstein Veblen⁵¹⁹

With that objection aside, in many ways, the notion of the gift economy of the potlatch is similar to our phenomena of public education and higher education. Education and university education is closely aligned with a cycle of reciprocity – a gift economy. In this gift economy, there is an obligation that bears a promise of reciprocity between the giver and the recipient. It is through the gift and the gift of giving that social

⁵¹⁶ *Ibid* at 67-68.

⁵¹⁷ See: M. Mauss, *The Gift: The Form and Reason for Exchange in Archaic Societies* (London: Routledge, 2002).

⁵¹⁸ M. Friedman, “Nobel Lecture: Inflation and Unemployment” in *Milton Friedman on Economics: Selected Papers* (Chicago: University of Chicago Press, 2007) at 18. It must be noted that there is no such thing as a *real* Nobel Prize in economics. What is mislabelled the “Nobel in economics” is the *Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel*. In an attempt to make economics sound *scientific*, Sweden’s central bank, and against the wishes of the Nobel trust, attempted to acquire the brand *Nobel* for the (*pseudo?*) social science of economics. Culturally, the *Sveriges Riksbank Prize* has ideologically favoured economic pedlars who have generally promoted neoliberal and neo-classical models since its creation. Perversely, the *Sveriges Riksbank Prize* has successfully piggybacked itself on the “memory” of the privately funded brand of the Nobel prizes; that is, the *Sveriges Riksbank Prize* is a fully *socially* subsidised prize or “gift” in economics since it is funded by Swedish taxpayers.

⁵¹⁹ Veblen, note 42 at 155. Also, see: R.A. Posner, *The Problems of Jurisprudence* (Cambridge: Harvard University Press, 1990) at 99. With much personal grudging respect, Judge Posner is, once again, correct in his modifying observations.

solidarity is maintained and enhanced. This is a suspension and a direct overturning of the *quid pro quo* culture that is representative of the market economy. Education as a gift, does not fit – or, at least, does not fit well – within a society that tries to commodify all things.

As the brilliant Brazilian educator, Paulo Freire, notes: “There is a ‘politicity’ in education, in the same way that there is an ‘educatability’ in that which is political; in other words, there is a political nature in education, just as there is a pedagogic nature in political action... [because education] is political.”⁵²⁰ Perhaps, because education is *always-already* situated in a gift economy, education is so difficult – if not impossible – to commodify. According to Henry Giroux: “Education must be understood as producing not only knowledge but also political subjects.”⁵²¹ As such, education and knowledge appear to be ideologically predisposed to subvert any process of commodification⁵²² “because public education [is essential] to the imperatives of a critical democracy.”⁵²³

3.9.2 A Glimpse at the Gift of Education in Early Canada

Education, like most gifts, are debts. In Canada, compulsory public state education was a “gift” that was forced upon a rural and mostly ambivalent population. As a rural population in the late 19th-century, pragmatic Canadians saw children as a necessary source of labour power on the farm or in the bush. With 70 per cent of Canadians living in rural areas at the beginning of the 20th-century, compulsory public

⁵²⁰ P. Freire “Education and Power: Questions About Power and Social Change” in *Paulo Freire On Higher Education* (ed.) M. Escobar & P. Freire (Albany: State University of New York Press, 1994) at 35.

⁵²¹ H.A. Giroux, *Postmodernism, Feminism, and Cultural Politics: Redrawing Educational Boundaries* (Albany: State University of New York Press, 1991) at 47.

⁵²² See: A. Waugh, *God* (New York: St. Martin’s Press, 2002) at 20. This is an ancient problem. As British cultural critic, Alexander Waugh, claims: “Sophia wanted to be a teacher, she wanted to act as an intermediary between God and all people on earth. ...Failing to find employment in a regular-school, she tried to muster pupils for herself by shouting at passers-by from the roadside.”

⁵²³ Giroux, *supra* note 521 at 47.

state education was a ‘luxury’ that was seldom enforced.⁵²⁴ From a constitutional perspective, the *British North America Act* conferred exclusive powers on the provinces to enact legislation in relation to “property and civil rights.”⁵²⁵ Consequently, public education was a provincial matter. This jurisdictional reality led to the application of compulsory public education unevenly across the country.⁵²⁶

The driving logic behind education was a product of the industrial age, Christian evangelicalism, and the utilitarian philosophy of “improvement.” Improvement in the Victorian age took many forms. Many advocates of public education saw education as a social engineering project. As a strictly utilitarian project, compulsory education was seen as a way to create better workers in a newly industrialising society.⁵²⁷

Public education in Canada prior to the 20th-century was a spotty affair. Post-secondary education, with the exception of medical schools and theology, gained little or no purchase in public policy or with the public until the end of the First World War. As an agrarian society, as “hewers of wood and drawers of water,”⁵²⁸ average Canadians had little if *any* political interest in provincial or national policies for post-secondary education. Concomitantly, and closer to their heart, they generally had no interest in funding public education from the public purse.

⁵²⁴ See: C.E. Phillips, *The Development of Education in Canada* (Toronto: W.J. Gage and Company Limited, 1957). Also, see: P.D. Axelrod, *The Promise of Schooling* (Toronto: University of Toronto Press, 1997) at 51-52.

⁵²⁵ See: *Constitution Act, 1982* (Schedule B of the *Canada Act 1982* (UK)) ss. 92(13).

⁵²⁶ P.D. Axelrod, *The Promise of Schooling* (Toronto: University of Toronto Press, 1997) at 36-37. For instance, Ontario introduced compulsory public school attendance laws in 1871. By comparison, compulsory public school attendance laws were implemented: in British Columbia, 1901; Prince Edward Island, 1877; New Brunswick, 1905; and, Saskatchewan, 1909.

⁵²⁷ K. Lang & D. Kropp, “Human Capital vs. Sorting: The Effect of Compulsory Attendance Laws” (1986) 101 (3) *Quart. J. Econ.* at 609.

⁵²⁸ H.A. Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History* (Toronto: University of Toronto Press, 1977) at 384-386.

Galbraith, writing about his own grade school education in Dutton, Ontario, which overlapped the period of the First World War, noted that “[a]part from the occasional case of a frail or studious boy who might be marked for the Presbyterian ministry, [most parents] ...viewed education in minimal terms [and] kept their older boys at home in the autumn until the field work was finished.”⁵²⁹

The quality of education that Galbraith received at the Willey’s School was questionable. According to Galbraith, his progress was through a “series of breathtaking promotions... [and were] the result of less... [than] academic merit than of academic convenience....”⁵³⁰ The head spinning acceleration of Galbraith’s pedagogical progress meant that he rocketed through grade school “in five years and started high school at the age of ten.”⁵³¹ Subsequently, Galbraith matriculated to the Ontario Agricultural College, now Guelph University. In his arid observation, he noted that he excelled at a less than stellar post-secondary institution. Galbraith recalled:

Once not long ago, I was asked by Time magazine about [my undergraduate education], I replied, thoughtlessly, that in my day it was certainly the cheapest and possibly the worst [college] in the English-speaking world. This was tactless and possibly wrong and caused dissatisfaction even after all these years. ...[Yet, n]o one questioned my statement that the college was inexpensive.⁵³²

3.9.3 A Brief History of Canadian Universities

Canadian universities were – and continue to be – shaped by many factors.⁵³³ As

⁵²⁹ J.K. Galbraith, *The Scotch*, (Toronto: The MacMillian Company of Canada, 1964) at 87.

⁵³⁰ *Ibid* at 84.

⁵³¹ *Ibid*.

⁵³² J.K. Galbraith, “Berkeley in the Thirties” in *Economic, Peace and Laughter* (Bloomington: New American Library, 1981) at 347.

⁵³³ In 1788, King’s College at Windsor, Nova Scotia, became the first English-speaking institution of higher education established in what would be known as Canada. In 1789, King’s College was granted university powers and bestowed £400 per annum for its maintenance. Laval University was founded in 1668 as a seminary, but did not receive its royal charter until 1852 under the determination and insistence

with public schools, universities are institutional creations of the provinces.⁵³⁴ Physical attendance at Canadian universities was historically shaped by access to educational centres. Remoteness and climate were not insignificant obstacles to higher education in Canada.⁵³⁵ The rural nature of Canadian society meant that the vast majority of Canadians did not have access to public school let alone a university education. Education until well into the 20th-century was the privilege of a relative few urban residents. Further, it would take the Great Depression and the Second World War to open the doors to higher education in Canada.

Ethnic communities and their attending religious orders also shaped the structure and admissibility of students to Canadian universities. Generally, this meant that Canadian universities patterned themselves after Protestant and Catholic universities in the United Kingdom and France. In addition, in the United Canada of the 1850s, the political reality was that public money ought not to be spent to subsidise higher or professional education. According to one leading 19th-century legislator, subsidised or free higher education for future “doctors, lawyers, divines, or editors or bankers... [or others is a condition that] everyone must repudiate!”⁵³⁶ This popular Canadian mind-set – if not a penny-wise and pound-foolish approach – would remain public policy concerning higher education well into the 20th-century (if not into the 21st).

3.9.4 A Post-War Break – Public Support for Education

It was not until the end of the Second World War, and six years after the Great

of Lord Elgin. See: Various, *The Makers of Canada: Index and Dictionary of Canadian History* (eds.) L.J. Burpee & A.G. Doughty (Toronto: Morang & Co., Limited, 1912) at 197 & 213.

⁵³⁴ See: G.A. Jones, “A Brief Introduction to Higher Education in Canada” in *Higher Education in Canada: Different Systems, Different Perspectives* (ed.) G.A. Jones, (New York: Garland, 1997).

⁵³⁵ See: H.A. Innis, “Significant Factors in Canadian Economic Development” in *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1956).

⁵³⁶ J. Rolph, *Debates of the Legislative Assembly of United Canada (Hansard)* 4th Parl., 2nd Session. Vol. 11, Pt. 3 (25th February 1853).

Depression, that public policy would shift grudgingly to support mass higher education. Accordingly, programmes appeared to admit greater numbers of Canadians for higher education; with specific preference given to male war veterans.⁵³⁷ Yet, explicit and implicit discrimination policies persevered that kept particular minorities out of higher education in Canada.⁵³⁸

3.9.5 Higher Learning in the New Millennium

For many critics, higher education is at a crossroads.⁵³⁹ Higher education must learn to incorporate new technologies and be able to compete in the new economy and yield to the ‘new demands’ of globalisation. Canadian universities and their “knowledge [must] be put to work for winning in a world economy.”⁵⁴⁰ Proponents see it as their mission to “dramatically improve education”⁵⁴¹ and somehow feel that because they have been good at a business that they have the answers concerning the problems confronting

⁵³⁷ T. Lemieux & D. Card, “Education, Earnings, and the ‘Canadian G.I. Bill’” (2001) 34(2) Can. J. Econ. at 313.

⁵³⁸ In the post-war period, anti-Semitism remained embedded in Canadian universities. For example, McGill practiced a quota system into the 1950s that limited enrolment to Jewish undergraduates. Queen’s University had a slightly improved record, but not by much. See: E.A. Collins, “Letter to R.C. Wallace – May 27th, 1944” (Kingston: Queen’s Archives, 1944) copy of letter on file with the author. In a letter to Queen’s principal, R.C. Wallace, in lieu of Ontario’s passage of the *Racial Discrimination Act*, Queen’s board of governor member, E.A. Collins, held that one “cannot help but think sometimes that Hitler was right.” Moreover, that “Bill 46... does not prevent us discussing [or practicing discrimination] ... verbally or in writing... [Bill 46] will [just] ... put a stop to apartment houses and employment signs, such as ‘No Jews need apply.’” For Collins, parroting Queen’s chancellor K.C. Laird in their recent meeting, “something has to be done promptly to prevent being over-run by our... [Jews] from Montreal.”

⁵³⁹ See: J. Alter, “A Case of Senioritis: [Bill] Gates tackles education’s two-headed monster” *Newsweek* November 28, 2010 at: <http://www.newsweek.com/2010/11/28/alter-education-is-top-priority-for-gates.html#> (last visited November 29, 2010). For a good rebuttal to Bill Gates and his misguided understanding as to pedagogy see: V. Strauss, “Ravitch answers Gates” *Washington Post*, November 30, 2010 at: <http://voices.washingtonpost.com/answer-sheet/diane-ravitch/ravitch-answers-gates.html> (last visited December 3, 2010).

⁵⁴⁰ G. Kenney-Wallace, “Winning in A World Economy: University-Industry Interaction and Economic Renewal In Canada” in *Science Council of Canada: Report 39* (Ottawa: Minister of Supply and Services, 1988) at xi.

⁵⁴¹ “United States Education” in Education Strategy – Bill and Melinda Gates Foundation at: <http://www.gatesfoundation.org/united-states/Pages/education-strategy.aspx> (last visited October 20, 2010).

public and higher education.⁵⁴² Indeed, higher education and the workers produced by it are considered a scarce commodity and captains of industry and corporations believe they have a claim on it:

Business is the prime user of the “product” of education – the skill sets, or lack thereof, of the graduates. It has an inherent right, as any investor, to determine the return on its investment. And the right to determine the cost of infrastructure that creates the return.⁵⁴³

In this instance and as a “product,” education is viewed as a scarce commodity; a scarce commodity that owes its *owner* – the rights holder, in this case, *business* – a return. In this light, education and the educated owe a rent – of sorts. Put differently, the educated must pay the price that the market demands – a tithe to owners of the property right – or, more importantly, to those who own or control the resources of the country.

3.10 The Problem of Rights and the Commons

3.10.1 Locke, Property and a System of Natural Rights

Rights were and are always complicated notions. Through their words and their *just* declarations and claims to natural justice, one could assume that they are self-

⁵⁴² As Henwood remarks: “Bill Gates... interventions in public education remind... me that the only reason people listen to him is that he’s thought to be some sort of business genius (as if business genius were translatable to pedagogy or anything else). If he’s that rich, he must be smart, eh? But he’s really not such a business genius.” See: D. Henwood, “Bill Gates, business genius?” Left Business Observer News December 2, 2010 at: <http://lbo-news.com/2010/12/02/bill-gates-business-genius/> (last visited December 3, 2010). As Marx anticipated so well: “I am bad, dishonest, unscrupulous, stupid; but money is honoured, and hence its possessor. Money is the supreme good, therefore its possessor is good. Money, besides, saves me the trouble of being dishonest: I am therefore presumed honest. I am brainless, but money is the real brain of all things and how then should its possessor be brainless? Besides, he can buy clever people for himself, and is he who has a power over the clever not more clever than the clever? Do not I, who thanks to money am capable of all that the human heart longs for, possess all human capacities? Does not my money, therefore, transform all my incapacities into their contrary?” See: K. Marx, *Economic and Philosophic Manuscripts of 1844* (London: Lawrence & Wishart, 1973) at 121. Also, see: McLaren & R. Farahmandpur, *Teaching Against Global Capitalism and the New Imperialism: A Critical Pedagogy* (Lanham: Rowman & Littlefield Publishers, Inc., 2005) at 201.

⁵⁴³ R. Wilson, “Presentation on behalf of the Nepean Chamber of Commerce to the Ontario Standing Committee on Social Development” March 17th, 1997, at: http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&BillID=&ParlCommID=54&Date=1997-03-17&Business=Bill+104%2C+Fewer+School+Boards+Act%2C+1997&DocumentID=18831#P142_9717 (last visited December 17, 2011).

evident.⁵⁴⁴ On the other hand, one cannot help but view them as *just words*.⁵⁴⁵ When government demands the right of payment for education, it behoves one to question the nature of that right, the taxes that support that right, and the intention of that right. After all, for most Canadians, it was only during the interregnum between the wars that we began to see an expansion and uniform exercise of the right to public education in Canada.

The debate as to the *tragedy of the commons*⁵⁴⁶ has been widely used by neo-classical economists. In short, one's labour justifies one's property right. The debate usually appears in supply-side economic literature to buttress Malthusian-like views toward resources and to limit access to these resources through private property. At its heart, a Malthusian system is one based on the scarcity of resources and the regulation of access to these scarce resources. Nevertheless, as Joan Williams points out: "Labeling something property does not predetermine what rights an owner does or does not have in it."⁵⁴⁷ Perhaps, then, the idea advanced above that business has an "inherent" claim on education is a rather chary notion.

Yet, in English law, private property seems to have predetermined rights. Most definitions of modern property rights find their source in the works of Thomas Hobbes and John Locke.⁵⁴⁸ These property rights have defined much of what we consider to be embodied in the rule of law. In doing so, the rule of law has had a tremendous impact on our understanding of government and the process of governance. For William

⁵⁴⁴ Perhaps the most famous of these types of claims is embodied in the United States *Bill of Rights*.

⁵⁴⁵ See: J. Bakan, *Just Words: Constitutional Rights and Social Wrongs* (Toronto: University of Toronto Press, 1997).

⁵⁴⁶ G.J. Hardin, "The Tragedy of the Commons" (1968) 162 *Sci.* at 1243.

⁵⁴⁷ J. Williams, "The Rhetoric of Property" (1998) 83 *Iowa L. Rev.* at 297.

⁵⁴⁸ See: T. Hobbes, *Leviathan* (ed.) R. Tuck (Cambridge: Cambridge University Press, 1991); J. Locke, *Two Treatises of Government* (London: Dent, 1989).

Blackstone, the definition of property is the “sole and despotic dominion which one man claims and exercises over the external thing of the world... [and] in total exclusion of the right of any other individual in the universe.”⁵⁴⁹ As we shall see, it also colours our view on the limited rights of intellectual property.

3.10.2 Scarcity and the (Non?)Existence of Rights

Private property rights are grounded on the dual notions of scarcity and natural rights. The argument charts a course that scarce resources require management and the only rational method to manage scarce resources are through the fruits of one’s labour as a right to private property. However, rights, even a right to one’s labour, is a metaphysical claim that is pure fiction. As Alasdair MacIntyre succinctly puts it, “there are no such [things as] rights, and belief in them is one with belief in witches and in unicorns.”⁵⁵⁰ Rights and rights-talk, including intellectual property rights, are historical constructs and products of mostly European social and historic development and traditions.

We must recall that human beings are subjects of their historical circumstances and “Locke, both in religion and politics, was the child of the class compromise of 1688.”⁵⁵¹ Being a “home boy,”⁵⁵² Locke’s compromise meant that the absolutist state that had set out to protect the privilege of feudalism⁵⁵³ had to adapt to the new system of

⁵⁴⁹ W. Blackstone, *Blackstone’s Commentaries on the Laws of England – Vol. 2* (New York: W.E. Dean, 1832) at 56.

⁵⁵⁰ A. MacIntyre, *After Virtue: A Study in Moral Theory* (London: Gerald Duckworth and Co. Ltd., 1981) at 69. Also, see: P. Williams, *The Alchemy of Race and Rights: Diary of a Law Professor* (Cambridge: Harvard University Press, 1991).

⁵⁵¹ F. Engels, “Letters on Historical Materialism” in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton & Company, Inc., 1978) at 764.

⁵⁵² G. Caffentzis, “John Locke, The Philosopher of Primitive Accumulation” (2008) 5 Bristol Rad. Pamphleteer at 2. Also, see: P. Jones, *Satan’s Kingdom: Bristol and the Transatlantic Slave Trade* (Bristol: Past & Present Press, 2007).

⁵⁵³ Wolff & Resnick *supra* note 469 at 30-32.

mercantile capitalism and do so based on “first principles.” A reliance on “first principles” allows one to wipe the historical and philosophical slate clean. First principles allow or permit one to create a system or an explanation (a natural rights discourse?) that consolidates the present and justifies or makes intelligible the past through this new system, which in our case is a “system of natural rights.”⁵⁵⁴ According to George Caffentzis, Locke’s Puritan ideology and ingenuity consisted in “extending the Cartesian *cogito* into the political and legal sphere.”⁵⁵⁵ Instead of thinking bringing the self into being, it was the exercise of labour that gave oneself ontological presence or existence in the world and confirmed the natural order of things. As Caffentzis puts it: “Locke transforms Descartes’ performative deduction of the self (by the very act of thinking of myself, I create myself) into a performative deduction for the creation of my property: ‘I labor on X, therefore X is part of me.’”⁵⁵⁶

For Locke, in the wake of the 1688 revolution, this meant that governance and central government became the necessary institution to protect private property through a theory of labour. In this drive to propertise (and privatise) governance and vice versa the governance of property, Locke generally held that the best government is a minimal government: particularly a government that limits its actions to the protection of private property and the liberty and rights of property holders. Hence, it is not beyond the pale to consider Locke “the main intellectual founder of liberalism, but also of *neoliberalism*... [and the father of] the ‘ruling idea’ of the ruling class of today.”⁵⁵⁷

⁵⁵⁴ Polanyi, *supra* note 170 at 112.

⁵⁵⁵ Caffentzis, *supra* note 552 at 4. Also, see: A. Moseley, *John Locke* (New York: Bloomsbury, 2007) at 10.

⁵⁵⁶ Caffentzis *Ibid* at 4.

⁵⁵⁷ *Ibid*.

3.10.3 The Misfortune of Locke's Materialism

The tragedy of the commons is a concept that usually finds its origins in the work of Locke. Locke was ontologically a materialist – albeit a vulgar or scientific materialist. For Locke, the political system unleashed by the Glorious Revolution turned his world upside down. As a materialist, Locke's theory of natural rights was a way to philosophically ground the world and bring stability and sense to a country and a world in confusion and turmoil. As such, the materiality and stability of nature purportedly allowed comparisons and measurements to be made between one thing in nature to another thing. Thus, real value exists in the nature of things. Then, and only then, can a value be established to compare one thing with another.

As remarked, Locke was ontologically a materialist and attached to the belief that for a thing to exist it must exist in matter. In addition, by taking matter out of nature, human beings were able to assess a thing's material nature and its value. Measure for measure, the materiality of nature allows for objective standards and comparisons. For Locke, the most valuable substance found in nature was precious metals. Thus, his view of wealth consisted in toiling in the soil and the “moil for gold.”⁵⁵⁸ Unambiguously, bringing gold out of the state of nature and the ground.

⁵⁵⁸ R.W. Service, “The Cremation of Sam McGee” in *The Best of Robert Service* (New York: Penguin Putnam Inc., 1940) at 16. Also, Locke's tenure as an advisor to Sir Isaac Newton, then warden of the Royal Mint, was unreliable. At worst, it was a tenure that was disastrous for the English poor – let alone the English economy. See: at: J. Locke, “Further Considerations Concerning Raising the Value of Money” in *The Works of John Locke Volume 5* (London: W. Otridge & Son, 1812) at 144. Locke's advice to Newton concerning the intrinsic value of silver and gold caused a currency crisis that was to last years and led to price and wage collapse and social upheaval. Locke was particularly obsessed and upset with the so-called monetary piracy of silver coin clippers. See: C.G. Caffentzis, *Coins, Abused Words, and Civil Government: John Locke's Philosophy of Money* (Brooklyn: Autonomedia, 1989) at 116. Also, see: J. Locke, “Some Considerations of the Consequences of the Lowering of Interest, and the Raising the Value of Money” in *The Works of John Locke Vol. 4* (London: C. & J. Rivington, et. al., 1824).

In the case of gold, and what would eventually become known as the gold standard, Locke was able to ground his material theory. It was the material basis of labour, as toiling in the earth (moiling for gold), that gave Locke the understanding that one possesses a right to the object of one's labour. When our labour mixes with soil, mixes with nature, mixes with the natural propriety of our labour and ourselves, we establish dominion (transubstantiates?) over the objects that we take out of nature. Through labour, one takes an object out of nature and we make that object our property. In Locke's famous claim:

Though the Earth, and all inferior Creatures be common to all Men, yet every Man has a *Property* in his own *Person*. This no Body has any Right to but himself.... Whatsoever then he removes out of the State of Nature hath provided, and left it in, he hath mixed his *Labour* with, and joyned to it something that is his own, and thereby makes it his *Property*.⁵⁵⁹

This is a clear, straightforward, and simple explanation of private property: and, it is wrong. By fusing nature and labour, Locke presupposes private property as a teleological end. As Raymond Williams notes, "Locke produced a defence of private property based on the natural right of a man to that with which he has mixed his own labour, and many thousands of people believed and repeated this...."⁵⁶⁰ As startling as Locke's ontological fiction is, Williams points out that "it must have been obvious to everybody that those who most often and most fully mixed their labour with the earth were those who had who had no property...."⁵⁶¹ Certainly, "the very marks and stains of the mixing [of labour and nature] were in effect a definition of being propertyless."⁵⁶² If *mixing our labour with nature and the earth leaves one "propertyless,"* then the logic behind the argument is not

⁵⁵⁹ Locke, *supra* note 548 at II § 27.

⁵⁶⁰ R. Williams, "Ideas of Nature" in *Culture and Materialism: Select Essays* (London: Verso, 2005) at 76.

⁵⁶¹ *Ibid.*

⁵⁶² *Ibid.*

only faulty but also incoherent. As economist Steve Keen might suggest: “It is neat, plausible, and it’s wrong.”⁵⁶³

3.10.4 Labour as a ‘General Social Activity’

Williams, yet, points out that Locke’s novel contribution to political economy is the “sense of labour as a general social activity....”⁵⁶⁴ Consequently, this can be viewed as a break with the feudal past and a different vision of the production of wealth. This is what makes some of the limited elements of Locke’s ideas surrounding labour intriguing. Nonetheless, Locke’s vision is a truncated notion of labour. In practice, he did not break a sweat physically hoeing a row. He made a fortune from trading silk, in lending, and through his investments “in the first issue of stock from the Bank of England.”⁵⁶⁵ One only has to glance at his support and investment in the slave trade to note his distorted understanding of labour. Owning and possessing other human beings and the products of their labour is not reflected in his labour theory of property (or even if it is implied it is repugnant). As a member of the board of directors and his ownership of shares in the Royal Africa Company,⁵⁶⁶ Locke’s notion of mixing labour with nature was far removed from ownership through any coherent theory of labour. As Williams points out, Locke’s theory “in its context and bearings [is] highly abstract.”⁵⁶⁷ That is to say, Locke’s abstraction – the labour theory of ownership (or property right) – was and remains a fiction. A fiction that was deployed to maintain the existing state of affairs and to justify

⁵⁶³ S. Keen, Interview with Doug Henwood, “Behind the News” September 24, 2011, at: <http://www.kpfa.org/archive/id/73635> (last visited September 27, 2011). Or, as H.L. Mencken put it, albeit slightly differently: “Explanations exist; they have existed for all time; there is always a well-known solution to every human problem — neat, plausible, and wrong.” See: H.L. Mencken, *Prejudices: Second Series, Volume 2* (New York: A. A. Knopf, 1920) at 158.

⁵⁶⁴ R. Williams, *Keywords: A Vocabulary of Culture and Society* (London: Fontana Press, 1988) at 177.

⁵⁶⁵ Zinn, *supra*, 400 at 73.

⁵⁶⁶ *Ibid.* Also, see: Caffentzis, *supra* note 558 at 192. Also, see: M. Craton, *Sinews of Empire: A Short History of British Slavery* (Garden City: Anchor Press, 1974) at 162.

⁵⁶⁷ Williams, *supra* note 564 at 177.

the retention, and contiguity of property ownership. Put differently, Locke's theory was arranged to politically preserve Protestant landowners in lieu of the 'Glorious Revolution' and overturn once and for all Catholicism, the old order, and, rationalise the toppling of a king.

3.11 Collective Labour or Self-Interest

3.11.1 A Too Ephemeral History of Self-Interest

The notion of self-interest is *the* central aspect or component of human nature that neoliberal philosophies promote. Needless to say, this is a short-sighted and an anaemic view of humanity. Locke's abstract notions of the state, property and *propriety* have been profound. This idea reduces human nature to merely self-interest and rational calculation and, at its very best, it is reductive reasoning *writ large*. In fact, if one pursued conceptually self-interest as the state of human nature, then one would flounder in an argument of *reductio ad absurdum*. It would be a vision of human nature that would utterly unintelligible. The prominence and centrality that our society and law has granted to individual *greed* as an organising principle is historically, ideologically, sociologically, and legally unique. In addition, it is rather fanciful or delusional.⁵⁶⁸ To be precise, the quasi-religious vindication of selfishness as an organising principle for society, what Milton might see as a measure of "the fall"⁵⁶⁹ or what Blake might see as

⁵⁶⁸ Then again, one need only familiarise one's self with the work of Jeremy Bentham to understand the so-called 'pleasure principle' – *felicific calculus* – that is at the heart of English utilitarianism and its rather anomalous view of human nature. See: J. Bentham, *The Rationale of Reward* (London: Robert Heward, 1830). Also, see: J. Bentham, *An Introduction to the Principles of Morals and Legislation* (Oxford: Clarendon Press, 1996).

⁵⁶⁹ J. Milton, *Paradise Lost, Or, the Fall of Man* (London: M. Cooper, 1754).

the operational logic of “dark Satanic mills”⁵⁷⁰ that fly in the face of a person’s “*practice of everyday life*.”⁵⁷¹

3.11.2 The Dyspepsia and Dystopia of Self-Interest

To put the logic of selfishness in simple relief, “[i]f someone fixing a broken pipe says, ‘Hand me a wrench,’ his co-worker will not, generally speaking, say, And what do I get for it?”⁵⁷² People do not socially interact purely in self-interested ways. That is not to say that negotiating material acquisition is not a necessary aspect of living, but it is a means for other human activity – like fixing a broken pipe, trimming the hedge, changing a diaper, nailing a nail or reading a book. To be precise, elevating selfishness as the *only* organising principle for society, and as the basis for private property, is a fuzzy utopian (dystopian?) conception of human life.⁵⁷³ In a more generous vein, David Hume advised that property consists of “a general sense of common interest... [where] all members of... society express to one another [through a sense that] ...induces them to regulate their conduct....”⁵⁷⁴ Yet, more in line with Locke, Adam Smith suggested that it was not common interest but “self-love” and “our own necessities”⁵⁷⁵ that govern our nature.

In our neoliberal period, the tragedy of the commons argument has bolstered, or purports to bolster, the privatisation of various public resources from health care, education, to water. Yet, selfishness and the *tragedy of the commons* are popular

⁵⁷⁰ W. Blake, “And Did Those Feet in Ancient Time” cited in S.E. Jones, *Against Technology: From the Luddites to Neo-Luddism* (New York: Routledge, 2006) at 81.

⁵⁷¹ See: de Certeau, *supra* note 137.

⁵⁷² Graeber, *supra* note 10 at 95-96.

⁵⁷³ A. Dinerstein & M. Neary, “From Here to Utopia” in *The Labour Debate: An Investigation into the Theory and Reality of Capitalist Work* (Aldershot: Ashgate, 2002) at 5. According to Dinerstein and Neary, against Fukuyama’s end of history thesis: “Disutopia is the most significant project of our time. It is not just the temporary absence of Utopia, but the political celebration of the end of social dreams... [and t]he result of all this together is Mediocrity.” Dinerstein and Neary see this as an obstacle to be overcome.

⁵⁷⁴ D. Hume, *A Treatise of Human Nature* (ed.) L.A. Selby-Bigge (Oxford: Oxford University Press, 1978) at 490.

⁵⁷⁵ Smith, *supra* note 163 at 27.

arguments that are not well thought out. Truthfully, it is a loaded concept: it is not a neutral concept. As Galbraith observed: “The modern conservative [and neoliberal economist are] ...engaged in one of man’s oldest exercises in moral philosophy; that is, the search for a superior moral justification for selfishness.”⁵⁷⁶

3.11.3 Beyond the Abstraction of Locke’s Concept of Labour

Locke’s scientific materialism is abstractly and esoterically based on his understanding of labour and its connection to wealth. Let us recall, as Williams noted, that those who mixed their labour the most with nature had no property.⁵⁷⁷ The mixing (or transubstantiation?) of labour with the soil to create private property is, in most senses, a crude materialism. And, as Williams points out, the people who do the labour never have nor do they get the property in the end. Locke’s crude materialism, or compartmentalisation, is a demonstration that has “left us as legacy [and] ...habit of observing natural objects and processes in isolation, apart from their connection with the vast whole; of observing them in repose, not in motion; as constants, not as essentially variables; in their death, not in their life.”⁵⁷⁸ Or, as Engels observed:

The history of science is the history of the gradual clearing away of this nonsense or of its replacement by fresh but always less absurd nonsense. The people who attend to this belong in their turn to special spheres in the division of labour and appear to themselves to be working in an independent field. And to the extent that they form an independent group within the social division of labour, their productions, including their errors, react back as an influence upon the whole development of society, even on its economic development. ...[In the context of private property] ...Locke, both in religion and politics, was the child of the class compromise of 1688.⁵⁷⁹

⁵⁷⁶ J.K. Galbraith quoted in R. Cornwell, “Stop the Madness,” *The Globe and Mail*, July 6, 2002.

⁵⁷⁷ Williams, *supra* note 564 at 146.

⁵⁷⁸ F. Engels, “Socialism: Utopian and Scientific” in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton & Company, Inc., 1978) at 695.

⁵⁷⁹ Engels, *supra* note 551 at 764.

This is a process of commodification of land and resources tend to be viewed through the infatuated lens of “private property.” Privatising is how most if not all neoliberal economists see any forms of common property – whether it is in land, water or intellectual property.⁵⁸⁰ As noted, Marx foreshadowed this, in *The Poverty of Philosophy*, when he held that the on-going commodification process – or modernisation – would make *all* things the objects/subjects of market forces and where they would enter a time of “general corruption... [and] universal venality”⁵⁸¹ and fungibility.

3.11.4 The Tragedy of Hardin’s So-Called “Tragedy of the Commons”⁵⁸²

In 1968, Garrett Hardin’s neo-Malthusian⁵⁸³ model of the ‘tragedy of the commons’ became a popular rationale used to justify neoliberal arguments for privatisation of commonly held land. Thomas Malthus’s notion concerning population was to construct an argument that defended the system of private property and as a way to attack the tradition of commonly held property.⁵⁸⁴ His central claim was that open access to shared resources will always fall victim to abuse and misuse. Human use and abuse will at the end of the day lead to resource exhaustion, devastation and ruin. His vision came from a long line of arguments that purported to deal with the classical

⁵⁸⁰ For a recent disturbing example of this privatising and commodification *ethos*, comments by World Bank President, Robert Zoellick, leaves even the most nominally rational person apoplectic. See: R. Zoellick, “Commodifying Wildlife? World Bank Launches Market Scheme for Endangered Species” Democracy Now! at:

http://www.democracynow.org/2010/12/9/commodifying_wildlife_world_bank_launches_market (last visited December 14, 2010).

⁵⁸¹ Marx, *supra* note 2. (New York: International Publishers Inc., 1963) at 34.

⁵⁸² See: Hardin, *supra* note 546.

⁵⁸³ See: T.R. Malthus, *An Essay on the Principle of Population, Or, A View of Its Past and Present Effects on Human Happiness* (Cambridge: Cambridge University Press, 1992).

⁵⁸⁴ See: A.M.C. Waterman, “Analysis and Ideology in Malthus’s Essay on Population” (1991) 31(58) *Australia Econ. Pap.*

problem of husbandry of cattle and the need to enclose the English commons.⁵⁸⁵ Hardin modifies this position.

For Hardin, the tragedy of the commons is ultimately a result of human being's uncontrollable drive toward self-interest in a world with limited resources. Put differently, the so-called *tragedy* relates to the overuse of scarce resources. In his tragedy model, common resource use cannot be kerbed or limited due to the nature of the wide-open access granted to them through a political system based on democracy and freedom. At its core, Hardin's system advocates the tyranny of privacy. Private property is the gate-keeping technology and solution, a preventative foil, against overuse and exhaustion of a valuable and limited resources that must be protected (but only for the chosen few).

Hardin holds that “[r]uin is the destination toward which all men rush...”⁵⁸⁶ because men cannot control themselves. This was not much of an insight. In fact, it was merely the reiteration of very old claim and suffers from the same logical and factual flaw. No less a figure than Aristotle claimed that “that which is common to the greatest number has the least care bestowed upon. Everyone thinks chiefly of his own, hardly at all of the common interest....”⁵⁸⁷

⁵⁸⁵ See: T.H. Green, *Proglomena to Ethics* (Oxford: Oxford University Press, 1929) at 75. As Green put it: “[The tragedy of the commons is] “the failure of the state to fulfil those functions which under a system of unlimited private ownership are necessary to maintain the conditions of a free life.” Also, see: Green, *supra* note 430.

⁵⁸⁶ Hardin, *supra* note 546 at 1243. It is important to note that Hardin's brief five-page piece has had a tremendous impact on social theory, even though its author was a specialist in biology and ecology. One also cannot help but notice that Hardin's view of human nature is perhaps over-shadowed by a lemming-like sense of doom. Hopefully, human beings are somewhat more sophisticated than Arctic rodents and their charge toward the sea.

⁵⁸⁷ Aristotle, *Aristotle: The Politics and the Constitution of Athens* (ed.) S. Everson (Cambridge: Cambridge University Press New York, 2005) at 33.

3.11.5 Hardin's Neo-Malthusianism Ruin: A Not So Modern Biologist

Hardin, as a modern biologist, failed to make – or even to entertain – one empirically verifiable claim in his *tragedy* thesis.⁵⁸⁸ As a modern biologist and a child of Darwin, one would assume that Hardin might accept the central tenant of modern biology: *adaptation*.⁵⁸⁹ Adaptation is absent form Hardin's position. Indeed, Hardin and his closed biological system eschew the possibility of adaptation or limits. Rather, he favours a survivalist method of thinning out the herd. A view and ideology similar to that of the Michigan militia.⁵⁹⁰ For Hardin, the tragedy of the commons is the result of too much public access or demands for resources that should be privately owned.

Put baldly, Hardin's agenda is about retaining or maintaining the (American?) *status quo*. As a neo-Malthusian, Hardin does not see the world through the dynamics of change.⁵⁹¹ And yet, change, and adapting to change, is *the* central premise behind and contained in the theory of evolution. It is perhaps because of Hardin's non-adaptive and static system, one that tacitly promotes neoliberal economic equilibrium theories, that his reasoning fits well with the neo-classical economic logic. This is a logic that promotes a closed system based on predictable mathematical variables to calculate value through ownership and privatisation.

The duration and popularity of Hardin's tragedy thesis – at least to some – is confounding if not dumbfounding. Yet, it becomes somewhat less confounding when

⁵⁸⁸ S.J. Buck Cox, "No tragedy on the Commons" (1985) 7 J. Environmental Ethics at 49-50. As Buck Cox points out, and in her use of novelist Josephine Tey's concept of "Tonypandy" (which refers to the historical fictions surrounding the Tonypandy riots), Hardin's "seminal" work is based on a falsification of history. Hardin's notion of the "tragedy" of commons trashes the historical facts of the commons and falsifying and denying the historical success and "triumph of the commons."

⁵⁸⁹ See: C. Darwin, *The Origins of the Species by Means of Natural Selection: Or, The Preservation of Favoured Races in the Struggle for Life* (Edison: Castle Books, 2004).

⁵⁹⁰ M. Moore, *Downsize This!: Random Threats from an Unarmed American* (New York: Harper Perennial, 1997) at 264. One cannot help but see a 'fortress America' developing in this isolationist world-view.

⁵⁹¹ See: G.J. Hardin, *The Ostrich Factor: Our Population Myopia* (Oxford: Oxford University Press, 1999).

one begins to understand that as a biologist, Hardin assumes that he can speak as an *expert* on social and cultural theory, anthropology and, in general, social sciences. Hardin's views would be considered laughable were it not for the solemnity that neo-classical economists and pundits favoured, promoted and popularised his position.

Nonetheless, for right-wing (and far-right)⁵⁹² pundits, economists, politicians, and many in the law and economics movement, Hardin's opinions appear to shore-up much of their ideology. Hardin's ardent anti-immigration⁵⁹³ position and his support for population control through eugenics,⁵⁹⁴ genocide,⁵⁹⁵ and famine⁵⁹⁶ should make a non-comatose reader uneasy. The issue of apocalyptic strategies to control human population to prevent environmental degradation ought to be viewed as problematic. Thus, the fact that Hardin has been taken seriously by the law and economics movement, and some mainstream economists, is astounding. Any sober mind armed with even a passing familiarity of Hardin's views cannot help but question the entirety of his tragedy of the commons thesis. But, as Twain was rumoured to have said, 'why let the facts get in the way of a good story.'

⁵⁹² Hardin has received funding from some rather *dubious* think-tanks and foundations, in particular, The Pioneer Fund. The Pioneer Fund awarded Hardin's work from 1988 through 1992. See: R. Lynn, "Garrett Hardin, Ph.D. – A Retrospective of His Life and Work" The Garrett Hardin Society, December, 11, 2003, at: http://www.garretthardinsociety.org/tributes/tr_lyn_2001.html.

⁵⁹³ G.J. Hardin, "The Survival of Nations and Civilization" (1971) 172 *Sci.* at 1297. According to Hardin, "In a less than perfect world, the allocation of rights based on [American] territory must be defended if a ruinous breeding race is to be avoided. It is unlikely that civilization and dignity can survive everywhere; but better in a few places than in none. Fortunate minorities must act as the trustees of a civilization that is threatened by uniform good intentions.

⁵⁹⁴ G.J. Hardin, *Biology: Its Principles and Implications – 2nd Ed.* (San Francisco: W.H. Freeman & Co., 1966) at 707.

⁵⁹⁵ See: G.J. Hardin, *Living Within Limits: Ecology, Economics, and Population Taboos* (Oxford: Oxford University Press, 1993) at 88-89. The implication that the U.S. should not have evacuated residents of Bikini Atoll is outrageous. To say the least, aside from setting off a nuclear bomb and irradiating the Atoll in 1950s, Hardin's dilemma that the blast should have incinerated the islanders and halt their propagation is rather *Goebbels-esque*.

⁵⁹⁶ G.J. Hardin, "Lifeboat Ethics – The Case Against Helping the Poor" in *World Hunger and Moral Obligation* (eds.) W. Aiken, and H. La Follette, (Englewood Cliffs: Prentice Hall, 1977) at 335.

Unlike a progressive agronomist and economist like Galbraith, proponents of enclosure scholarship exalt the benefits of enclosure.⁵⁹⁷ As such, Hardin's understanding of what would constitute a "free" or "open range" versus a shared "commons" is suspect, – Hardin's notion of a "commons" is logically incorrect and a category mistake.⁵⁹⁸ For this reason, his opinions as to the history of property, law, political economy, sociology, philosophy and anthropology must be viewed within this limited context. As such, necessary caveats must be added to any extension and misappropriation of his concept of the tragedy of the commons. What the tragedy of the commons argument does is that it simplifies and amplifies notions that favour privatising multi-use resources and commodifies them.⁵⁹⁹

According to political economist, psychiatrist, and ecologist, Joel Kovel, positions like Hardin's presuppose the "[d]estruction of the commons... [as] a simple necessity... so land... [can] be commodified..."⁶⁰⁰ Hardin's thinly argued position is for the land to be conserved – and it rings hollow. The argument comes in many forms: and, as we know, the argument is for the creation of private property and it does not occur in a

⁵⁹⁷ See: Boyle, *supra* note 408 at: 36. Boyle is as dumbfounded – if not ambivalent – as most critical or moderate observers concerning Hardin's success in shaping the economic and ecological discourse of enclosure.

⁵⁹⁸ As Niels Röling and others have indicated, this logical flaw, at least as of yet, is rarely addressed or admitted to in the "tragedy of the commons" economics literature. See: N.G. Röling, "An Idea Called Knowledge System" in *Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in Times of Environmental Uncertainty* (eds.) N.G. Röling & A.E. Wagemakers (Cambridge: Cambridge University Press, 1998). Also, see: S.V. Ciriacy-Wantrup & R.C. Bishop "Common Property" as a Concept in Resources Policy (1975) 15 Nat. Res. J. at 713. Also, see: J. Sumner, *Sustainability and the Civil Commons: Rural Communities in the Age of Globalization* (Toronto: University of Toronto Press, 2005) at 108. Also, see: H.S. Drago, *The Great Range Wars: Violence on the Grasslands* (Lincoln: University of Nebraska Press, 1970).

⁵⁹⁹ To be fair to Hardin, he did partially recant his tale of woe in 1994; that is, after a quarter century of neoliberal brow beating, Hardin added some necessary caveats to his theory of primitive accumulation. See: G.J. Hardin, "The Tragedy of the Unmanaged Commons" (1994) 9(5) *Trends in Eco. & Evol.* at 199. Also, see: J.A. Baden & D.S. Noonan, "Preface: Overcoming the Tragedy" in *Managing the Commons* (eds.) J.A. Baden & D.S. Noonan (Bloomington: Indiana University Press, 1998) at XVII.

⁶⁰⁰ J. Kovel, *Overcoming Zionism: Creating a Single Democratic State in Israel/Palestine* (London: Pluto Press, 2007) at 51.

vacuum. In Kovel's example, the destruction of Palestinian common property allows for the creation, imposition and dispossession of a system of private property enforced by a foreign and colonialising power. For Hardin, it is the justification for the exercise of personal dominion over land and its privatisation.

Accordingly, if we believe in the commodification and privatisation programmes of the free market, then why not privatise our forests,⁶⁰¹ our water,⁶⁰² our environment,⁶⁰³ our libraries,⁶⁰⁴ our education⁶⁰⁵ and our health care system?⁶⁰⁶ Many neoliberal advocates propose this as a viable solution to economic instability and long term

⁶⁰¹ M. Palo, "No Sustainable Forestry without Adequate Privatization" in *Skogforsk – 48* (eds.) T. Eid, H.F. Hoen & B. Solberg (Oslo: Norwegian Forest Institute, 1997) at 302. Also, see: United Nations, *Millennium Ecosystem Assessment – Synthesis Report* (New York: United Nations, 2005) at: <http://www.maweb.org/> (last visited December 10, 2011).

⁶⁰² See: M. Barlow & T. Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water* (New York: New Press, 2002).

⁶⁰³ A good example of this was Larry Summers's infamous pronouncements regarding the worldwide distribution of toxic chemicals. See: L.H. Summers, "The Toxic Waste Memo" (Washington: World Bank, December 12, 1991) at: <http://twentyfive.ucdavis.edu/includes/tt/10/summers-memo.pdf> (last visited January 2, 2011). Also, see: Features, "Toxic Memo" Harvard Magazine (May-June 2001) at: <http://harvardmagazine.com/2001/05/toxic-memo.html> (last visited February 10, 2010). In the memo, Summers endorsed the need to ship first world toxic waste to "developing nations." It must be noted that as a senior economic adviser in the Clinton administration, Summers helped orchestrate the deregulation of the financial sector that led to the 2008 fiscal crisis. In addition, Summers as the president of Harvard presided over the destruction of the university's historic endowment fund, see: B. Condon & N. Vardi, "Harvard: The Inside Story of Its Finance Meltdown" Forbes Magazine, March 16, 2009, at: http://www.forbes.com/forbes/2009/0316/080_harvard_finance_meltdown.html (last visited February 10, 2010).

⁶⁰⁴ G.J. Stigler, "The Politics of Political Economists" (1959) 72 *Quart. J. Econ.* at 532. According to Stigler: "Once violent debates over questions like the propriety of free public libraries have vanished from discussion, and once absurd heresies like governmental support of an agricultural class" are overcome, then conventional economists can get on with the free market programme of constructing *real* state policy.

⁶⁰⁵ See: V. Galt, "Student and teacher groups decry private universities" *The Globe and Mail*, April 3, 2000, at: A9. This was related to the Harris government's intention to provide degree granting privileges to private universities in Ontario. Also, see: Duffin, *supra* note 101 at 50.

⁶⁰⁶ See: P. Armstrong & H. Armstrong, *Wasting Away: The Undermining of Canadian Health Care* (Don Mills: Oxford University Press, 2010). Also, see: J.M. Gilmour, "Creeping Privatization in Health Care: Implications for Women as the State Redraws Its Role" in *Privatization, Law, and the Challenge of Feminism* (eds.) B. Cossman and J. Fudge (Toronto: University of Toronto Press, 2002). Also, see: International Business Machines, "IBM Enterprise Content Management: Making Your Industry Our Business" (2009) at: <ftp://public.dhe.ibm.com/software/data/ECM/industry/industrial-strength-ECM.pdf> (last visited December 10, 2010).

planning.⁶⁰⁷ Moreover, if we accept the commodification process as a reasonable project, are there limits to this “price system”?⁶⁰⁸ Depending on how one answers these questions, reflects on how one views intellectual property. Is it plausible that we accept the proposition that knowledge can and must be commodified and propertised in all instances? As Marian Miller succinctly puts it:

The task of enclosing and commodifying material resources such as land and water is almost complete. Now the focus has shifted to the enclosure and commodification of knowledge. Knowledge and information have always been seen as crucial commodities in the capitalist enterprise... and their control and manipulation are of growing importance.⁶⁰⁹

But if “their control and manipulation are of growing importance” *should* they be commodified and, if so, to what limit? Under our intellectual property system, one that purports to operate within the “free enterprise system” is public regulation warranted? Moreover, ultimately, how do we regulate the new economy’s influence on our institutions of higher education and the production of surrounding something as essential as pharmaceutical research?

Intellectual property laws and their protection have always been politically and culturally unpredictable. It is only in the hands of earnest and clear-headed litigators – individuals who see intellectual property as *concrete, real, black letter* or, confusingly, a

⁶⁰⁷ As Galbraith wryly observed, “[Milton Friedman’s] misfortune is that his economic policies have been tried.... If all else fails, immortality can always be assured by spectacular error.” J.K. Galbraith, *Money: Whence It Came, Where It Went* (Boston: Houghton Mifflin, 1975) at 176.

⁶⁰⁸ T.B. Veblen, *The Engineers and the Price System* (Whitefish: Kessinger Publishing, 1921) at 4. As Veblen remarks, contrary to the competitive models of the free market: “the price system cannot be maintained without a salutary use of sabotage – that is to say, such habitual recourse to delay and obstruction of industry and such restriction of output as will maintain prices at a reasonably profitable level and so guard against business depression.”

⁶⁰⁹ M.A.L. Miller, “Tragedy for the Commons: The Enclosure and Commodification of Knowledge” in *The International Political Economy of the Environment* (eds.) D. Stevis & V.J. Assetto (Boulder: Lynne Rienner Publishers, 2001) at 111.

product of “natural law”⁶¹⁰ – that limited rights in expressions or ideas are not thorny issues. As noted earlier, intellectual property laws have been viewed as growing out of the “common law.” Yet, this fiction, which is only the by-product of a *naturalistic* discourse, only survived briefly under the intellectual property umbrella of a “common law” copyright and – fortunately – did not last long.⁶¹¹ Yet, despite statutory declarations to the contrary, intellectual property finds itself in constant crisis and in conflict in the public’s imagination. Some people express sentiments as to intellectual property as being identical to a right in “real” property – many, simply, do not see the distinction or just do not care. Debatably, the notion of a limited right or “limited term” of interest confuses most people.

3.12 A Historicity of Intellectual Property

3.12.1 Periodising the Origins of Intellectual Property

Ironically, intellectual property was born at approximately the same time as the first enclosure movement occurred – the ‘new world order’ for the 16th century. Modern notions of intellectual property have existed and have been modified throughout its historic development with all other forms of property interests in the state. Intellectual property has been central to disputes from colonialisation⁶¹² in the late 18th-century

⁶¹⁰ See: T. Aquinas, *Introduction to St. Thomas Aquinas: The Summa Theologica* (ed.) A.C. Pegis (New York: The Modern Library, 1948) at 618. Ultimately, natural law and natural justice are grounded on the assumption that there is a strict order to the universe and that this order — otherwise known as God — ultimately governs all movements and actions. For Aquinas, men – and *only* men – understood law because as a “rational creature [it] is subject to divine providence... [and it is] this participation of the eternal law in the rational creature [that] is called the natural law.”

⁶¹¹ See: *Donaldson v. Beckett*, 2 Brown’s Parl. Cases 129, 1 Eng. Rep. 837; 4 Burr. 2408, 98 Eng. Rep. 257 (1774). Also, see: Rose, *supra* note 7 at 51. Also, see: Patterson, *supra*, note 417.

⁶¹² See: N. Chomsky, *501: The Conquest Continues* (Boston: South End Press, 1993) at 13. As Chomsky points out, Britain’s policy of destroying the comparative advantage of the printed indigenous cotton industry in India was to favour British production, innovation, exploitation and profits at home.

through to the great wars of the 20th-century.⁶¹³ Moreover, at the early part of the 20th-century, intellectual property and the introduction of Fredrick Taylor's system of industrial production, a system known as Taylorism,⁶¹⁴ transformed the industrial process. In doing so, it revolutionised and the management of industrial knowledge. The Taylorist system of mass production led to the "de-skilling"⁶¹⁵ of the artisanal/working class that comprised the industrial sector of the 19th-century. In addition, in doing so, Taylorism subsumed artisanal knowledge through the standardisation of the mass production process. Further, the introduction of the industrial system, and its commitment to standardising "the division of labour," led to the dominant manufacturing strategy to "de-skill" labour⁶¹⁶ and control of the knowledge of the workers. This de-skilling process became central to the valorisation of "scientific management" and the ownership of knowledge. As such, through the 'age of invention' and the standardisation of production, patents and the advantage this provided to the accumulation of capital for corporation became paramount.

3.12.2 Braverman, *De-skilling* and the Irony of Knowledge: Or, a Variation on Twain's "Thing Difficult to Obtain"

This *de-skilling* process has been central and present in the formation of industrial society and its relation to artisanal and working-class culture and its dismantling. Indeed,

⁶¹³ See: J.M. Clark, "The Basis of War-Time Collectivism" (1917) 7(4) Amer. Econ. Rev. at 772. The central concern in this instance, the was patenting airplane technology during World War I that held up development and innovation.

⁶¹⁴ See: F. Taylor, "Scientific Management" *Organization and Identities: Text and Readings in Organisational Behaviour* (eds.) H. Clark, J. Chandler & J. Barry (London: Thomson Learning Business, 2002) at 235. "The managers, assume... the burden of gathering together all of the traditional knowledge which in the past has been possessed by the workmen and then classifying, tabulating, and reducing this knowledge to rules, laws, and formulae..."

⁶¹⁵ See: H. Braverman, *Labor and Monopoly Capital* (New York: Monthly Review Press, 1998).

⁶¹⁶ *Ibid* at 170. Braverman's sense of the "de-skilling" process of labour is that it is crystallised in capitalist production. According to Braverman, the "de-skilling" of labour is the dominant feature and *modus operandi* of late-capitalism and technological society.

it is the central tenant of post-technological society: one that has been about revolutionising the de-skilling Taylorist model. Stripping the worker of knowledge and rendering it to management. Moreover, and building on the Taylorist model, our current model of work has been about converting mechanical information and knowledge and transforming it into digital processes. This new digital production process is similar to what Marx saw as a “train of ancient and venerable prejudices and opinions... [that can be] swept away... [so] all new-formed [prejudices and opinions] ...become antiquated before they can ossify... [and] all that is solid melts into air.”⁶¹⁷

Yet, as noted, it appears that intellectual property – customary communal knowledge – is, in fact, older than it appears. Unlike its cousin, that of individual property rights and private rights, intellectual property cannot glibly avoid the collective propriety of a community of ideas and a community that shares ideas. Justifiably, it could be argued intellectual property is older than “real” property and communitarian and common by its very nature. Put differently, underneath the notion of intellectual property is a communitarian philosophy toward ideas: this is a relationship to knowledge that is informed by an older set of values – what some might call Aristotelian ethics. Aristotelian in the sense that it is an attempt to define what is “the good”⁶¹⁸ course of action for a community. As Charles Taylor correctly points out, this is the age-old struggle in a community between “the priority of right over the good or the good over the right.”⁶¹⁹ This is one of the central tensions surrounding the ownership of ideas in late-capitalist society. Indeed, the balancing of an intellectual property right while at the same

⁶¹⁷ K. Marx & F. Engels, *The Communist Manifesto* (London: Verso, 1998) at 38.

⁶¹⁸ See: Aristotle, *Aristotle: The Nicomachean Ethics* (trans.) W.D. Ross (Oxford: Clarendon Press, 1908) at 15. “[H]uman good turns out to be activity of the soul in accordance with virtue.” Arguably, most neoliberal economist might take issue with this definition.

⁶¹⁹ C. Taylor, “Hegel’s Ambiguous Legacy for Modern Liberalism” (1989) 10 *Cardozo L. Rev.* at 857.

time preserving ‘the good’⁶²⁰ of society in the present and in an increasingly unpredictable future.

3.12.3 ‘Legitimizing’ Owning?

In a late-capitalist society or an information society, the rôle that the state plays in legitimating or delegitimizing “who owns what” becomes indeterminate and is exposed as the political beast that it is.⁶²¹ It means that we live in a world of continuous “legitimation crisis”⁶²² as to the “ownership” question and the degree of state intervention in the knowledge economy.⁶²³ This is “a war of all against all”⁶²⁴ as to whose interest will prevail. It is a struggle as to whose interests are being ‘balanced’ as to the form and content of our intellectual property regimes and its peonage. As suggested, this is partly due to the confusion as to what we mean by “property”⁶²⁵ and by the Internet.⁶²⁶

For almost the entire duration of the property system under the common law, the law has claimed that it has sought to develop, mitigate and eliminate the inherent conflict

⁶²⁰ For liberals like John Rawls, ‘right’ always has priority over ‘the good.’ See: J. Rawls, *Political Liberalism* (New York: Columbia University Press, 1996).

⁶²¹ Governments will violate patents when they deem it necessary. As is well-known, U.S. patents surrounding aircraft during World War I were found to be obstructionist. Thus, government war policy overrode property rights. See: G. Bittlingmayer, “Property Rights, Progress, and the Aircraft Patent Agreement” (1988) 31(1) *J. L. & Econ.* at 227. A recent override of pharmaceutical patent law was the challenge presented by the South African government surrounding AIDs. Also, see: R.L. Swarns, “Drug Makers Drop South Africa Suit Over AIDs Medicine” *The New York Times*, April 20, 2001, at: <http://www.nytimes.com/2001/04/20/world/drug-makers-drop-south-africa-suit-over-aids-medicine.html> (last visited June 4, 2010).

⁶²² See: Habermas, *supra* note 33.

⁶²³ As much as the “knowledge economy” is touted as the driving engine of the “new economy,” it must be noted that our so-called ‘new economy’ is producing far more precarious workers in the service sector than in the “knowledge” sector.

⁶²⁴ T. Hobbes *De Cive* (Whitefish: Kessinger Publishing, 2004) at 18.

⁶²⁵ Whether from the perspective of the common law or the civil law, property is “popularly” and consistently misunderstood a “real” object rather than as an interest or as an “incorporeal right.” It should be noted, the emphasis given to “incorporeal” is a redundancy since the very nature of a right means that it is disembodied by definition. See: C.B. Macpherson, “The Meaning of Property” in *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1992) at 9.

⁶²⁶ For an interesting feature film documentary as to the problem of copying and copyright in the digital age see: B. Gaylor, *RiP!: A Remix Manifesto* (Montréal: National Film Board of Canada, 2008) at: http://www.nfb.ca/film/rip_a_remix_manifesto/ (last visited July 20, 2009).

in the alienation of the common land and in the inheritance system – that is, to preserve wealth. In an attempt to control the trade in intangibles, intellectual property regimes are confronted with a different problem: to wit, the problem of controlling the infinite, ingenious inventiveness of human imagination.

3.12.4 Organising Intellectual Ownership

In “liberal capitalist countries”⁶²⁷ intellectual property regimes and peonage have been instrumental tools and used as legal mechanisms to create, form, constitute and legitimate a political economy that structures the restrictive allocation and adjudication of fundamental (universal?) incorporeal “rights” and resources. This relationship shapes the distribution of wealth, the development of future technology, the progress of knowledge and the general welfare of humanity. Indeed, it is a central feature of intellectual property regimes and peonage that it possesses the unique ability to colonise material and intellectual interests and structure a “particular form of intellectual organization”⁶²⁸ that make it such a powerful metaphor in shaping modernity and the modern world.

C.B. Macpherson noted that “[p]roperty has always been a central concern of political theory, and of none more so than liberal theory.”⁶²⁹ It is in this sense that this study seeks to be equally concerned with the political economy of our liberal intellectual property tradition: yet, it is also to support and extend the case that human understanding, freedom, democracy, knowledge and creativity is best actualised when it is organised for the common good and against privatising monopolies. The one caution that haunts this

⁶²⁷ See: L. Trotsky, *The Revolution Betrayed: What is the Soviet Union and Where is it Going?* (Detroit: Labor Publications, Inc., 1937) at 210.

⁶²⁸ N. Chomsky, *Hegemony or Survival: America’s Quest for Global Dominance* (New York: Metropolitan Books, 2003) at 1.

⁶²⁹ C.B. Macpherson, “Liberal-Democracy and Property” in *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1978) at 199.

hstudy is that intellectual property regimes have a propensity to *always-already* constitute and create a neo-colonialism of the mind. It could be said that intellectual property is but another form of “legal imperialism.”⁶³⁰ Indeed, in as much as this imperialising strategy of discourse is true, intellectual property rarely touches on or speaks to “freedom of the [legal] imagination”⁶³¹ and “to work out in... [our collective] imagination various future possibilities.”⁶³² Intellectual property is about raising fencing and making enclosures. Its default setting is about exploitation: despite claims to the contrary, it is not about the exploration of human possibilities.

3.13 An Origin of Patents

3.13.1 A Version on the Historic Origins of Patents

[Y]ou take my life
When you do take the means whereby I live.

Shakespeare⁶³³

Harry Braverman would agree with this sentiment concerning information and the production process.⁶³⁴ The actual geographic origins and era of patents, at least in their European form(s), are difficult to locate and date. Critics and commentators are correct to point out that there is a mistaken “popular belief that the patent system originated in industrial England in the post-medieval era.”⁶³⁵ According to Jan Fagerberg, Richard Nelson and David Mowery, although there were no patent-like institutions in existence in ancient Babylonia, Egypt, Greece or the Roman Empire, there were forms or types of

⁶³⁰ See: A. Hunt, “Law’s Empire or Legal Imperialism?” *Reading Dworkin Critically* (ed.) A. Hunt (Oxford: Berg Publishers, Inc., 1992).

⁶³¹ See: J.B. Whyte, *Legal Imagination* (Chicago: University of Chicago Press, 1985).

⁶³² *Ibid* at XXV.

⁶³³ W. Shakespeare, *The Merchant of Venice* (Boston: St. Martin’s Press, 2002) at 103.

⁶³⁴ See: Braverman, *supra* note 615.

⁶³⁵ I. Mgbeoji, *Global Biopiracy: Patents, Plants, and Indigenous Knowledge* (Vancouver: University of British Columbia Press, 2006) at 1.

intellectual property.⁶³⁶ Charles Anthon noted that in 5th-century B.C.E., the Greek colonial city of Sybaris had intellectual property incentives where “great encouragement was held out to all who should discover any new refinement in luxury, the profits arising from which were secured to the inventor by patent for the space of a year.”⁶³⁷ This assertion is possibly true: and, it leads one to conclude that private “proprietary” interests in ideas have been around much of recorded history.

As noted, some sources hold that patents, as we know them, originated in Renaissance Italy. This may be factually accurate as to a periodisation of a certain form of statutory grant or patent. Yet, if we examine our own assumptions, assumptions that tend to project into and over-totalise history, then a potentially more complex and rich story unfolds. A history that perhaps gets us closer to the (a) truth⁶³⁸ as to the national interests, greed, politics and policies that structure *letters patent* during the development and state formation of the nation-state.⁶³⁹

3.13.2 *Litterae patentes* as Monopolies

It is important to note that the *letters patent* – *litterae patentes* – were not issued by Renaissance city fathers to inventors merely to provide them with incentives for future discoveries. The fundamental *raison d'être* for granting or extending monopoly privileges through a *letters patent* was to ensure that such a monopoly contributed and

⁶³⁶ J. Fagerberg, R.R. Nelson & D.C. Mowery, *The Oxford Handbook Of Innovation* (Oxford: Oxford University Press, 2005) at 267.

⁶³⁷ A. Charles, *A Classical Dictionary: Containing An Account Of The Principal Proper Names Mentioned in Ancient Authors, And Intended To Elucidate All The Important Points Connected With The Geography, History, Biography, Mythology, And Fine Arts Of The Greeks And Romans Together With An Account Of Coins, Weights, And Measures, With Tabular Values Of The Same* (New York: Harper & Brothers, Publishers, 1841) at 1273. Needless to say, this has to be one of the longest titles for a book in the English language.

⁶³⁸ See: T. Kealey, *The Economic Laws of Scientific Research*, (New York: Martin's St Press, 1996).

⁶³⁹ See: M. Frumkin, *The Early History of Patents for Invention* (Surrey: Surrey Fine Art Press, 1947). Also, see: P.J. Federico, “Origin and Early History of Patents” (1929) 11 J. Pat. & Tra. O. Soc. at 292.

strengthened the wealth of the city-state or nation. Governments during the 15th-century operated on a similar basis as today – *quid pro quo* – and treated intellectual property as an essential feature and element of state power. In England, letters patent were the product of and exercised through the Sovereign’s royal prerogative. As such, *letters patent* were capricious grants. At the Sovereign’s will, the terms of a grant could be arbitrarily changed or, worse, unilaterally withdrawn.

3.13.3 The First Modern Patent Holder – Brunelleschi’s Revolution

In 1421, there is little question that before the systemic formation of the Venetian patent system, most observers consider Florentine Filippo Brunelleschi’s as the first modern patent holder for an invention.⁶⁴⁰ Brunelleschi (1377-1446) was one of the outstanding artists, geniuses and architects of the Italian Renaissance.⁶⁴¹ Along with his tremendous achievements in the “new” classicism and urbanism movement of Renaissance architecture, Brunelleschi invented and introduced the “linear perspective” in painting.⁶⁴² The “linear perspective” conceptually transformed and dominated “the ways of seeing”⁶⁴³ for Europeans for centuries. Epistemologically speaking, John Berger holds that Brunelleschi’s ‘perspective’ revolutionised for Europeans the way they: viewed; knew; understood; and, articulated their world. One of Berger’s central points is that “seeing” is a component of ideology – and arguably Brunelleschi’s way of seeing

⁶⁴⁰ See: Prager, *supra* note 508 at 109. Also, see: M. Coulter, *Property in Ideas: The Patent Question in Mid-Victorian Britain* (Kirkville: Thomas Jefferson Press, 1992) at 8. Also, see: P.O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* (Baltimore: Johns Hopkins University Press, 2001) at 96. Also, see: Mgbeoji, *supra* note 635 at 16. For an ironic observation on the origin of “inventors” see: J.K. Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958) at 127. Galbraith’s observation holds that: “Inventions that are not made, like babies [or inventors] that are not born, are not missed.” Brunelleschi might be an exception or, at least, take exception to Galbraith’s sentiment.

⁶⁴¹ See: F.D. Prager & G. Scaglia, *Brunelleschi: Studies of His Technology and Inventions* (Mineola: Dover Publications, 1978).

⁶⁴² See: M.L. King, *The Renaissance in Europe* (London: Laurence King Publishing, 2003) at 115.

⁶⁴³ See: J. Berger, *The Ways of Seeing* (Penguin: London, 1972).

patents changed the world. Put differently, the way one “sees” – not merely the biological process of fixing objects in space and time – but the way one projects ideas onto the world reveals the ideologies embedded in their culture:

The convention of the perspective, which is unique to European art and which was first established in the early Renaissance, centres everything on the eye of the beholder. It is like a beam from a lighthouse - only instead of light travelling outward, appearances travel in. The convention called those appearances reality. Perspective makes the single eye the centre of the visible world. Everything converges on the eye as the vanishing point of infinity. The visible world is arranged for the spectator as the universe was once thought to be arranged by God.⁶⁴⁴

Brunelleschi’s ‘vision’ and the contagion of this linear perspective, not that different from some forms of legal positivism and reasoning, was to become the dominant visual experience of Europeans. This visual experience would also dominate the world of art until the era of impressionism and “art in the age of mechanical reproduction.”⁶⁴⁵ So, one should note that Brunelleschi cultural and artistic contributions are not merely limited to the realm of intellectual property and the creation and exercise of patents. Yet, in intellectual property circles, Brunelleschi is mostly only known as being the “first” modern patent holder.

3.13.4 Exclusive Possession as Knowledge

As a member of the great Silk Guild of Florence,⁶⁴⁶ Brunelleschi was aware of the power that exclusive possession in *a* knowledge held as to the potential to generate great wealth. Brunelleschi knew that exclusivity in an art or knowledge would allow one

⁶⁴⁴ Berger, *supra* note 643 at 16.

⁶⁴⁵ See: W. Benjamin, “The Work of Art in the Age of Mechanical Reproduction” in *Illuminations* (trans.) H. Zohn, (ed.) H. Arendt (New York: Schocken Books, 1968). Benjamin’s observations are perhaps one of the most insightful essays on the ever-changing standpoint of “Western” perception. In *The Ways of Seeing*, John Berger highlighted the significant debt to visual history that Benjamin added to the discussion surrounding “auratic” art and its transformation by industrial reproduction. See: Berger, *supra* note 643.

⁶⁴⁶ See: E. Staley, *The Guilds of Florence* (Chicago: Ayer Publishing, 1906): at 230-231. Brunelleschi was a member of the *Arte degli Orafi* that operated under the umbrella of the “Silk Guild” and he was made a freeman of the “Silk Guild” in 1414.

to dominant manufacturing or, at least, aspects of a manufacturing process. In many ways, it was his efforts to extend that right are truly history making. What is notable, here, is that Brunelleschi's singular way of "seeing" the world – in a very specific (if not micro-fascist⁶⁴⁷) way – translated in a rudimentary way of viewing art into a *way of seeing* or viewing *propriety* or property as a *right* in an idea. Perhaps Brunelleschi's way of seeing, in this manner, led to and attached to our much vaunted "common sense" approach to current patent law disputes and the self-evident and limited notion of ownership in an idea.

The "first" patent, the patent granted to Brunelleschi, was for the vague description of a water going vessel, *Il Badalone*.⁶⁴⁸ Brunelleschi was the architect and builder of a church: the renowned *duomo*, the *Basilica di Santa Maria del Fiore* in Florence. Brunelleschi had a technical and transportation problem to solve. As the architect, Brunelleschi needed marble for the *duomo*. The issue was how to transport it cheaply and without damage. Brunelleschi saw his solution in a vessel that could transport marble longer distances on the water. Brunelleschi's vessel, its design and its sole purpose, was to transport marble from their quarries near the Arno River cheaply to Florence for the *duomo*.⁶⁴⁹ According to Frank Prager:

Brunelleschi was a classic man of the Renaissance: tough-minded, multi-talented and thoroughly self-confident. He claimed he had invented a new means of conveying goods up the Arno River (he was intentionally vague

⁶⁴⁷ See: M. Foucault, "Introduction" in G. Deleuze & F. Guattari, *Anti-Œdipus: Capitalism and Schizophrenia Vol. 1*. (trans) R. Hurley, M. Seem & H.R. Lane (London: Continuum, 1972) at XV. Foucault remarks that one of our central (post?) modern problems is "[h]ow do we rid our speech and our acts, our hearts and our pleasures, of fascism? How do we ferret out the fascism that is ingrained in our hearts?"

⁶⁴⁸ See: Prager & Scaglia, *supra* note 641 at: 116. According to some interpretations, *Il Badalone* means a simple-minded and wayward giant.

⁶⁴⁹ See: B.W. Bugbee, *Genesis of American Patent and Copyright* (Washington: Public Affairs Press, 1967) at 17-18. Also, see: A. di Tuccio Manetti, *The Life of Brunelleschi* (trans.) H. Saalman (University Park: Pennsylvania State University Press, 1970).

on details), which he refused to develop unless the state kept others from copying his design. Florence complied, and Brunelleschi walked away with the right to exclude all new means of transport on the Arno for three years.⁶⁵⁰

To some, Brunelleschi's bargain to exclude all new forms of transportation on the Arno was a form of legalised extortion. According to (neo-conservative?) historian and critic, Owen Lippert, it is clear that the introduction of enforceable patents such as Brunelleschi's amounted to a form of legalised "blackmail."⁶⁵¹ Justifiably, legalised blackmail sounds like a harsh assessment: and, it is possible that Lippert, a former Senior Fellow with The Fraser Institute in Vancouver,⁶⁵² has changed his opinion.⁶⁵³

Brunelleschi achievements in architecture, sculpture and painting were remarkable: yet, what was historically transformative was in how he cajoled the Republican patricians of Florence into granting him an enforceable letter of exclusivity on his proposed shipping vessel, *Il Badalone*. Brunelleschi's proposal to the city of

⁶⁵⁰ Prager, *supra* note 508 at 109.

⁶⁵¹ O. Lippert, "One Trip to the Dentist is Enough-Reasons to Strengthen Intellectual Property Rights Through the Free Trade Area of the Americas Now" *Competitive Strategies for the Protection of Intellectual Properties* (ed.) O. Lippert (Vancouver: The Fraser Institute, 1999) at 129.

⁶⁵² See: Profile of Owen Lippert, Fraser Institute, at:

http://oldfraser.lexi.net/about_us/people/owen_lippert.html (last visited Oct. 15, 2008).

⁶⁵³ According to Lippert's profile he was trained as a historian but he also considers or fancies himself a researcher and advocate for stronger intellectual property rights. Ironically, as has become fairly well known, Lippert was forced to resign from Prime Minister Harper's 2008 campaign election team after it was discovered that he was a plagiarist. As we know, plagiarism is a pesky and persistent problem in the 'information age.' In a 2003 speech given by Harper, purportedly written by Lippert, Harper urged Canada to send troops to assist the U.S. in its illegal invasion of Iraq. The speech appeared to be copied almost 'word-for-word' from a speech given a few days earlier by the then Australian Prime Minister, John Howard. Needless to say, in the grand scheme of things, Lippert's 'indiscretion' metaphorically douses water on his enthusiasm and advocacy for stronger intellectual property laws. See: C. Weeks & J. Taber, "Tory campaigner resigns over plagiarized speech" *The Globe and Mail*, Wednesday September 30, 2008 at:

<http://www.theglobeandmail.com/servlet/story/RTGAM.20080930.welexnplagiarism0930/BNStory/politic/> (last visited October 5, 2008). More recently, the Dean (now former-Dean) of the University of Alberta's Medical School, Phillip Baker, had to resign for plagiarising a commencement address by Dr. Atul Gawande. Gawande gave his address to Stanford University graduates in 2010. See: *The Canadian Press*, "U of A dean who copied part of speech resigns" *Toronto Star*, June 17, 2011 at: <http://www.thestar.com/news/canada/article/1010679--u-of-a-dean-who-copied-part-of-speech-resigns> (last visited June 18, 2011).

Florence seems to fit Lippert's description of "blackmail." Yet, it should be noted that the patent was not for any *real* innovation: it was just for a "secret" and the secret, and the only innovation asserted in the patent, was that the *Il Badalone* could ship marble "for less money than usual."⁶⁵⁴

Brunelleschi's patent was a uniquely modern form of coercion: one that was to concretise the city's grant into his enforceable legal instrument of an exclusive limited right. Brunelleschi's enforceable letter gave him a "limited right to sole commercial exploitation of the sea-craft"⁶⁵⁵ and, by 1427, *Il Badalone* was complete. Brunelleschi was well positioned for historical success. Specifically, he would not only be recognised by history as an architectural and artistic genius but would become a very wealthy man with his new venture as an inventor.

Unfortunately, *Il Badalone* sank on its maiden voyage. When it sank into the Arno River, near Empoli, *Il Badalone* took to the bottom a 100,000 pounds of quarried Carraran marble. For Brunelleschi, although he was successful in gaining a patent for the *Il Badalone*, the sinking of it meant the loss of most of his personal fortune. It also meant an end to his small part and "genius" in the art shipbuilding,⁶⁵⁶ and, his dream of making his patents enforceable. It seems, at least in Florence, that the sinking of *Il Badalone* and the granting of patents of invention ended with Brunelleschi's misadventure.

According to Bruce Bugbee, there were several reasons why the grant of patent rights in Florence ended with Brunelleschi's titanic-like "success." Bugbee suggests that one explanation as to the demise of the use of patents for the next fifty years were the

⁶⁵⁴ See: Prager & Scaglia, *supra* note 641 at 116.

⁶⁵⁵ Mgbeoji, *supra* note 635 at 16.

⁶⁵⁶ See: A. Herman, *To Rule the Waves: How the British Navy Shaped the Modern World* (New York: Harper Collins, 2004). Shipbuilding is a tricky business. A ship's efficacy is one that is complicated by a ship's purpose, by the 'technologies' at hand, and by the bodies of water that one wants to cross.

contentious and fractious competition and “conflict between the Major Gilds.”⁶⁵⁷ Without the presence of an assertive genius like Brunelleschi, the guilds closed ranks to control their knowledge of crafts and were cautious to maintain the *status quo* – their own economic self-interest. For the guilds, the safeguards afforded by “the ascendancy of the Medici [Family] (and selective patronage) after 1434”⁶⁵⁸ extended protection for the guilds. In addition, the “decree of 1447 limiting State-governed incentives for new crafts and technological innovations to tax exemptions alone”⁶⁵⁹ ended and, with it, the possibility of the profitable exploitation of the ‘fruits of one’s genius’ from the likes of a Brunelleschi.

Even with the monstrous failure with *Il Badalone*, Brunelleschi’s example introduced a novel and revolutionary theme into the epistemically tactile nature of Roman law. Specifically, Brunelleschi made it possible for the claim that as a creative inventor one could own an idea in the present and in the future – a future tied to the “fruit of his genius”⁶⁶⁰ and future interests in the form of income. But it is a vague *interest*. Brunelleschi patent was vague because he refused to make his plans “available to the public, in order that the fruit of his genius and skill may not be reaped by another without his will and consent.”⁶⁶¹ Prior to Brunelleschi’s patent claim, the issue of ownership as to one’s future “right” to one’s intellectual *genius* without ‘his will and consent’ was impossible to determine. Brunelleschi’s genius, to a degree, was to challenge the millennial traditions of Roman property law.

⁶⁵⁷ Bugbee, *supra* note 649 at 19.

⁶⁵⁸ *Ibid.*

⁶⁵⁹ *Ibid.*

⁶⁶⁰ Prager, *supra* note 508, 109.

⁶⁶¹ *Ibid.*

In Roman law, property had been historically grounded within the confines of a person or in a subject's material relationship to an external object. The act of ownership as to one's possessions consisted in the ability to exclude others from the use of a material "thing" – whether the "thing" at issue was one's land, one's apple or one's ring. Brunelleschi's prophetic transformation as to the concept of property was not just to convert water into wine but also to assert that he had thought of something similar to the *first* notion of wine and that he owned the 'genius' as to the process for making wine. In effect, Brunelleschi was propertising his *genius*. As suggested, Brunelleschi true genius, unlike his artistic introduction of a *linear perspective*, which as discussed tends to be ubiquitous and widespread in the "Western" perspective, consisted in the fact that he was able to receive legal protection for what was really a failed idea. To paraphrase Jean-Jacques Rousseau, the genius of Brunelleschi as the true founder of intellectual property in a patent was that he had discovered a *legal* way to create a *mental fence* around his idea. That is to say, Brunelleschi's ability was to convince people to grant him the ownership in a failed idea. Perhaps, Brunelleschi's lasting accomplishment was not his great works of art or the *duomo*, rather his lasting accomplishment was the propertisation and commodification of inventive ideas. Put differently, having *enclosed* or *invented* a concept, Brunelleschi could have pre-empted Rousseau and said: "This is mine", and [I have come] ...across people simple enough to believe... [me]."⁶⁶²

3.13.5 Venice and *litterae patentis*

Although the first enforceable patent crystallised in the Brunelleschi's letter with the Republic of Florence, it was in 1474 that the first patent system in Europe was

⁶⁶² J.-J. Rousseau, "The Social Contract" in *Collected Writings of Rousseau Vol. IV* (trans.) J.R. Bush, R.D. Masters & C. Kelly, (Hanover: University Press of New England, 1994) at 55.

organised and established by the Commonwealth of Venice:⁶⁶³ a commonwealth possessing “a registry of patents.”⁶⁶⁴ The Venetian statute reads as follows:

We have among us men of great genius, apt to invent and discover ingenious devices... if provision were made for the works and devices discovered by such persons, so that others who may see them could not build them and take the inventor’s honor away, more men would then apply their genius, would discover, and would build devices of great utility and benefit to our Commonwealth.⁶⁶⁵

Yet, even with the establishment of a registry, the political economy of this patent system was uneven and unpredictable. Indeed, one ought not to assume or overstate the case as to the continuity and coherence of the Venetian patent system and confuse it with the system we have today. As Vaver points out, the Venetian system and its enforcement was rather arbitrary:

[Its] enforcement of impartiality [was] in the face of increasingly partisan demands for the protection of valuable knowledge and information may have been itself a driving force behind the adoption of the statute. But the new statute-derived patents were not universally adopted by Venetian inventors before the turn of the [15th] century, perhaps because there was no single political authority to enforce the new practice. Nevertheless, the statute confirms that the Venetian authorities were concerned with the management of the city’s economy and recognised the importance of technological innovation to its success.⁶⁶⁶

The importance of Venetian authorities and their management of technological innovation and its success ought not to be understated. It is important to note that the Venetians, with their economic ties and close geographic proximity to the *Levant*, wanted to retain their ability to expand and exploited economic trade with the east. This was a

⁶⁶³ See: C.A. Nard & A.P. Morriss, “Constitutionalizing Patents: From Venice to Philadelphia” (Case Western Reserve University: 2004) at: <http://ssrn.com/abstract+585661>.

⁶⁶⁴ Mgbeoji, *supra* note 635 at 16.

⁶⁶⁵ See: G. Mandich, “Venetian Patents, 1450-1550” 30 (1948) J. Pat. Off. Soc’y. Also, see: Venetian Republic Patent Statute (1474) in *Principles of Patent* (eds.) D.S. Chisum *et al.* (New York: Foundation Press, 2001) at 10-11.

⁶⁶⁶ Vaver, *supra* note 266 at 9.

trade that brought material prosperity to the Venetian city-state, but, more importantly, it also allowed Venetians to freely exploit – “borrow” – the intellectual innovation and inventions of the *Orient*.

At that time, Venice, and its rise and fall as a Mediterranean trading centre, acquired a status of wealth that was un-paralleled by other European states. As a political project or model for the future of patent law development, and its worth, Venice established relatively secure foundations or parameters for enforceable patents. Moreover, the establishment and precedent of an enforceable and a limited right were contagious: like the plague, patents were poised to sweep across and eventually infect all of Europe’s various legal systems.

As is well known, the word patent comes from the medieval Latin phrase *litterae patentes* and means “open letter.”⁶⁶⁷ For Blackstone, the purpose of the open letter was to make the grant known to the public:

THE king’s grants are also matter of public record. For, as St. Germyn says, the king’s excellency is so high in the law, that no freehold may be given to the king, nor derived from him, but by matter of record. And to this end a variety of offices are erected, communicating in a regular subordination one with another, through which all the king’s grants must pass, and be transcribed, and enrolled; that the same may be narrowly inspected by his officers, who will inform him if any thing contained therein is improper, or unlawful to be granted. These grants, whether of lands, honours, liberties, franchises, or ought besides, are contained in charters, or letters patent, that is, open letters, *litterae patentes*: so called because they are not sealed up, but exposed to open view, with the great seal pendant at the bottom; and are usually directed or addressed by the king to all his subjects at large.⁶⁶⁸

⁶⁶⁷ See: V. Shiva, *Biopiracy: The Plunder of Nature and Knowledge* (Toronto: Between The Lines, 1997) at 3. “Open letters” – *litterae patentes* – are opposed to “closed letters” – *litterae clausae* – which were personal letters and sealed on the outside edge with wax that was meant to be broken only by the recipient.

⁶⁶⁸ W. Blackstone, *Blackstone’s Commentaries on the Laws of England* (Oxford: Clarendon Press, 1765-1769) at 346.

By strict definition, a *letters patent* was a monopoly conferred by a monarch or sovereign in the form of an open letter whose royal seal gave the holder of the letter the rights and privileges as to an economic monopoly.⁶⁶⁹ As a legal instrument, it was initially an exclusivity of a grant for economic privilege from the feudal state.

Letters patent were the broad legal instrument of choice that government employed to control and manage this *useful* knowledge. From the introduction of the patents to the present, one of the central functions of a patent has been to protect and regulate the flow of information as it pertained to commodity production. Remarkably, *letters patent*, although eventually an open declaration, were used by master craftsmen and local guilds to protect the art, skill and knowledge of the production process. The guild system, and the closed system inherent in their information as to their crafts and skills of the knowledge of production, were setup to control that information.

After Brunelleschi's ill-fated *Il Badalone* and its 'patentable' information sank beneath the surface of the Arno River and into history, it would be the half-century of intensifying economic competition between Italian city-states that would eventually make the monopolies established through *letters patent* the norm. At the forefront towards enforceable patents were Venetian glass blowers.

The technologically advanced knowledge of Venetian glass blowers was to become well known throughout Europe in the latter part of the 15th-century. To protect the knowledge retained within glass blowing and other useful industries, Venice granted a ten-year monopoly to the individual who introduced a new and useful device to the city.

⁶⁶⁹ *Letters patent* were a broad legal instrument that were used as a legal right or entitlement to an office, the right to create an economic monopoly, the sole right to an invention or a charter for a corporation. For instance, the Gentleman Office of the Black Rod was created by *letters patent* in 1350 and was a personal attendant for the Sovereign – a gatekeeper of sorts.

In doing so, Venice was perfecting its statecraft through grants of monopolies. These were monopolies over the use, application, and control of technical knowledge that benefited Venetian society. Although Venice could control its various monopolies within the *polis* of its city-state, it had little control over its monopoly if its “knowledge workers”⁶⁷⁰ decided to leave town – except, of course, “the death penalty [that] awaited *Venetian glass-blowers* who tried to practise their art abroad.”⁶⁷¹ As Frumpkin remarks:

[G]lass was then so precious that many Venetian artists were tempted to establish works abroad, and knowing the Venetian patent system, the first thing they sought in foreign countries was a monopoly for the new methods they brought with them. ...In this way patents were introduced into various countries during the sixteenth century; and it is curious to note how many of these early patents were granted for glass manufacture and how many Italians there were among the first patentees.⁶⁷²

The city’s inability to control émigré Venetian glass blowers and the craft knowledge in their heads had a dramatic impact on glass manufacturing across northern Europe, but, more specifically, on the introduction of the Venetian patent system.

It was through émigré Venetian glass blowers and their travels in the late 1400s that would introduce new glass making techniques to the rest of Europe. Glass blowers would be the vectors that would spread the owner-inventor patent system to the rest of Europe and the modern world.⁶⁷³ As Venetian glass blowers emigrated and spread across Europe, they would request monopolies of limited terms of exclusivity in the towns, cities and countries in which they settled. In doing so, the glass blowers could protect the

⁶⁷⁰ See: P.F. Drucker, *Landmarks of Tomorrow: A Report on the “Post-Modern” World* (New York: Harper Colophon Books, 1959). Also, see: P.F. Drucker, *The Effective Executive* (Amsterdam: Butterworth-Heinemann, 2007) at 4.

⁶⁷¹ M. Frumkin, “The Origin of Patents” (1945) 27(3) J.P.O. Soc. at 144. Also, see: M.J. Enright, “Regional Clusters: What We Know and What We Should Know” in *Innovation Clusters and Interregional Competition* (eds.) J. Bröcker, D. Dohse & R. Soltwedel (Berlin: Springer, 2003) at 110.

⁶⁷² *Ibid.*, Frumkin, at: 144.

⁶⁷³ See: M. Perelman, *Steal This Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity* (New York: Palgrave, 2002).

monopoly of their acquired skills in a given community and market. This also granted them control over the skills of their apprentices, allowing industry and market dominance that could far out live the life that the actual monopoly grant acquired.

3.14 A Different Kind of Patenting?

3.14.1 Patent By State

According to Rod Falvey, Feli Martinez and Geoff Reed, it was under Henry the VI that the first English patent of invention was granted in 1449.⁶⁷⁴ This “first” English patent was granted to John of Utyman, who made the stained glass for Eytton College.⁶⁷⁵ The patent awarded John of Utyman was a 20-year monopoly on a glass-making process that, until then, was unknown in England. In exchange for the 20-year monopoly, John of Utyman was obliged to teach native Englishmen the manufacturing process. Yet, this claim pertaining to the origin of the “first” English patent system seems doubtful.

Although it may be useful to trace our patent system to Florence, to Brunelleschi and to his unique genius, alternate explanations exist. In particular, patents and our understanding and explanations as to them are more – or should be? – nuanced: we should understand the monopolies of renaissance economies and contextualise and re-examine them as to the origins of patents.⁶⁷⁶ This re-examination is needed partly as a response to the modern tendency to narrow the historical definition of *letters patent* as only pertaining to an *invention* and the inventor. This may also be partly a result of the

⁶⁷⁴ R.E. Falvey, F. Martinez & G.V. Reed, “Trade and the Globalisation of Patent Rights” (2002) Internationalisation of Economic Policy at: http://www.nottingham.ac.uk/economics/leverhulme/research_papers/02_21.pdf. Also, see: L. Palombi, *Gene Cartels: Biotech Patents in the Age of Free Trade* (Cheltenham: Edward Elgar, 2009) at 3. Also, see: D. Neef, *The Knowledge Economy* (Boston: Butterworth-Heinemann, 1998) at 124.

⁶⁷⁵ A.A. Gomme, *Patents of Invention: Origin and Growth of the Patent System in Britain* (London: Longmans Green and Co. 1946) at 6.

⁶⁷⁶ See: Federico, *supra* note 639 at 292.

miasma present in the “West” and how it has defined “authorship” as a solitary act and inventing as the sole and individual act of the genius “inventor” at work.

Put differently, it is a somewhat typical and modern “Western” foible to project our understanding uncritically, *ahistorically*, and unwittingly (and many times intentionally) on to other cultures. We also tend to project uncritically on to cultures from the past. Indeed, the England of 1450 was a radically different culture from our own. The definition of *letters patent* loses its critical interpretive force if left unexamined: a strength that can be used to help uncover its broader societal purpose. That is to say, the current onlookers or critics hold that our shared knowledge and understanding – or of any given historical era or topic – can be projected backwards and considers the era’s culture readily accessible and similar if not identical to our own. The idea of historic or cultural incommensurability⁶⁷⁷ is rarely entertained or tolerated.⁶⁷⁸ In this process, the historical observer assumes that she can capture the truth of that historical period in its totality – specifically, its historicity – and attain historical accuracy with limited distortion through a (rather awkward) process of deductive logic. The theoretical trade-offs, assuming there is a game afoot, is that this leads to our profound misunderstanding as to the *origins* and *authenticity* of almost everything – particularly to the purpose and utility of patents. That is to say, if we focus only the narrow rationally and analytically defined terms of a patent, one only pertaining to an invention, and fail to comprehend the broad range of protections that *letters patent* afforded their holders, then we dismiss their entire social order and impose our fictional solitary – econometric? – account as fact. In biblical terms, this is a failed unwritten commandment - or *mitzvah* –

⁶⁷⁷ R.J Bernstein, “Incommensurability and Otherness Revisited” in *Culture and Modernity: East-West Philosophic Perspectives* (ed.) E. Deutsch (Honolulu: University of Hawaii Press, 1991) at 85.

⁶⁷⁸ See: T. Eagleton, *The Significance of Theory* (Oxford: Basil Blackwell, 1990).

in which we all bear, to varying degrees, some responsibility as witnesses to patent history.

For example, as intellectual property activist Jamie King notes, a similar historical misunderstanding in our current assumptions exists. It occurs when we cast a notion like *individual* and individual *inventor* backwards and this leads to an overabundance of contradictions and utter confusion.⁶⁷⁹ According to conventional wisdom, inventions need inventors and inventors need a self. An inventive-self requires a full-blown conception of the individual and, for that matter, a regime of individual ownership must *always-already* be present and a system of adjudication and enforcement of those rights. Hence, the tautology of the inventive “self” becomes one of the grand inventions of modernity. King points out: “People have not always conceived of thoughts and ideas as objects of property, and the alienated self so necessary to today’s order appears to have been entirely missing for a good deal of the Middle Ages.”⁶⁸⁰ Thus, it would appear that Brunelleschi’s full-blown genius and modern sense of ‘self’ would be an aberration that defies our understanding.

King holds that *our* notion of “self” is absent as an ontological category in the medieval period and, as such, the politics shaping “identity” is substantially different. Any experience of *it* – the *self* – was *always-already* in relation to others. ‘Self’ was a constitutive relationship that could only be understood in terms of the social relationship established by and through others. As Raymond Williams notes: “**Individual** originally

⁶⁷⁹ J. King, *The Dissolving Fortress* (2005) Eur. J. Higher Ed. at: www.elia-artschools.org/downloads/publications/EJHAE/King.doc (last visited July 14, 2009).

⁶⁸⁰ *Ibid.*

meant indivisible.”⁶⁸¹ In fact, medieval Latin had no term for “individual” and the best definition it could muster was the meaning “*Individuus*... [which] was used to translate *atomos*”⁶⁸² from the Greek meaning of “not cuttable, not divisible.”⁶⁸³ This does little to clarify our understanding of the “self” but it does point to the ambiguity that exists in our conventional everyday use of notions like authorship, ownership and property.

At this point, one could speculate that *truly* the *real* genius of Brunelleschi was his invention of the modern individual – the *self* of the conscious, modern, idea-owning self – but, as an inordinate number of philosophers would point out, this would be a banal over-simplification of western philosophy from Aristotle, to Descartes, to Sartre to Derrida. There is an inordinate amount of evidence that medieval Europeans could not linguistically or conceptually consider themselves as autonomous and separate from the social order surrounding them. Medieval and early Renaissance Europeans only understood themselves through their communities, through the revealed truth of their God, in relation to the power and hierarchy of the Church⁶⁸⁴ and in subservience to the Crown. Hence, we historically err if we project our 21st-century understanding of patents, patent holders and of intellectual property onto the past.

For example, a broader “definition” of *letters patent* included ‘letters of protection.’ Letters of protection precede the historical recognition and debate(s) as to the origin of inventive patents. According to Lien Luu, Edward III’s (1312-1377) “promotion of industrial development in England... [encouraged] skilled Continental

⁶⁸¹ Williams, *supra* note 564 at 161. Also for an interesting examination of the problem of the individual see: P. Stallybrass, “Shakespeare, the Individual, and the Text” *Cultural Studies* (ed.) L. Grossberg *et. al.* (New York: Routledge, 1992) at 593-612.

⁶⁸² *Ibid.*, Williams, at: 162.

⁶⁸³ *Ibid.*

⁶⁸⁴ M. Heidegger, “The Age of the World Picture” *The Question Concerning Technology and Other Essays* (trans.) W. Lovitt (New York: Harper Torchbooks, 1977) at 115-154.

artisans to settle... [and] can be traced back”⁶⁸⁵ at least to 1331 – compared to the Utyman patent of 1449 or 90 years before the Brunelleschi patent of 1421.⁶⁸⁶ Although this was not a patent in the (failed) *Il Badalone* sense, it is a letter of protection to develop and protect the invented objects and skills of the patent holder. According to Ha-Joon Chang, this form of patent is an economic “incentive” (“inventive”?), a fundamental link, that provides the first form of protection and subsidisation for domestic “infant” industries⁶⁸⁷ against foreign competitors.

Leading up to 1331, England’s domestic weaving industry was in disarray. Before Edward’s ‘letters of protection’ and the promotion of a domestic English weaving industry, English wool was being exported to Flanders. In Flanders, Flemish weavers would use advanced weaving technology to weave high-quality wool cloth. This wool cloth was then re-imported to England and sold as a finished product to the English. So, in 1331, Edward III issued the Flemish weaver John Kempe letters of protection to promote a domestic English weaving industry:

The king to all his bailiffs... [k]now you that John Kempe of Flanders, [a] weaver of woollen cloths, will come to stay within our realm of England to exercise his mystery here, and to instruct and teach those wishing to learn therein, and will bring with him certain men, servants and apprentices of that mystery, we have taken John and his aforesaid men, servants and apprentices, and their goods and chattels into our special protection.⁶⁸⁸

⁶⁸⁵ L. Luu, *Immigrants and the Industries of London, 1500-1700* (London: Ashgate Publishing, Ltd., 2005) at 53.

⁶⁸⁶ Frumpkin baldly rejects this position. Frumpkin, *supra* note 671 at 144. According Frumpkin, this view is the product of “an erroneous tradition [that] patents were known at the time of Edward III; this may be dismissed as a pure legend.” Frumpkin’s objection is dually noted. Comparatively, Robert Merges calls them proto-patents and dates them to 1378. See: R.P. Merges, *Patent law and policy: Cases and Materials* (Charlottesville: Michie, Co., 1992) at 3.

⁶⁸⁷ Chang, *supra* note 250.

⁶⁸⁸ B.W. Clapp & H.E.S. Fisher, *Documents in English Economic History: England from 1000 to 1760* (London: G. Bell & Sons, 1977) at 180.

Edward's royal seal attached to 'letters of protection' for John Kempe and "his aforesaid men" is a classic example of the obscure English origins of *letters patent* as 'letters of protection' over "that mystery" – not unlike the vague patent granted to Brunelleschi's *Il Badalone*. As indicated, in the broad sense of invention or mystery of production through *letters patent*, 'letters of protection' in England and "that mystery" preceded Brunelleschi's patent by 90 years.

Even if we consider Kempe's 'letters of protection' not to be a "patent we must consider that just five years later Edward once again exercised his royal prerogative and issued two more 'letters of protection' to protect a different "mystery." In 1336, Edward encouraged the immigration of two weavers from the 'low countries and granted them 'letters of protection' and this was to become a common practice.⁶⁸⁹ According to Luu:

By moving to England, Flemish clothworkers enjoyed both a cheaper (25-35 per cent savings in costs) and a more secure supply of English wool.... While it is unclear how many came as a result of this royal encouragement, there are reasons to believe that the number was quite substantial. The Flemish cloth towns were devastated by fifty years of strife with France, and many Flemish weavers accepted the King' offer.⁶⁹⁰

Thus, it must be acknowledged that *letters patent*, which include letters of protection, were documents that served multiple of purposes – ultimately being "perfected" under the influence and nuance of the Apennine system. Yet, what is important for our investigation is to note that a patent became a central legal and economic instrument that the state could use to control, develop, and regulate

⁶⁸⁹ Ironically, this policy of "letters of protection" is very similar to our current Canadian immigration policy that seeks out immigrants with specialised skills and qualifications to meet the "points system" to qualify landed immigrant status. The substantive difference being, at least from Edward's time, that he let his weavers weave; whereas, in Canada, we let medical doctors and engineers exercise their economic *liberty* to drive taxi cabs or work as janitors.

⁶⁹⁰ Luu, *supra* note 685 at 55.

economic growth and nation building.⁶⁹¹ With economic influence, so, too, come degrees of abuse and corruption.

3.14.2 Political Economy and Nation-Building Through Open Letters

Where there are monarchs there are courtiers seeking favours or payoffs for services rendered. Over time the practice developed of using patents to reward courtiers. Aside from patents for inventions, there were patents giving individuals the sole right to practise a particular trade, patents gave the holder the right to supervise an industry like inns and alehouses, and patents that allowed the holder to avoid certain import or export restrictions.⁶⁹²

Perelman holds that it was under “William Cecil (Lord Burghley), chief minister under Elizabeth I, who [actively] used patent grants to induce foreign artisans to introduce Continental technologies into England.”⁶⁹³ Locating the origins of our modern patents system solely in the Apennine system is somewhat limited: that is to say, the situation is multi-layered and complex. As economic instruments evolved and technologies changed in 15th-century Europe, patents became central instruments in a nation-state’s economic policies and planning. Although it may appear ludicrous to us today, the “theft” of technologies associated with glass blowing were the espionage of the 15th century. Frumpkin’s point as to the death penalty being applied to “treasonous” glass blowers should not be lost on any student of the Cold War.⁶⁹⁴

⁶⁹¹ C.P. Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton: Princeton University Press, 2003) at 24.

⁶⁹² P. Drahos & J. Braithwaite, *Information Feudalism – Who Owns the Knowledge Economy?* (London: Earthscan, 2002) at 34.

⁶⁹³ Perelman, *supra* note 673 at 13.

⁶⁹⁴ In comparing the espionage of nuclear secrets and glass-blowers, one cannot help but remember the case of Ethel and Julius Rosenberg. The Rosenbergs were executed in 1953 for conspiracy to commit espionage related to passing atomic bomb information to the Soviet Union. See: S. Yalkowsky, *The Murder of the Rosenbergs* (New York: Crucible Publications, 1990). Also, see: E.A. Alman & D. Alman, *Exoneration: The Trial of Julius and Ethel Rosenberg and Morton Sobell — Prosecutorial Deceptions, Suborned Perjuries, Anti-Semitism, and Precedent for Today’s Unconstitutional Trials* (Seattle: Green Elms Press, 2010).

3.14.3 Medieval Industrial ‘Espionage’

Perelman suggests that this 15th-century form of espionage occurred because “patents were originally a vehicle for stealing information from others rather than promoting invention.”⁶⁹⁵ Peter Drahos and John Braithwaite imply that “open letters” acted as feudal forms of “technology transfer” – a late medieval and early Renaissance form of an information arms race. The burgeoning and expanding economies of the early Renaissance essentially contained a Polanyian-type *double movement*. Or, perhaps more accurately, a Marxian form of crisis and contradiction; a situation that created the conditions for the first form of “information feudalism.”⁶⁹⁶

It was the economic inducement and incentive of patents offered by the English Crown, and industry, that lured foreign master craftsmen to England. The incentive of monopolies sought to make foreign secrets and their “mystery” known to English craftsmen. As such, it was the Crown’s protection of master craftsmen and their ability to share their mystery that helped fuel and act as a social and economic lubricant for foreign technology transfers to Renaissance England. For Drahos and Braithwaite:

In England ‘Letters of Protection’ were issued in the 14th century to foreign tradesmen. The idea was to persuade skilled craftsmen to come to England and help develop English industry. Protection against imports was part of the incentive that was being offered... [and]... [l]etters of protection became ‘letters patent’.... Over the next few centuries the issues of letters patent proliferated, so much so that hardly any part of English commercial life remained unaffected by them.⁶⁹⁷

When foreign master craftsmen or artisans received exclusive trade privileges in the form of a monopoly from the Crown, they acquired economic security and the Crown gained a

⁶⁹⁵ Perelman, *supra* note 673, at 14.

⁶⁹⁶ See: Drahos & Braithwaite, *supra* note 692 at 1.

⁶⁹⁷ *Ibid* at 34.

fixed payment and a secure source of revenue for itself. Decisively, the Crown had a source of revenue that could be acquired and secured outside parliament and the politics involved in a tax bill.

Many observers insist that patents in England were first an economic instrument directly related to an “invention.” But, “invention” is in the eye of the beholder. Arguably, the great invention of the Elizabethan age had more to do with “innovating” sources of revenue for the Crown. The Crown was in need of revenue and all forms of revenue that could be generated through patents were useful to this end. Avoiding parliament and escaping the purview and debate of parliament dominated the Crown’s strategy and policy. The generation of revenue free from a meddlesome parliament was one of the paramount objects of the Crown. Thus, with the support of the Crown, the issuance of patents became a central source of revenue that ballooned the maritime trade of England under Queen Elizabeth.

3.14.4 Patents as State Monopolies

Patents of invention were important, but innovative patents that generated revenue were essential. As Ronald Seavoy remarks, Queen Elizabeth’s patents were granted to at least to six different trading monopolies under her reign:

Queen Elizabeth (1558-1603) was acutely aware of the increased revenue available from increased trade. Among the long distance trading companies she chartered (with monopoly privileges) were the Muscovy Company (1566) trading into Archangel in northern Russia, the Eastland Company (1579) trading into the Baltic, the Levant Company (1581) trading in present day Lebanon, the Barbary Company (1585) trading into north Africa, the Guinea Company (1588) trading along the west coast of Africa, and the East India Company (1600) trading into the Indian Ocean and beyond.⁶⁹⁸

⁶⁹⁸ R.E. Seavoy, *Origins and Growth of the Global Economy: From the Fifteenth Century Onward* (Westport: Praeger, 2003) at 58.

To keep this in context, these companies, due to their unique position in the post-Columbian world of globalisation, one of the innovations of 15th-century patents were their “business method.”⁶⁹⁹ To promote credulity to the extreme, these companies and their distinctive strategies to increase trade, enslave foreign populations and access natural resources, deployed unique *apparati* or a “unique apparatus”⁷⁰⁰ to capture trade. Their business method placed them in novel geographic and strategic locations around the world – locations they could exploit.

3.14.5 Letters of Protection and the Problem of Monopolies

Although the origin of European forms of *letters patent* or letters of protection were contentious, as we have seen, they were active and complementary policies that were traceable to 14th and 15th-century England, Florence and Venice. *Letters patent* were central economic instruments in the process and/or maintenance of city-state formation on the Apennine Peninsula and adopted in the modern state formation of Elizabethan England. What becomes indisputable is that when *letters patent* and letters of protection were issued, a grant and privilege or monopoly became a centralising force for the state to enforce and to influence economic development. Beyond the city-states of the Apennine Peninsula, *letters patent* became a vital and central instrument in the process of European nation-state formation and one that lingers with us to this day.

In England, the issuance of “open letters” of monopoly became one of the central sources for the Crown to acquire extra-parliamentary sanctioned revenue. This allowed the Crown to circumvent, to a degree, parliament’s will and consolidate and structure English society in a particular way. It allowed the Crown to follow its own autocratic

⁶⁹⁹ M.B. Eisen, “Arts and Crafts: The Patentability of Business Methods in Canada” (2001) 17 C.I.P. Rev. 279.

⁷⁰⁰ *Ibid.*

interests without formal appeals to parliament for funds.⁷⁰¹ It was a particular benefit for the Crown and was one of its preferred methods to raise revenue. The sovereign, by making an “open letter” as to the grant conferring a right – granting a monopoly, status on a person, or a corporation revolutionised – a new way of conducting rule and regulation, but, most importantly, raising much-needed revenue. This did not occur overnight, but in the formation of the modern English nation-state, letters of patent became a central organising instrument. Letters of patents transformed and organised its domestic economy and, to degrees, allowed this marginal power to secure its place amongst other major European nations. It must be remembered that the English nation-state, amidst its own fractious regional and ethnic populations, coupled with contentious interests as to property ownership, compounded by political caldron of the Protestant Reformation and the English Civil War, still managed to consolidate legal instruments that could gain general domestic compliance, consolidation and enforcement.

3.15 Law as Social Lubricate

3.15.1 Greasing Legal Gears

Law seen either as the anchor or as a social lubricate and is always reflexively a peculiarly knotted reality. It is the perceived rôle of neutrality – the non-aligned and disinterested status of the law – that becomes intensely controversial. It is also problematic as to how one assembles the material issues central to the examination of intellectual property. Justifiably, it is the questionable nature of legal or judicial neutrality – through the clouded and shoddy lenses of monolithically econometrically

⁷⁰¹ Arguably, this is a particular space that has much in common with the relationship that exists between modern global corporations and ostensive forms of democratic governments.

challenged societies – whether Stalinistic or neoliberal – that prompt this reconsideration of the political and economic forces surrounding intellectual property.

Historical materialism, as a theoretical position, then, is one that is hopefully deeply informed by cultural materialism. It provides, perhaps, a necessary and useful approach to understanding and gaining insight into the ‘mystical origins’ of the ideological and the socio/political legal framework that has become intellectual property. As such, an unpacking of the concepts of materialism(s)⁷⁰² in both their historical and cultural musings are in order.

3.15.2 Materialism and Its Discontents

In the ambiguous “West,” the European form of materialism has been a central philosophic concept and organising principle: the materialism that originated with the ancient Greeks – even if it was the watery materialism of Thales⁷⁰³ or that which swallowed the *Il Badalone* – is or ought to be the grounding for our examination and analysis of intellectual property. Of course, the ancient Greeks were one link in the chain of western philosophers who theorised the nature of reality and attempted to understand in language physical or material forms. The nature of matter and the definition of materialism has had a glorious and tawdry history.⁷⁰⁴ The idea of matter as a tangible “stuff” is perhaps one of the reasons for the common confusion of logical categories as to

⁷⁰² As should be obvious, there are at least as many types of materialism as there are materialists. Moreover, as Stanley Aronowitz has correctly observed, Marxian historical materialism is problematic and must, to varying degrees, over-come its own contradictions. Unfortunately for this investigation, we are only able to note this problem and lack the required space to address such an interesting problem. For further elaboration on the problems with Marxian materialism, see: S. Aronowitz, *The Crisis in Historical Materialism: Class, Politics, and Culture in Marxist Theory* (Minneapolis: The University of Minnesota Press, 1990).

⁷⁰³ See: R.E. Allen, *Greek Philosophy: Thales to Aristotle*, (ed.) R.E. Allen (New York: The Free Press, 1985) at 2. For Thales, the primordial ‘stuff’ – *ousia* – of all life was water and there was little or no distinction to be drawn between *liquidity* and life.

⁷⁰⁴ One needs only to look at the elegant and (possibly) original musings as to the atom of Democritus and compare them to the philosophic thuggery of Stalin’s scientific materialism to note that there is a profound difference between these positions.

property as a “thing” and what is the *propriety* in a thing. Nonetheless, as an ontological category of metaphysics, the epistemological and historical premises grasped by materialist philosophy, reached its zenith in its “idealised” form of philosophy of represented by G.W.F. Hegel.

Hegel stands as a bridge that tried to link the two dominant but discordant philosophies of Europe that were born out of the Renaissance⁷⁰⁵ and the Enlightenment.⁷⁰⁶ It was the perceived inherent conflict between rationalism⁷⁰⁷ and empiricism⁷⁰⁸ that led Immanuel Kant to his philosophical critiques and fused his transcendental idealism⁷⁰⁹ with a practical moral philosophy that governs an individual understanding and ethical life through the use of their practical reason.⁷¹⁰ Yet, it was Hegel’s attempt to unify Kant’s transcendental rationalism with his idealism⁷¹¹ that gave

⁷⁰⁵ The Renaissance is periodised as running from the 14th through the 17th century. This is an uneven historical exaggeration: yet, provides a useful point of departure to situate our discussion.

⁷⁰⁶ See: F.C. Copleston, *The History of Philosophy Vol. 7* (New York: Bantam Doubleday Dell Publishing, 1963). Father Copleston’s work is dauntingly impressive: arguably, his work is the most comprehensive survey of “Western” philosophy that has been written.

⁷⁰⁷ See: R. Descartes, “Meditations on the First Philosophy” in *The Rationalists* (trans.) J. Veitch (New York: Anchor Books, 1974). By rationalism, I mean the philosophy of innate ideas. Rationalism is a philosophy that holds that truth and certainty are achieved through doubt and allows one to discover the innate ideas that lay the foundation for the mind and subsequent understanding.

⁷⁰⁸ See: J. Locke, *An Essay Concerning Human Understanding* (Glasgow: William Collins Sons and Co. Ltd., 1964). By empiricism, I mean the philosophy that knowledge is acquired solely through sense data and is impressed upon the mind by experience of the external or objective world. That is, the mind is a *tabula rasa* and has the external world stamped upon it through the process of experience.

⁷⁰⁹ See: I. Kant, *Critique of Pure Reason* (Mineola: Dover Publishing Ltd., 2003). According to Kant, we experience the phenomenal appearances of the world and, as such, we do not see things as they are *in and of themselves*. It is for mind to understand the logical difference between understanding the world of appearance to achieve a transcendental realism as to the nature of mind and achieve true knowledge.

⁷¹⁰ See: I. Kant, *Foundation of the Metaphysics of Morals* (trans.) L.W. Beck (Indianapolis: Bobbs-Merrill Company, Inc., 1981).

⁷¹¹ See: G.W.F. Hegel, *Elements of the Philosophy of Right* (trans.) H.B. Nisbet (Cambridge: Cambridge University Press, 1991); *Encyclopaedia of the Philosophical Sciences*, (New York: Continuum, 1990); *Hegel’s Logic* (trans.) W. Wallace (Oxford: Oxford University Press, 1982); *The Phenomenology of Spirit* (trans.) A.V. Miller (New York: Oxford University Press, 1977); *Hegel: The Essential Writings* (ed.) F. Weiss (New York: Harper and Row, Publishers, 1974); *The Philosophy of History* (trans.) J. Sibree (New York: Dover Publications, Inc., 1967); *Hegel: Selections* (ed.) J. Loewenberg (New York: Charles Scribner’s Sons, 1957).

birth to what Marx and what John Berger might call a new “way of seeing” – perhaps a version of Brunelleschi’s linear perspective.

3.15.3 Material Conditions for Understanding: The State and the Law

For Marx, it was our social relations to one another and to the material world that allowed us to understand that our “legal relations as well as forms of the state [that] are to be grasped neither from themselves nor from the debatable general development of the human mind, but rather have their roots in the material conditions of life.”⁷¹² It is in political economy that we find the living anatomy, the life’s blood and pulse of civil society. For our purposes, it is in these material struggles that we produce the cultural and historical conditions for reflection that allow us to locate, understand, examine and critique the concept of intellectual property in terms of political economy. Yet, one must acknowledge that there has been a general rejection of the (orthodox) Marxian materialism, one that denies that labour, class and crisis are the engines of history. To put it bluntly, Marx and a materialist perspective have generally been dismissed as a basis for understanding modernity, law and intellectual property rights. Yet, there has been an intellectual softening: the fiscal crisis of 2008 has made shady experts a little less sure and circumspect as the inevitability and invincibility of late-capitalism.

3.16 Conclusion

This chapter sought to lay out the general theoretical problems surrounding a materialist approach to intellectual property. Yet, the simplicity of a philosophic foundation to examine intellectual property rights based upon materialism can be tenaciously problematic. We may be able to understand the development of intellectual

⁷¹² K. Marx, “Preface” in *A Contribution to the Critique of Political Economy* (Moscow: Progress Publishers, 1977) at 1.

property rights and patents by looking backwards, but the problem lies in that its innovation and development “must be lived forward.”⁷¹³ Yet, for all its drawbacks, political economy provides the most “sensible” (with all the caveats that *must* attach to any use of the term “sensible” or “common sense”) platform upon which to launch an analysis of intellectual property rights and the eventual examination of the corporate influence and ideology on the development of modern university research.

A materialist philosophy thrives on contradiction and allows dialectical explanations as to the nature of intellectual property rights to take shape and unfold. It may be necessary to recognise that intellectual property regimes are about power and this power is inherently attached to a Nietzschean notion of a ‘will to power’⁷¹⁴ – or, perhaps more accurately, to Foucault’s ‘power is knowledge’ thesis.⁷¹⁵ Yet, this is hardly sufficient to unearth the material foundations of political economy and its link to intellectual property regimes. Based on the theoretical and historical montage rendered above, I have shown that there are a numerous social, philosophical, cultural, historical, environmental, and epistemological explanations as to the rise of intellectual property regimes in European and English thought and law.

As noted, the origins of the modern patent system and its laws were initially a political and economic instrument to control knowledge. They were first developed as part of the Florentine and Venetian city-state’s need for centralisation, consolidation and control of economic development and trade. As this strategy for intellectual property

⁷¹³ S. Kierkegaard, *Søren Kierkegaard’s Journals and Papers, Vol. 1* (eds.) H. Hong & E. Hong (Bloomington: Indiana University Press, 1967) at 450.

⁷¹⁴ See: F. Nietzsche, *The Will to Power* (New York: Vintage Books, 1968). Also, see: F. Nietzsche, *The Future of Our Educational Institutions and Homer and Classical Philology* (trans.) J.M. Kennedy (Edinburgh: T.N. Foulis, 1909).

⁷¹⁵ See: Foucault, *supra* note 6.

migrated north, it became a central political force in the nation-state building of England. As such, the pattern of authority and the legal capacity of the city-states of Florence and Venice to grant enforcement of patents as mercantile monopolies became standardised. At first, patents became a way to maintain the commercial dominance of the Renaissance Italian city-state. But as patents were adopted throughout Europe, in the shadow of the labour shortages of the Black Death, this legal technology became vital to the success of economic development of the English state. Through the expansion of trade, new strategies for the development of new methods and technologies for nation building through *letters patent* became a central component of material life. The development of *letters patent*, and intellectual property, in general, became fundamental to the economic engine that was to fuel post-medieval England on its way to the development of capitalism.

At the beginning of the 21st-century, the control of technological developments has attempted to transform or thrust most modern industrialised and industrialising societies and cultures into an undefined and, as suggested, an “undiscovered country” of stronger intellectual property regimes. We have been told that the questionable ‘new economy’ – the “information autobahn”⁷¹⁶ – is revolutionary and that stronger intellectual property regimes ensure future innovation and the genius of inventors. It would appear to be fair to suggest that this is neither historically or materially accurate. As the famous Soviet psychologist Alexei Leontiev suggests:

Man perceives the world and thinks about it as a social, historical entity; he is armed and at the same time limited by the ideas and knowledge of his time and his society. The wealth of his consciousness is in no way

⁷¹⁶ See: D. MacKenzie, “Europe plans its information autobahn” *New Scientist*, February 26, 1994, at: <http://www.newscientist.com/article/mg14119140.300-europe-plans-its-information-autobahn---.html> (last visited February 1, 2009).

reducible to the wealth of his personal experience. Man does not know the world like a Robinson Crusoe making independent discoveries on an uninhabited island. He assimilates the experience of preceding generations of people in the course of his life; that happens precisely in the form of his mastering of meanings and to the extent that he assimilates them. Meaning is thus the form in which the individual man assimilates generalised and reflected human experience.⁷¹⁷

The post-modern and neoliberal advocates for stronger intellectual property regimes may perceive the engine of history as being fuelled by the imaginative genius of independent discoveries, but that belies the true social construction of knowledge. They view the nature of the individual as a *tabula rasa* who, through sheer will and self-inspired genius, makes singular historic contributions to knowledge. As mangled as “free-market” societies have become this type of sophistry is unsupportable. Put differently, the “communicative rationality”⁷¹⁸ that under-grades universities, scientific communities, and society in general, are not reducible to the disciplines of the market, the unbridled forces of late-capitalism and the misguided *originality* and ownership that attempts to patent the creativity of the individual.

⁷¹⁷ A.N. Leontyev, *Problems of the Development of the Mind* (Moscow: Progress Publishers, 1981) at 226.

⁷¹⁸ See: J. Habermas, *The Theory of Communicative Action, Vol. 1: Reason and the Rationalization of Society* (trans.) T. McCarthy (Boston: Beacon Press, 1984).

4 CHAPTER FOUR – TOWARDS A METHOD

4.1 Methodological Considerations

4.1.1 The Problem with Intellectual Property and the Legacy of Property

When a man does not know what harbour he is making for, no wind is the right wind.

Seneca (the Younger)⁷¹⁹

To become a famous economist, you need not be familiar with the founding documents of your discipline.

Doug Henwood⁷²⁰

Prejudice apart, the game of push-pin is of equal value with the arts and sciences of music and poetry.

Jeremy Bentham⁷²¹

The secret of a great success for which you are at a loss to account is a crime that has never been discovered, because it was properly executed.

Honoré de Balzac⁷²²

On the whole, and in lieu of divining the wind and our ignorance surrounding economics, Bentham's and Balzac's observations would appear to be applicable to intellectual property. For over two and half decades, since "the end of history"⁷²³ and the fall of the Berlin Wall, most politico-legal theories and progressive theorists have shied away – with *some* valid reasons – and embraced a picayune post-Marxist approach to understanding late-capitalist society.⁷²⁴ Within reason, Francis Fukuyama's theory of

⁷¹⁹ Seneca, "Epistle LXXI: On the Supreme Good" in *Seneca – Ad Lucilium Epistulae Morales: With an English Translation by Richard M. Gummere* (London: William Heinemann, 1967) at 75.

⁷²⁰ Henwood, *supra* note 143 at: 173.

⁷²¹ Bentham, *supra* note 568 at 206.

⁷²² H. de Balzac, *Father Goriot* (Charleston: Biblio Bazaar, LLC, 2006) at 103. This passage is perhaps better known by the oft-paraphrased quote that: 'Behind every great fortune is a great crime.'

⁷²³ F. Fukuyama, "The End of History" (1989) 16 *Natl. Int.* 3.

⁷²⁴ For an interesting formulation of the problems confronting "late-capitalism" see: E. Mandel, *Late Capitalism* (London: New Left Books, 1975). Also, see: C. Mouffe & E. Laclau, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (London: Verso, 1985). Also, see: K. Baynes, "Democracy and the Rechtsstaat" in *The Cambridge Companion to Habermas* (ed.) S.K. White

humanity looking “forward to... century upon century of capitalism”⁷²⁵ seemed an endless possibility.

This meant that the political vacuum was filled and, as a whole, tacitly supported a system for the ‘free market’ and stronger property and intellectual property regimes. To varying degrees, this has been a methodologically stagnant and torpid period.⁷²⁶ Aside from a handful of exceptions in popular discussions, the debates surrounding Marxism, globalisation and intellectual property – with the compulsory exceptions of the internal (and at times, what would appear to some, as anaemic) dialogue within the peripheral and marginal academic “left”⁷²⁷ and social justice activists – were thoroughly ignored by policy makers. The ‘shocking doctrines’ of neoliberalism cut a huge swathe

(Cambridge: Cambridge University Press, 1995). A good example of this has been the advancement of “reflexive law,” which has gained broad – if not obscurant(istic) – popularity in certain law schools, as a strategy to blunt the forces at play in late-capitalism and ambiguous globalisation. Unfortunately, I find this a problematic response to the so-called issue of ‘over-governance.’ See: R. Buxbaum, “Juridification and Legitimation Problems in American Enterprise Law” in *Juridification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporative, Antitrust and Social Welfare Law* (ed.) G. Teubner (Berlin: de Gruyter, 1987) at 244. As Richard Buxbaum’s assessment clearly indicates, over twenty-five years ago, that “[t]he organizational forms embodying enterprise activity are well-suited to assimilate reflexive, self-learning and self-steering processes because their internal hierarchical structures in any event rely heavily on the kind of indirect governance associated with reflexive law concepts. In historical reality... these forms happen to be structured to wrestle the external environment into exactly the socially incredulous trap of deregulation which the reflexive law proponents claim or hope to avoid.” Also, for a clear assessment of neoliberal deregulation, see: D. Camp, “Blame for Wakerton at Tories’ Door” *The Toronto Star*, May 28, 2000, at: A15.

⁷²⁵ A. Callinicos, *The Revolutionary Ideas of Karl Marx* (London: Bookmarks Publications Ltd., 1996) at 4.

⁷²⁶ That is not to suggest that there has not been tremendous gains that have addressed, or attempted to address, the problems and conflicts that late-capitalism presents for various social minorities through the development of what some consider suspicious “identity politics” and democracy. For a powerful – if not *the* – neoliberal/conservative counter example see: A.D. Bloom, *The Closing of the American Mind: How Higher Education has Failed Democracy and Impoverished the Souls of Today’s Students* (New York: Simon & Schuster, 1988). Contrary to the grumblings of cultural critics like Alan Bloom, identity politics was a breath of fresh air in the 1980s and 1990s that partly pushed stodgy or doubtful academics to acknowledge that there was a project of ‘marginality’ at play in liberal democratic education and post-modern society. See: M. Minow, *Not Only for Myself: Identity, Politics, and the Law* (New York: New Press, 1997).

⁷²⁷ See: J. Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International* (trans.) P. Kamuf (New York: Routledge, 1994). Also, see: M. Hardt & A. Negri, *Empire* (Cambridge: Harvard University Press, 2000); Perelman, *supra* note 673.

for a generation of pundits, intellectuals and academicians in the post-Soviet period who simply saw the world as simple, black or white, free market or state-run.⁷²⁸

Methodologically, one would wish that researching the world were a straightforward process; that is, that the world would be a simpler place to understand. Nonetheless, unfortunately, it is not. But, in an effort to conform to a more traditional methodological approach to research, the reader should be informed that case studies will be one of the heuristic methods used to advance this argument and the exploration of intellectual property, academic freedom, and the corporatisation of the university. After all, an argument based on facts is a far better tool to shape future opinions. Put differently, in grudging deference to the late New York Senator Daniel Patrick Moynihan: “You are entitled to your own opinion, but you are not entitled to your own facts.”⁷²⁹

4.1.2 The Shuttle-cock of Public Policy and Intellectual Property

In the dying years of the 20th and in the founding years of the 21st-century, the dominant public policy discourse surrounding intellectual property fell into the hands of right-wing law and economic advocates.⁷³⁰ These self-proclaimed “free-traders,”

⁷²⁸ For a thoroughly compelling reading of this history and the destruction of the Soviet state system see: D.M. Kotz & F. Weir, *Revolution from Above: The Demise of the Soviet System* (London: Routledge, 1997). As Kotz and Weir suggest, this laid the foundation, following the so-called Gulf-states, for the kleptocracy of the “petro-state” economy that has become and is modern Russia. Arguably, Canadian policy makers should take note of this form of ‘free market’ development and calibrate or ‘curb’ their enthusiasm for resource and specifically oil driven economics.

⁷²⁹ Daniel Patrick Moynihan cited by T.J. Penny, “Facts Are Facts” National Rev. September 4, 2003, at: <http://www.nationalreview.com/article/207925/facts-are-facts-timothy-j-penny> (last visited February 28, 2017).

⁷³⁰ As of 2009, Richard Posner, one of the leading law and economic advocates, and one not noted for his “extended diatribe[s] railing against capitalism,” has recanted, somewhat, in his advocacy for the “free market.” Posner has begun to openly question the coherence and soundness of the logic behind and embedded in free market ideology. See: R.A. Posner, “How I Became a Keynesian” The New Republic, September 23, 2009, at: <http://www.tnr.com/article/how-i-became-keynesian> (last visited November 3, 2009). Also, see: Posner, *supra* note 410. What is more, as Posner has implied, his confusion over law and the law of economics or the “law and economic movement” and the “intellectual property rights” contained

corporate proponents for neoliberal and social neo-conservative⁷³¹ policies and ideas, micro-economists, and politicians saw the world differently. They mostly promoted various forms of privatisation and the moral vacuity of ‘personal responsibility’ for and as the *salvation*⁷³² of the individual and the nation. They saw nothing wrong with the enclosure of public spaces and the intellectual commons and had, to degrees, a flattened conception of history and an individualised notion of *popular* support on their side.⁷³³ Specifically, as Margaret Thatcher pronounced, there is no such thing as society merely just a collection of individuals and their specific and particular interests.⁷³⁴ Hence, the short list observation that the most notable things “that sprang out of Thatcherism [have

therein are – at least in the context of the 2008 recession – due, in part, to his lack of interest in reading Keynes. Once he read Keynes, Posner considered himself a Keynesian. Following Mark Twain’s advice, Posner is cognizant that “[l]oyalty to petrified opinions never yet broke a chain or freed a human soul in *this* world — and never *will*.” I laud Posner for his wisdom. Nevertheless, Posner’s misunderstanding and his influence in promoting the “law and economics” movement – one that instigated or perhaps indirectly triggered a massive infusion of corporate money to set up university chairs and programmes of “law and economics,” an influence that has unduly influenced at least two generations of legal minds across North America – has narrowed the ideological spectrum of legal education and critical legal pedagogy. Prior to Posner’s ‘road to Damascus’ moment in 2009, he has generally favoured public policy to be pragmatically constructed through market forces. Also, see: Landes & Posner, *supra* note 254. Also, see: R. Cooter & T. Ulen, *Law and Economics* (Addison: Wesley Longman, 2007). Also, see: R. Coase, *The Firm, The Market, and the Law* (Chicago: University of Chicago Press, 1990). Also, see: G. Melloan, “We’re All Keynesians Again: Nobody Can Accuse the Government and the Fed of Inaction” *The Wall Street Journal*, January 13, 2009, at: <http://online.wsj.com/article/SB123180502788675359.html> (last visited June 14, 2014.) Also, see: S. Žižek, *First as Tragedy, Then as Farce* (New York: Verso, 2009).

⁷³¹ In general, neo-conservative critics support neoliberal economic policies with the added contentious moral enforcement mechanism and caveats of suspect socially conservative or ‘traditional’ values. Typically, in the West, these *values* are promoted through some form of Christian evangelical values promoting a fusion of church and state. For an interesting, provocative and invaluable assessment of the historic struggle between Catholicism, Protestant evangelicalism, anti-Semitism and the state see: J. Carroll, *Constantine’s Sword: The Church and the Jews, A History* (Boston: Houghton Mifflin, 2001).

⁷³² The religious term is used intentionally. As David Graeber points out, the notion of *debt* has been, since the beginning of religion, “synonymous with guilt and sin. There are numerous prayers pleading with the gods to liberate the worshipper from the shackles or bonds of debt.” Graeber, *supra* note 10 at 56.

⁷³³ It must be noted that the term “popular” is suspect adjective. Much of modern electoral strategies in “Western” democracies have been about marginalising the electorate and stultifying and eviscerating democratic participation.

⁷³⁴ Prime Minister Thatcher’s actual statement was “[t]here is no such thing as society.” M. Thatcher, cited in D. Keay, “Aids, education and the year 2000!” *Woman’s Own*, October 31, 1987, at: <http://www.margaretthatcher.org/document/106689>, (last visited September 4, 2008).

been] ...extreme financialisation, the triumph of the shopping mall over the corner store, the fetishisation of housing and Tony Blair.”⁷³⁵

4.1.3 Short-term Gain for Long-term Pain

In the neoliberal age, the privatisation of the intellectual commons, similar to public assets and Crown corporations in this country, was seen as a sensible strategy for economic reorganisation and good short – if not long – term public policy.⁷³⁶ The public relations industry⁷³⁷ was an essential element of this economic reorganisation strategy. The public relations industry of the last thirty years, through its corporate partners and as corporations themselves, helped convince the public that privatisation was good: a good in itself and did so with little or no debate.⁷³⁸ To be precise, policy makers and privatisation advocates saw the rationalisation of privatising choice as expanding liberty for innovation and progress toward a democratic and high-tech knowledge-based society. Yet, according to Fredrick Jameson:

[The] market as a concept rarely has anything to do with choice or freedom, since those are all determined for us in advance, whether we are

⁷³⁵ Y. Varoufakis, “How I became an erratic Marxist” The Guardian, February 18, 2015, at: <http://www.theguardian.com/news/2015/feb/18/yanis-varoufakis-how-i-became-an-erratic-marxist> (last visited March 9, 2015).

⁷³⁶ Brian Mulroney’s Progressive Conservative government began a series of privatisations of Crown corporations beginning after their 1984 election victory. This privatisation consisted of corporations such as: Air Canada; Petro-Canada; Nav Canada; and, Canadian National Railways. C. Holroyd, *Government, International Trade and Capitalism: Canada, Australia, and Relations with Japan* (Montréal: McGill-Queen’s University Press, 2002) at 87. In Ontario, the Mike Harris government’s privatisation of Highway 407 is a provincial example of this scheme.

⁷³⁷ The incredulous public relations industry is a shadowy entity in democratic societies. See: E.L. Bernays, *Crystallizing Public Opinion* (New York: Boni & Liveright, 1923); *Public Relations* (Norman: University of Oklahoma Press, 1952). Edward Bernays as the nephew of Sigmund Freud learned his uncle’s trade well. Bernays, known as the father of the public relations industry in America, made it clear that public relations is an on-going process of integration, *re*-integration, indoctrination and social calibration. Bernays holds that successful public relations requires the adjustment of individual interests and public communal or civic interests to be aligned with corporate interests. That is, persons and their interests must be disciplined, allied, attuned and subordinated to private power and corporate interests.

⁷³⁸ With the exception of the 1988 “free trade election,” which saw a brief rôle reversal as to support for “free trade,” “free trade” has been actively supported by both of Canada’s right and centre right political parties since 1993. N. Wiseman, *In Search of Canadian Political Culture* (Vancouver: University of British Columbia Press, 2007) at 16.

talking about new model cars, toys, or television programs: we select among those, no doubt, but we can scarcely be said to have a say in actually choosing any of them. Thus the homology with freedom is at best a homology with parliamentary democracy of our representative type.⁷³⁹

Even so, privatisation was and is essentially a utilitarian (authoritarian?) made political choice as to our collective future. Privatisation was extended and promoted and seen as one objective for the furthering the process of private ‘primitive accumulation’⁷⁴⁰ of intellectual property.⁷⁴¹

The ‘Balzacian’ secret, if there is one, as to intellectual propertisation in the university, and its success over the last three decades has been as much about a cult of silence⁷⁴² as it has been about respected researchers becoming self-interested “academic entrepreneurs.”⁷⁴³ This is what Harry Glasbeek, amongst others, has assiduously documented as a neoliberal boardroom *putsch* or a *coup d’état* of “wealth by stealth.”⁷⁴⁴ It is within, through, and over national (and perhaps, rational) systems of governance that our public policy choices, particularly with intellectual property regimes, have become

⁷³⁹ F. Jameson, *Postmodernism, Or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991) at 266.

⁷⁴⁰ Marx, *supra* note 67 at 667- 724. Also, see: M. Perelman, *supra* note 446. Also, see: T. Frank, *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy* (New York: Anchor Books, 2000). As Thomas Frank suggests, globalisation and the *Wal-Martisation* of the world has meant that our current economic life is doomed to certain if not inevitable cycles of debt, crisis and financial instability. This must be held in the context that we have been sold a “culture of security” that has proven to be nothing short of promoting a culture of hysteria. Also, see: D. Bosshart, *Cheap?: The Real Cost of Living in a Low Price, Low Wage World* (London: Kogan Page, 2007) at 61.

⁷⁴¹ That is not to say that people committed to public access to intellectual property ‘have gone quietly into that dark night.’ As the copy-left slogan holds: “All Wrongs Reserved.” See: D. Allison, cited in C.-L. Wang “Palo Alto Tiny BASIC” in *Dr. Dobb’s Journal of Tiny BASIC Calisthenics & Orthodontia: Running Light without Overbyte* (ed.) J. Warren (San Francisco: CPM Media, May/June 1976).

⁷⁴² For an interesting comparison and moral parallel as to institutional delay and failure occurring in universities, see: Globe Newspaper Co., *Betrayal: The Crisis in the Catholic Church* (Boston: Little, Brown, 2003).

⁷⁴³ C.W. Mills, *The Sociological Imagination* (New York: Oxford University Press, 2000) at 98. It must be noted that Mills would hardly support the “entrepreneurial” and promotional *pathos* emanating from the contemporary universities and their huckster prone management schools.

⁷⁴⁴ See: H.J. Glasbeek, *Wealth by Stealth: Corporate Crime, Corporate Law, and the Perversion of Democracy* (Toronto: Between the Lines, 2002).

situations where “stock manipulation [is] ...more important in control than efficiency of production”⁷⁴⁵ let alone the production of other social goods.

To some cultural and legal critics, our current political malaise has meant that as a society and a culture we are “living in a continuous condition of cultural amnesia.”⁷⁴⁶ Late 20th and early 21st-century rightwing critics frame the origin of the malaise as a product of “liberal culture.”⁷⁴⁷ To left-wing critics, we have become defeated and self-flagellating post-historical agents. A society that has given up on democracy and settled into the collective post-modern⁷⁴⁸ “IKEAä culture.”⁷⁴⁹

4.1.4 Mistaking ‘Social Amnesia’ as Success

Proponents of neoliberalism, who “trumpet the triumph of capitalism,”⁷⁵⁰ typify this state of “social amnesia.”⁷⁵¹ Arguably, this has been a force for forgetfulness and that has had a remarkable and detrimental effect on our historical memory and it bodes ill for a democratic society. It has muddled our critical capacities, fouled our democratic

⁷⁴⁵ H.J. Glasbeek, “Preliminary Observations on Strains of, and Strains in, Corporate Law Scholarship” in *Corporate Crime: Contemporary Debates* (eds.) F. Pearce & L. Snider (Toronto: University of Toronto Press, 1995) at 111.

⁷⁴⁶ G.H. Lenz, *Crisis of Modernity: Recent Critical Theories of Culture and Society in the United States and West Germany* (Frankfurt: Campus-Verl., 1986) at 163.

⁷⁴⁷ See: Bloom, *supra* note 726. For contrary points of view, see: M. Nussbaum, “Undemocratic Vistas” (1987) 34(17) *New York Rev. Books*. Also, see: N. Chomsky, “Understanding Power” in *Understanding Power: The Indispensable Chomsky* (eds.) P.R. Mitchell & J. Schoeffel (New York: New Press, 2002).

⁷⁴⁸ See: Lyotard, *supra* note 269. Also, see: M.A. Peters, “Leo Strauss and the Neoconservative Critique of the Liberal University: Postmodernism, Relativism and the Culture Wars” (2008) 49(1) *Crit. Stud. Ed.*

⁷⁴⁹ B. Edvardsson & B. Enquist, *Values-Based Service for Sustainable Business: Lessons From IKEA* (New York: Routledge, 2003) at 83. It should also be noted that the patentable culture of IKEAä was founded by a Swede, Ingvar Kamprad. It is well documented and Kamprad self-identified himself as a person who at one time had pro-fascist sympathies and was a member of pro-fascist party. D.S. Nordin, *A Swedish Dilemma: A Liberal European Nation’s Struggle with Racism and Xenophobia, 1990-2000* (Lanham: University Press of America, 2005) at 193. Also, see: E. Åsbrink, *Och i Wienerwald står träden kvar* (Stockholm: Natur & Kultur, 2011). According to Åsbrink, Kamprad was actually a recruiter for the pro-fascist party. Theodor Adorno and Max Horkheimer predicted this fascistic cultural turn in 1944. See: T.W. Adorno & M. Horkheimer, “The Culture Industry: Enlightenment as Mass Deception” in *Dialectic of Enlightenment* (trans.) E. Jephcott (ed.) G.S. Noerr (Stanford: Stanford University Press, 2002) at 94. “[C]ultural chaos is disproved every day; for culture now impresses the same stamp on everything.”

⁷⁵⁰ Glasbeek, *supra* note 744 at 3.

⁷⁵¹ See: R. Jacoby, *Social Amnesia: A Critique of Contemporary Psychology* (New Brunswick: Transaction Publishers, 1996).

and educational institutions, silenced the voice of public intellectuals and many legal practitioners, and thoroughly muddied the waters of the public policy surrounding current intellectual property regimes and debates concerning law and economics. According to American intellectual historian and cultural critic, Russell Jacoby, the left's malaise has had a tremendous impact on public intellectuals and on the "imagination, boldness – or writing" of academicians.⁷⁵² Jacoby sees the unsavoury "culture wars,"⁷⁵³ which began in the 1980s, and the level of post-modern dogma⁷⁵⁴ posing as pedagogical debate, as not raising but lowering the bar on the quality of public discourse surrounding education.⁷⁵⁵ Throughout the American and European left, and the purported liberal pursuit of spreading global democracy⁷⁵⁶ means that:

[T]he vision has faltered, the self-confidence drained away, the possibilities dimmed. Almost everywhere the left contracts, not simply politically but, perhaps more decisively, intellectually. To avoid contemplating the defeat and its implications, the left now largely speaks the language of liberalism – the idiom of pluralism and rights. At the same time, liberals, divested of a left wing, suffer from waning determination and imagination.⁷⁵⁷

It is within this post-modern language of (self-proclaimed leftist) liberalism – a solipsism purported as *pluralism* – that represents our collective lack of imagination at the beginning of the 21st-century. It stands in as an example of the unsure *objective*

⁷⁵² See: R. Jacoby, *The Last Intellectuals: American Culture in the Age of Academe* (New York: Noonday Press, 1987).

⁷⁵³ See: J.D. Hunter, *Culture Wars: The Struggle to Define America* (New York: Basic Books, 1991).

⁷⁵⁴ See: R. Jacoby, *Dogmatic Wisdom: How the Culture Wars Divert Education and Distract America* (New York: Doubleday, 1994).

⁷⁵⁵ For a good, though, dated assessment, see: J. Kozol, *Savage Inequalities: Children in America's Schools* (New York: Harper Perennial, 1992).

⁷⁵⁶ G.M. Mara, *The Civic Conversations of Thucydides and Plato: Classical Political Philosophy and the Limits of Democracy* (Albany: SUNY Press, 2008) at 5.

⁷⁵⁷ R. Jacoby, *The End of Utopia Politics and Culture in an Age of Apathy* (New York: Basic Books, 1999) at 10. Recent events in north Africa and some middle-Eastern countries have yet to prove this observation incorrect.

language offered by a *muscular* form of liberalism.⁷⁵⁸ This is a language of *realism* that reflects and mirrors the neoliberal era. An era typified by a language of a “neutralized democratic theory.”⁷⁵⁹ This is not just the axiomatic neutralisation of democratic theory, but also a neutralisation of democratic practice. In practise, it is a neutralisation that mutes or strangulates the potential of *radical* liberalism at the heart of modern democracy.⁷⁶⁰ For some critics, equality and property are a good thing⁷⁶¹ and sacrificing substantive democracy is not only a possibility but perhaps a necessity. For others, it is not. C.B. Macpherson rejected this position and spent his life advocating and promoting a form of *radical* liberalism⁷⁶² that understood the property trap. Macpherson observed and advised that liberal political “theorists have so reduced the ethical content of

⁷⁵⁸ For a good Canadian example of this form of ‘muscular liberalism’ in its ‘imperial lite’ version, one need only turn to the plodding (some might say ‘pedantic’) academic work of Michael Ignatieff, former Liberal Party leader of Canada. Ignatieff’s opinions on the former Yugoslavia and the U.S. invasions of Iraq and Afghanistan bristle with contradictions. See: M. Ignatieff, *Virtual War: Kosovo and Beyond* (Toronto: Penguin Books, 2001). Also, see: M. Ignatieff, *Empire Lite: Nation-Building in Bosnia, Kosovo and Afghanistan* (London: Vintage, 2003) at 122. To say the least, Ignatieff is flexible as to the application of international law if the means can be justified according to achieving a *liberal* end: that is, it is relatively easy for him to advocate a “new humanitarian empire, a new form of colonial tutelage.” For a interesting, *radical* left and more controversial opinion as to the various debacles labelled “N.A.T.O. interventions,” specifically the Libya “intervention” in the spring of 2011, see: T. Ali, “Libya is another case of selective vigilantism by the west” *The Guardian*, March 29, 2011, at: <http://www.guardian.co.uk/commentisfree/2011/mar/29/libya-west-tripoli-arab-world-gaddafi> (last visited April 12, 2011). Needless to say, Tarik Ali has marked out a territory that has no shortage of purported “progressive” critics who demonstratively object to his blunt but nuanced position. Unfortunately, for Ali’s critics, he is right, measured, and equally suspicious of N.A.T.O.’s humanitarian claims as to their purported “humanitarian intervention.” Innocent Libyans dying, for a propaganda contest between a “rehabilitated” Kaddafi and his morally ambivalent western handlers, meant that too many innocents were caught and mired in the crossfire. Ali’s ‘leftish’ critics, to be kind, are unreasonable and what might be called his “right” and politically soft “middle” (liberal?) supporters are obsequious promoters of a continuation of the established order but with a different figurehead.

⁷⁵⁹ C.B. Macpherson, *Democracy in Alberta: Social Credit and the Party System* (Toronto: University of Toronto Press, 1953) at 240. Also, see: M. Ignatieff, “The Year of Living Dangerously” *The New York Times Magazine*, March 14, 2004, at: <http://www.nytimes.com/2004/03/14/magazine/14WWLN.html> (last visited March 30, 2008). It should be noted that Ignatieff has adjusted his opinion somewhat as to the matter, see: M. Ignatieff, “Getting Iraq Wrong” *New York Time Magazine*, August 5, 2007, at: <http://www.nytimes.com/2007/08/05/magazine/05iraq-t.html> (last visited March 30, 2008).

⁷⁶⁰ C. B. Macpherson, *Democratic Theory: Essays in Retrieval* (Oxford: Clarendon Press, 173) at 173.

⁷⁶¹ J. Rawls, *The Law of Peoples: With “The Idea of Public Reason Revisited”* (Cambridge: Harvard University Press, 2000) at 34-35.

⁷⁶² See: C.B. Macpherson, *The Life and Times of Liberal Democracy* (Oxford: Oxford University Press, 1977).

democracy... [to the point that] they reduce politics to a sort of market which measures and equates political supply and demand... [and that] they destroy the basis for any ethical criterion of demand.”⁷⁶³ In a sense, this is the “negative dialectics” of *enlightenment* that Adorno anticipated as auguring public policy in our “ultra-liberal”⁷⁶⁴ or neoliberal age.

To be sure, this criticism, and Macpherson’s material requirement for an “ethical criterion of demand,” attaches to most visions of the various political economies of late-capitalism. As such, Macpherson’s observations linger in our current investigation into intellectual property regimes. Put differently, once one rejects *any* “ethical criterion” then particular pragmatic considerations surrounding intellectual property are easily modified to suit *any* and *all* particular normative (relative?) social and economic purposes. These social and economic purposes are built up, pushed aside, assembled, entrenched or dismissed, according to the selective political interests of most politicians (or academicians) both in and out of power. In particular, the corporate agenda has become a dominant force in today’s world and it is no surprise that major municipal and international laws and policies reflect corporate interests.⁷⁶⁵ As the ostensible “information autobahn”⁷⁶⁶ came to dominant popular economic discourse at the end of the millennium, so, too, did the regulatory rhetoric surrounding stronger protection of intellectual property. That is to say, stronger regulatory rhetoric, which attempted to cloak the drive for increasing corporate *rentier* profits, became a central component to

⁷⁶³ Macpherson, *supra* note 759 at: 240.

⁷⁶⁴ T.W. Adorno, *Negative Dialectics* (London: Routledge, 1990) at 262.

⁷⁶⁵ According to Glasbeek, this is partly the ability of corporate deviance to redefine and recast itself to avoid the “stigma that would be attached to corporations..., corporate big wigs, and... the capitalism they serve....” Glasbeek, *supra* note 744 at 144.

⁷⁶⁶ D. MacKenzie, “Europe Plans Its Information Autobahn” *The New Scientist*, 26th Feb. 1994, at: <http://www.newscientist.com/article/mg14119140.300-europe-plans-its-information-autobahn--.html> (last visited July 19, 2007).

increase “shareholder value”⁷⁶⁷ and was/is a primary concern for policy makers in our reputed *new economy*.

4.1.5 The Oratory of Cost-Benefit ‘Philanthropy’

In our current milieu, neoliberal values and discourse have constructed an intense environment. The oratory of cost-benefit analysis as governing rational choice, one that promotes an autonomous market pricing system and leads to *objective values*, has been used as a central rationale for governments to subsidise research and develop “knowledge-based industries.” It is a position that supports the strategy of government funnelling public monies to be transformed into ‘private’ capital. For industry, and for academic researchers, it allows “donations” and agreements to be made that are publicly funded and, of course, are tax deductible as donations or business expenses.

In recent years, a general glance at the rhetoric and questionable philanthropic contributions to universities, the naming of business, medical and law schools, “centres,” “chairs” and classrooms,⁷⁶⁸ show that universities understand the funding game and the

⁷⁶⁷ The term “shareholder value” is usually traced to the work of Michael Jensen and William Meckling. See: M.C. Jensen & W.H. Meckling, “Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure” (1976) 3(4) *J. Financial Econ.* For a damning criticism of this position see: R. Martin, “The Age of Customer Capitalism” (2010) 65 *Harv. Bus. Rev.* at 58. Also, see: L.A. Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (San Francisco: Berrett-Koehler, 2012).

⁷⁶⁸ Some examples of naming of chairs, schools and centres are: Global Television Network Chair in Communication Studies at McMaster University; the Richard Ivey School of Business at the University of Western Ontario; the Schulich School of Law at Dalhousie University; the Ontario Power Generation Engineering Building at the Ontario University Institute of Technology; Astra-Zeneca Chair in Biotechnology at the University of Toronto, Mississauga; Merck Frosst BC Leadership Chair in Pharmaceutical Genomics in Drug Discovery at Simon Fraser University; Sherman Health Sciences Research Centre at York University; and, The Dahdaleh Institute for Global Health at York University. As Linda McQuaig and Neil Brooks document, most corporate donations amount to about only 20% of the overall cost associated with the naming of a chair, building or institute. In addition, McQuaig and Brooks remark that the attempt to get a health studies programme named after Tommy Douglas at the University of Toronto was blocked, speculatively, because Douglas was a socialist. See: L. McQuaig & N. Brooks, *The Trouble With Billionaires* (Toronto: Viking Canada, 2010) at 193. In addition, the Dahdaleh contribution to York University has recently been linked to issues present in the Panama Papers concerning tax stratagems, tax evasion and money laundering. See: R. Cribb, “Panama Papers: British-Canadian billionaire mysterious middleman in ‘corruption scheme’” *The Toronto Star*, May 25, 2016, at:

scarcity of public resources in the neoliberal age.⁷⁶⁹ Mammon has come to academia, and academia has welcomed these advances and many universities opened their arms touting the new “corporate university brand.”⁷⁷⁰ These donations to higher education, these publicly funded tax deductions, as lauded and as needed as they may be, are just another form of socialising and promoting a brand for the flavour or firm of the day.⁷⁷¹ The socialising of risk for private gain has been historically a staple of Canadian political economy.⁷⁷² Thus, the use of the tax system to redistribute, entrench and extend the logic

<https://www.thestar.com/news/world/2016/05/25/panama-papers-british-canadian-billionaire-mysterious-middleman-in-corruption-scheme.html> (last visited May 27, 2016). Also, see: D. Henwood, *My Turn: Hillary Clinton Targets the Presidency* (New York: Seven Stories Press, 2016) at 65. Henwood notes that, aside from donating \$5 million to the dubious Clinton Foundation in 2010, Dahdaleh was subsequently indicted in 2011 for allegedly bribing Bahrainian officials of the smelting company Aluminium Bahrain B.S.C. Also, see: D. Armstrong & A. Katz, “Billionaire Found in the Middle of Bribery Case Avoids U.S. Probe” Bloomberg, August 14, 2014, at: <http://www.bloomberg.com/news/articles/2014-08-14/billionaire-found-in-middle-of-bribery-case-avoids-u-s-probe> (last visited October 31, 2016). Also, see: C. Hedges, “The Best and the Brightest Led America Off a Cliff” Truthdig, December 8, 2008, at: http://www.truthdig.com/report/page3/20081208_hedges_best_brightest (last visited September 25, 2016). Chris Hedges holds that this is an example of college and university presidents being “obsequious fundraisers” who “shower honorary degrees and trusteeships on hedge fund managers and Wall Street titans whose lives are usually examples of moral squalor and unchecked greed.” Also, see: Z. Dubinsky, “Panama Papers billionaire honoured at York U despite bribery case” CBC News, June 20, 2016, at: <http://www.cbc.ca/news/canada/toronto/panama-papers-victor-dahdaleh-york-university-honorary-degree-1.3644284> (last visited June 20, 2016). Also, see: H. Bronstein & G. Slattery, “Exclusive: Stiglitz quits Panama Papers probe, cites lack of transparency” Reuters, August 5, 2016, at: <http://www.reuters.com/article/us-panama-tax-idUSKCN10G24Z> (last visited August 13, 2016).

⁷⁶⁹ Glasbeek, *supra* note 744 at 245. Unlike certain ideologues, who think that there were up to “twelve [Harvard law faculty] who would say they were Marxists who believed in the Communists overthrowing the United States government,” most law school faculty board members know which side their bread is buttered. See: T. Cruz, cited by J. Mayer, “Is Senator Ted Cruz Our New McCarthy?” *The New Yorker*, February 22, 2013, at: <http://www.newyorker.com/news/daily-comment/is-senator-ted-cruz-our-new-mccarthy> (last visited November 1, 2014).

⁷⁷⁰ A. Renaud-Coulon, “Branding Your Corporate University” in *The Next Generation of Corporate Universities: Innovative Approaches for Developing People and Expanding Organizational Capabilities* (ed.) M. Allen, (San Francisco: Pfeiffer, 2007) at 86.

⁷⁷¹ P. Jordan & Staff, “The Struggles of Mr. Sprott” *The Globe and Mail*, April 22, 2013, at B1-4. The recent downturn in the commodities market ought to have an impact on the largesse of Eric Sprott’s generous donations to the Sprott School of Business at Carleton University. Who knows, it may even religiously convert Sprott from “not [being] a believer in diversification” concerning the funds he manages. Moreover, Peter Munk’s contributions to U. of T.’s Munk Centre may also see a plunge, see: P. Jordan, “Peter Munk confronts Barrick’s perfect storm” *The Globe and Mail*, April 25, 2013, at B1.

⁷⁷² From the pre-Confederation “family compact” in Canada West, the “C.P.R. scandal” of the Prime Minister Macdonald’s government, to, arguably, our present day Canada has always been a nation built with public money for private gain. See: P. Berton, *The National Dream: The Great Railway, 1871-1881* (Toronto: McClelland & Stewart, 1970).

of *quid pro quo* in a corporatising university culture – although offensive – should not be surprising.

Macpherson’s work, as much as this inadequate summary can convey, was an attempt to revise and revision “liberal-democratic theory”⁷⁷³ and the state⁷⁷⁴ and this holds consequences as to how we conceive, promote and protect democratic education and society and defend against “neofeudalism.”⁷⁷⁵ As Macpherson points out, his understanding of democratic society is “a revision which clearly owes a great deal to Marx, in the hope of making that theory more democratic while rescuing that valuable part of the [radical] liberal tradition which is submerged when liberalism [is] identified with capitalist market relations.”⁷⁷⁶ It is within a similar methodological framework, an understanding of the tension between political democracy and private property, which this study anchors its inquiry into intellectual property. In Macpherson’s sense, this is an attempt methodologically to “understand the concept of the net transfer of powers”⁷⁷⁷ and, in our case, map what is at stake between democracy, *the commons* of universities and impact that late-capitalist values has on them.

This is a methodological search to determine if there are new limits being created and imposed by late-capitalist intellectual property regimes and how they influence university governance and academic freedom. In lieu of Balzac’s caution, this is an attempt to make known the “secret” that has allowed so much public wealth to be

⁷⁷³ C.B. Macpherson, “Humanist Democracy and Elusive Marxism: A Response to Minogue and Svacek” (1976) 9 Can. J. Pol. Sci. at 423. Also, see: C. Hedges, *The Death of the Liberal Class* (New York: Nation Books, 2010).

⁷⁷⁴ C.B. Macpherson, “Do We Need a Theory of the State?” (1977) 18 Euro. J. Soc. at 222.

⁷⁷⁵ Hedges, *supra* note 773 at 156. As Hedges puts it: “Capitalism, as Marx understood, when it emasculates government and escapes its regulatory bonds, is a revolutionary force.” Hedges implies that this can be a counter-revolutionary force and Polanyi would add that unbridled capitalism becomes a social corrosive.

⁷⁷⁶ Macpherson, *supra* note 733 at 423.

⁷⁷⁷ *Ibid* at 424.

transformed, converted and transferred into private hands. Common property privatised for ideological and personal gain seems to be the hallmark name of “progress,” suspect “innovation,” and “market efficiency” in neoliberal times. This, unfortunately, is a state that has come to dominate our public universities as institutions and narrowed our collective imagination. Thus, this foray is an attempt to interrogate the parroted and ambiguous arrangements that claim that commodifying university research and education puts “knowledge to work.”⁷⁷⁸ That is to say, the methodology advanced is a minor attempt to reveal the systematic pressures of property, the commodification of intellectual inquiry, and how this system of propertisation places irrational limits on freedom of thought, academic freedom, and the right to pursue free academic inquiry.

4.2 Considering Methods

4.2.1 Methods as a Game of Hide and Seek?

Ideas reveal, but they also conceal.⁷⁷⁹ The interpretation of them can render the objects of social inquiry and investigation either opaque or transparent. As social theorist Lee Harvey suggests, one has to come methodologically to grips with the fact that “[t]here is no simple methodic recipe for doing critical social [or legal] research.”⁷⁸⁰ If there was a “simple methodic recipe,” then truth would be self-evident. All our problems would be solved and there would be no basis for debate. Expressly, there would exist a methodological cookbook – a Julia Child’s set of instructions⁷⁸¹ – readily available to everyone on how to arrive on the right *recipe* or concoction for the solutions to social

⁷⁷⁸ See: Association of Universities and Colleges of Canada, *Putting Knowledge to Work, Sustaining Canada as an Innovative Society: An Action Agenda* (Ottawa: Association of Universities and Colleges of Canada, 1996).

⁷⁷⁹ This is a perhaps distorted remembrance or quote of a conversation with Wally Clement, *circa*, 1996.

⁷⁸⁰ L. Harvey *Critical Social Research* (London: Unwin Hyman, 1990) at 2.

⁷⁸¹ R. Schrambling, “Julia Child, the French Chef for a Jell-O Nation, Dies at 91” *The New York Times*, August 13, 2004, at: <http://www.nytimes.com/2004/08/13/dining/13CND-CHILD.html?pagewanted=3> (last visited March 3, 2011). As Child quipped: “A cookbook is only as good as its worst recipe.”

research, policy problems, political solutions and legal choices. On the other hand, one has to make choices that are based on particular and specific epistemic assumptions: assumptions that may be far flung to some observers⁷⁸² and, yet, are substantially correct.

Absurdist playwright, Eugene Ionesco, summed up the methodological problem this way: “It isn’t what people think that is important, but the reason they think what they think.”⁷⁸³ Thinking, as it seems, as the capacity for language, is a human conundrum, one that may yet release us from our ‘blessed’ ignorance (or bury us in our own self-delusion or interest?). Moreover, by ‘thinking it through’ *language* we may be able to reconceptualise the construction and structure of intellectual property regimes. Terry Eagleton holds that:

Language is what emancipates us to a degree from the dull constraints of our biology, enabling us to abstract ourselves from the world (which includes for this purpose our bodies), and so to transform or destroy it. Language liberates us from the prison-house of our senses, and becomes an entirely weightless way of carrying the world around with us.⁷⁸⁴

It is in the shadow of the “dull constraints” of intellectual property regimes that we are seeking a language of emancipation.

4.2.2 Thinking About Modes of Intellectual Property

In this discussion, it is assumed – in Ionescoian terms, *absurdly* or not – that knowledge is formed and structured by real existing relations and on-going social relationships. To paraphrase Stanley Aronowitz, intellectual property laws are not merely intellectual property laws; “they are instances of historically situated social

⁷⁸² Suspect “rational choice” theorists, at the best of times, have rarely provided an ontologically coherent description as to why people make decisions other than through self-interested choices. That is, the *universal* – and infantile – claim of *self-interest* dismisses *atypical* choices and attempts unsuccessfully to absorb, convert or subsume altruistic behaviour under the umbrella of self-interest.

⁷⁸³ E. Ionesco, cited in L.I. Ponomarev, *The Quantum Dice* (Bristol: Institute of Physics Publishing, 1993) at 50.

⁷⁸⁴ T. Eagleton, *The Illusions of Postmodernism* (Cambridge: Blackwell Publishers, 1996) at 73.

relations which imply a whole regime of how humans interact....”⁷⁸⁵ According to Eagleton, as to our cultural and methodological considerations, we are “cultural beings by virtue of our nature... [and] culture is at once our splendour and our catastrophe.”⁷⁸⁶ Arguably, this is a similar situation concerning the limitations, constraints, prohibitions and the common and “open source” culture that surround intellectual property.⁷⁸⁷

Insofar as this is the case, it is a caution that one must remember that one can go too far empirically and/or analytically in assessing intellectual property through a late-capitalist lens. In particular, (re)presenting or mimicking the dominant form of thought – ideology – present in the law and economics movement would be a fundamental mistake. That being said, it must be noted that in choosing the (or an?) alternative – a material and dialectical analysis of intellectual property – one might find that this approach is “likely to have a dynamic of its own and that, inadvertently perhaps, ... will lead [it] to a situation where the methodological tail wags the substantive dog.”⁷⁸⁸ We are or ought to put ourselves on notice, be forewarned, or, at least, should be fleetingly concerned as to the methods deployed to frame our object of investigation and ought not to “theoretically overtotalize”⁷⁸⁹ certain claims as to the nature of intellectual property regimes and the university.

⁷⁸⁵ S. Aronowitz, *Science as Power: Discourse and Ideology in Modern Society* (Minneapolis: University of Minnesota Press, 1988) at 365.

⁷⁸⁶ Eagleton, *supra* note 784 at 73.

⁷⁸⁷ “Open source” movements have been a democratic thorn in the side of most advocates for increased enforcement of intellectual property.

⁷⁸⁸ L.A. Coser “Two Methods in Search of a Substance” in *A Handful of Thistles: Collected Papers in Moral Conviction* (New Brunswick: Transaction, 1988) at 4.

⁷⁸⁹ In the 1970s and 1980s, “over-totalisation” became a central criticism and buzzword for post-structural and postmodern critics as to various Marxian projects. E.W. Saïd, “Traveling Theory” in *The World, the Text, and the Critic* (Cambridge: Harvard University Press, 1983) at 242. In this instance, Saïd is specifically providing a caution as to analysing the work of Foucault: Saïd’s caveat as to *over-totalisation* is one that we must be sensitive to in the use of a Marxian critique of intellectual property regimes.

4.2.3 Positivism's Method(s) – Absolute Certainty(?)

Contrary to a dialectical materialist position, a narrow positivist method to understanding the implementation of modern intellectual property regimes, and their effects, emphasises a textual and factual approach to understanding its statutory value and its practical impact. For lack of a better reference, this narrow positivist approach claims to have a strict adherence to legal precedence and statutory interpretation.⁷⁹⁰ Legal positivism or “posited” law has a long, rich and informed history in common law jurisdictions.⁷⁹¹ Truthfully, many advocates of a positivist approach to legal interpretation are adherents to the concept of *utility* as applied to law and economic problems.⁷⁹² It is because this is *their* “cause”⁷⁹³ that they recommend that the appropriate methodology used to resolve interpretive disputes involving the *uncommon* law of intellectual property be resolved through a thoroughly legal positivist method.⁷⁹⁴ They believe in a strict textual approach to statutory interpretation in the – oft-strident –

⁷⁹⁰ See: *Canadian Broadcasting Corp. v. SODRAC 2003 Inc.* [2015] 3 S.C.R. 615.

⁷⁹¹ See: G. Mousourakis, *The Historical and Institutional Context of Roman Law* (Burlington: Ashgate, 2003) at 20, n.54. Also, see: M.H. Kramer, *In Defense of Legal Positivism: Law Without Trimmings* (Oxford: Oxford University Press, 2003). Kramer's central thesis is to separate law from morality. In doing so, he holds that self-interested officials can adjudicate without the “muddleheaded ideas” that confuse the established norms of “Law:” that is, adjudication will occur without the subjective and suspicious laws of morality. Also, see: Hobbes, *supra* note 548; Locke, *supra* note 548; J.-J. Rousseau, *The First and Second Discourses* (eds.) R.D. Masters (trans.) R.D. Masters & J.R. Masters (New York: St. Martin's Press, 1964); and, Bentham, *supra* note 568.

⁷⁹² See: E. Mackaay, “Schools: General” in *Encyclopedia of Law and Economics: The History and Methodology of Law and Economics, Vol. 1* (Cheltenham: Edward Elgar Publishing Ltd.).

⁷⁹³ W. Shakespeare, *Othello* (Cambridge: Cambridge University Press, 2005) at 270. As Othello noted: “It is the cause, it is the cause, my soul....” Legal positivists would consider this *cause*, un-ironically, as immaterial.

⁷⁹⁴ This older philosophic version of *utility* is commonly confused with law and economics version of *efficiency*. According to a younger and less temperate Richard Posner, economic efficiency is the purpose of the law. See: R.A. Posner, *Economic Analysis of Law* (Boston: Little Brown, 1973). There is an intriguing aspect of Bentham's utilitarian and economic thought that is latent in most ‘law and economic’ discussions about seeing capitalism as a ‘stabilising’ social force, see: J. Bentham, *The Defence of Usury* (New York: Theodore Foster, 1837). This is one of the fundamental arguments for the bizarre and fictional origins of neo-classical economics and its imaginary capacity to posit human beings as only utilitarian self-interested calculators. To state the obvious, this is an *a priori* and metaphysical claim that has no basis in reality.

assumption that somehow this approach makes the law transparent and self-evident. Generally, legal positivists hold that they will – or can? – strictly interpret parliament’s intention through a “close reading” of the legislation and will not go beyond the letter of the prescribed legislation if they are duly diligent (Oh, if it were only that simple!).⁷⁹⁵

A slightly looser positivist form of legal interpretation as to intellectual property rejects this strict interpretive approach. From a centre-right institutionalist perspective, greater care from a pragmatic position takes its stock of law and economics but includes: statutory declarations; legal precedence; policy forums; conventional parliamentary debates; and, to varying degrees, social and economic considerations.⁷⁹⁶ This approach still relies heavily on methodological assumptions that are empirically based – specifically, garrulous *hard* empirical assumptions about the nature of language, the nature of the law and society, the nature of neo-classical economics, and the alleged ‘nature of reality.’⁷⁹⁷ Hard-nosed neo-classical economic approaches to ‘reality’ presume an epistemic – common sense? – foundation and is usually assumed beyond reproach.

⁷⁹⁵ See: J. Derrida, *Margins of Philosophy* (Chicago: University of Chicago Press, 1982); *Writing and Difference* (trans.) A. Bass (London: Routledge & Kegan Paul, 1978). As Derrida playfully points out, the problem with trying to nail down each signifier is that each signifier points to another signified. In doing so, it points to its meaning which in turn points itself another signifier. This is a problem in that there is no stable end-point. The language game of meaning goes on *ad infinitum* in what Derrida calls “infinite play.”

⁷⁹⁶ This is arguably why no single individual has been charged in the global 2008 financial crisis precipitated by Wall St. See: Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States* (Washington: The Financial Crisis Commission, 2011) at: <http://fcic.law.stanford.edu/>.

⁷⁹⁷ See: D. Hume, *A Treatise of Human Nature* (Oxford: Oxford University Press, 2000). Hume’s vision of human knowledge is based on the *highly* problematic assumption that human beings are a so-call *tabula rasa* or blank slates. That is, the ‘self’ experiences a world of impressions that provide the basis for experience and the foundation for simple and, eventually, complex *ideas* about ‘the world.’ The simple observation that language exceeds the cognitive constraints of an individual’s experience profoundly limits this as a sound basis to methodologically explore intellectual property. Also, see: S. Žižek, *Organs Without Bodies: Deleuze and Consequences* (New York: Routledge, 2004) at 194.

4.2.4 A Broader Approach to Social Research

Anthony Giddens represents a broader approach to social research as being a multi-layered process. A multi-layered process must appreciate a positivist and deductive method, but it must eventually – if not ultimately – value an inductive and heuristic approach to social research. Giddens’s observation, one that would include legal research, is sceptical of a thorough positivist method as to legal and social science research. A strictly positivist approach to social research holds that sense experience and *data* is the *only* basis to form real social knowledge. As Giddens frames the dispute:

Positivism holds that science should be concerned only with observable entities that are known directly to experience. On the basis of careful sensory observation, one can infer laws that explain the relationship between the observed phenomena. By understanding the causal relationship between events, scientists can then predict how future events will occur. A positivist approach to [legal] sociology believes in the production of knowledge about society based on empirical evidence drawn from observation, comparison and experimentation.⁷⁹⁸

In this vein, sociological and legal positivists follow analytic philosophers and logical and legal positivists down a dead-end street to an epistemologically flawed understanding of the world – let alone a limited and hamstrung understanding of the law.⁷⁹⁹ For critics like Giddens, a positivist approach to social (and legal) research is as good a point as any to start basic social research, but, all things considered, it must not be mistaken for its final destination or accomplishment. What is more, positivism has its place; albeit, a

⁷⁹⁸ A. Giddens, *Sociology* (Cambridge: Polity Press, 2006) at 5.

⁷⁹⁹ See: A.J. Ayer, *Language, Truth, and Logic* (Harmondsworth: Penguin Books, 1971). Ayer’s brilliant and thoroughly frustrating position essentially eliminates any truth claim about the external world. For instance, his logical positivism reduces bird watching and seeing a cardinal to something as simple as the ‘speech act’ of: “Red spot, here, now.” In my opinion, this is not a particularly helpful epistemic strategy in trying to ‘unpack’ our complex world. Perhaps the best example of this ridiculous form of logic is Donald Rumsfeld’s “known unknowns” and “unknown unknowns” speech.

nominal place to methodologically understanding intellectual property, social life, and the structures and rules that we deploy to govern society.⁸⁰⁰

As opposed to a legal positivist's position, a contextualised, critical or 'sociological realist'⁸⁰¹ approach to the law does not detach law from its social context.⁸⁰² A sociological realist approach acknowledges that empirical observation is necessary, but understands the limited scope of and logical justification that black-letter interpretation of the law and how it frames our understanding of intellectual property regimes. Experience is an important footing to ground an empirical investigation into intellectual property, but it is not the exclusive element for a solid intellectual and methodological foundation upon which to critically evaluate intellectual property in society and so we can formulate future social policy.

By analogy, in the construction of a building a "footing" is merely one aspect of the overall technology called a "foundation." If a footing is not sound, then neither is the overall foundation. Foundations are composite technologies that perform different functions and allow for drainage, ventilation, load bearing walls and provide the structural basis upon which a solid structure can be built and remain relatively stable throughout the life-time of the structure. Yet, like any foundation, and certainly *any* footing, the foundations for intellectual property are rarely 'empirically' visible above ground level. Put differently and contrary to a positivist position, perhaps with a

⁸⁰⁰ One need only do an informal survey of any class on intellectual property to find out how much the laws against infringement are respected. That is, ask students: "How many of you are infringing on copyright or patents?" Most will admit that they are taking their notes on pirated software or have pirated software on their computers.

⁸⁰¹ See: J. Dewey, "Logical Method and the Law" (1924) 10 Cornell L.Q. 17. Also, see: K. Llewellyn, *The Bramble Bush: On Our Law and Its Study* (New York: Little Brown, 1960).

⁸⁰² For an interesting and relatively contemporary survey of authors on the issues of "sociological" or American realism in the law see: *Reading Dworkin Critically* (ed.) A. Hunt (Oxford: Berg Publishers, Inc., 1992).

structural excavation – similar to a Foucaultian “archaeology of the human sciences”⁸⁰³ – a *positivist* foundation is never readily observable above ground nor questioned. A positivist foundation is assumed to be the sound methodology, in putatively normative terms, to perused intellectual property rights and advance future policies. This is precisely the problem and the appeal to the metaphor of “foundations” or “first principles” that most positivists express or implicitly possess. A current positivist conception of intellectual property is *always-already* tied into a neo-classical system of economics. Its ideology is inherent and, like the footing of a foundation, it is never “seen” but present. Moreover, a positivist and neoliberal foundation for intellectual property views the model of private property and ownership structured by late-capitalism as natural and normative outcome (not quite a common law justification for intellectual property, but an exorable economic justification).

The current methodological argument advanced is that a historical and cultural materialism of intellectual property law, like any investigation into a social science, must take stock of its subject’s apparent *foundations*. Yet, it must also be flexible as to its method(s) of investigation. Even with the best of intentions, an empirical and pragmatic approach, as to the analysis of all the elements that comprise intellectual property, tend to be “susceptible to [a] theoretical overtotalization”⁸⁰⁴ of its subject of investigation. As has been suggested, sticking to a strictly analytic or legal positivist legal regime of interpretation would limit the depth of our investigation. And so, a positivist approach would rule out a purported *archaeological* interpretation of intellectual property. As

⁸⁰³ Foucault has a passion for digging, see: M. Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Pantheon Books, 1970).

⁸⁰⁴ Saïd, *supra* note 789 at 242. It must be noted that this criticism by Saïd is directed toward Foucault and his analysis of power, but it is just as applicable to the homological method ‘master narrative’ such as positivism.

opposed to legal and/or sociological positivism approach, C. Wright Mills puts forward a different interpretation or method as to trying to understand social phenomenon:

We neither take the world for granted nor believe it to be a simple fact. Our business is with facts only in so far as we need them to upset or clinch our ideas. Facts and figures are only the beginning of the proper study. Our main interest is in making sense of the facts we know or can readily find out. We do not want merely to take an inventory, we want to discover meanings, for most of our important questions are questions of meaning.⁸⁰⁵

4.2.5 Meaning Matters, Or Does It?

According to a Mills, we are not – or ought not to be – store clerks doing an intellectual property inventory and *objectively* positing or proposing it as public policy. If our questions are about meaning, then we ought to presume that there are truths underlying our uncovered objective facts and observations.

This implies that this study ought to incorporate empirical and analytic aspects that are subject to this investigation. Indeed, it must be sensitive and understand their *utility*, but *must* keep them in their place. One must not mistake or confuse a “fact” with its “meaning.” To be precise, one should acknowledge a fact’s price and place and, then, not over or underrate its value.⁸⁰⁶ A “fact” or its price are only significant when incorporated into the overall scheme of meaning and its purpose and value in human society and culture. Thus, empirical and analytic legal models must not be exhaustively used as methodological tools to assist us in our investigation into intellectual property and the university.

⁸⁰⁵ C.W. Mills, *The Power Elite* (New York: Oxford University Press, 1956) at 364.

⁸⁰⁶ See: O.O.W. Wilde, *The Picture of Dorian Gray* (New York: Barnes and Noble Classics, 2003) at 50. As Wilde remarks: “Nowadays people know the price of everything, and the value of nothing.”

It is not that empirical facts are unimportant. Clearly, they are. But, not in the way that most logical/legal positivists or “symbolic interactionist”⁸⁰⁷ and their law and economic advocates believe.⁸⁰⁸ A heuristic⁸⁰⁹ hermeneutics of intellectual property is needed: a method where there is a ‘fusion of horizons’ and where the various levels of meaning attached to intellectual property can be explored. As Hans-Georg Gadamer put it: “The working out of the hermeneutical situation means the achievement of the right horizon of enquiry for the questions evoked by the encounter with [a] tradition.”⁸¹⁰ Remarkably, if one surrenders to a legal positivist method of investigating intellectual property, we would have no horizons or a limited ability to see only one horizon. It would be tantamount to throwing in the towel before the first round of a fight. Arthur Mullard’s observation that “[b]oxing got me started on philosophy...” [because] “you bash them, they bash you and you think, what’s it all for?”⁸¹¹ the same thing is true of thinking about intellectual property. If intellectual property positivists are *always-already* right, then what is it all for? Why get started with the theories of intellectual property in the first place? Indeed, if law and economic scholars are already certain and confident as to the purpose of intellectual property and its results, then it really amounts to a “fixed” fight. Moreover, then, they already know the outcome and the nature of what intellectual property is under late-capitalism: they know its value and its instrumental purpose as *rentier* capital. Rightward leaning law and economic scholars understand that

⁸⁰⁷ T.J. Watson, *Sociology, Work and Industry* (New York: Routledge, 1996) at 58.

⁸⁰⁸ See: L. Harvey, *Myths of the Chicago School of Sociology* (Aldershot: Gower, 1987).

⁸⁰⁹ R.J. Antonio, “Introduction: Marx and Modernity” in *Marx and Modernity: Key Readings and Commentary* (ed.) R.J. Antonio (Oxford: Blackwell, 2003) at 26.

⁸¹⁰ H.-G. Gadamer, “The Principle of Effective History, Rhetoric, Hermeneutics, and the Critique of Ideology” in *The Hermeneutics Reader: Texts of the German Tradition from the Enlightenment to the Present* (ed.) K. Mueller-Vollmer (New York: Continuum, 1989) at 269.

⁸¹¹ Arthur Mullard cited in *The New Penguin Dictionary of Modern Quotations* (eds.) R. Andrews & K. Hughes (London: Penguin Books, 2000) at 308.

intellectual property's purpose is in securing future capital and, indeed, they use the argument of the accumulation of capital as its justification and purport that this is the sole engine for future innovation. There is a logical circularity implicit in this position; an argument that is used to subdue further criticism of intellectual property's mythology.⁸¹²

Law and economic proponents of extending intellectual property rights principally use *utility* – or *efficiency* – as a justification; that is as a doorstop for the current economic system. Yet, the test of extending intellectual property's *utility* within capitalism is an *always-already* a deferred test: a test to be measured in some “undiscovered” future. Similar to religious *salvation*, *utility* has a certain rhetorical power but it consistently defers accountability. Thus, the language of accountability and our use of language that reduces or flattens intellectual property to merely an economic trope or discourse of instrumentally is used to justify our current arrangement. This strategy truncates and abbreviates the theory of intellectual property to a narrow and circular justification of *utility* and *efficiency*: intellectual property is *a priori* reduced to an ontology that subjugates it as a means to achieve a specific economic end. As Judge Posner has put it: “the nation depends in no small part on the efficiency of industry, and the efficiency of industry depends in no small part on the protection of intellectual property.”⁸¹³ This is an *end* predisposed to profit *rentier capital* and to meet the *means* and needs of the intellectual property owner. Remarkably, in the beginning, and as its end, this position is inclined to support laws that *improve* and expands intellectual propertisation for the benefit of private capital. And, private capital downplays, degrades, nullifies or attempts to neutralise returns that would fall into or benefit the

⁸¹² D. Vaver, “Intellectual Property Today: Of Myths and Paradoxes” (1990) 69 Can. Bar Rev. at 98.

⁸¹³ *Rockwell Graphic Sys., Inc. v. DEV Industries, Inc.*, 925 F.2d 174, 180 (7th Cir.1991) at 29.

public domain. Rather than understanding that a “statute must be treated as a means to an end,”⁸¹⁴ advocates for expanding intellectual property rights commonly disregard or deny that “the end should be determined by the social forces which brought it about.”⁸¹⁵ In many ways, the social forces, history and the process of accumulation embedded in the object of intellectual property must be washed clean of its past. Put differently, history and the social forces surrounding intellectual property must be erased.⁸¹⁶

Intellectual property has the uncanny ability to analytically insulate – or attempt to insulate – itself from the murky and nebulous reality of politics. Yet, as Herbert Marcuse warns us, “if linguistic [and analytic] analysis is applied to political [and, hence, intellectual property] terms and phrases... the method already shuts off the concepts of [the] political, i.e., critical [and cultural] analysis.”⁸¹⁷ Consequently, as has been indicated, our method of understanding intellectual property and patents must go beyond the “neutral” position that they are merely disinterested statutory creatures. We must recognise them as intensely political instruments or tools.⁸¹⁸ Hence, an analytic, linguistic or purportedly neutral analysis of legal terms used to unpack intellectual property regimes in the neoliberal state, and under our late-capitalist regime, must be recognised as insufficient and unsatisfactory.

That is not to say that a recognition or awareness of the inherently political nature of intellectual property policy is adequate to resolve our problem. It is a start.

⁸¹⁴ J.A. Corry, “Administrative Law and the Interpretation of Statutes” (1935) 1 U.T.L.J. 286, at 292.

⁸¹⁵ *Ibid.*

⁸¹⁶ J. Derrida, “*Différance*” in *Margins of Philosophy* (trans.) A. Bass (Chicago: University of Chicago Press, 1986) at 24.

⁸¹⁷ Marcuse, *supra* note 281 at 185.

⁸¹⁸ One of the recent federal governments ‘town hall’ meetings to “best foster innovation, competition and investment” in new copyright legislation is but one example of intellectual property’s highly political nature. See: J. Bradshaw, “Cross-country copyright reform hearings under way” *The Globe and Mail* Tuesday July 21, 2009 at: <http://www.theglobeandmail.com/news/arts/cross-country-copyright-reform-hearings-under-way/article1225359/> (last visited July 25, 2009).

Justifiably, it is a place to begin a strategy to methodologically recognised that the depoliticised veil of neutrality surrounding intellectual property regimes is intensely problematic. Put differently, “the neutralization of the question is... very suspect... as when someone says that he’s not political, neither on the right nor the left; [because when he says he’s *apolitical*] everyone knows he is on the right...”⁸¹⁹ So, too, it could be said, as to the purported neutrality of intellectual property regimes and intellectual property “rights-talk”⁸²⁰ in and under the governance of late-capitalism.

4.3 A Neoliberal State of Mind

4.3.1 Neoliberalism and the State

The latter part of the 20th-century saw if not the unprecedented rise of powerful modern transnational corporations, then it certainly witnessed a consolidation of their power within and outside the neoliberal state.⁸²¹ After almost a decade of stagflation in America (and Canada and the rest of the world) during the 1970s, the 1980 election of Ronald Reagan signalled a purported sea change⁸²² in economic policies.⁸²³ The term

⁸¹⁹ J.-F. Lyotard, “One of the Things at Stake in the Women’s Struggle” in *The Lyotard Reader* (ed.) A.E. Benjamin (Oxford: Basil Blackwell, 1989) at 111.

⁸²⁰ For a critical examination of the ambiguous neutrality of “rights-talk” in a constitutional discussion, see: A. Hutchinson, *Waiting for Coraf: A Critique of Law and Rights* (Toronto: University of Toronto Press, 1995) at 58.

⁸²¹ After the financial crisis of 2008-2009, the nation-state, in particular the United States, flexed its muscles to support and bailout municipal and international capital. Many proponents in the suspicious “anti-globalisation” movement like to remind us that 51 out of the 100 of the largest economies in the world today are corporations, not countries. See: J. Brecher, T. Costello & B. Smith, *Globalization from Below: The Power of Solidarity* (Cambridge: South End Press, 2000) at 8. Yet, in 2008, it was to the protection of ‘nanny’ nation-state’s petticoats that financial markets and transnational corporations ran to when the crisis they unleashed sought to devour them.

⁸²² See: Aronowitz, *supra* note 400 at 409. In 1981, the mass firing of 11,000 air traffic controllers, by Ronald Reagan, was an example of how labour’s times had changed and signalled the future of the attacks on organised labour and changes that were to come.

⁸²³ The United Kingdom preceded the American “turn to the right” by a little over a year and a half with the election of Margaret Thatcher on May 4th 1979. The miner’s strike of 1984-85 is recognised as one of Thatcher’s major political and ideological victories – a victory that crushed the National Union of Mineworkers. See: A. Callinicos & M. Simons, *The Great Strike: The Miners’ Strike of 1984-5 and Its Lessons* (London: Socialist Worker, 1985).

“Reaganomics”⁸²⁴ became synonymous with a post-Vietnam rhetoric about the dawning of a new day, a new “morning in America”⁸²⁵ and a new day for late-capitalism.⁸²⁶ Economically, it was supposed to be a return to the good old days of “free market principles”⁸²⁷ monetarism⁸²⁸ and supply-side economic policies.⁸²⁹ This was a grand return, a return of the purportedly repressed, to the illusion (or delusion) of “responsible” small government and professed traditional values. This was supposed to be a return to

⁸²⁴ In an ironically “shocking” turn of events, Jeffrey Sachs, the economist who imposed the “shock therapy” (a term he profoundly dislikes) on Bolivia in the mid-1980s and, in the 1990s, on economies of the former Soviet block, has apparently undergone a type of “new deal” conversion. Sachs in his latest book, with a bit of a nod to O.W. Holmes, holds that ‘taxes are the price we pay for civilisation.’ See: J.D. Sachs, *The Price of Civilization: Reawakening American Virtue and Prosperity* (New York: Random House, 2011). Also, see: W.A. Niskanen, “Reaganomics” in *The Concise Encyclopedia of Economics* at: <http://www.econlib.org/library/Enc/Reaganomics.html>. <http://www.econlib.org/library/Enc1/Reaganomics.html> (last visited April 2, 2008).

⁸²⁵ W. Safire, *Safire’s Political Dictionary* (Oxford: Oxford University Press, 2008) at 437. Although being a right-wing libertarian, Safire is correct in observing that this slogan could be viewed as an “unfounded or fuzzy optimism about the country’s future.” For a different perspective on this phrase see: P.J. Williams, “Mourning in America” *The Nation*, July 30, 2007, at: <http://www.thenation.com/article/mourning-america> (last visited October 12, 2011).

⁸²⁶ A “new day” for late-capitalism? Perhaps. Most *critical* Marxists – and Marx himself – are ambiguous as to the “inevitable” demise of capitalism – predicting the future is the stock and trade of soothsayers and politicians. As Doug Henwood noted: “In 1987, I thought that the crash was the end of the world. I thought it was the beginning of another depression. That’s why I’m so measured now. When the depression didn’t happen in the late ‘80s, that made me really rethink why it didn’t, and I came to appreciate the power of state bailouts.” See: A. Newitz, “The Marxist Wall Street Couldn’t Ignore” *Salon*, December 21, 1998 at: <http://www.salon.com/it/feature/1998/12/21feature3.html>.

⁸²⁷ See: J.K. Galbraith, *Economics in Perspective: A Critical History* (Boston: Houghton Mifflin, 1991) at 260. As Galbraith suggests, the rationalisations of free market principles and perfect competition leads to “an increasingly esoteric existence, if indeed, any existence at all.” This is similar to Galbraith’s position that “esoteric economics” (neo-classical econometrics) is unhelpful in understanding the world. As an “exoteric” economist, Galbraith held that you had to take the world as you found it and not “assume” that the world must fit a preordained and abstract economic model. Galbraith adopts Veblen’s assessment of esoteric knowledge as one that prides “itself on having no practical use of any kind...” “I always felt that although the prestige still lies with esoteric activities in a university, probably the exoteric are more useful.” J.K. Galbraith interview with H. Kreisler, “Intellectual Journey: Challenging the Conventional Wisdom” (Berkeley: Institute of International Studies, 1996) at:

<http://globetrotter.berkeley.edu/conversations/Galbraith/galbraith1.html> (last visited June 30, 2012). Also, see: Veblen, *supra* note 319 at 255-56.

⁸²⁸ See: Galbraith, *supra* note 607 at 295. As Galbraith notes: “Professor Friedman’s breath-takingly simple solution would... [be tried in] ...the hope that all problems could be solved by the magic of monetary management. Alas.”

⁸²⁹ L. Lapham, *Hotel America: Scenes in the Lobby of the Fin de Siècle* (London: Verso, 1995) at 100. As Lewis Lapham observes: “Not one politician in fifty can explain... the mystery of supply-side economics.... Why quarrel with a great truth in which the public wishes to believe and for which it stands willing to pay?”

fiscal responsibility, to the noble cause – almost sacred cause – of “budget reform”⁸³⁰ and policies that rewarded individual initiative not collectivised welfare.⁸³¹

4.3.2 A New Morning for America

The 1980s became an era saturated with *ad hoc* economic plans and social policy slogans of “a hand-up, not a hand-out”⁸³² for people in need. At the end of the Carter administration, during the dawning of the Reagan era, the solution proposed by most trickster-like ‘mainstream’ economists was to deal with American – and by association Canadian – economic decline and lagging productivity through business tax cuts, deregulation and free trade.⁸³³ According to Joseph Stiglitz:

The deregulation advocates had a Manichaeian view of the world: they saw the wonders of the free market, over here, and evils of government, over there, making no mention of the many instances which the fruitful operation of the market *depended* on a degree of regulation. By the nineties, it had become an article of faith with many Republicans, and quite a few Democrats as well, that the market, by itself, could handle almost any problem – that government, by definition, made things worse.⁸³⁴

Thus, deregulation was a simple – if not simplistic – but effective strategy that was at the core of restructuring the economy as well as transforming the operation and activities of public institutions and public policy. In the developed “West,” this privatising ethos became embedded in almost every government policy, and, concomitantly, came to dominate the dynamics of most future public policy debates and narrowed the choices and options as to the policies surrounding intellectual property.

⁸³⁰ L. Lapham, *The Agony of Mammon: The Imperial World Economy Explains Itself to the Membership Davos, Switzerland* (London: Verso, 1998) at 70.

⁸³¹ For a jocund tale of the rejection of Reaganomics see: N.R. Singer “Voodoo Economics: Soul Work in the Age of Reagan” (2000) 30(1) Iowa Rev. at 113-136.

⁸³² Safire, *supra* note 825 at 303.

⁸³³ See: J.G. Madrick, *Age of Greed: The Triumph of Finance and the Decline of America, 1970 to the Present* (New York: Alfred A. Knopf, 2011).

⁸³⁴ J.E. Stiglitz, *The Roaring Nineties: Why We’re Paying the Price for the Greediest Decade in History* (London: Penguin, 2004) at 102.

The historic and economic antagonisms of the 1970s, what was really a crisis in corporate profitability, came to a head and brought about the end of the New Deal in the USA.⁸³⁵ For many neoliberals, the New Deal was viewed as nothing but creeping socialism and the expansion of a scrounging “nanny state.”⁸³⁶ The New Deal, according to neoliberals, was the major impediment, malefactor or culprit in North American economic stagnation puzzle.⁸³⁷ Even though, by most measurements, the most prodigious gains in American and Canadian productivity were established through the growth of coverage by the social umbrella established from 1944 to 1973. These

⁸³⁵ These were a series of federal pieces of legislation known as: the *Agricultural Adjustment Act* (AAA) (Pub. L. 73-10, enacted May 12, 1933); and, the *National Industrial Recovery Act* (NIRA), (Ch. 90, 48 Stat. 195, formerly codified at 15 U.S.C. sec. 703, enacted June 16, 1933). For a good overview see: B. Harrison & B. Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America* (New York: Basic Books, 1988) at 110. It must be noted that the tentative “New Deal” in Canada was generally rejected through constitutional cases brought by the provinces against the federal government in the 1930s. For example, see: *Attorney General of Canada v. Attorney General of Ontario (Labour Conventions)* [1937] A.C. 326; and, *Attorney General of Canada v. Attorney General of Ontario (The Employment and Social Insurance Act)* [1937] A.C. 355. Canada’s *new deal* eventually came to fruition through a series of “voluntary” post-war policies and programmes initiated by the federal government. See: F.R. Scott, “The Privy Council and Mr. Bennett’s ‘New Deal’ Legislation” in *Essays on the Constitution: Aspects of Canadian Law and Politics* (Toronto: University of Toronto Press, 1977). Also, see: F.R. Scott, “Centralization and Decentralization in Canadian Federalism” (1951) 29 Can. Bar Rev. 1095. The federal government initiated social programmes by developing a strategy of “co-operative federalism” that avoided tramping on provincial jurisdiction. Also, see: M. Barlow & B. Campbell, *Straight Through the Heart: How the Liberals Abandoned the Just Society*, (Toronto: Harper Collins Publishers Ltd., 1995) at 21-22. According to Barlow and Campbell, five major studies by the Liberal government laid the foundation for the modern Canadian welfare state: the 1944 White Paper on Employment and Income; The Rowell-Sirois Report on Dominion-Provincial Relations; The Report on Social Security for Canada; The Heagerty Report of the Advisory Committee on Health Insurance; and, The Curtis Report on Housing and Community Planning.

⁸³⁶ I. Macleod, “Quoodle” *The Spectator*, December 3, 1965. Needless to say, the “nanny” state coddled the baby-boom generation and allowed them to reinvent themselves in the West through the various neoliberal cultural incarnations of ‘self-actualising’ individuals from the 1970s to today. Mostly, it is a project with unsatisfactory results and the dismantling of much of the welfare state. As Noam Chomsky recently observed as to the newly elected zealots from the Tea Party: “Corporate power is now concerned that the extremists they helped put in office may in fact bring down the edifice on which their own wealth and privilege relies, the powerful nanny state that caters to their interests.” N. Chomsky, “America in Decline” In *These Times* August 5, 2011 at: http://inthesetimes.com/article/11806/america_in_decline/ (last visited Oct 2, 2014).

⁸³⁷ Rarely did it – or does it – occur to many American experts that the post-war recovery of Europe and Japan under the Marshall Plan meant that they were able to retool and eventually compete for world markets that had, by default, been capitalised by American industries in the post-war interregnum. See: J. Gimbel, *Science, Technology, and Reparations: Exploitation and Plunder in Postwar Germany* (Stanford: Stanford University Press, 1990).

programmes were largely inclusive. Programmes such as: the G.I. Bill;⁸³⁸ extending unemployment insurance; Social Security;⁸³⁹ and, Medicare and Medicaid.⁸⁴⁰ A similar social-economic and government expansion occurred federally and provincially in Canada. The socialised expansion of the Canadian state accompanying productivity gains and, due to the constitutional divisions of powers, went through a range of federal and provincial programmes in the form of: Old Age Security;⁸⁴¹ Canada/Québec Pension Plan;⁸⁴² the Canada Health Act;⁸⁴³ and, various government grants for post-secondary education; provincial social welfare; and, housing initiatives. Under the new economic puritanism of neoliberalism, these programmes were seen as anachronistic and viewed as unproductive government intervention that caused a drag on the economy: these *inefficiencies* could be eliminated through privatisation and the operation of the free market. Rather than being seen as a complimentary and stabilising influence on the “short term vagaries of the market,”⁸⁴⁴ government intervention was categorically seen as unnecessary interference that hobbled the operation of the market.

4.3.3 Good-Bye the Possibility of the Great Society, Hello *Greed Society*⁸⁴⁵

The neoliberal rejection of the New Deal programme, the “great society”⁸⁴⁶ and, in Canada, the “*just society*”⁸⁴⁷ was to favour ostensibly a market-based model for

⁸³⁸ See: *Servicemen’s Readjustment Act of 1944*, P.L. 78-346, 58 Stat. 284m. For the first time, this act gave many American veterans from working-class backgrounds the opportunity to study in post-secondary institutions. Also, see: M. Perelman, “The Role of Higher Education in a Security State” (2005) 182 *The N.E.A. Ed. J.* at 182. In Canada, a similar programme allowed veterans to attend and acquire post-secondary education. See: Lemieux & Card, *supra* note 537 at 313. Lemieux and Card note that English-speaking Canada benefited far more than French-speaking Canada from this programme.

⁸³⁹ *The Social Security Act (Act of August 14, 1935)*, ch. 531 49 Stat. 620

⁸⁴⁰ Both Medicare and Medicaid were added as amendments to the original *Social Security Act* in 1965.

⁸⁴¹ *Old Age Security Act*, R.S.C. 1985, c. O-9.

⁸⁴² *Canada Pension Plan Act*, R.S.C. 1985, c. C-8.

⁸⁴³ *Canada Health Act*, R.S.C. 1985, c. C-6.

⁸⁴⁴ Stiglitz, *supra* note 833 at 90.

⁸⁴⁵ See: Madrick, *supra* note 833.

economic development. The market-based model was one centred on the notion of a putatively competitive capitalist society – a society based on the first principles of *laissez-faire* economics. In the Anglo-American “West this represented a significant change from the last fifty years of political policies and practices of a mixed economy and brought to an end the culture of what could be called the second generation of the modern welfare-state.⁸⁴⁸

4.3.4 Reaganomics, Less Government and More Debt

There were four general planks that neoliberalism – Reaganomics⁸⁴⁹ – promoted to increase wealth production at the end of the 20th-century. Firstly, was the general rule of less government intervention and regulation in the economy. Secondly, the Federal Reserve System,⁸⁵⁰ and, in Canada, the Bank of Canada,⁸⁵¹ the imposition of tight monetary policies drove up overnight lending rates and long term loan rates into the 20% range with the rationalisation or objective that this would reduce inflation.⁸⁵² Thirdly, was a purported general policy of tax “fairness” that reduced marginal tax rates on income earned from capital and labour and, specifically, for the benefit of corporate

⁸⁴⁶ See: Johnson, *supra* note 360. As we know, Johnson’s increasing intervention in Viet Nam meant that the ‘Great Society’ was a stillborn child.

⁸⁴⁷ It is often lost on most legal and political scholars that the notion of referring to a “just society” in Canada was a concept introduced into our political discourse by socialist, poet and constitutional expert, Frank Scott. Pierre Trudeau’s appropriation of the term, like so much of Trudeau’s legacy, rarely acknowledged his debt to others and their ideas. See: F.R. Scott, “A Policy of Neutrality for Canada” (1939) 17(2) *Foreign Affairs* at: 8-9.

⁸⁴⁸ As Polanyi points out, the abandonment of the Speenhamland Laws, which were a replacement to the Elizabethan Poor Law, in England, amounted to an end of the medieval form of what could be called the “welfare” system or state in England. The abandonment of Speenhamland was “the true birthday of the modern working class.” Polanyi, *supra* note 170 at 101.

⁸⁴⁹ According to Henwood, *Reaganomics* became a buzzword that signified a type of “*sadomonetarism*” that penetrated popular culture and saturated media to justified the roll back of the welfare state. Henwood, *supra* note 143 at: 64.

⁸⁵⁰ See: *Federal Reserve Act* (ch. 6, 38 Stat. 251, enacted December 23, 1913, 12 U.S.C. ch.3).

⁸⁵¹ See: *Bank of Canada Act, S. of C.*, 1934, c. 43.

⁸⁵² A.J.C. Drainville, “Monetarism in Canada and the World Economy” 46 (1995) *Stud. in Poli. Econ.: A Socialist Rev.* at 29.

earnings. Lastly, there was a wholesale reduction in government spending in almost every sector of the economy, except, not surprisingly, military⁸⁵³ and criminal justice spending.⁸⁵⁴ Arguing beyond understanding and, perhaps credulity, but strategically, the Reaganites endlessly bleated that lower taxes would generate greater economic activity and employment and, thus, increase higher overall tax revenue.⁸⁵⁵ They garnered enough popular support to pursue these policies.⁸⁵⁶ Armed with these economic policies, which acted as a catalyst for a profound shift and transformation of economic policies and regulation, a neoliberal vision became ubiquitous, almost universal, and fuelled much of the rhetoric of a “new world order”⁸⁵⁷ through the purported – if not punitive – process of

⁸⁵³ Former U.S. President Dwight Eisenhower warned against the creeping power of the “military-industrial complex” – a power he helped inculcate in the American state. See: D.D. Eisenhower, *The Military-Industrial Complex* (Portland: Basementia Publications, 2006). As noted, Chomsky usually refers to this economy as a form of “military Keynesianism.” One of the interesting aspects of this system is that fact that government not only subsidises the investment that the private market “invests” in, but that consumption of the new weapon systems are consumed by the government as the sole consumer. This guarantees private capital a full return on its investment. This is a socialised boon for questionable private enterprise through the high-tech investments visa-via the political economy of the military Keynesianism. This system is rarely questioned or criticised. See: N. Chomsky, *World Orders Old and New* (New York: Columbia University Press, 1996) at 100.

⁸⁵⁴ See: E. Schlosser, “The Prison-Industrial Complex” *Atlantic Monthly* (December 1998) at: <http://www.theatlantic.com/doc/199812/prisons> (last visited April 10, 2009). Also, see: A.Y. Davis, *Are Prisons Obsolete?* (New York: Seven Stories Press, 2003) at 84.

⁸⁵⁵ R. Dallek, *Ronald Reagan: The Politics of Symbolism* (Cambridge: Harvard University Press, 1999) at 64. Cutting taxes is unfortunately an ideological ‘truism’ (or falsehood) that has a legacy that has yet to be – if ever – extirpated from public and political discourse. According to the Historical Tables of the US government, debt grew under the Reagan administration from 33.3% of G.D.P. in 1980 to 51.9% at the end of 1988. See: Historical Tables, Budget of the United States Government, Table 7.1 — Federal Debt at the End of Year: 1940–2014 at: <http://www.gpoaccess.gov/usbudget/fy10/hist.html> (last visited November 10, 2010).

⁸⁵⁶ It is traditionally understood that this type of “taxpayer revolt” was popularized in the United States with the success of Proposition 13 in California in 1978. See: A. O’Sullivan, T.A. Sexton & S.M. Sheffrin, *Property Taxes and Tax Revolts: The Legacy of Proposition 13* (Cambridge: Cambridge University Press, 1995). Arguably, one can trace the current debt crisis in California back to the “tax revolt” of Proposition 13. The public infrastructure needed to support the “housing bubble” in California has only exacerbated this crisis.

⁸⁵⁷ This statement or “sound bite” by George Bush Sr. should not come as a shock. It ought to be perceived as a consistent familial opinion. See: G.H.W. Bush, “George H.W. Bush: Address Before a Joint Session of the Congress on the Persian Gulf Crisis and the Federal Budget Deficit” September 11, 1990, at: http://bushlibrary.tamu.edu/research/public_papers.php?id=2217&year=1990&month=9 (last visited August 4, 2009). In fact, this view ought to be understood as a version of “American triumphalism” and as a cloaked rejection of FDR’s New Deal stemming or originating from authoritarian and neo-fascist sympathies that were prevalent in America during the 1930s. That is to say generationally, as the son of

globalisation.⁸⁵⁸ It is no accident that globalisation emerged “in the age of neo-colonialism, of decolonization accompanied by the emergence of multinational capitalism and the great transnational corporations... [and we must consistently remember that it] now... precisely... [means the] necessary subordination or dependency... [on a single economic order].”⁸⁵⁹ Theories, advocates and detractors surrounding “globalisation” are numerous and differ. Yet, the one connection that ought to be made is that globalisation and the *new* corporatism⁸⁶⁰ should be view in our analysis as products of late-capitalism and state-action and enforced through law. As Glasbeek urges us, “scholars inquiring into the scope and character of the new capitalism and the activists who want to resist its

Prescott Bush, also known as America’s ‘banker to the Nazis,’ George Bush Sr.’s reliance – intentional or not – on the rhetoric of fascism and a ‘new order’ should not be viewed as unexpected. See: M.J. Racusin, “Thyssen Has \$3,000,000 in New York Vaults” *The New York Herald Tribune*, July 31, 1941, at 1. Anti-Semitic views were prevalent in American industrialist culture, see: H. Ford, “The International Jew: The World’s Problem” *The Dearborn Independent*, May 22, 1920, at 1. Both Ford and Alfred Sloan, head of General Motors, were solidly behind Hitler’s rearmament of Germany in the 1930s and up to, and including, the commencement of WWII. See: A. Kugler, “Airplanes for the Führer: Adam Opel AG as Enemy Property, Model War Operations and General Motors Subsidiary, 1939-1945” in R. Billstein, K. Fings & A. Kugler, *Working for the Enemy: Ford, General Motors, and Forced Labor in Germany During the Second World War* (ed. & trans.) N. Levis (New York: Berghahn, 2000) at 33. Also, see: M. Dobbs, “Ford and GM Scrutinized for Alleged Nazi Collaboration” *The Washington Post*, November 30, 1998 at A1.

⁸⁵⁸ Advocates for globalisation and “free-trade” consistently argue that it is ‘a rising tide that raises all boats.’ They rarely address any distributive issues or concrete examples of immiseration that occur to workers through globalisation whether they occur in Toronto, Detroit, Nairobi, Bangkok or Beijing. For examples of unease, see: J.E. Stiglitz, *Globalization and Its Discontents* (London: Penguin, 2002). More recently, Canada’s policies toward foreign workers has come under increasing scrutiny ranging from programmes that favour information workers, fast food workers through to coal face miners. One of the central issues of these policies has been the ‘artificial’ suppression of domestic wages. J. Stanford, “Temporary worker program changes just a new rubber stamp” *The Globe and Mail*, April 29, 2013, at: <http://www.theglobeandmail.com/commentary/temporary-worker-program-changes-just-a-new-rubber-stamp/article11606920/> (last visited May 1, 2013).

⁸⁵⁹ F. Jameson, “Modernism and Imperialism” in *Nationalism, Colonialism, and Literature* (ed.) S. Deane (Minneapolis: University of Minnesota Press, 1990) at 47-48.

⁸⁶⁰ The modern use of the term “corporatism” compared to Benito Mussolini’s *corporatism* cannot be underestimated. See: B. Mussolini cited in J. Burrell, *The Republican Treason: Republican Fascism Exposed* (New York: Algora Pub., 2008) at 137. “Fascism should more properly be called corporatism because it is the merger of state and corporate power.” It is somewhat contentious as to whether Mussolini actually made this claim. A now general position is that this passage was written by the Italian philosopher Giovanni Gentile and lifted and accredited to Mussolini. See: J. McMurtry, “Fascism and Neo-Conservatism: Is there a Difference” (1984) 4 *Praxis International* at: 86-102. Nonetheless, Mussolini’s vision of corporatism, one that combines the interests of the state, corporations and various national socialist workers parties, has, to degrees, parallels with the modern Tea Party in the U.S. and various “nationalistic” political parties in Canada and Europe.

forward march... [must not] ignore the nature of the corporation [and *real* persons ignore it] at their peril....”⁸⁶¹ As Glasbeek unfailingly points out, the meaning – and the meaningfulness – of democracy is what is at stake in this struggle.

In the age of “new capitalism,”⁸⁶² one must be cautious and ought not to ignore the influence of corporatism, its legalised personality, and recognise it as a legalised and imperialising project.⁸⁶³ In reference to intellectual property regimes, similar to other older imperial regimes, is that the idea that the “law is what the law does”⁸⁶⁴ and the analogy of an imperialising project – or *conquest* – appears apt. One could even compare the expansion of international intellectual property agreements,⁸⁶⁵ ones that parallel or parrot the expansion and strengthening of intellectual property rights for corporations, as a type of neo-colonialism.⁸⁶⁶ Alan Hunt, in his more or less Marxian manner, suggests that liberal legalism *always-already* “involves a conception of law as a purposive enterprise in which state law is conceived....”⁸⁶⁷ Law is constitutive and by “first selecting its targets and then aspiring to colonize, rule or otherwise govern major fields or aspects of liberal-democratic society”⁸⁶⁸ it preselects and, thus, predetermines certain outcomes. It would appear that this colonising aspect of liberal-democratic society is, perhaps, carried to the extreme with expansionist plans for intellectual property rights

⁸⁶¹ Glasbeek, *supra* note 744 at 3.

⁸⁶² W.E. Halal, *The New Capitalism* (New York: Wiley, 1986) at 51.

⁸⁶³ For an interesting discussion of the imperialising force of law see: Hunt, *supra* note 630.

⁸⁶⁴ A. Hunt & G. Wickham, *Foucault and Law: Toward a Sociology of Law as Governance* (London: Pluto Press, 1994) at 99. Indeed, the spread and expansion of intellectual property is a clear example of this *imperialising* project.

⁸⁶⁵ See: *Agreement on Trade-Related Aspects of Intellectual Property Rights*, Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994, at: http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm (last visited December 4, 2010).

⁸⁶⁶ See: K. Aoki, “Neocolonialism, Anticommons Property, and Biopiracy in the (Not-So-Brave) New World Order of International Intellectual Property Protection” in *Law and Power: Critical and Socio-Legal Essays* (eds.) K. Tuori, Z. Bankowski & J. Uusitalo (1998) 6 *Ind. J. Global Leg. Stud.* 11.

⁸⁶⁷ A. Hunt, “The Politics of Law and the Law of Politics” in *Law and Power: Critical and Socio-Legal Essays* (eds.) K. Tuori, Z. Bankowski & J. Uusitalo (Liverpool: Deborah Charles Publications, 1997) at 53.

⁸⁶⁸ *Ibid* at 53.

under late-capitalism – with advocates of intellectual property rights who claim or think that they ought to exist in perpetuity.⁸⁶⁹

4.3.5 Great Men and Unintended Consequences

As has been suggested, the *great man* theory of history is an unrealisable – and unenviable (unbelievable!) – proposition. Yet, one must recognise the impact and particular and specific effects that individuals and social movements can have in shaping history and the uncertain *law of unintended consequences*.⁸⁷⁰ In the case of Reagan, and his fellow supply-siders, the reforms they unleashed in terms of deregulation have had a lasting – perhaps unintended – impact on late-capitalist societies and, in particular, for recent American and Canadian economic policies.⁸⁷¹ In doing so, many politicians abdicated the government rôle to oversee and regulate various industries ranging from: manufacturing; transportation; banking; telecommunications; public housing; public welfare; and, the general regulatory programmes created after the ‘Great Crash’ of

⁸⁶⁹ Mark Helprin has suggested that copyright should exist forever. Can patents be far behind? See: M. Helprin, “A Great Idea Lives Forever. Shouldn’t Its Copyright?” *The New York Times*, May 20, 2007, at: <http://www.nytimes.com/2007/05/20/opinion/20helprin.html?ex=1337313600&en=3571064d77055f41&ei=5124&partner=permalink&exprod=permalink> (last visited June 10, 2008). Also, see: Landes & Posner, *supra* note 415.

⁸⁷⁰ It has been suggested that Adam Smith was responsible for introducing the concept, or his version, of ‘the law of unintended consequences’ into our vernacular language. Smith calls this a situation where a person allows “an invifible hand to promote an end which was no part of his intention.” A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations Vol. II*. (London: W. Strahan & T. Cadell, 1776) at 35. Norbert Elias has a slightly more nuanced analysis of this situation: “Underlying all intended interaction of human beings is their unintended interdependence.” N. Elias, “Sociology and Psychiatry” in *Psychiatry in a Changing Society* (eds.) S.H. Foulkes & G.S. Prince (London: Tavistock, 1969) at 143.

⁸⁷¹ One only need to note the obsessive caterwauling against debt and deficit spending and restraining government spending for social programmes that has begun to percolate to the surface after the massive bank bailouts ended the “fiscal crisis.” See: M. Bai, “One Liberal Voice Dares to Say, Cut the Budget” *The New York Times*, August 25, 2010, at: http://www.nytimes.com/2010/08/26/us/politics/26bai.html?_r=2 (last visited August 29, 2010). This demand to reform social security is not a new phenomenon. Under the economically ebullient Clinton Administration, social security “reform” (privatisation) was on the agenda. See: P.J. Ferrara & M.D. Tanner, *A New Deal for Social Security* (Washington: Cato Institute, 1998). For a counter example to the Cato Institute’s folly see: H.J. Aaron & R.D. Reischauer, *Countdown to Reform: The Great Social Security Debate* (New York: Century Foundation Press, 2001).

1929.⁸⁷² Under the Reaganites, the market was seen not as the problem, but as the solution, if not panacea, to the problem of economic malaise and social inequality that neoliberals saw as coming to fruition during the 1970s.⁸⁷³

In the 1980s, long term macro-economic planning was rejected by neoliberals in theory or, at least, on paper, in speeches. Neoliberals saw short-term economic gains as the long-term solution to government intervention, planning, and government regulation. As such, neoliberals promoted the protection of short-term gains for corporations, for their shareholders, for their chief executive officers and, allegedly, for the long-term benefit of taxpayers. For certain, the current global fiscal crisis, which culminated in 2007-2008, had and still has a direct relationship and deep roots in the economic ideas and policies unleashed by the Reaganites in the 1980s. It must be noted that the cornerstones of neoliberalism(s) of today continue to have ideological traction. Neoliberalism's Ponzi-like policies have not been explicitly rejected even though their systemic and moral bankruptcy – both literally and metaphorically – have been proven – and, proven wrong. Over this period, as American and Canadian budgetary deficits spiralled, so, too, did annual trade deficits – at least in manufactured goods – and overall debt.⁸⁷⁴ As we have seen from the fiscal crisis, it was, is, and probably will be that the American and Canadian middle-class and working-class who will pay the full price for this economic folly in the near and distant future.⁸⁷⁵

⁸⁷² Once again, one of the more rational – if not reasonable and wry – assessments of our economic history, see: J.K. Galbraith, *The Great Crash, 1929* (Boston: Houghton Mifflin, 1997).

⁸⁷³ R. Reagan, “Ronald Reagan’s First Inaugural Address delivered 20 January 1981” at: <http://www.americanrhetoric.com/speeches/ronaldreagandfirstinaugural.html> (last visited August 4, 2009).

⁸⁷⁴ It must be noted that Canada generally did a much better job as to managing its debt and deficit during the 1990s. Yet, it must also be noted that the policies unleashed by the Chrétien Liberal government eviscerated most of the post-war welfare state.

⁸⁷⁵ See: S. Greenhouse, *The Big Squeeze: Tough Times for the American Worker* (New York: Anchor Books, 2009) at 210. Also, see: E. Brynjolfsson cited by C. Freeland, “Fear of falling out of middle class

4.4 Neoliberalism, ‘Deregulation’ and the University

4.4.1 Globalisation and the University

[Neo-liberalism was and is] a successful war on a troublesome working class [that began] in the late 1970s and early 1980s. That assault – wage-cutting, speedup, deregulation, outsourcing, union-busting, cutbacks in the welfare state, all... gathered under the name of neoliberalism – created a problem for a system dependent on high levels of mass consumption both to maintain aggregate demand and to secure its political legitimacy. ...So the answer was to counter the downdraft of falling wages with rising borrowing, via credit cards and mortgages. That model seemed to hit a wall in the recent economic crisis, but there’s no real recognition of that fact, and no new model for accumulation.

Doug Henwood⁸⁷⁶

Sadly, in 2017, this is still the hegemonic economic model and form of accumulation. From the beginning of 1980s, under the rubric of globalisation, there has been an increasing – if not unprecedented – influence and pressure from modern corporations on, over and through the education offered and the research conducted by universities in our “bright Satanic mills.”⁸⁷⁷ As such, congenial partnerships are generally seen or envisioned as mostly benign. These *envisioned partnerships* are seen as necessary budgetary accommodations that must be made by successive and successful university administrations in hard economic times and the new world order. Some argue

stalks U.S.” The Globe and Mail, April 26, 2013, at B2. According to M.I.T. economics professor Erik Brynjolfsson: “The job security of the middle class is declining, and so is social mobility.” Also, see: J. Holland, *The Fifteen Biggest Lies About the Economy: And Everything Else the Right Doesn’t Want You to Know About Taxes, Jobs, and Corporate America* (Hoboken: Wiley, 2010). Also, see: R. Hahnel, *Economic Justice and Democracy: From Competition to Cooperation* (New York: Routledge, 2005). For a spritely – yet grim – assessment of this situation, see: Moore, *supra* note 590.

⁸⁷⁶ D. Henwood, interview with B. Sunkara, “Doug Henwood: Capitalism thrives on class exploitation” Salon, May 19, 2013, at: http://www.salon.com/2013/05/19/doug_henwood_on_the_decline_of_the_left_partner/ (last visited December 15, 2014).

⁸⁷⁷ T. Bridgman & H. Willmott, “Academics in the ‘Knowledge Economy’: From Expert to Intellectual?” in *Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy* (eds.) A. Harding, A. Scott, S. Laske & C. Burtscherat: (Burlington: Ashgate, 2007) at 114. Also, see: Arthurs, *supra* note 14 at 629. Also, see: M.N.N. Lee, “The Impacts of Globalization on Education in Malaysia” in *Globalization and Education: Integration and Contestation Across Cultures* (eds.) N.P. Stromquist & K. Monkman (Lanham: Rowman & Littlefield, 2000) at 326.

that this relationship represents the *corporatisation* of universities.⁸⁷⁸ According to Public Citizen: “While for much of the last century, higher education was considered a public good and an essential agent of democratization, upward mobility and equal opportunity, today it is considered by many to be a lucrative business....”⁸⁷⁹ In their attempt to secure alternative funding, some critics hold that universities are compromising their integrity and their future as public and democratic institutions.

4.4.2 Insulated and Aloof – Universities and Commercial Interests

As illustrated, the future of universities as public, democratic and research-oriented institutions is part of an older *real* and rhetorical debate. Almost seventy years before the decade of the *Bayh-Dole Act*⁸⁸⁰ and the supposed birth of the new economy, Frederick Cottrell, a professor of chemistry at the University of California, Berkeley, who founded the Research Corporation,⁸⁸¹ held that university researchers must remain independent from the commercialising interests and influences of corporate America. To Cottrell, it was essential that researchers and universities remain insulated and aloof from commercial interests and the vagaries of the market. Hence, the objective of Cottrell’s Research Corporation, an independent and non-profit organisation, was to encourage the

⁸⁷⁸ See: *Campus, Inc.: Corporate Power in the Ivory Tower* (eds.) G.D. White & F.C. Hauck (Prometheus Books, 2000). Also, see: L.C. Soley, *Leasing the Ivory Tower: The Corporate Takeover of Academia* (Boston: South End Press, 1995). Also, see: C. Gilde, *Higher Education: Open for Business* (Lanham: Lexington Books, 2007).

⁸⁷⁹ Public Citizen, “WTO U – Higher Education: Public Good or Global Service Industry?” at: <http://www.citizen.org/trade/subfederal/services/education/> (last visited December 10, 2010). In 2003, the Confederation of University Faculty Associations of British Columbia, as to the General Agreement on Trade in Services (GATS), strongly advised the government of Canada to exclude post-secondary education from the GATS: “If GATS were applied to the Canadian education sector, the effects would be profound. Education would no longer be considered a public service; instead it would be categorized as merely another commercial enterprise.”

⁸⁸⁰ *Bayh-Dole Act of 1980*, Pub. L. No. 96-517. The purpose of *Bayh-Dole* was to change the nature of ownership of inventions made with U.S. government funding. Prior to *Bayh-Dole*, federally funded projects had to assign ownership rights back to the federal government. After *Bayh-Dole*, universities, businesses and non-profit institutions could retain ownership in the invention and licence it.

⁸⁸¹ See: Research Corporation for Scientific Advancement, at: <http://www.rescorp.org/about-rdsa> (last visited May 2, 2008).

progress of university science and encourage patent holders to donate their patents and, thus, the profits from their work so they could fund further scientific research. Cottrell's Research Corporation sought to provide American universities with a disinterested party: a party that could prudently incorporate its patent management expertise to assist scientific progress and future innovation. As the "Samaritan of science,"⁸⁸² Cottrell held that commercialised universities, or, at least, their activities, posed a threat to science and "[a] danger was involved, especially should the experiment prove highly profitable to the university and lead to a general emulation of the plan."⁸⁸³ Put differently, commercial applications would take centre stage in the operation of the university and it would be at the expense of its commitment to the pursuit of knowledge and truth – a game that "is not worth the candle."⁸⁸⁴

4.4.3 Commercialism and Secrecy

The principle problem that Cottrell laid bare was that university trustees, versed in business and well intentioned or not, would be "continually seeking... funds and in direct proportion to the success of... [the] experiment [and] its repetition might be expected elsewhere.... [T]he danger this suggested was the possibility of growing commercialism and competition between institutions and an accompanying tendency for secrecy in scientific work."⁸⁸⁵ If truth is a central concern for social and natural scientists, then, Cottrell was correct in observing that *secrecy* could become a central problem as to the creation of knowledge and would create significant self-imposed bottlenecks in the production of knowledge. The need for secrecy in privatised university scientific

⁸⁸² F. Cameron, *Cottrell, Samaritan of Science* (Garden City: Doubleday, 1952).

⁸⁸³ F. Cottrell, "Patent Experience of the Research Corporation" (1912) *J. Ind. & Eng. Chem.* at 222.

⁸⁸⁴ G. Herbert, *The Poetical Works of George Herbert: With Life, Critical Dissertation and Notes* (New York: D. Appleton & Co., 1854) at 315.

⁸⁸⁵ Cottrell, *supra* note 883.

research, pertaining to the conflicts of interests, *would* place strict limits on academic researchers.⁸⁸⁶ Not surprisingly, the internal and external dynamics of this situation would increasingly cost academicians their independence and their academic freedom.

Generally, neoliberals are oblivious to this issue – or see it as a non-issue. Neoliberals and the neoliberal state’s *free market* agenda ideologically holds that institutions of higher learning should be run like businesses.⁸⁸⁷ The neoliberal strategy sought and seeks to withdraw and/or restructure the way it provides funding or grants to public institutions by making institutions of higher education subject to the disciplines of the market. These strategies sought to transform university technology transfer offices and make the “office of technology licensing [into] a profit center.”⁸⁸⁸ This “change in strategy... boils down to treating intellectual property like merchandise and then marketing these products to targeted customers.”⁸⁸⁹ As some commentators note, the majority of the professoriate were upset with these free market sentiments and there was a sentiment that it “was not exactly welcomed by an establishment that prides itself on remaining a quaint cottage industry.”⁸⁹⁰ But, in their defence, at least as intellectual crofters, the professoriate owned their means of production.

⁸⁸⁶ D.S. Greenberg, *Science for Sale: The Perils, Rewards, and Delusions of Campus Capitalism* (Chicago: University of Chicago Press, 2007) at 61. Also, see: Also, see: J.P. Kassirer & M. Angell, “Financial Conflicts of Interest in Biomedical Research” (1993) 329 N.E.J.M. at: <http://www.nejm.org/doi/full/10.1056/NEJM199308193290810> (last visited November 4, 2010).

⁸⁸⁷ See: W.C. Symonds, “Should Public Universities Behave Like Private Colleges?” *Business Week* November 15, 2004 at: http://www.businessweek.com/magazine/content/04_46/b3908089.htm (last visited March 14, 2009). Also, see: J.R. Brown, “Privatizing the University: The New Tragedy of the Commons” (2000) 290 *Science* at: 1701.

⁸⁸⁸ M. Arndt, “MIT, Caltech And the Gators?: How the University of Florida Moved to the Major League of Technology Startups” *Business Week* May 21, 2007 at: 2.

⁸⁸⁹ *Ibid.*

⁸⁹⁰ S. Pearlstein, “The Lesson Colleges Need to Learn” *Washington Post*, December 17, 2003, at 2.

4.4.4 Funding Models: Cutbacks and Dependency

For critics of the neoliberal university, the university was increasingly entering progressive cycles of government cutbacks and the new business model seemingly appeared to offer the sole solution to budgetary shortfalls. The business model of turning academic capital into profit centres – into fungible capital – and capitalising on directed and indirect government subsidies through business tax deductions, meant that universities were increasingly dependent “on industry and philanthropy for operating the university.”⁸⁹¹ Not surprisingly, this privatising of funding sources for universities naturally – or psychologically – tends to reflect the viewpoint and *ethos* of the mostly corporate donors.⁸⁹² Arguably, this business solution has led to a ‘Stockholm syndrome’⁸⁹³ of sorts for university administrators to justify their compensation⁸⁹⁴ and for some – if not many – academic researchers to justify their increased compensation.

[It means that] an increased amount of... [university] resources [are] being directed to applied or dubious practical subjects, both in teaching and in research; a proprietary treatment of research results, with the commercial interest in secrecy overriding the public’s interest in free, shared knowledge.... [This is] an attempt to run the university more like a business [and as one] that treats industry and students as clients and... [academics] as service providers with something to sell. We pay increasing attention to the immediate needs and demands of our “customers” and, as the old saying goes, “the customer is always right.”⁸⁹⁵

⁸⁹¹ Brown, *supra* note 886 at 1701.

⁸⁹² It must be noted that the “de-coupling” of tuition concerning ambiguously named “professional schools” has narrowed the interests and concerns of these students who attend. See: H.W. Arthurs, “Legal Institutions in the New Economy” (1996) 34 O.H.L.J.

⁸⁹³ N. Bejerot, “The Six Day War in Stockholm” (1974) 61 New Scientist at: 486.

⁸⁹⁴ The recent compensation package of \$1 million paid to Western University president, Amit Chakma, has called into question the merits of the new business model pursued by Canadian universities. As Sam Trosow has commented: “Excessive executive compensation of this magnitude is simply unacceptable in the public sector.... This is especially so given the belt-tightening, cutbacks and general austerity facing so many in the university community.” S. Trosow cited in I. Boekoff, “Western faces backlash to Chakma’s salary payout” The Gazette, March 30, 2015, at: http://www.westerngazette.ca/news/western-faces-backlash-to-chakma-s-salary-payout/article_41406092-a74c-5406-bc07-2e01ae5cff68.html (last visited January 25, 2016).

⁸⁹⁵ Brown, *supra* note 886 at 1701.

In the guise of globalisation, political priorities surrounding university research promoted closer affiliation between institutions of higher learning and private corporations. This introduced competitive models and partnerships around knowledge production. The objective of creating questionable “public-private-partnerships” (P3s)⁸⁹⁶ was to improve the “efficiency” of scientific discoveries in university labs.

In general, 3Ps were a market model developed to promote more “efficiency” in the use of scarce resources. In fact, 3Ps have “more than three decades of relentless promotion of privatisation and public-private partnerships... by international financial institutions and national governments”⁸⁹⁷ and they have proven themselves to be absolute failures in monopoly or oligopoly sectors of the economy. That is, in monopoly or oligopoly sectors of the economy, 3Ps merely concentrate corporate profit and wealth.

In this instance, *efficiency* is defined as the ability of university research to be accelerated and its application in industry and commodity production to be brought to the market quicker. To be exact, the method for improving scientific performance was to

⁸⁹⁶ See: A. Davidson-Harden, *et. al.* “Neoliberalism and Education in Canada” in *The Rich World and the Impoverishment of Education: Diminishing Democracy, Equity and Workers’ Rights* (ed.) D. Hill (New York: Routledge, 2008) at 57. One of the principle criticisms of P3s projects is that they are merely another method of ‘privatising profit and socialising risk:’ that is, that taxpayers will ultimately be left holding the bag, footing the bill and guaranteeing private profit for P3s. Also see: A. Morrow, “Private-partnerships cost Ontario taxpayers \$8 billion: Auditor General” *The Globe and Mail*, December 9, 2014, at: <http://m.theglobeandmail.com/news/politics/private-partnerships-cost-ontario-taxpayers-8-billion-auditor-general/article22012009/?service=mobile> (last visited December 9, 2014). In an interesting re-edit, or “self-censorship,” of this headline occurred from the original, which was clearly critical of P3s, to “Government-managed projects could save Ontario money: Auditor-General.” The change was made sometime between the afternoon and evening of December 9th, 2014. Also, see: A. Morrow, J. Nelson & S. Silcoff, “The long road to privatization of Hydro One” *The Globe and Mail*, March 13, 2015), at: <http://m.theglobeandmail.com/report-on-business/wynnes-quest-for-full-value-the-long-road-to-privatization/article23461789/?service=mobile> (last visited March 14, 2015). Also, see: T. Walkom, “Brampton case shows P3s work – just not for the public” *January 10, 2008*, at: <http://www.thestar.com/article/292722> (last visited June 30, 2009). According to Walkom, the consortium that built the Brampton hospital, in spite of their \$300 million cost overrun as to its construction, paid for by taxpayers, retain an exclusive 25-year right to a range of non-health related services (such as parking lots fees and tuck and coffee shops) worth an estimated \$2.7 billion over the life-time of the contract.

⁸⁹⁷ S. Kishimoto, O. Petitjean & E. Lobina, “Conclusion: Reclaiming Public Water Through Remunicipalisation” in *Our Public Water Future: The Global Experience with Remunicipalisation* (eds.) S. Kishimoto, E. Lobina & O. Petitjean (Amsterdam: Transnational Institute, 2015) at 112.

shrink the “time horizons and [increase] a multiplication of deadlines”⁸⁹⁸ for university research to meet. In doing so, the *raison d’être* was to make pure research more “productive” – not necessarily better research. It was to make pure research subject to market forces and more responsive to the demands of “academic capitalism.”⁸⁹⁹

Academic capitalism is part of the broader application of the commodification of education and knowledge. The commodification of education and the potential that the market possesses to discipline and focus pure research for commercial development and its application is far-reaching. The phenomenon is that knowledge must be goal oriented: and that orientation is not about discovering truth but about what the market will bear. To be precise, the value of knowledge is seen as part of a “trickle-down”⁹⁰⁰ theory for knowledge production. Academic capitalism is about universities and faculty members structuring, willingly or not, their resources and aligning them with an overall national and/or provincial strategies that facilitate local, regional and national economic and

⁸⁹⁸ D. Pels, *Unhastening Science: Autonomy and Reflexivity in the Social Theory of Knowledge* (Liverpool: Liverpool University Press, 2003) at 2.

⁸⁹⁹ See: G. Rhoades & S. Slaughter, “*Academic Capitalism and the New Economy: Challenges and Choices*” *American Academic* at: 37 - www.aft.org/pdfs/highered/academic/june04/Rhoades.qxp.pdf. (last visited March 4, 2009). According to Slaughter and Rhoades, “academic capitalism” is a regime that entails colleges and universities “engaging in market and market-like behaviours.” Also, see: Slaughter & G. Rhoades, *Academic Capitalism and the New Economy: Markets, State, and Higher Education* (Baltimore: Johns Hopkins University Press, 2004).

⁹⁰⁰ See: Rogers, *supra* note 441 at 207. Rogers points out that President Hoover, as an engineer, was ignorant of the fact and “did not [sic] know that money trickled up.” In addition to Will Rogers’s definition, John Kenneth Galbraith recalled that the “trickle-down theory” was what he remembered from his youth as being the “horse and sparrow theory.” See: J.K. Galbraith, “Recession Economics” *New York Review of Books*, Vol. 29, No. 1., February 4, 1982. For Galbraith, what ‘supply-siders’ and Reaganites called “trickle-down” economics is merely the re-branding of “what an older and less elegant generation called the “horse-and-sparrow theory”: If you feed the horse enough oats, some will pass through to the road for the sparrows.” Arguably, this is a useful metaphor for explaining the current corporate or “business models” at work in universities. This university business model of intellectual fertilisation, and what the future has for pedagogical trends in higher education, suggests a form of “horse and sparrow theory” in search of application – in both senses. Galbraith, perhaps in one of his “less elegant” or indelicate moments, might call this the ‘horseshit theory’ for spreading growth.

industrial policies. In the era of globalisation,⁹⁰¹ this has meant that universities must shape their policies around global competitiveness.⁹⁰² Accordingly, the final – if not sole – objective or purpose of university research is that it must be marketable – *ergo*, fungible.

In the new economy, the attempt of the state to *withdraw* from the economic regulation in the market, through deregulation, was really just regulation or re-regulation of state resources by another name.⁹⁰³ According to William Kleinknecht this “arose from Reagan’s misguided quest for free-market purism.”⁹⁰⁴

All grew out of the evisceration of regulations that a more sensible generation of political leaders had put into place to keep market forces from making a shambles of our economy and culture. All enriched an elite of business interests at the expense of ordinary Americans, without achieving what was supposed to be the goal of deregulation: a general increase in the well-being of the nation.⁹⁰⁵

If deregulation was to increase the perceived “general well-being” of the nation and its citizens, then why did we witness increased – if not extreme – political pressure to strengthen intellectual property regimes during the 1980s? The argument advanced by advocates, in contradistinction to free market deregulation, was that stronger intellectual property laws and regulation were needed. Intellectual property required stronger

⁹⁰¹ For an interesting discussion see: M. Mandel, “Rights, Freedoms, and Market Power: Canada’s Charter of Rights and the New Era of Global Competition” in *The New Era of Global Competition: State Policy and Market Power* (eds.) D. Drache & M.S. Gertler (Montréal and Kingston: McGill-Queen’s University Press, 1991).

⁹⁰² See: Press Release, “Innovation Park at Queen’s University connects to global grid of research networks” December 2, 2008, at: <http://www.innovationpark.ca/article/innovation-park-queen%E2%80%99s-university-connects-global-grid-research-networks> (last visited January 10, 2009). The purpose of the new Innovation Park “seeks to foster an environment of discovery that accelerates and supports the growth of new businesses” and, perhaps, knowledge.

⁹⁰³ I would argue that James Galbraith is correct in identifying the self-servingly named “deregulation movement” as an attempt to create a “corporate republic” in America. Insofar as it goes, it is a corporate ideological strategy to infuse the methods and mentality of big business in the populous and weld its message into every aspect of public and political life. See: Jas.K. Galbraith, *supra* note 376 at 145.

⁹⁰⁴ Kleinknecht, *supra* note 327 at 72.

⁹⁰⁵ *Ibid.*

regulation and enforcement. Unlike the rest of the economy, where deregulation was seen as a benefit, increased regulation as to intellectual property would lead to greater benefits. Increased regulation and enforcement as to intellectual property by the state would lead to future opportunities, further innovation, and increased wealth for Americans and Canadians.

4.4.5 Calibration and Transparency – Solutions for the Market?

The argument implied that enforcement of stronger intellectual property regimes, and through the implementation of better market mechanisms, would allow for greater transparency and efficiencies to occur for the creation of wealth. For now, let it be accepted that the logic behind the general deregulation movement, in association with the strengthening of intellectual property laws, is not a consistent or logically coherent position or project. Moreover, it would appear that strengthening intellectual property regimes is at loggerheads with various rationalisations for the neoliberal deregulation movement. Nonetheless, it was through the eye of this needle that one had to pass to understand the *rentier* mentality of the ‘Washington beltway’ that pushed for legislation to secure the profits to enter the paradise of the “post-Bayh-Dole era.”⁹⁰⁶ It would seem that this was a benign strategy that would advance scientific research and create wealth. In general, the underlying philosophy surrounding *Bayh-Dole* was that it was “better to take what does not belong to you than to let it lie around neglected.”⁹⁰⁷ Yet, for critics like Fred Warshofsky, *Bayh-Dole*’s “main purpose was to transfer effective ownership of

⁹⁰⁶ M. Feldman, “Post-Bayh-Dole University-Industry Relationships” in *Capitalizing on New Needs and New Opportunities: Government-Industry Partnerships in Biotechnology and Information Technologies* (ed.) C.W. Wessner (Washington: National Academy Press, 2001) at 179.

⁹⁰⁷ M. Twain, *Mark Twain’s Book for Bad Boys and Girls* (ed.) R.K. Rasmussen (New York: M.J.F. Books, 1995) at 49.

new inventions and technologies generated in university-owned facilities to corporations through licensing.”⁹⁰⁸

[A]s a flood of imports washed away millions of domestic manufacturing jobs, attitudes toward patents and their role in the economic equation began to change. The interests of industry and labor coalesced in the search for viable weapons in the fight against foreign competition. The election of Ronald Reagan further shifted the mood toward protection of intellectual property. The major philosophical argument against patent protection – that it was inherently monopolistic – was no longer politically or, even more to the point, economically correct in an era of increasing trade competition. The policy of using antitrust laws against companies that refused to license their patent technologies was reversed by the Justice Department.⁹⁰⁹

The high-interest rate policies pursued in the early 1980s,⁹¹⁰ the return to *laissez-faire* and monetarism, were a shock to the overall late-capitalist state system in North America. Tight money supply and high-interest rate policies caused a fundamental recalibration, of sorts, to the entire post-war redistributive system of the welfare state. Yet, luckily, at least according to some observers, the counter-hegemony of ‘trickle-down economics’ was limited. The welfare state had deep roots:

The resilience of many elements of the welfare state suggests that although unions and left-of-center parties may play a key role in welfare state development, programs may be sustainable even where support weakens. In short, the Thatcher and Reagan records of mixed and limited success raises serious questions about the applicability of the dominant paradigm for studying welfare state development to the study of retrenchment.⁹¹¹

⁹⁰⁸ F. Warshofsky, *The Patent Wars: The Battle to Own the World's Technology* (New York: Wiley, 1994) at 8.

⁹⁰⁹ *Ibid.*

⁹¹⁰ See: C. Mollins, “The Excessive 80s” Canadian Business Online, September 15, 2003, at: http://www.canadianbusiness.com/managing/strategy/article.jsp?content=20030915_55505_55505&page=1 (last visited August 12, 2006). During the peak of the 1981-1982 recession, the Bank of Canada's overnight lending rate peaked at 21% while the prime rate at the chartered banks hit 22.75% in August of 1981.

⁹¹¹ P. Pierson, *Dismantling the Welfare State?: Reagan, Thatcher, and the Politics of Retrenchment* (Cambridge: Cambridge University Press, 1994) at 29.

To be precise, according to Peter Evans, Dietrich Rueschemeyer and Theda Skocpol, the state may be subject to substantial challenges and changes but its persistent social structure underlying the state is embedded in its operation and becomes a repositioning that allows for Polanyi-type “double-movement.”⁹¹² In the neoliberal era, the double-movement ensures that the social fabric of society is not torn apart by the corrosive effects of *laissez-faire* and accumulated capital. As much as Thatcherism and Reaganism tried to dismantle the welfare state, social welfare policies are not easily dismantled:

[The] basic patterns of state organization and of the relationships of states to social groups often persist even through major periods of crisis and attempted reorganization or reorientation of state activities. It is necessary for the analyst to identify conditions of persistence or nonpersistence to explain many outcomes, especially unintended outcomes, of interest.⁹¹³

In our instance, in the post-Thatcher/Reagan quixotically named “deregulated” state, a persistent condition was that areas of the economy that had been hitherto considered as elements outside of the market – what has been generally considered the commons – were now undergoing the process of commodification. At the beginning of the 1980s, it meant that the neoliberal state had cleared the decks of ‘social welfarism’ and was readily able to set sail and strengthen intellectual property regimes. Neoliberalism sought to consolidate, appropriate and concentrate wealth and ownership, and, it zealously sought a commodification process of parts of the economy that had hitherto been in the public domain. It sought to commodify the common goods of all citizens – a general enclosure movement of sorts – and privatise parts of the economy that it could – goods such as

⁹¹² Polanyi, *supra* note 170 at 148.

⁹¹³ P.B. Evans, D. Rueschemeyer & T. Skocpol, “On the Road toward a More Adequate Understanding of the State” in *Bringing the State Back In* (eds.) P.B. Evans, D. Rueschemeyer & T. Skocpol (Cambridge: Cambridge University Press, 1985) at 348.

education.⁹¹⁴ This was, perhaps, the high-water mark of neoliberalism, for knowledge to pass into the market and be “repackaged” or “branded” and, like all other things, become an object of commerce and exchange.

4.4.6 The “New Economy” and the University

After bread, education is the first need of the people.

Georges Jacques Danton⁹¹⁵

The current influence and corporatisation of education make this statement appear rather quaint. To think of education as fundamental to human sustenance and survival seems to overstate our collective situation. Danton’s claim almost seems like the ramblings of an idealist or, at worst, a romantic. In our advanced industrial society, education and literacy are viewed as providing the basic utility in intellectual tools for an individual to function in a modern knowledge economy. But, to what ends? Mark Twain observed: “When I am king, they shall not have bread and shelter only, but also teachings out of books; for a full belly is little worth where the mind is starved....”⁹¹⁶ Hitherto, the corporate ‘agenda’ – if there is one – could be viewed as the elimination of risk – full

⁹¹⁴ In 2003, the Confederation of University Faculty Associations of British Columbia, as to the General Agreement on Trade in Services (GATS), strongly advised the government of Canada to exclude post-secondary education from the GATS: “If GATS were applied to the Canadian education sector, the effects would be profound. Education would no longer be considered a public service; instead it would be categorized as merely another commercial enterprise.” R. Clift, “Background Paper on the General Agreement on Trade in Services (GATS) and Post-Secondary Education in Canada” Confederation of University Faculty Associations of British Columbia (CUFA/BC) November 29, 1999, at: <http://www.cufa.bc.ca/briefs/GATS.html>.

⁹¹⁵ G.-J. Danton cited in J.R. Censer & L.A. Hunt, *Liberty, Equality, Fraternity: Exploring the French Revolution* (University Park: Pennsylvania State University Press, 2001) at 94.

⁹¹⁶ M. Twain, *The Prince and the Pauper: A Tale for Young People of All Ages* (Boston: James R. Osgood & Co., 1882) at 52.

bellies⁹¹⁷ – and has been about and for a dumbing down of potential workers and innovators and, arguably, twittering away their emaciated future.⁹¹⁸

4.4.7 Discipline, Re-Learning and “Personal” Self-Development

Conversely, Peter Drucker holds that education in an entrepreneurial society must discipline “individuals [so they] will increasingly... take responsibility for their own continuous learning and re-learning [and] for their own self-development and for their own careers.”⁹¹⁹ In doing so, this fits with the neoliberal restructuring and affects “practically every dimension of social life.”⁹²⁰ It sees education “as a sort of a ladder to be kicked aside once a new plateau has been reached.”⁹²¹ Needless to say, this is antithetical to Dewey’s position that “the educational process has no end beyond itself; ... [it] is its own end; and... is one of continual reorganizing, reconstructing, [and] transform[ation].”⁹²² As opposed to Dewey, Drucker has a very focused – if not narrow – conception of human nature. Dewey, in his measured prodding, is suggesting that human learning and education be creative and emancipatory. Drucker, at his best, or perhaps his worst, is convinced that education ought to be a Darwinian struggle to ensure the survival of one’s *own career*.

⁹¹⁷ As has become popularly known, obesity and the problem of “junk food” has become a pandemic across the West in the last two decades. That is, full bellies have been mostly achieved through empty calories. See:

⁹¹⁸ This is framed as the problem of the “McJob:” a low-pay, low-prestige, no benefit, no pension and no-future job. See: S. Lohr, “No More McJobs for Mr. X” *The New York Times*, May 29, 1994, at s. 9-2.

⁹¹⁹ P.F. Drucker, *Innovation and Entrepreneurship: Practice and Principles* (Amsterdam: Butterworth-Heinemann, 2007) at 238.

⁹²⁰ D.M. Kotz, “Neoliberalism and the U.S. Economic Expansion of the ‘90s” (2003) 54 (11) *Monthly Rev.* at 15.

⁹²¹ R.D. Boisvert, *John Dewey: Rethinking Our Time* (Albany: State University of New York Press, 1998) at 105.

⁹²² J. Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Cosimo Classics, 2005) at 59.

4.4.8 The Obsolescence of the University

Drucker's position is telling. Regarded by some as the man who invented the so-called "corporate society,"⁹²³ Drucker is notably sceptical as to the future of universities and their *raison d'être*. Drucker's view of our current education system holds that "[w]hen a subject becomes totally obsolete [then] we make it a required course."⁹²⁴ Universities anachronistically hold on to antiquated traditions. As such, Drucker holds that:

Universities won't survive. The future is outside the traditional campus, outside the traditional classroom. Distance learning is coming on fast.⁹²⁵

Drucker's fails to explain that there is a blurring of the line between the research university and undergraduate institutions, one that obscures the nature of this debate: yet, his position is revealing. In the intense debate surrounding the presence of corporate values influencing higher education, and the possible obsolescence of the university, Drucker supports the position that education and research must be subjected to market forces. Critical of this type of position, Magda Lewis asserts that: "The rise of corporatization and the globalization of the world's economies, coupled with the politics of neoconservatism [neoliberalism], have had the effect of threatening closure on what now is possible, especially in intellectual pursuits [in the university because they] ...are seen as antithetical to corporate interests."⁹²⁶ Moreover, intellectual pursuits must have outcomes that are market oriented and marketable.

⁹²³ See: J.J. Tarrant, *Drucker, The Man Who Invented the Corporate Society* (Boston: Cahnners Books, 1976).

⁹²⁴ Peter Drucker cited in M. Crochet "Governance in European Universities" in *Reinventing the Research University* (eds.) L. Weber & J.J. Duderstadt (London: Economica, 2004) at 228.

⁹²⁵ Peter Drucker cited by F.H.T. Rhodes, "The Advancement of Learning: Prospects in a Cynical Age" 142 (2) (1998) Proceedings of Amer. Phil. Soc. at 234.

⁹²⁶ M. Lewis, "Public Good or Private Value: A Critique of the Commodification of Knowledge in Higher Education – A Canadian Perspective" in *Structure and Agency in the Neoliberal University* (eds.) J.E. Canaan & W. Shumar (New York: Routledge, 2008) at 60.

The debate surrounding the new economy and the university, more or less, has elements of a mind-set that has had a tremendous impact on the governance of most public institutions and universities. To be sure, certain strategies exist and policies have been put in place to use and assist the university to be more business-like and assist in the “transfer of research results to the commercial sector.”⁹²⁷ This facilitates accessing the university resources and its intellectual labour and making the university business friendly and the “government’s emphasis on a business model for public policy.”⁹²⁸ Part of this new environment means using the university’s resources to generate intellectual property rights and more property *per se*.⁹²⁹ Nevertheless, understandably, there is resistance to the business model being proposed for universities.

4.4.9 Self-interested Academics

Friedman remarks that: “Universities are run by faculty, and... faculty... [are only] interested in its own welfare.”⁹³⁰ As anyone who has sat through, or witnessed, the bear-pit and outcomes of faculty board meetings, this was/is a challenge for the new economy as to how to harness the self-interest(s) of the professoriate. Intellectual property interests and rights were used as an *incentive* programme to ensure that faculty members became interested in their own welfare or became self-interested. As to how one gets better control over the disparate characters and individuals of the professoriate:

⁹²⁷ L. Minsky, “Dead Souls: Aftermath of Bayh-Dole” in *Campus Inc.: Corporate Power in the Ivory Tower* (eds.) G.D. White & F.C. Hauck (Amherst: Prometheus Books, 2000) at 95. Also, see: Renke, *supra* note 78.

⁹²⁸ B. McKenna & I. Semeniuk, “Science council rewired to work with industry” *The Globe and Mail*, May 8, 2013, at A1.

⁹²⁹ One cannot help but become slightly apoplectic with a culture where individuals issue property claims on the moon and the sun. For an interesting review, see: V. Pop, *Who Owns the Moon?: Extraterrestrial Aspects of Land and Mineral Resources Ownership* (New York: Springer, 2009). This is the logic of colonisation and a coloniser, see: S.G. Millin, *Rhodes* (London: Chatto & Windus, 1933).

⁹³⁰ M. Friedman cited in M. Leontiades, *Pruning the Ivy: The Overdue Reform of Higher Education* (Charlotte: Information Age Publishing, 2007) at 75.

the jury is still out. Yet, enchanting a professoriate that has a tendency to be quixotic and independent can prove not to be a simple process of allowing them to have vested interest. Encouraging academic entrepreneurs through start-up companies aligned with university licences and their tech-transfer offices is one approach. A very popular approach.

For Drucker and Friedman, the woes experienced in administering university education are the result of maintaining a façade. This is a façade that conceals the self-interest of academicians and their real interests. Put differently, their devotion to a *higher calling* and a faculty's desire for independence, autonomy and academic freedom is really nothing but a turf war over "entitlement." For Drucker and Friedman, the fictional character Gordon Gekko, from Oliver Stone's film, *Wall Street*, who zealously believed that "Greed is good,"⁹³¹ is more or less the right barometer to gauge intention and successfully exploit economic utility in the university. Drucker and Friedman essentially hold the same opinion as to how the power and structure of the market ought to perform and shape higher education.⁹³²

One way to curb obstreperous faculty in the modern university is to restructure labour relations between faculty and the administration.⁹³³ In this restructuring, one solution is to use a carrot to renegotiate this labour relationship and, truly, one of the

⁹³¹ O. Stone, *Wall Street* (Century City: 20th Century Fox, 1987). This is actually an adaptation of the famous remark by Ivan Boesky that greed is "healthy." Madrick, *supra* note 833 at 88-89.

⁹³² Friedman had a very focused – microscopic – view of the world. Henwood, *supra* note 143 at: 152. As Henwood remarks, Friedman's almost obsessive neo-classical visions of the world led almost an entire generation of "economists [to] pay attention to money but not credit — that is, the medium of exchange used to grease immediate purchases and sales, but not the longer term obligations used to finance investment and consumption." This is why the recent incredulous "crisis" appeared as such a surprise to some observers (arguably, neoliberal economists who have much in common with believers in the "flat earth society").

⁹³³ G. Rhoades, *Managed Professionals: Unionized Faculty and Restructuring Academic Labor* (Albany: State University of New York Press, 1998) at 211.

carrots used securing labour peace is intellectual property. As Vaver sensibly observes, most university research and intellectual property generated within the university are “supported by public funds... [and] government control over its content is minor and indirect.”⁹³⁴ Strategically, for some advocates, this is an important fault line to explore and exploit the self-interest of the professoriate and researchers because “[g]overnment funding of intellectual labor can be divorced from government control over what is funded.”⁹³⁵ Arrangements and relationships as to the research to be conducted and affiliated with universities can be made flexible and porous. Or, in establishing research projects, corporate partnerships, arrangements and legal relationships can become licencing affairs. For private enterprise, the university was – is and will be – a useful toolbox that can be relied upon to conduct and gain research expertise. Research expertise that can be used for future product development: product development with public resources and with little government oversight. As Vaver points out:

Agencies at different governmental levels could distribute funding for intellectual labor with only the most general guidance over content. Leaving businesses, universities, and private individuals to decide which projects to pursue.⁹³⁶

In an ever-competitive world, the use of universities, their research facilities and staff (or students) are a useful and *cheap* resource. This is a common sense way to socialise risk and to privatise benefits: for what it is worth, universities are an excellent source for privatising wealth creation through resources provided at the public expense.

⁹³⁴ Vaver, *supra* note 266 at 108-109.

⁹³⁵ *Ibid.*

⁹³⁶ *Ibid.*

4.4.10 Utility and Universities in a Globalised World

A short walk down almost any Canadian law school corridor, corridors that once represented Jevons's idealism and his devotion to the *utility* associated with Hindu-Arabic numerals,⁹³⁷ classrooms are now adorned and branded with various names and logos of law firms. Interestingly, these names proudly posted outside of classroom doors remind us of the old adage and fact that “[t]he one great principle of... English [and Canadian] Law is... to make business for itself.”⁹³⁸ Under our current circumstances, one can hardly fault university and law school administrators from exploring and finding alternative funding sources given the budgetary cutbacks imposed by governments. Much of our current situation and the secret of its Balzacian “great success” is a result of neoliberalism's rhetoric of economism. The new economy's nomenclature that has come to dominate public discourse, and our (post-modern) culture under the structure of late-capitalism in the 1980s and 1990s in the academy, elevates the “bottom line” logic of economics as a hegemonic discourse. It appears that this will be our dominant discourse for the foreseeable future.

Nevertheless, the economic orthodoxy present in current economic discourse, at least until neoliberal economists began being “converted – virtually overnight – from being Friedmanite monetarists to being J.M. Keynes deficit spenders,”⁹³⁹ implies that free market economics – or at least its ideology – is presently vulnerable. That is to say, the free market ideology that has dominated and been a powerful force in shaping public policy discourse is not monolithic. Put differently, the hubris of the neoliberal agenda

⁹³⁷ It is fairly common knowledge that “Hindu-Arabic” numerals are Hindu in origin but gained their toe-hold in Europe through the ‘Silk Road’ from Arabic traders.

⁹³⁸ C. Dickens, *Bleak House* (New York: Penguin Books, 1971) at 603.

⁹³⁹ Posner, *supra* note 410 at 267.

held that it had human nature right but that is now in question. Perhaps, neoliberalism got it wrong. In a neoliberal world-view, self-interest and greed were and are the most important influences that shape and channel economic policy. The governing rationale of self-interest, one that ought to shape *all* economic planning and policies, is vindicated by the operation of the free market. To be exact, if the free market is not governing decision-making, then it should be. But, what happens when the market fails?

The refrain of the neoliberal free market system emphasises the decentralisation, deregulation, privatisation and globalisation of labour, resources and even the state.⁹⁴⁰ In the 1990s, in terms of creating the general perception for a shrinking tax base, a crisis in education was one strategy produced to legitimate structural and transformational change over the governance of education. For example, on July 6, 1995, Ontario's Education Minister, John Snobelen, in an informally videotaped speech, held that in order to transform education in Ontario the government needed to manufacture a crisis in education. "Creating a useful crisis is part of what it will be about."⁹⁴¹ "[W]e need to invent a crisis... [because] if you don't bankrupt it well, if you don't create a great crisis [then you cannot create] a useful crisis"⁹⁴² to impose free market reforms.

This suspect *useful crisis* in bankrupting provincial education – although not formally put into legislation – is a discerning and defining strategy. The mind-set being put into place was to restructure education from kindergarten to post-graduate studies according to the market. Arguably, has imprinted itself indelibly along with neoliberalism's vision of the new economy on higher education. Neoliberalism's

⁹⁴⁰ If one is even nominally aware as to the various product assistance "help lines" that are "off-shored," then one is not surprised as to the potential *off-shoring* of various government services.

⁹⁴¹ John Snobelen cited in R. Cohen, *Alien Invasion: How the Harris Tories Mismanaged Ontario* (Toronto: Insomniac Press, 2001) at 131.

⁹⁴² *Ibid.*

pedagogical agenda was to make education cost less – if not possibly make it profitable. The purported “common sense revolution” sought market efficiencies and increasingly imposed a “back to basics” pedagogy on the education system⁹⁴³ – one that eliminates *critical* thought. The ideology of self-interest is not *self-critical* concerning public education or other pedagogical pursuits. For example, Harry Arthurs observed that the *new economy* was having a deleterious impact on legal education and, indeed, on the progressive practice of law:

Cuts in public expenditure have diminished the law schools’ margin for innovation in teaching and research. Insecurity about future job prospects has dampened student enthusiasm for critical perspectives. Cutbacks in public funding for legal clinics and advocacy groups have reduced their share of the production of law and legal services. Concerns about the “bottom line” have led even affluent law firms to reduce their involvement in pro bono work. It would not be too much to say that the new economy has indeed operated as a disciplining framework for the law industry.⁹⁴⁴

Although Arthurs, perhaps wisely, does not use the language of “enclosure” in describing this situation, it is not too great a leap to see that “fiscal prudence” and “budgetary constraints” are effective policy tools to impose, as we have noted, a particular ‘way of seeing’ the world – that is to say, a particular way of capturing and enclosing the world. As we know, neoliberalism’s disciplinary framework in the “law industry” and the education industry was and is actively carving up public spaces and access to public institutions.⁹⁴⁵

⁹⁴³ See: J. Ibbitson, *Promised Land: Inside the Mike Harris Revolution* (Scarborough: Prentice Hall Canada, 1997).

⁹⁴⁴ Arthurs, *supra* note 892 at 49.

⁹⁴⁵ See: A. Hutchinson, “Legal aid or lawyers’ aid” *The Globe and Mail*, August 13, 2002, at: <http://www.theglobeandmail.com/opinion/legal-aid-or-lawyers-aid/article756097/> (last visited September 9, 2011).

4.4.11 'Progress, Growth and Optimism'

During the 1990s, one must remember that most of the *new economy* rhetoric appeared and paralleled much of the popular myths promoted in the 1980s and mimicked “the great confident roar of American progress and growth and optimism.”⁹⁴⁶ In and through the mass media, tropes such as to the “the end of history,” a “new world order”⁹⁴⁷ and “triumphant capitalism, American style,”⁹⁴⁸ came to dominate the dogma propagated through “right-wing” think-tanks.⁹⁴⁹ The co-optation of the mainstream media⁹⁵⁰ renders much contemporary commentary banal and has come to represent the “hegemony of market theology.”⁹⁵¹

In 1989, the end of history meant that we were entering a new (terminal?) point in history because liberal capitalism⁹⁵² had triumphed over the communism – or any other form of ‘democratic collectivism’ – and history, as we understood it, had come to an end.

⁹⁴⁶ Ronald Reagan cited in T.M. Schaefer & T.A. Birkland, *Encyclopedia of Media and Politics* (Washington: CQ Press, 2006) at 245.

⁹⁴⁷ G.H.W. Bush, “Address Before a Joint Session of Congress on the End of the Gulf War” March 6, 1991, at: <http://millercenter.org/scripps/archive/speeches/detail/3430> (last visited November 4, 2008).

⁹⁴⁸ Stiglitz, *supra* note 858 at 5.

⁹⁴⁹ Here is just a small sample of the plethora of “right-wing” think tanks: Cato Institute; Polyconomics; The Fraser Institute; the Canadian Council of Chief Executives; the Law and Economics Consult Group; Von Mises Institute; John M. Olin Foundation; and, of course, the Heritage Foundation. For insightful comments on this situation see: Chomsky, *supra* note 612 at 54. According to Chomsky, we ought to be cognizant that there “has been a far-reaching take over of the ideological system by the right.... [As such, there has been] ... a proliferation of right-wing think tanks, a campaign to extend conservative control still further over ideologically significant sectors of the colleges and universities, now replete with professorships of free enterprise [and chairs of law and economics, that are now] ...lavishly funded far-right student journals....” Also, see: P.R. Krugman, *The Conscience of a Liberal* (New York: W. W. Norton & Company, 2009) at 164-165. This is the “new normal.” It is also an example of the extent that neoliberal ‘intellectual’ mobilisation has been a success in universities. They pattern themselves by mimicking academic neutrality through a problematic series of, what Robert Fisk calls, “tink tanks.” See: R. Fisk, “Assad will only go if his own tanks turn against him” *The Independent*, November 16, 2011, at: <http://www.independent.co.uk/opinion/commentators/fisk/robert-fisk-assad-will-only-go-if-his-own-tanks-turn-against-him-6262679.html?origin=internalSearch> (last visited November 18, 2011).

⁹⁵⁰ See: D. Kellner, *From 9/11 to Terror War: The Dangers of the Bush Legacy* (Lanham: Rowman & Littlefield, 2003) at 60. Also, see: D. Kellner, *Television and the Crisis of Democracy* (Boulder: Westview Press, 1990) at 170.

⁹⁵¹ W.D. Burnham cited in M. Klonsky & S. Klonsky, *Small Schools: Public School Reform Meets the Ownership Society* (New York: Routledge, 2008) at 51.

⁹⁵² Liberal capitalism and liberal democracy are often conflated as the same thing. Rightly or wrongly, we ought to be sensitive to this adumbration.

Indeed, history had come to an end in the sense that what would now occur is a mere process of tinkering within the markets of nation-states and calibrating globalisation to the global marketplace. Soviet communism was vanquished. Marxism is (was) dead.⁹⁵³ As noted, capitalism had triumphed over Marxism/socialism and we could go about the business of creating wealth. Neoliberal methodological considerations, their strategies, their rationales and their philosophical assumptions had been vindicated. The triumph of neoliberalism asserted that we had gone beyond the unreliable dialectical projects of the 19th-century – we were, now, “post-historical” beings – and we could proceed with economic policies favouring wealth acquisition outside or away from the messy world of politics. In a mischievous but accurate historical reminder of the redundancy concerning the argument of “triumphant capitalism” Jean-Paul Sartre often observed, “that an ‘anti-Marxist’ argument is only the apparent rejuvenation of a pre-Marxist idea.”⁹⁵⁴

4.4.12 Political Economy of Intellectual Property

A methodology for a critical political economy of intellectual property means that it must have some set of methods, principles, and rules to examine society and the law. Rather than choosing a “black-letter”⁹⁵⁵ approach to legal hermeneutics, this examination hopes to ground itself in what Max Horkheimer believed should be a method for liberating “human beings from the circumstances that enslave them.”⁹⁵⁶ Or as Jacoby put it: “Critical theory as critique and [is a kind of] negative psychoanalysis [that] resists social amnesia and the conformist ideologies; it is loyal both to an objective notion of

⁹⁵³ Fukuyama, *supra* note 723 at 3. According to Fukuyama: “[I]t is developments in the Soviet Union – the original ‘homeland of the world proletariat’ – that have put the final nail in the coffin of the Marxist-Leninist alternative to liberal democracy.”

⁹⁵⁴ J.-P. Sartre, *Search for a Method* (New York: Vintage Books, 1963) at 7.

⁹⁵⁵ *Naglee v. Ingersoll* 7 Pa. 185 (1847).

⁹⁵⁶ M. Horkheimer, *Critical Theory* (New York: Seabury Press, 1982) at 244.

truth and to a past which the present still suffers.”⁹⁵⁷ Thus, a critical theory of intellectual property and its social theory ought to be oriented toward critiquing and changing society as a whole, in contrast to a traditional legal theory that is merely oriented to reiterating statutes and precedents by legally explaining it. Horkheimer wanted to distinguish critical theory as a radical and emancipatory form of Marxian theory, critiquing both the model of science put forward by logical positivism and what he and his colleagues saw as variations of covert positivism and, most certainly, differently from any form of authoritarian orthodox Marxism or Stalinist communism. After all, as Mikhail Bakunin dryly noted long before the new left: “[T]he people will feel no better if the stick with which they are being beaten is labeled ‘the people’s stick’.”⁹⁵⁸

4.5 The Tally Stick of Property

4.5.1 Property in Neoliberal (Roman?) Times

The stick of “private property” is a flexible though weathered incentive structure. In conventional neoliberal times, all forms of private property are assumed and tossed around as an ultimate social good. According to Campbell McConnell and Stanley Brue, in their work on microeconomics:

[P]rivate individuals and firms, not the government, own most of the property resources (land and capital)... This right of **private property**, coupled with the freedom to negotiate binding legal contracts, enables individuals and businesses to obtain, use, and dispose of property resources as they see fit... Property rights encourage investment, innovation, exchange, maintenance of property, and economic growth.⁹⁵⁹

This position encounters very little resistance – as most positions amassed through historical inertia. Since the origins of Roman law, a strange tendency has occurred to

⁹⁵⁷ Jacoby, *supra* note 751 at 18.

⁹⁵⁸ M. Bakunin, *Bakunin on Anarchy* (ed.) S. Dolgoff (New York: A.A. Knopf, 1972) at 338.

⁹⁵⁹ C.R. McConnell & S.L. Brue, *Microeconomics: Principles, Problems, and Policies* (Boston: McGraw-Hill/Irwin, 2005) at 60.

presume that all property assumes the basic form of *dominium* – a power over a “thing.” This is a tendency that remains true in many streams of our popular notions of property where individuals assume that private property is a direct connection with an object – a connection that transcends the state or is shot through with the creation of the state.

4.5.2 Encouraging Innovation and Investment

McConnell and Brue’s assertion that property rights encourage investment and innovation are taken as facts. As a rule, there is no empirical evidence offered up for scrutiny or even a diffident attempt at quantification of the claim as to encouraging investment or innovation or even a comparison as to government spending through innovation and its percentage in producing the gross domestic product.⁹⁶⁰

Indeed, there are no hard reasons that could be used to back up the assertion that private property leads inevitably to growth. In this model, as we have explored it, purposive human action and activity only gains value (meaning?) in the neoliberal mind-set through the rigours and committed road to privatisation.⁹⁶¹

The important thing about private ownership is the incentive structure that it creates. When labor services, other resources, goods, and assets are privately owned, people will have a strong incentive to engage in productive activities... [and] actions that increase the value of resources. With well-defined and enforced private ownership rights, people get ahead by helping and cooperating with others.⁹⁶²

Yet, this notion of cooperation and productive activity is problematic. As we know, in Canada, the reality is that the vast majority of land is publicly owned as Crown Land.

⁹⁶⁰ It must be acknowledged, that an economic quantification of intellectual property and the value of innovation would be virtually impossible.

⁹⁶¹ See: von Hayek, *supra* note 481.

⁹⁶² J.D. Gwatney, R.L. Stroup, R.S. Sobel & D. MacPherson, *Macroeconomics: Private and Public Choice* (eds.) J.D. Gwatney, *et. al.* (Fort Worth: Dryden, 2000) at 337.

Approximately, 11% of land in Canada is privately owned.⁹⁶³ Perhaps naïvely, we have a slightly nuanced conception of private property, public property and survival:⁹⁶⁴ yet it must be acknowledged that on the surface it appears that there is a different conceptual understanding at work than our cousins to the south. As former Bank of Canada Governor, David Dodge, has noted, “[h]aving the right technical skill capacity is very important for innovation, but there is no evidence that [there is a] ...lack of STEM [science, technology, engineering and math] skills [in Canada and] is constraining our innovation.”⁹⁶⁵ Dodge holds that “[w]hat we don’t know is what the right formula is to get innovation....”⁹⁶⁶ This is an uncertain view that incorporates, perhaps, a distinct or a more nuanced and *holistic* view of education, innovation, intellectual property and life.⁹⁶⁷

4.5.3 Private Property Versus Public Investment

In terms of private property and public capital, after the financial bailout of General Motors, Chrysler, American Insurance Group *et. al.*, the need for public bailouts (a sorted form of public ownership) appears bottomless. The most recent assessment for the Troubled Asset Relief Program (T.A.R.P.) finds that “[t]he total potential federal government support could reach up to \$23.7 trillion.”⁹⁶⁸ This sum of capital, money or value, which aside from boggling the mind, is a type of money/credit that must have a

⁹⁶³ See: V.P. Neimanis, *The Canadian Encyclopedia*, (Ottawa: Historica Foundation of Canada, 2008) at: <http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0002049> (last visited March 12, 2008).

⁹⁶⁴ For a problematic discussion of this, see: M. Atwood, *Survival: A Thematic Guide to Canadian Literature* (Toronto: Anansi, 1972).

⁹⁶⁵ D. Dodge, cite by S. Chiose, “Business, government, education need to go back to school on STEM skills: report” *The Globe and Mail*, April 30, 2015, at:

<http://www.theglobeandmail.com/news/national/back-to-school-on-stem-skills/article24175710/> (last visited May 1, 2015).

⁹⁶⁶ *Ibid.*

⁹⁶⁷ See: *Harvard College v. Canada (Commissioner of Patents)* [2002] 4 S.C.R. 45, 2002 SCC 76.

⁹⁶⁸ F. Norris “Big Estimate, Worth Little, on Bailout” *The New York Times*, July 20, 2009, at: <http://www.nytimes.com/2009/07/21/business/economy/21bailout.html> (last visited July 25, 2009).

According to Neil Barofsky, the special inspector general for the T.A.R.P. set up by the Treasury Department, “potentially” \$23.7 trillion should cover the tab.

“backstop”⁹⁶⁹ and is a good example of *public* money protecting private gain and socialising risk. Thus, the suspicious model of microeconomics and increased private property, or, at least, its self-promotion over the last three decades, appears to be suffering a rather profound disillusionment (or thrashing?), at least, for the moment.⁹⁷⁰

4.5.4 Property – So Simple... So Elusive

Why property? What is it? Why intellectual property? What do these concepts mean and why do we seem to think that its meaning is clear? These are prudent questions to ask but are rarely posed as being relevant in debates surrounding current intellectual property regimes. In the 19th century, if you were a self-proclaimed French anarchist, like Pierre-Joseph Proudhon, the issue of property was all too clear. If you were asked, what is property?: the answer was simple. Hence, Proudhon’s *dictum*: “Property is theft.”⁹⁷¹ According to Proudhon, the justification for property was a bald clash between the pursuit of tyranny for the few that runs counter to, and is pitted against, the universal democratic pursuit of liberty, equality and fraternity.

We, at first, know, almost intuitively, what property is. Yet, on closer inspection, property is a concept that transubstantiates⁹⁷² into something else. Most theories as to the

⁹⁶⁹ See: J. Creswell & L. Story, “Thain Resigns Amid Losses at Bank of America” The New York Times, January 22, 2009, at: <http://www.nytimes.com/2009/01/23/business/23thain.html> (last visited January 28, 2009). The term “backstop” cited in this article was that the government bailout was worth \$20 billion to Bank of America, and, \$90 billion to Merrill Lynch.

⁹⁷⁰ It is somewhat clear that neoliberal economists and their recent “overnight” conversion to Keynesianism could just as easily be transformed with a ‘deathbed conversion.’ That is, in their obsequious fashion they could quickly return to their original neoliberal creed. They must intuitively know Voltaire’s deathbed caution that: “Now, now my good man, this is no time for making enemies.” See: Voltaire cited in R. Holmes, “Voltaire’s Grin” 42(19) The New York Times Rev. of Books, November 30, 1995 at: 55.

⁹⁷¹ P.-J. Proudhon, “The System of Economic Contradictions” in *No Gods, No Masters: An Anthology of Anarchism* (ed.) D. Guérin (trans.) P. Sharkey (Edinburgh: Scotland, 2005) at 55. This statement has also been translated as “Property is theft.” See: P.-J. Proudhon, *What is Property?: An Inquiry into the Principle of Right and of Government* (trans.) B.R. Tucker (Princeton: Benj. R. Tucker, 1876) at 11.

⁹⁷² See: *The Concise Oxford Dictionary of the Christian Church* (ed.) E.A. Livingstone (Oxford: Oxford University Press, 1977) at 520. “The conversion of the whole substance of the bread and wine into the

origin of property are related to the ‘Fall’ of man and humanity being banished from the Garden of Eden. Prior to the Fall, human beings had no sense of private property and all was held in common.

Objectively, if that is possible, it seems that in our current *normative* legal sense that property might be misguided or “accidental.” In law, the meaning of ‘intangible property’ – a category to which intellectual property belongs – appears sturdy and sound. Or is it? Black’s Law Dictionary defines intangible property as “used chiefly in the law of taxation.... [T]his term means such property has no intrinsic and marketable value, but is merely the representative or evidence of value, such as certificates of stock, bonds, promissory notes, and franchises.”⁹⁷³ Intangible property has no “intrinsic or marketable value”? It is only mere “evidence of value”? So how does that fit with our understanding of intellectual property? In one sense, the statutory definition of intellectual property seems clear: but its intangibility tends to cloud the issue. How one answers these questions greatly influences the method that one chooses in coming up with an answer as to the value of intellectual property.

In coming to grips with and perhaps coming toward an understanding of “intangible properties,” such as intellectual property, where does one begin? Usually, methodology refers to a “known” set of rules, postulates or procedures that are employed by a specific discipline in order to epistemologically *uncover* its “first and most elementary principles of human knowledge.”⁹⁷⁴ If we are searching for the most elementary principles of human knowledge, the notion that one individual can own an

whole substance of the Body and Blood of Christ, only the accidents (i.e. the appearances of the bread and wine) remaining.” Hence, is the material world is, in ecclesiastical terms, an accident?

⁹⁷³ H.C. Black, *Black’s Law Dictionary*, 6th ed. (St. Paul: West Publishing Co., 1990) at 809.

⁹⁷⁴ R. Descartes, *The Method, Meditations, and Selections from the Principles of Descartes* (trans.) J. Veitch (Edinburgh: William Blackwood and Sons, 1880) at 265.

idea appears either preposterous or may be so simple that it is true. Similar to McConnell and Brue's assertion, where property rights encourage investment and innovation, a well-worn argument for expanding intellectual property rights is that it will facilitate the overall efficiency of the market. In lieu of our current predicament, this position could be labelled naïve, misguided or, if followed logically, its reasoning will be found circular but have *utility* – that is, it is possible that “it works.”

Despite suggestions to the contrary, rights and the rights to property have changed and evolved radically since the decline of the Roman Empire. The Roman view of property was exclusively one of “private property”⁹⁷⁵ and an absolute right to a possession. Property rights, like all rights, are historically contingent and – can be – inherently unstable and fickle concepts. The post-Roman period in England led to a very different conception of rights and rights to property. The state can allocate rights to one party – or perhaps many parties – to resources and their use. The state can elevate ownership over and against traditional users. The courts at a tortuous whim can dress-up a position over another and find one to be politically or *juridically* correct and abolish the rights of others.⁹⁷⁶ In doing so, the law gives rights “with one hand, and take[s them] away with the other.”⁹⁷⁷ Yet, property and the allocation of its uses and the access to scarce resources give a fundamental priority in the historic rhetoric of property to liberal democracy.⁹⁷⁸ Thus, in Derrida's sense, what we are trying to examine and explain – to

⁹⁷⁵ Graeber, *supra* note 10 at 199.

⁹⁷⁶ In terms of the pliability of democratic rights see: *Citizens United*, *supra* note 39. Also, one only needs to be casually aware of the historic plight of the rights of First Nations peoples in the Americas to understand their contingency. See: Galeano, *supra* note, 249. Also, see: J. Borrows, “Wampum at Niagara: The Royal Proclamation, Canadian Legal History, and Self-Government” in *Aboriginal and Treaty Rights in Canada* (ed.) M. Asch (Vancouver: UBC Press, 1997).

⁹⁷⁷ J. Milton, *The Prose of John Milton* (London: J.R. & C. Childs, 1835) at 421.

⁹⁷⁸ For an interesting discussion on the preference for property rights and “individual liberty” opposed to collective security in Canada, Richard Risk provides an important assessment of the Great Depression and

lay flat, to observe and get at – is the *history* of the history of property. Specifically, to find a process to unfold the rhetoric concerning the history of the history of intellectual property.⁹⁷⁹

4.5.5 The Problematic Nature of Property

It must be emphasised that a critical investigation into the nature of intellectual property is obligated to produce an adequate description as to the problematic nature of property. Thus, merely ascribing intellectual property as ‘Eurocentric,’ as a unified body of law and its inherent power, no matter how accurate, would be “guilty of such [an] ‘over-totalisation’.”⁹⁸⁰ That is to say, it would be a process of misapprehension, and possibly an intentional distortion, of the historical record. Prior to the consolidation of post-Reformation England and the formalisation of land ownership, which commenced under Queen Elizabeth, and the sputtering but forceful and successful attempts to enclose the commons, property interests, either tangible or intangible, were uneven and broadly interpreted and thoroughly understood – or misunderstood – as needing to have mutual benefits for all parties.

4.5.6 State Centralisation – Not an Invisible Hand

It is only with the enormous resources and centralisation of the state during the 16th and 17th century England that enclosure could occur and introduce a new form of social relationship as to property. According to David Vaver, intellectual property, and, in our case, the protection afforded by patent law, was part of the product of a strong

the problem of economic rights in a time of crisis. See: R.C.B. Risk, “Canadian Law Teachers in the 1930s: ‘When the World was Turned Upside Down’” (2004) 27 Dalhousie L.J. at 43. Also, see: R.C.B. Risk, “Here Be Cold and Tygers: A Map of Statutory Interpretation in Canada in the 1920s and 1930s” (2000) 63 Sask. L. Rev. at 195.

⁹⁷⁹ This is what Derrida refers to, in one of his lectures on Hannah Arendt’s ‘truth and politics’ thesis, as the history of “the history of the lie.” See: J. Derrida, “The History of the Lie: Prolegomena” in *Without Alibi* (trans.) P. Kamuf (Stanford: Stanford University Press, 2002) at 38.

⁹⁸⁰ T. Eagleton, *Myths of Power: A Marxist Study of the Brontës* (Basingstoke: Macmillan, 1999) at xiii.

utilitarian and economic argument that asserted and formalised particular types of rights. In the historical trajectory of monarchical, mercantile and the burgeoning development of property rights and intellectual property rights, and capitalist interest in new forms of *rentier* income, Vaver suggests that without such rights “much research and creativity would not be carried on or would not be financed by capitalists.”⁹⁸¹ Concerning “financing,” it should be added, it is always heavily subsidised by the public purse.

One could imply that this means that the law must ensure the property interests of *rentiers*, due to their *innate* prosperity and creativity. These *rentiers*, in their search for knowledge and wisdom, are tacitly and ultimately tied to a form of capitalist production and reproduction and the entrenched system of ownership that supports private property, at the end of the day, benefits innovation. This assumption presupposes that “intellectual property” is a natural outgrowth of the “market.” That the production and legal exchange of intellectual property, and its circulation through the dense and complex vascular system that is late-capitalism, somehow leads to the market making automatic and “efficient” allocation of resources. In a sense, it is positing the fallacy of *post hoc ergo propter hoc*. In particular, intellectual property is recognised after the fact as a central component of the life’s blood of late-capitalism and as a kind of “oxygen of democracy”⁹⁸² that fuels future innovation. What is more, it is imputed that there exists a “common sense” approach to intellectual property, one that shows us demonstrably that

⁹⁸¹ D. Vaver, *Copyright Law* (Toronto: Irwin Law Inc., 2000) at 10.

⁹⁸² See: J. Winter, *Democracy’s Oxygen: How the News Media Smother the Facts* (Montréal: Black Rose Books, 1997). Winter would not be in favour of this usage. Winter ascribes this phrase to the media, which, in its broadest sense, encapsulates most – if not *all* – forms of intellectual property.

without the legal protection of this specific type of property right, our technological, and market, society would collapse into anarchy.⁹⁸³

4.6 Conclusion

Throughout this chapter, I have outlined the importance of how one might methodologically approach socio-legal research. The method(s) used to unpack social science and our jurisprudence has had a profound impact on how we look at social and the legal-politico⁹⁸⁴ problems surrounding intellectual property regimes. Our methods influence as to how we situate ourselves and our understanding of the problem of neoliberalism. They influence our comprehension concerning property and the operation of intellectual property. As Alain Lipietz suggests, in his deconstruction of the fictions of liberalism, the *social relations* and the anthropological problems/assumptions of a “natural” *homo oeconomicus* of property is a peculiar fiction:

[T]ales are what they are.... [E]ach one is important because it puts before us the story-teller's perception of reality. What is recounted and what is ignored... show us what the story-tellers think is important in their lives and their history. Most people, of course, make a sharp distinction between such fables and a theoretical text, yet the connection between the concepts and the reality is basically the same; it is like a flashlight which shines into the darkness of a cavern.⁹⁸⁵

⁹⁸³ See: R. Horton, “African AIDS Beyond Mbeki: Tripping into Anarchy” 356 – 9241 (2000) *The Lancet* at: 1541-1542. “Anarchy” as a 19th and 20th-century philosophy certainly does not advocate the collapse of civilisation and society: rather, anarchy proposes direct governance as opposed to the barbarism of totalitarianism or capitalism. Also, see: Bakunin, *supra* note 158; P. Kropotkin, *Mutual Aid: A Factor in Evolution* (London: William Heinemann, 1902); E. Goldman, *Anarchism and Other Essays* (New York: Dover, 1969). Also, for an excellent but overlooked discussion of the historical contribution of anarchism to democratic thought and development from William Godwin to “Paris 68” see: D. Miller, *Anarchism* (London: J.M. Dent & Sons, 1984).

⁹⁸⁴ M.R. Madsen, “France, the UK, and the Boomerang’ of the Internationalisation of Human Rights (1945-2000) in *Human Rights Brought Home: Socio-legal Studies of Human Rights in the National Context* (eds.) S. Halliday & P.D. Schmidt (Oxford: Hart, 2004) at 73.

⁹⁸⁵ A. Lipietz, “Reflections on a Tale: The Marxist Foundation of Concepts of Regulation and Accumulation” (1988) 26 *Stud. Pol. Econ.* at 13. Also, see: Graeber, *supra* note 10. Graeber’s recent contribution to the mythopoeics of the economic history is poignant as to origins of money and impacts on our current understanding of “debt.” It also reflects indirectly as to the “debt” owed to the generational and so-called “up-stream” contributions of knowledge surrounding intellectual property.

As to our story, the methodological flashlight used is to problematise how one's particular understanding of intellectual property regimes can undermine the work of public universities, university researchers and harm technological innovation. Neoliberalism has been an extremely powerful force in shaping and directing the debates surrounding the public sphere. Neoliberalism has told *its* story as an economic "win-win situation" of competition and globalisation for the last thirty years, but "no matter [what] their 'private' [or privatising] appearance, it is political authority that designates markets, money and wage relations and thus even gives legitimacy and permanence to systems of social relations."⁹⁸⁶ Hence, neoliberalism's current crisis may open the window and may cause a moment of critical reflection as to how our intellectual property regimes might develop and how we want to develop the public sphere and the university.

The conflict between the two liberal property models originally formed in the 17th and 18th centuries are part of the origin of our confusion as to the purpose of intellectual property. That odd amalgam of Hobbesian and Lockean visions of property provides a problematic framework that is used to justify individual ownership and set the conditions for the capitalist relations of ownership, production and reproduction.⁹⁸⁷ Hence, the socio-economic struggles that have shaped and modified our understanding of intellectual property are problematic and, as Lyotard might suggest, are not *neutral* or *apolitical*.

Over the past three decades, neoliberalism's problematic understanding of property's history has shaped much of the debate surrounding intellectual property. The push to solidify laws and agreements according to neoliberal values, as to intellectual property within the university, has benefited from the decline of the welfare state and the

⁹⁸⁶ *Ibid.*

⁹⁸⁷ This problem, although interesting, is one that due to brevity cannot be adequately dealt with in the limits of this discussion. For a concise insight into this issue see: Macpherson, *supra* note 762.

weakness of public universities and their precarious under-funding.⁹⁸⁸ The institutional constraints and the full pressure of the neoliberal agenda compel research professors, attempting to establish careers, and to enjoy the fruits of their labour, and make useful scientific discoveries, to adopt their new rôle in the knowledge economy. The issue of private property and the exclusive rights that can attach to these discoveries have their origin in three hundred-year-old theories of ownership placed in one's labour – mental labour that is seldom, if ever, the sole genius of the individual inventor. As we shall see, when intellectual property rights were relatively weak, science, technology and the research conducted by universities experienced their greatest flourishing. Yet, when intellectual property rights are strengthened, they impede scientific process and function to transfer and concentrate massive amounts of wealth and result in the (unjust?) enrichment of a few individuals. As Michael Perelman puts it, historically science, both inside and outside the university, and its progress has always depended on mutual respect and cooperation⁹⁸⁹ and stronger “intellectual property rights are to science what tollbooths are to highway traffic.”⁹⁹⁰ It is to tollbooths of knowledge economy that we will now turn.

⁹⁸⁸ Arguably, this has been the same strategy used by neoliberal governments to push for corporate and middle-class tax cuts, to starve the state of revenue, and, then, declare the state has failed. It is a focused effort to reshape society and cast it in a neoliberal mould.

⁹⁸⁹ Perelman, *supra* note 673 at 77.

⁹⁹⁰ *Ibid* at 195.

5 CHAPTER FIVE – A REVIEW

5.1 Evidently, There are Problems with Knowledge, Regulation, ‘Primitive Intellectual Accumulation’ and Its Discontents

5.1.1 From Privilege to Property?

If there be any thing in the world common to all mankind, science and learning are in their nature *publici juris*, and they ought to be as free and general as air or water.

Lord Camden⁹⁹¹

David Vaver observed, concerning the overlay of Hobbesian and Lockean theories as to the state and property, that it would appear that intellectual property burst onto the constitutional stage of the 18th-century nation-state almost like “Venus on the half-shell.”⁹⁹² By transforming the right and *privilege* of ownership to intellectual property, it merged or attempted to graft itself onto the fully formed notion of *natural* ownership.⁹⁹³ For a short time during the 18th-century, it might have been possible that the economic history of intellectual property in Anglo-American law could have been envisioned and reconceptualised as *real* property. In other words, forms of intellectual property could be viewed as a type of quasi-natural or common law right.⁹⁹⁴ Yet, with a pinch of salt or a “teaspoonful of brains,” cooler heads prevailed and, for lack of a better phrase, *absolute ownership* of knowledge was rejected. A temperate understanding similar to Bernard of Chartres, the twelfth-century French/Norman neo-Platonist,

⁹⁹¹ See: *Donaldson v. Beckett*, *supra* note 611.

⁹⁹² P.J. Farmer (a.k.a. Kilgore Trout) *Venus on the Half-Shell* (New York: Dell Publishing, 1975). This alias Kilgore Trout should not be mistaken for Vonnegut’s fictional character “Kilgore Trout.” Vonnegut was not too pleased with Farmer’s appropriation of the character Trout: “So it goes.” Also, see: S. Botticelli, *The Birth of Venus (1482-1485)*, Florence, Uffizi Gallery at: <http://www.haltadefinizione.com/magnifier.jsp?idopera=10&lingua=en> (last visited June 30, 2009).

⁹⁹³ D. Vaver, *Intellectual Property: Critical Concepts in Law Vol. 1*, (London: Routledge, 1996) at 3.

⁹⁹⁴ Vaver, *supra* note 266 at 58. Also, see: *Donaldson v. Beckett*, *supra* note 611. Lord Mansfield, who also ruled wisely in the *habeas corpus* slavery case of James Somersett, astutely commented that should a “common law” right exist in copyright, then it would mean that knowledge could be locked up and *owned* by the copyright holder. Similar to his holding in *Somersett*, Lord Mansfield understood that only “positive law” could be invoked to justify such broad, unusual, and ‘odious’ claims of ownership.

encapsulated that these forms of *hubris* as to the ownership of ideas must be tempered with the understanding that: “In comparison with the ancients, we stand like dwarfs on the shoulders of giants.”⁹⁹⁵

5.1.2 The Blurring of Lines of Property(es)

Yet, the blurring of the lines between *real* and *intangible* property in knowledge and debatable information since the 18th-century has been profound. It has produced seemingly endless confusion and lingering sentiments (and resentments) as to *propriety* as an idea and as being identical with *real* property. Indeed, that ideas and expressions exist as property rights and has been promoted as a fact in many people’s minds.⁹⁹⁶ To confirm this, one needs only turn to the notions present in the popular media that equates copyright infringement with “theft”⁹⁹⁷ or proponents of strengthening copyright comparing infringement with sexualised murders.⁹⁹⁸

⁹⁹⁵ Bernard of Chartres, cited in John of Salisbury, *The Metalogicon of John of Salisbury: A Twelfth-century Defense of the Verbal and Logical Arts of the Trivium* (trans.) DD. McGarry (Berkeley: University of California Press, 1955) at 167. Also, see: Bernard of Chartres, cited in R.K. Merton, *On the Shoulders of Giants: A Shandean Postscript* (London: Collier-Macmillan, 1965) at 40. Merton takes great pains to point out that the “popular” source for the famous quotation is oft-misattributed to Sir Isaac Newton and that the ancient citation attributed to Lucan’s work, by Diego de Estella in the *Didacus Stella*, is also or potentially misleading. Thus, Merton concludes that this historic use of ‘standing on the shoulders of giants’ was coined by Bernard of Chartres. Of course, one could always ask the bothersome question concerning where Bernard of Chartres borrowed the phrase.

⁹⁹⁶ See: Vaver, *supra* note 266. Also, see: R. Deazly, *Rethinking Copyright: History, Theory, Language* (Cheltenham: Edward Elgar, 2006) at 142. As Ronan Deazley puts it: “[I]ntellectual properties are not properly property rights, they are monopoly grants, but for the sake of convenience let us refer to them as property rights: after all, it does no harm.”

⁹⁹⁷ Editorials/OpEd, “Stands Strongly Against Theft on the Internet...” The New York Times, June 28, 2005, at: <http://www.nytimes.com/2005/06/28/opinion/28tue2.html> (last visited December 15, 2008). It is rather ironic that this notion of theft still persists. Perhaps it consists as to those whose interests could be expanded and protected. If The New York Times would spend a little money on investigating one of its most profitable advertisers – that is, one of the richest men in the world, Bill Gates – it might find out that he “borrowed” heavily to create his first operating system for IBM. According to Andrew Schulman, co-author of *Undocumented DOS* and *Undocumented Windows*, and author of *Undocumented Windows 95*: “In 1981, Microsoft paid Seattle Software Works for an unauthorized clone of CP/M, and Microsoft licensed this clone to IBM which marketed it as PC-DOS on the first IBM PC in 1981, and Microsoft marketed it to all other PC OEMs as MS-DOS.” See: A. Schulman, “The Caldera v. Microsoft Dossier” in O’Reilly Media, at: <http://www.oreillynet.com/network/2000/02/07/schulman.html> (last visited December 3, 2010). Also, for a slightly more biased or declarative account of this “unauthorized clone” see: Digital Research “CP/M: The First PC Operating System” at: <http://www.digitalresearch.biz/CPM.HTM> (last visited

Remarkably, the nautical yarn of intellectual property comes down to the political story that one wants to tell, convey or ideologically embed as the correct one in our *democratic society*.⁹⁹⁹ As has been presented, the suspect natural or liberal anthropological and economic *tale* of property and the state is questionable. Rather, it is “a tale Told by... [Eurocentric neoliberal economists¹⁰⁰⁰] ...full of sound and fury, Signifying nothing.”¹⁰⁰¹ Yet, this is an anchor that drags down and is lost on most law and economics pundits and advocates. Still, the ideological baggage of *self-interest* and “selfishness”¹⁰⁰² are obdurate, self-reproducing, and incriminating neoliberal themes. These concepts are powerful and continue to shape public policy and policy of intellectual property. In intellectual property circles, these concepts are either explicitly

December 3, 2010). By comparison, see: S.K. Sandeen, “The Value of Irrationality in the IP Equation” in *Intellectual Property Law: Economic and Social Justice Perspectives* (eds.) A. Flanagan & M.L. Montagnani, (Cheltenham: Edward Elgar Publishing, 2010) at 54. As Sandeen points out, amongst many others, it was the contribution of Tim Berners-Lee and his refusal to patent the hypertext system, a system that eventually became the World Wide Web, that led directly to today’s so-called “information revolution.” Berners-Lee intuitively understood that patents would obstruct innovation concerning the development of the Web.

⁹⁹⁸ There is the infamous statement by Jack Valenti, before Congress, who held that intellectual property infringement through video recording demonstrates the “savagery and the ravages of this machine.” Valenti held that copyright infringement could be linked and equated to the crimes of the Boston Strangler. See: J. Valenti, cited in “Hearings before the Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee of the Judiciary, House of Representatives, Ninety-seventh Congress, Second Session on H.R. 4783, H.R. 4794 H.R. 4808, H.R. 5250, H.R. 5488, and H.R. 5705, Serial No 97, Part I, Home Recording of Copyrighted Works, April 12, 1982” (Washington: US Government Printing Office, 1982).

⁹⁹⁹ For a chilling description of democratic ideology see: Bernays, *supra* note 340 at 37. As Bernays suggests: “We are governed, our minds are molded, our tastes formed, our ideas suggested, largely by men we have never heard of. This is a logical result of the way in which our democratic society is organized.” With impeccable logic like this, who needs to be *reasonable*?

¹⁰⁰⁰ See: Ö. Mehmet, *Westernizing the Third World: The Eurocentricity of Economic Development Theories* (London: Routledge, 1999).

¹⁰⁰¹ W. Shakespeare, *Macbeth* (eds.) W.G. Clark & W.A. Wright (Oxford: Clarendon Press, 1869) at 68.

¹⁰⁰² One must be aware as to the popular impact and fascination America has had with the works of Ayn Rand. To “plumb” the depths of Rand’s work is to discover a literary landscape full of pastiche and an utterly juvenile philosophic worldview – a wasteland. See: J. Burns, *Goddess of the Market: Ayn Rand and the American Right* (Oxford: Oxford University Press, 2009). Also, see: B. Doherty, “Why Ayn Rand is Hot Again” The Washington Times October 5, 2009, at:

<http://www.washingtontimes.com/news/2009/oct/05/why-ayn-rand-is-hot-again/> (last visited October 10, 2009). Also, of course, see: A. Rand, *The Virtue of Selfishness* (New York: Penguin, 1964). Arguably, one of the most simplistic examples in neoliberalism’s tawdry and sloppy efforts to prop up its misconstrued notion of *self-interest* being the heart and soul of human “nature.”

or implicitly used to construct most neoliberal policy strategies. Put differently, the tale surrounding Anglo-American business law, the demand for stronger intellectual property protection, and its economic *raison d'être*, retain “the astonishing belief that the nastiest motives of the nastiest men somehow or other work for the best results in the best of all possible worlds.”¹⁰⁰³

5.1.3 State Formation and Its Crises

Modern intellectual property, at least as we understand it, remains the product and by-product of liberal state formation, state intervention, and capitalist relations of property, production and reproduction. The construction, maintenance and enforcement of a capitalist economy, and the late-capitalist state, and the potential expansion of intellectual property, are deeply entrenched and ingrained processes. They are processes of coordination and state action on an enormous scale: especially, the rule of law of intellectual property must be embedded in the formation of the *totally* administered state and the regulation (or lately, the non-regulation?)¹⁰⁰⁴ of capital in a globalised world. In terms of capitalist forms of production, what is important for our discussion are the kinds

¹⁰⁰³ J.M. Keynes cited in G. Schuster, *Christianity and Human Relations in Industry* (London: Epworth Press, 1951) at 109.

¹⁰⁰⁴ As has been previously noted, ‘de-regulation’ or ‘non-regulation’ in the modern state is merely a form of “re-regulation:” that is, economic resources are re-directed to targeted industries and subsidises their interests and profits at public expense or cost to the public purse. See: W. Pfaff “Deregulation gone mad” The New York Times April 3, 2006 at: http://www.nytimes.com/2006/04/03/opinion/03iht-edpfaff.html?_r=1 (last visited May 10, 2007). In 1980, Tom Allison, at the time chief counsel to the U.S. Senate Commerce Committee, was a man who played a key role in the deregulation of the U.S. airline industry. In 2006, Allison opined “that if senators had known then what they know now about airline deregulation, they would never have passed the measure.” According to William Pfaff, Allison held that deregulation resulted in a “massive shift of airline debt to the public...” This massive shift of debt to the public occurred “via a federal corporation established to pay the pensions (or a part of them) of the employees of airlines driven out of business or forced into bankruptcy.”

of governance used to secure future innovation within an economic system – specifically, late-capitalism – that is prone to on-going and continual structural crisis.¹⁰⁰⁵

Up until the late 19th-century and the crystallisation of the industrial capitalism, knowledge tended to resist commodification in the form of patent law.¹⁰⁰⁶ As has been suggested, knowledge for most of human “civilisation” has been the result of social relations not “individual” genius under the law or any other circumstances. Yet, the distortion and influence of neoliberalism over the last thirty to forty odd years – in the context of two hundred years of liberal capitalism – has meant that the relatively recent tapestry (or crêpe in the window) of free market ideology has cloaked (or choked) the historical discussion of knowledge as merely an economic or property relationship. Knowledge as a social relationship – a relationship that resists commodification – is now mostly known as a property interest in discrete bits of information: bits of information that can be owned or economically exploited for limited periods. As such, the privatisation of ideas lends itself to the appearance that it is almost “natural.” Hence, what has become relevant if not central or, at least, has become one of the “great questions of contemporary American [and global] political economy is ...*who shall control the commons?*”¹⁰⁰⁷

¹⁰⁰⁵ See: Marx, *supra* note 67. Also, see: D. Harvey, *The Enigma of Capital: And the Crises of Capitalism* (Oxford: Oxford University Press, 2010).

¹⁰⁰⁶ As we know, the historical production done by guilds meant that membership barriers and trade secrets were used as practices to control knowledge. Guild membership was a way to control techniques of production or the devices used in production and this allowed them to concentrate wealth and power. The organisation’s monopoly on knowledge in a manufacturing process made it a powerful economic block in proto-capitalist development.

¹⁰⁰⁷ D. Bollier, “Reclaiming the Commons” (2002) Boston Rev. at: <http://www.bostonreview.net/BR27.3/bollier.html>, (last visited August 25, 2005).

5.1.4 Social Relations and Knowledge

As Marx astutely observed, the forces of production – the mode of production and the means of production – deeply influence the overall structure of a society.¹⁰⁰⁸ Or, put differently: “a technology is always, in a full sense, social. It is necessarily in complex and variable connection with other social relations and institutions....”¹⁰⁰⁹ Technologies are not just new objects that do things “differently.” Technologies are more than that; they are about new ways of collectively thinking and doing things differently.

Remarkably, the historically distinctive character of the medieval guild system was geared to the individual production of a “masterpiece” as the final goal of apprenticeship – an apprentice’s achievement would be one that would finally admit one to one’s chosen guild or profession. Similarly, with the formation of church-run universities in the middle-ages, students entered and were required to complete a series of examinations leading to the granting of a “certificate, the *licentia docendi*, or license to teach.”¹⁰¹⁰ As occupational licenses, or degrees, they granted their possessors a monopoly to teach in various parishes. It was this monopoly to teach that came to be founded in the common law. Indeed, one of the older cases that crystallised the common law on the issues of educational monopolies was *Hamlyn v. More (the Case of Gloucester School, 1410)*.¹⁰¹¹ This was a case that involved the education of children and competition amongst educators in a small English town. In *Hamlyn*, two masters of the grammar school in Gloucester brought an action against another master who had set up

¹⁰⁰⁸ See: K. Marx, “The German Ideology” in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton & Company, Inc., 1978).

¹⁰⁰⁹ R. Williams, “Communications Technologies and Social Institutions” in *Contact: Human Communication and Its History* (ed.) R. Williams (London: Thames & Hudson, 1981) at 227.

¹⁰¹⁰ J. Kirkpatrick, *Montessori, Dewey, and Capitalism: Educational Theory for a Free Market in Education* (Claremont: T.L.J. Books, 2008) at 157.

¹⁰¹¹ *Hamlyn v. More (the Case of Gloucester School, 1410)* B. & M. 613.

a rival school in the parish. The competing master undercut the original masters “and compelled them to lower their fees in order to survive the competition.”¹⁰¹²

As the administration of universities shifted from church-run institutions to institutions regulated by the state, so, too, did the concerns of the policy shift from ecclesiastic matters toward acquiring the skills and knowledge that once belong exclusively to the guilds. State policies as to higher education geared itself toward the material world, to scientific progress, to economics and became one of the central policies and goals of an industrialising society – yet, it must be noted, this was not the *only* goal of the university. The university, intentionally or not, stood as an example of a free institution in societies ravaged by ecclesiastic strife and political interference.

Thus far, at least for the last three hundred years, modern scientific knowledge has had to negotiate the formation of the nation-state, the development of the modern university and the “low hanging fruit” of the age of industrial invention.¹⁰¹³ Industrialisation and capitalism revolutionised our world and what appeared as solid social relations grounded in a fixed universe and world that melts “into thin air” and produced a series of crises throughout the age of capitalism.¹⁰¹⁴ Much of the history and literature of the modern state is about how we as a society manage its risks.¹⁰¹⁵

¹⁰¹² J.H. Baker, *An Introduction to English Legal History* (London: Butterworths, 1990) at 510.

¹⁰¹³ It must be noted that the imaginative capacity of what McLuhan would call the evolution from “mechanical man” to “digital man” has remained relatively constant for the last 500 years. That is, the engineering imagination has been about reducing the number of mechanical operations needed to run a machine, the number of parts in machines and skilled workers needed to support and maintain this mechanised society are not that different to the ‘new’ digitised knowledge. The ‘great leap forward’ of the post-WW II era was finding ways of taking and processing mechanical information and simplifying it into digital formats or processes.

¹⁰¹⁴ Marx, *supra* note 2 at 34. As Marx points out, capitalism is thoroughly revolutionary in that it attempts to insert itself into every aspect of human endeavour and attempts to commodify all things.

¹⁰¹⁵ See: U. Beck, *Risk Society: Towards a New Modernity* (New Delhi: Sage, 2004).

5.1.5 Managing Risk and Modernity

The German sociologist, Ulrich Beck, suggests that our current stage of capitalist development is an attempt to manage the risks we have created in a rational and systematic manner. Expressly, our current stage of development consists in minimising crises and insecurities: minimising problematic “global warming;” “peak oil” or “glut oil;” environmental degradation; and, the numerous “wars” on cancer, drugs and terrorism.¹⁰¹⁶ These are crises we have collectively created through our own ingenious banality and are part of the “risks of modernization.”¹⁰¹⁷ They, of course, create ‘unintended consequences’ and *other* unforeseen risks.¹⁰¹⁸ One of the central institutions and instruments we use to minimise risk – to socialise risk, minimise, and actuarially spread risk – in a modern society is through the regulatory state.

¹⁰¹⁶ For a cogent unpacking of our current crisis, see: S. Žižek, *Living in the End Times* (New York: Verso, 2011).

¹⁰¹⁷ Beck, *supra* note 1015 at 21.

¹⁰¹⁸ To confirm the *negative dialectic* of this problem, one only has to resort to the hagiography of the brilliant mathematician, *Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel* winner, and paranoid schizophrenic John Nash in the Hollywood film “A Beautiful Mind.” See: S. Nasar, *A Beautiful Mind: A Biography of John Forbes Nash, Jr., Winner of the Nobel Prize in Economics, 1994* (New York: Simon & Schuster, 1998) at 189. Nash’s great *scientific* contribution was his purported “game theory” that became the logic that lay behind the nuclear cold war strategy of “mutual assured destruction.” As a mathematician, Nash’s insights into human nature and behaviour are problematic. Nash held that individuals never seek compromise, rather the best situation that can be hoped for is an *antagonistic* equilibrium – dare I say a Hobbesian world-view. J. Gill, P. Johnson & M. Clark, *Research Methods for Managers, 4th Ed.* (Los Angeles: Sage, 2010) at 59. According to John Gill, Phil Johnson and Murray Clark, the society assumed by game theorists such as Nash is “characterized by a war of all against all as it is constituted by the actions of self-serving individuals continuously strategizing about what they should do based upon their low-trust apprehension of other people. Of course what one could also argue is that perhaps the only people who believe that all people are like this are some economists and all psychopaths!” Nash’s “So Long Sucker – Fuck Your Buddy” strategy has been morticianised into the ostensible terms and various models that economics departments teach as the “prisoner’s dilemma.” Nash’s sad description of the “prisoner’s dilemma” has unfortunately been used endlessly by educators, neoliberals economists and neo-conservatives pundits, politicians, journalists, amongst others, to describe a pattern of behaviour that reinforces their own distorted (if not Freudian projections) onto the isolated and paranoid *nature* of (“cold war”) human beings. Also, see Adam Curtis’s brilliant films, specifically see: A. Curtis, *The Trap: What Happened to Our Dream of Freedom – “Fuck You Buddy”* (London: British Broadcasting Corporation, 2007) at: <http://video.google.com/videoplay?docid=6075374506314368402#> (last visited March 9, 2009).

With the rise of the regulatory state, what Max Weber called the future age of the “iron cage,”¹⁰¹⁹ a fairly standard pattern of industrial and social development came to dominate the essential features of the modern nation-state. The centralisation of government bureaucracy, industrial production, finance, standardisation of measurements, the professionalisation of skills, and the consolidation of legal regimes, witnessed the growth of the regulatory state. The expansion of government intervention and regulation from public schools to the business of regulating business and the *non-reflexive* free enterprise system, and, in our case, the regulation and enforcement of intellectual property, and eventually its rôle in shaping universities, has marked this period.

5.1.6 Managing Information and Knowledge

As we have noted from a labour perspective, the industrial and managerial speed up of the production process in industrial capitalism was about power, control, information and knowledge. Power and control meant the “de-skilling” of the labour process through scientific management and one of its principle architects was Charles Taylor.¹⁰²⁰ The knowledge of the production process through industrial secrets and patents were part of the managerial strategy for control. To Perelman:

¹⁰¹⁹ M. Weber, *The Protestant Ethic and the Spirit of Capitalism* (Mineola: Dover Publications, 2003) at 181. Should any one question the validity of Weber’s prediction, one should consider John Urry’s observation that: “Automobility is thus a system that *coerces* people into an intense *flexibility*. It forces people to juggle fragments of time so as to deal with the temporal and spatial constraints that it itself generates. Automobility is a Frankenstein-created monster, extending the individual into realms of freedom and flexibility whereby inhabiting the car can be positively viewed and energetically campaigned and fought for, but also constraining car ‘users’ to live their lives in spatially stretched and time-compressed ways. The car is the literal ‘iron cage’ of modernity, motorized, moving and domestic.” J. Urry, “The System of Automobility” (2004) 21(4/5) *Theo., Cult. & Soci.* at 28. Also, see: J.J. Flink, *America Adopts the Automobile, 1895-1910* (Cambridge: The MIT Press, 1970).

¹⁰²⁰ It must be noted that Adam Smith’s “division of labour” in the process of making pins precedes scientific Taylorism by over a hundred years. See: A. Smith, *supra note* 163. Yet, Smith’s division of labour as to making pins is not comparable to the “mass” scientific assembly/production line and the logic enforced by Taylorism.

Taylor laid out a plan to destroy the intellectual property of workers. Indeed, Taylor could achieve his goal even if his managerial based knowledge were universally available. All that was required, so far as Taylor was concerned, was to break the workers' monopoly of knowledge. So long as labor on the shop floor controlled the bulk of the information about the production process... [they had power]. Workers were not seen as repositories of information, but merely as shirkers who required managers to keep them diligent. ...As soon as management began to find ways to break the workers' monopoly of information and to establish themselves as a major source of production information, economists suddenly began to take note of the great importance of information.¹⁰²¹

One way to manage the knowledge that was universally available was to formalise it: indeed, to structure and organise it under state action by creating “gate-keepers”¹⁰²² of higher education.

5.1.7 The ‘Rationalisation’ of Higher Education

One of the most notable transformations, one that grew out of an industrialising Europe and America, was the need for the formation of the regulated state and a state strategy that supported higher education – one that unrequitedly still impacts us today. The 19th-century saw the introduction of the modern form of the university. In 1810, Wilhelm von Humboldt secured Prussian state support for the University of Berlin. This educational experiment was to become commonly known as the “Humboldtian project”¹⁰²³ or “Humboldtian model.”¹⁰²⁴ Von Humboldt’s project sought to displace the ecclesiastical grip on universities with an education that was based on Enlightenment

¹⁰²¹ M. Perelman, *Class Warfare in the Information Age* (New York: St. Martin’s Press, 1999) at 45.

¹⁰²² W. Clement, *The Canadian Corporate Elite: An Analysis of Economic Power* (Toronto: McClelland & Stewart, 1975) at 270.

¹⁰²³ B.R. Clark, *Places of Enquiry: Research and Advanced Education in the Modern Universities* (Berkeley: University of California Press, 1995) at 19.

¹⁰²⁴ R.D. Anderson, *European Universities from the Enlightenment to 1914* (Oxford: Oxford University Press, 2004) at 51. Anderson is critical of the “Humboldtian model” and the influence on modern education that von Humboldt’s writings had on university reform. Anderson suggests that von Humboldt’s writings only became popularised after 1900. Yet, Nietzsche’s writings on the university in the 1870s would tend to belie this position. See: F.W. Nietzsche, *On the Future of Our Educational Institutions* (Edinburgh: T.N. Foulis, 1909). Also, see: F.W. Nietzsche cited in J.R. Hollingdale *Nietzsche* (Cambridge: Cambridge University Press, 1986) at 27. When he was a teenager, Nietzsche held that the works of von Humboldt encouraged in him “an unusual urge toward knowledge [and] ...towards general culture.”

principles and on a solid enlightenment foundation grounded in science and the state. At the close of the Napoleonic wars, the Prussian state was uniquely situated to exploit the productivity of its universities and began to develop what was to become one of the industrial innovating systems of state capitalism in the 19th and early 20th-century . It achieved much of this through its geographic location, workers and through its education system and its reform.¹⁰²⁵

5.1.8 The Modern Origin of Research Universities

Von Humboldt's initiative of combining teaching and research in post-secondary institutions placed various disciplines under one roof and became the models for research institutes and universities in most Western countries.¹⁰²⁶ As such, under von Humboldt, and eventually the centralising figure of Otto von Bismarck,¹⁰²⁷ the Prussian and, then, German state became one of the leading countries that dominated industrial engineering and eventually dominated the synthetic world of the burgeoning chemical industry at the end of the 19th-century.¹⁰²⁸ As Veblen notes, concerning Britain's initial success as an industrial power through innovation and science, "this does not mean that the British have sinned against the canons of technology. It is only that they are paying the penalty

¹⁰²⁵ C.M. Clark, *Iron Kingdom: The Rise and Downfall of Prussia, 1600-1947* (Cambridge: Harvard University Press, 2006) at 407. British visitors who observed the Prussian education system were consistently amazed that such an authoritarian political environment could "have produced such a progressive and open-minded educational system."

¹⁰²⁶ H. Perkin, "History of Universities" in *International Handbook of Higher Education Vol. 1* (eds.) J.J.F. Forest & P.G. Altbach (Dordrecht: Springer, 2006) at 177.

¹⁰²⁷ According to Galbraith, von Bismarck had once made overtures to Marx to put his pen to work for the benefit of the Prussian version of the welfare state. See: J.K. Galbraith, "The Massive Dissent of Karl Marx" in *The Essential Galbraith* (ed.) A.D. Williams (Boston: Houghton Mifflin Co., 2001) at 195.

¹⁰²⁸ W.O. Henderson, *The Rise of German Industrial Power, 1834-1914* (Berkeley: University of California Press, 1975) at 186. According to Henderson, from 1840 onward, the availability of raw materials along with the establishment of universities and technical colleges "contributed to the remarkable expansion of the chemical industries in Germany." Also, see: J.P. Murmann & R. Landau, "On the Making of Competitive Advantage: The Development of the Chemical Industries of Britain and Germany Since 1850" in *Chemicals and Long-term Economic Growth: Insights from the Chemical Industry* (eds.) A. Arora, R. Landau & N. Rosenberg (New York: Wiley, 1998).

for having been thrown into the lead and so having shown the way.”¹⁰²⁹ In showing the way, the British demonstrated their incredible ingenuity: an ingenuity that could become an Achilles heel under their self-inflicted enforcement of patent laws that sought strict boundaries or a choking “dead hand”¹⁰³⁰ around the throat of innovation. As Marx points out, capital has many factions and they are rarely amenable to one another.¹⁰³¹ In terms of industrial development, Veblen opined:

At the same time, it is not to be imagined that the lead has brought nothing but pains and penalties. The shortcomings of the British industrial situation are visible chiefly by contrast with what the British might be doing if it were not for the restraining dead hand of their past achievement, and by further contrast, latterly, with what the new-come German people are doing by use of the English technological lore.¹⁰³²

Arguably, where Marx asserted that the Germans excelled at the end of the 18th and beginning of the 19th-century at philosophical idealism, it is clear that by the mid 19th-century that expertise had shifted to the university and to technical, chemical and mechanical engineering.¹⁰³³

5.1.9 “You Can’t Fool the Children of the [Scientific] Revolution,”¹⁰³⁴ Or Can You?

¹⁰²⁹ T.B. Veblen, *Imperial Germany and the Industrial Revolution* (New York: Cosimo Classics, 2006) at 132.

¹⁰³⁰ K. Marx, *Capital: A Critique of Political Economy, Vol. 3* (New York: Progress Publishers, 1959) at 439.

¹⁰³¹ *Ibid* at 382. “The credit system, which has its focus in the dubious national banks and the big money-lenders and usurers surrounding them, constitutes enormous centralisation, and gives to this class of parasites the fabulous power, not only to periodically despoil industrial capitalists, but also to interfere in actual production in a most dangerous manner – and this gang knows nothing about production and has nothing to do with it.” Some in our intellectual property system, patent trolls for instance, are similar to our credit system and they possess a ‘fabulous power’ – the threat of litigation – and are a gang who also knows little or next to nothing about production.

¹⁰³² Veblen, *supra* note 1029 at 132.

¹⁰³³ C. Mitcham & E. Schatzberg, “Defining Technology and the Engineering Sciences” in *Philosophy of Technology and Engineering Sciences* (eds.) D.M. Gabbay, *et. al.* (Amsterdam: Elsevier B.V., 2009) at 38. According to the 1856 constitution of the *Verein Deutscher Ingenieure*, the pan-German engineering association, the “the advancement of German *Technik* [was] more [important] than the promotion of the [individual] interests of engineers.”

¹⁰³⁴ T. Rex, “Children of the Revolution” *Tanx* (Paris: Strawberry Studios, 1972) at Track 12.

Fortunately, as children of the Enlightenment and the scientific revolution in universities, the success of the 20th-century pharmaceutical revolution has benefited immeasurably from the collective knowledge of pathogens and epidemiology,¹⁰³⁵ personal, public and medical hygiene,¹⁰³⁶ and the progress and accumulation of pharmacological knowledge. Yet, the socio-economic struggles that have stamped, shaped and modified our understanding of intellectual property in pharmacology, scientific knowledge and political economy are difficult. As implied, these technologies plied similar historic and economic waters as to an earlier stage of industrial and economic development: they have a similar but distinct vintage. These technologies interlock in the production of culture and knowledge over time. As Twain is said to have commented: “History doesn’t repeat itself, but it rhymes.”¹⁰³⁷

Over the past three or four decades, the push to solidify laws surrounding intellectual property within the university have benefited as to the university’s precarious under-funding from neoliberal governments and economic models and witnessed new constraints being placed upon researchers.¹⁰³⁸ The institutional constraints, under the full pressure of the neoliberal agenda and the market, see research professors as

¹⁰³⁵ J. Snow, *On the Mode of Communication of Cholera* (London: J. Churchill, 1855) at 39-40. John Snow’s statistical account of the cholera deaths led to the massive public works that left their mark on Victorian London and Britain. The infamous removal of the “handle” of the Broad Street pump in London would eventually confirm Snow’s theory as to the oral-faecal mode as to the transmission of cholera. Also, see: S. Johnson, *The Ghost Map: The Story of London’s Most Terrifying Epidemic – and How it Changed Science, Cities and the Modern World* (New York: Riverhead Books, 2006).

¹⁰³⁶ I.P. Semmelweiss, *The Etiology, Concept, and Prophylaxis of Childbed Fever* (Madison: University of Wisconsin Press, 1983). In modern germ theory, along with John Snow, amongst others, Ignaz Semmelweiss is recognised for his contribution as to the hygiene of hand washing of physicians around the procedures of childbirth and prevention of “childbed fever.” Also, see: O. Hanninen, M. Farago & E. Monos, “Ignaz Philipp Semmelweis, The Prophet of Bacteriology” (1983) 4(5) *Infection Control* at: 367–370.

¹⁰³⁷ M. Twain, cited in R. Dawkins & Y. Wong “The Conceit of Hindsight” in *Ancestor’s Tale: A Pilgrimage to the Dawn of Evolution* (Boston: Houghton Mifflin, 2004) at 1.

¹⁰³⁸ J.A. Newton, “To Not Intend, Or to Intend Not ... That Is the Question” in *The Corporate Campus: Commercialization and the Dangers to Canada’s Colleges and Universities* (ed.) J.L. Turk, (Toronto: James Lorimer & Company Ltd., Publishers) at 183.

entrepreneurial agents that ought to promote, establish and pursue careers that are “market oriented.” Yet, what does this mean to them as individuals? Does it make them academic workers? Or academic entrepreneurs? And, how does this impact upon their academic independence and their academic freedom?

It appears that researchers must make *useful* – especially profitable – scientific discoveries that are geared toward the short-term interests of the market. The objects of research must have practical application and speed research toward start-up companies and generating initial public offerings to investors. Moreover, this type of “science as knowledge” model must appeal to capital’s metanarrative of privatised profit. “Blue skies research”¹⁰³⁹ must be fungible research and must gear itself to “the threats [that blue skies research poses] to the growth of [marketable] knowledge.”¹⁰⁴⁰ To be sure, blue skies research does not respond to “the ‘terroristic’ demands of performativity.”¹⁰⁴¹ Yet, in neoliberalism if the market can ‘incentivise’ the subjects and objects of research, then, it is assumed, researchers must – and will – respond to market forces.

Yet, “blue skies research... [is] research without a clear goal.”¹⁰⁴² Arguably, it is this type of research, research without a clear goal or end, that led to the scientific breakthroughs that brought about the periods of the so-called “first” and “second

¹⁰³⁹ The term “blue sky” research is aptly named because it sprang from an honest and simple query as to why the sky is blue. John Tyndall’s curiosity as to why the sky is blue directly suits and fits the point that basic science is the essential activity in the process of creating past, current and future knowledge. See: A.S. Eve & C.H. Creasey, *Life and Work of John Tyndall* (London: Macmillan, 1945). Also, see: M. Livio, *Brilliant Blunders: From Darwin to Einstein – Colossal Mistakes by Great Scientists That Changed Our Understanding of Life and the Universe* (New York: Simon & Schuster, 2013). As an aside, the fact that the Canadian government has withdrawn funding from much basic research has led one Canadian newspaper to claim that “we don’t even know snow.” Editorial, “On snow, science and federal cuts to research funding” *The Globe and Mail*, January 18, 2015, at: <http://www.theglobeandmail.com/globe-debate/editorials/on-snow-science-and-federal-cuts-to-research-funding/article22493768/> (last visited January 20, 2015).

¹⁰⁴⁰ N. Blake, “Habermas, Lyotard, and Higher Education” in *Lyotard: Just Education* (eds.) P.A. Dhillon & P. Standish (New York: Routledge, 2000) at 58.

¹⁰⁴¹ *Ibid.*

¹⁰⁴² D. Bell, *Science, Technology and Culture* (Maidenhead: Open University Press, 2005) at 33.

industrial revolution.”¹⁰⁴³ Blue skies research could be held responsible and led to what some commentators refer to as the “second industrial divide”¹⁰⁴⁴ – what is sometimes held to be an era of workers as “symbolic analysts”¹⁰⁴⁵ in a high-tech economy. The high-tech bubble of 2000, the housing financial bubble of 2008 and, now, the “Euro crisis”¹⁰⁴⁶ might have dampened this exuberant rhetoric, but one might speculate that this rhetoric has merely shifted or fuelled more magical or mystical thinking.¹⁰⁴⁷ Like most rhetoric surrounding “economic progress,” technological innovation and the generation of “new” wealth through high-tech, hope springs *infernally* with the unremitting logics of capital and a cancer cell.

5.2 Private Markets or Public Subsidies?

5.2.1 19th-century Railroads and the Tradition of Public Subsidies

In the late 19th-century, the technological engine of wealth and innovation that was transforming the landscape of North America were railroads. The fertile ground of the railroad industry was to shape much of the future discourse surrounding the uneven process of technological innovation and industrial development.¹⁰⁴⁸ The conversion of North American markets from a rural agrarian society and culture to an urban and

¹⁰⁴³ P. Geddes, *Cities in Evolution: An Introduction to the Town Planning Movement and to the Study of Civics* (London: Williams & Norgate Ltd., 1915) at 59. As Eric Hobsbawm notes, the evidence of a “second” let alone a “first industrial revolution” based on economics and “the aggregate growth of the British economy between 1760 and 1820...[is] modest.” E.J. Hobsbawm, *On History* (London: Abacus, 1997) at 155. That is, the process of periodisation is a more complex historical problem than we assume or than we have been led to believe. Legal historians and law and economic experts ought to note this failure in their tempered assessments as to the notion of economic progress and “innovation.”

¹⁰⁴⁴ See: M.J. Piore & C.F. Sabel, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).

¹⁰⁴⁵ R. Reich, *The Work of Nations: Preparing Ourselves for 21st Century Capitalism* (New York: Simon & Schuster, 1993) at 270.

¹⁰⁴⁶ Jas.K. Galbraith, “The crisis in the eurozone” Salon, November 10, 2011, at: http://www.salon.com/2011/11/10/the_crisis_in_the_eurozone/singleton/ (last visited November 17, 2011).

¹⁰⁴⁷ Y. Varoufakis, “Interview with Yanis Varoufakis” Behind the News, November 12, 2011, at: <http://www.leftbusinessobserver.com/Radio.html> (last visited November 12, 2011).

¹⁰⁴⁸ See: M. Perelman, *Railroading Economics: The Creation of the Free Market Mythology* (New York: Monthly Review Press, 2006).

working-class society and culture are structurally embedded in the history of ‘primitive accumulation’ and the capital formation of railroads. With its profuse ‘land grants’ or public subsidies, both in the U.S. and in Canada, “the age of the open frontier”¹⁰⁴⁹ expanded its population and industrial base in a way that was impossible for Europe. Moreover, the development of technological knowledge and the movement of material goods and perishable commodities at a distance became an essential feature of “progress” at the end of the 19th-century and the beginning of the effusively named “American Century.”¹⁰⁵⁰ Central to this pattern of development were communications and transportation technologies that would open up trade in what would once have been an unbelievable speed. It was the new technologies of telegraphy, telephone, railroads, refrigeration and electrification and industries ‘at a distance’ that would measure real progress and become the new engine driving the ‘new world’ of capitalist ingenuity.¹⁰⁵¹

¹⁰⁴⁹ Polanyi, *supra* note 170 at 247. Polanyi is acutely aware that the “open frontier” was “opened” by what Chomsky points out is celebrated every October as “Columbus Day.” See: N. Chomsky, “The Manufacture of Consent” in *The Chomsky Reader* (ed.) J. Peck (New York: Pantheon Books, 1987) at 122. The “manufacture of consent” is a phrase coined by Walter Lipmann that was actually a reworking of Edward Bernays’s phrase for public relations and the “engineering of consent.” See: E.L. Bernays, *Cyrstallizing Public Opinion* (New York: Boni & Liverlight Inc., 1923). Bernays, the famous American nephew of Sigmund Freud, was tremendously influential in the early 20th-century and the rise of consumerism in America. Bernays is attributed with coining the phrase “public relations.” He was one of the principal architects of we now call the “public relations industry” and, arguably, did more to promote Freud in America than any academic.

¹⁰⁵⁰ H. R. Luce, “The American Century” in *The Ambiguous Legacy: U.S. Foreign Relations in the “American Century”* (ed.) M. J. Hogan (Cambridge: Cambridge University Press, 1999) at 11.

¹⁰⁵¹ See: H.A. Innis, *The Bias of Communication* (Toronto: University of Toronto Press, 1951). To put this into perspective, revolutionary claims about the transformative nature of the “information economy” or the new “global economy” are not nearly so new or revolutionary. Keynes was clear that a capitalist during the pre-W.W. I era saw the world as *his* oyster. See: J.M. Keynes, *The Economic Consequences of the Peace* (New York: Penguin, 1988) at 11-12. Keynes eloquently points out that:

The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend. He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality, could dispatch his servant to the neighboring office of a bank for such supply of the precious metals as might seem convenient, and could then proceed

The government grants that were to ‘open up the west’ (where is a good feminist critic when you need one?)¹⁰⁵² were the same subsidies that led to the eventual corporate monopolies that were to dominate 19th and 20th-century America and Canada. Railroad monopolies were the spark that set the industrial fire for industrial development but it was banking and finance that would solidify these gains. But, at what cost? In general, belief in progress for progress’s sake is a problematic concept. As Oliver Wendell Holmes Jr. remarked about progress: “[T]he great thing in this world is not so much where we stand, as in what direction we are moving....”¹⁰⁵³ In attempting to understand “progress” and “innovation,” which is claimed to be at the heart of the pharmaceutical industry, a brief review of mythologies of free enterprise and competition and the corporation is warranted.

5.2.2 Market Mythologies versus Free Enterprise

I see in the near future a crisis approaching that unnerves me and causes me to tremble for the safety of my country.... [C]orporations have been enthroned and an era of corruption in high places will follow, and the money power of the country will endeavor to prolong its reign by working upon the prejudices of the people until all wealth is aggregated in a few hands and the Republic is destroyed.

Abraham Lincoln¹⁰⁵⁴

abroad to foreign quarters, without knowledge of their religion, language, or customs, bearing coined wealth upon his person, and would consider himself greatly aggrieved and much surprised at the least interference. But, most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of improvement, and any deviation from it as aberrant, scandalous, and avoidable. The projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions, and exclusion, which were to play the serpent to this paradise, were little more than the amusements of his daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalization of which was nearly complete in practice.

¹⁰⁵² They are ample and well equipped: A.J. Davis, *Arbitrary Justice: The Power of the American Prosecutor* (New York: Oxford University Press, 2007) at 10. Also, see: Coontz, *supra* note 466 at 75. Also, see: M.P. Ryan, *Womanhood in America: From Colonial Times to the Present* (New York: Franklin Watts, 1983).

¹⁰⁵³ O.W. Holmes, Jr., *The Autocrat of the Breakfast-Table* (London: J.M. Dent & Sons Ltd., 1906) at 88.

¹⁰⁵⁴ A. Lincoln, “Letter to Colonel William F. Elkins” in *The Lincoln Encyclopedia: The Spoken and Written Words of A. Lincoln Arranged for Ready Reference* (ed.) A.H. Shaw (New York: Macmillan, 1980) at 40.

What Perelman refers to as the “invention of capitalism”¹⁰⁵⁵ or the creation or development of “free market mythologies”¹⁰⁵⁶ became essential to the creation of the folklore and narrative of North American industrial development. The physical and mythical construction of the late 19th-century railroad system and subduing the “wilderness” in the U.S.¹⁰⁵⁷ and Canada¹⁰⁵⁸ was intimately calibrated to the building of the myth of progress and in the creation of industrial cities. These policies led to political, social, legal and scientific transformations in both countries and, moreover, led to the comprehensive transformation of nationally regulated economies. Whereas many current narratives by commentators, as to the industrial development of the United States, Canada, and Britain – and most other capitalist countries – explore or exploit the notion of a “golden age of the laissez-faire”¹⁰⁵⁹ market, they consistently overlook – or worse, reject – that the purported free market has always been subject to numerous forms and types of government constraint.¹⁰⁶⁰ Protection of one’s home market was the norm for early economic development. According to John Brewer, “the largest economic actor in

¹⁰⁵⁵ See: Perelman, *supra* note 446.

¹⁰⁵⁶ Perelman, *supra* note 1048 at 9.

¹⁰⁵⁷ See: R. Bradford, *John Henry* (New York: Harper & Brothers, 1931). Also, see: M. Klett, “The Legacy of Ansel Adams” (1990) 120 *Aperture* at: 72.

¹⁰⁵⁸ The first mention of the character of Paul Bunyan, a “tall tale,” is based loosely on the mid-19th-century figure of “Big Joe Mufferaw” (a.k.a. Joseph Montferrand) from the Ottawa Valley, and appeared in print in America early in the 20th-century. See: J. MacGillivray, “The Round River Drive” *Detroit News*, July 24, 1910, at: 6.

¹⁰⁵⁹ R.A. Solo, “A Return to The Golden Age of Laissez Faire?” (1980) 2 (1-3) *Tocqueville Rev.* at 164.

¹⁰⁶⁰ See: L.T. Sargent, *Contemporary Political Ideologies: A Comparative Analysis* (Belmont: Wadsworth Publishing Co., 1993) at 82. According to Sargent, “[c]apitalism returned to its roots, so to speak, in the free market...” Put differently, Peter McLaren holds that apologists of the ‘golden age’ or “free-marketeers,” like von Hayek, in more honest moments, holds that government intervention as to assisting or establishing business monopolies is preferable to labour monopolies or state sponsored ‘social’ regulation. Also, see: P. McLaren, *Che Guevara, Paulo Freire, and the Pedagogy of Revolution*, (Lanham: Rowman & Littlefield Publishing, 2000) at 22.

eighteenth-century Britain...[was] namely the state.”¹⁰⁶¹ Remarkably, modern protectionism has acted throughout history “to promote exports, limit imports, and in general pursue the protectionist import-substitution policies that have opened the way to industrial ‘take-off’ from England to South Korea.”¹⁰⁶² As Chang points out, the United States did not have a credible or enforceable patent act until 1836.¹⁰⁶³ Before the overhaul, patents were regularly granted without any proof as to their novelty. “[T]his encouraged racketeers to engage in ‘rent-taking’ by patenting devices already in use (‘phony patents’) and then demand money from their users under threat of suit for infringement.”¹⁰⁶⁴ In addition, it was common practice to take information of an “invention communicated to him by a foreigner residing abroad”¹⁰⁶⁵ and file a patent for the purposes of domestic enforcement.

5.2.3 Monopolies ‘R’ US – A Glimpse at America’s Gilded Exceptionalism

A century before the monopolies of Bill Gates, Steve Jobs and Google™ influenced intellectual property, steel production and railroad monopolies dictated the direction of government economic policies. When protectionism was not enough, alternate non-tariff barriers – such as patents – provided a potential toehold to

¹⁰⁶¹ J. Brewer, *The Sinews of Power: War, Money and the English State 1688-1783* (London: Unwin Hyman Ltd., 1989) at 151.

¹⁰⁶² N. Chomsky, *Year 501: The Conquest Continues* (Boston: South End Press, 1993) at 10.

¹⁰⁶³ See: *Patent Act of 1836*, Ch. 357, 5 Stat. 117 (July 4, 1836).

¹⁰⁶⁴ H.-J. Chang, “Technology and Industrial Development in an Era of Globalization” in *Rethinking Developmental Economics* (ed.) H.-J. Chang (London: Anthem Press, 2004) at 270-271. Also, see: H.-J. Chang, *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism* (New York: Bloomsbury Press, 2008).

¹⁰⁶⁵ W. Brown, *The Repertory of Patent Inventions, and Other Discoveries and Improvements in Arts, Manufactures and Agriculture, Vol. 15* (London: W. Simpkin & R. Marshall, 1833) at 1.

monopolise and continue the era of “exceptional”¹⁰⁶⁶ economic and political development in America – what was eventually to be labelled “American exceptionalism.”¹⁰⁶⁷

This was the era that Twain referred to as the beguiled ‘Gilded Age’.¹⁰⁶⁸ an age where post-Civil War America prospered and was a time when large mass production industries, combinations or trusts came to dominate steel production and become the dominant guiding force in the American economy. In a more mischievous encapsulation concerning this age of accumulation, historian Vernon Parrington used the term “The Great Barbecue.”¹⁰⁶⁹ The ‘great barbecue’ was one “to which all were invited, except for inconspicuous persons like farmers and laborers.”¹⁰⁷⁰ This period was typified by a gluttonous mentality and morality where the politics of patronage encouraged the state to “provide the beeves for roasting. Let all come and help themselves.”¹⁰⁷¹ Well, “not quite all, to be sure; inconspicuous persons, those who were at home on the farm or at work in

¹⁰⁶⁶ See: A. de Tocqueville, *Democracy in America Vol. II* (trans.) H. Reeve (Cambridge: Sever & Francis, 1863) at 43. Also, see: F.J. Turner, *The Significance of the Frontier in American History* (New York: Penguin, 2008).

¹⁰⁶⁷ There is debate as to the origin of the expression “American exceptionalism.” Some hold the term was coined by Jay Lovestone, national secretary of the American Communist Party, for which Lovestone was ridiculed by other members of the party. See: E. Browder & J. Zack, *The Daily Worker*, January 29, 1929, at 3/2. Also, see: W. Safire, “Sh-Sh-Sh – Quietism” *The New York Times*, December 21, 2003, at: <http://www.nytimes.com/2003/12/21/magazine/21ONLANGUAGE.html> (last visited September 4, 2014). Others suggest that the pejorative term was coined by Stalin to ridicule Lovestone and other American communists who thought America was exempt from historical materialism. D.E. Pease, “Exceptionalism” in *Keywords for American Cultural Studies* (eds.) B. Burgett & G. Hendler (New York: New York University Press, 2007) at 108. Also, see: D.E. Pease, *The New American Exceptionalism* (Minneapolis: University of Minnesota Press, 2009) at 10. Also, see: T. McCoy, “How Joseph Stalin Invented ‘American Exceptionalism’” *The Atlantic*, March 15, 2012, at: <http://www.theatlantic.com/politics/archive/2012/03/how-joseph-stalin-invented-american-exceptionalism/254534/> (last visited September 12, 2014). Still, others date the concept of “exceptionalism” further back to Alexis de Tocqueville. See: de Tocqueville, *Ibid* at 42. As de Tocqueville puts it: “[t]he position of the Americans is therefore quite exceptional....”

¹⁰⁶⁸ See: M. Twain & C.D. Warner, *The Gilded Age: A Tale of Today* (New York: New American Library, 1969).

¹⁰⁶⁹ V.L. Parrington, *Main Currents in American Thought, Vol. III: The Beginnings of Critical Realism in America, 1860-1920* (New York, 1930) at 23.

¹⁰⁷⁰ W.R. Miller “The Lost World of Gilded Age Politics” (2002) 1 *J. Gilded Age & Progressive Era* at: 49.

¹⁰⁷¹ Parrington, *supra* note 1069 at 23.

the mills and offices... [can be] overlooked....”¹⁰⁷² That is to say, “a good many indeed out of the total number of the American people”¹⁰⁷³ (the 99 percent?) should just stay home.

Post-Civil War America and post-Confederation Canada saw huge government investment and economic intervention in their national economies. These were economic interventions that established the industrial base for these nations. The newly established industries were propelled by: government incentives; government guaranteed loans; government issued bonds; government tax subsidies; and, massive government land grants. Government policies and intervention fuelled steel production and subsidised the laying of regional¹⁰⁷⁴ and trans-continental railroads.¹⁰⁷⁵ Government listened to homegrown business interests and imposed the widespread use of import tariffs to develop and protect domestic production. Tariffs were sought, acquired, and enforced against imported goods. Primarily, tariffs were used to subsidise and favour domestic industry. This protection of domestic production allowed for the “early development” of the domestic economy.¹⁰⁷⁶ It must be kept in mind, and contrary to free-market

¹⁰⁷² *Ibid.*

¹⁰⁷³ *Ibid.*

¹⁰⁷⁴ T.S. Brown, *A History of the Grand Trunk Railway of Canada* (Québec City: Hunter, Rose, 1864) at 44. According to Brown, “the Grand Trunk stockholders are simply elated with their present prospects, [and] those of the Great Western Railway should be in hysterics; if one is making money, the other must be ‘coining.’” Also, see: Chang, *supra* note 363. Arguably, the economics at play in the “railroad bubble” of the mid-19th-century is not too different that the “dot-com bubble” or the “high-tech bubble” of the late 20th and early 21st centuries or the loquaciously labelled “Great Recession” of 2008. For an examination of the term “Great Recession” see: C. Rampell, “‘Great Recession’: A Brief Etymology” *The New York Times*, March 11, 2009, at: <http://economix.blogs.nytimes.com/2009/03/11/great-recession-a-brief-etymology/>. Also, see: P. Krugman, “The Great Recession versus the Great Depression” *The New York Times*, March 20, 2009, at: <http://krugman.blogs.nytimes.com/2009/03/20/the-great-recession-versus-the-great-depression/>.

¹⁰⁷⁵ See: R. Chodos, *The CPR: A Century of Corporate Welfare* (Toronto: J. Lewis & Samuel, 1973) at 118. Also, see: W.J.A. Donald, *The Canadian Iron and Steel Industry: A Study in the Economic History of a Protected Industry* (Boston: Houghton Mifflin Co., 1915). Also for a good American account see: M. S. Thompson, *The “Spider’s Web”: Congress and Lobbying in the Age of Grant* (Ithaca, NY: Cornell University Press, 1985).

¹⁰⁷⁶ Chomsky, *supra* note 1062 at 103.

hagiographers and apostles, that early development in late mercantile and early industrial economies favoured domestic policies over foreign or “free trade”¹⁰⁷⁷ policies.¹⁰⁷⁸ Put differently, the much admired “level playing field”¹⁰⁷⁹ was established to favour what would become at the end of the 20th-century as being a game winner for the unsure “developed” nations and at the expense of the “under-developed” nations. As James Wilson puts it: “In actuality, ‘free trade’ is power trade, in which the powerful state seeks protection and powerful nation-states attempt to keep more ‘undeveloped’ countries in their subordinate position.”¹⁰⁸⁰ Perhaps, this can be said to be the same economic pattern or strategy used in the 19th-century to geographically favour and concentrate wealth in the interests of banks, railroads and urban elites in North America at the expense of their agrarian brethren – what Marx called “[t]he antagonism between town and country.”¹⁰⁸¹

¹⁰⁷⁷ According to the *Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel* winning economist and former chief economist at the World Bank, Joseph Stiglitz, has referred to the World Trade Organisation’s “free trade” strategy is similar to the 19th-century “free trade” movement of the Opium Wars: “That too was about opening markets...” See: J.E. Stiglitz cited G. Plast, “The Globalizer Who Came In From the Cold” *The Observer* (London) October 10, 2001, at: <http://www.gregpalast.com/the-globalizer-who-came-in-from-the-cold/>. Also, see: W.T. Hanes & F. Sanello, *The Opium Wars: The Addiction of One Empire and the Corruption of Another* (Napierville: Sourcebooks Inc., 2002) at 26.

¹⁰⁷⁸ For a persuasive account of the causal relationship as to the “early development” of “developed” nations as a global kleptocracy see: C. Hill, *A Nation of Change and Novelty: Radical Politics, Religion and Literature in Seventeenth Century England* (London: Routledge, 1990) at 17. Also, see: N. Miller, *The Founding Finaglers* (New York: David McKay Company Inc., 1976) at 85. According to Miller: “Corruption, in fact, was the lubricant that greased the wheels of the nation’s administrative machinery. England, like most European nations, had no tradition of an uncorrupted, professional civil service... [Indeed,] graft and corruption played a vital role in the development of modern American society and in the complex... interlocking machinery of government and business that presently determines the course of our affairs.”

¹⁰⁷⁹ The business expression of a certain “level playing field” should always be kept in mind to the often misattributed quotation to Lord Wellington: ‘That the battle of Waterloo was won on the playing fields of Eton.’ Rather, this expression must be understood in light of Alastair Pennycook insight. A. Pennycook, *English and the Discourses of Colonialism* (London: Routledge, 1998) at 64. “Not only were the playing fields of Eton seen as the best preparation for colonial service but the Empire was seen as one vast playing field.”

¹⁰⁸⁰ J. Wilson, “The Individual, the State and the Corporation” in *The Cambridge Companion to Chomsky* (ed.) J.A. McGilvray (Cambridge: Cambridge University Press, 2005) at 250.

¹⁰⁸¹ K. Marx, *The German Ideology: With Selections from Parts Two and Three, Together with Marx’s “Introduction to a Critique of Political Economy”* (New York: International Publishers, 1970) at 69. Also, see: G. Laxer, “Cosmopolitan Elites Versus Nationality-focused Citizens – Cycles of Decommodification

5.2.4 Railroads, Speculation, Regulations and Patents

By the mid to late-19th-century, railroads and associated industries had become the second largest economic sector in America, agriculture remaining the largest until 1900.¹⁰⁸² The railroad lobby and politicians promoted policies that stimulated speculation and their own interests. In turn, this speculation led to a frenzy of capital lending and investment and a further construction boom or “bubble” in infrastructure development. The speculators of the early 1870s were apparently unaware of Twain’s remark that: “There are two times in a man’s life when he should not speculate: when he can’t afford it, and when he can.”¹⁰⁸³ Unchecked, this speculation eventually fuelled the bust known as the ‘Panic of 1873.’¹⁰⁸⁴ In succession, the 1873 bust spurred a Polanyian-type “double-movement” toward regulation of capital and a scepticism of capital that “had shaken confidence in economic self-healing”¹⁰⁸⁵ and the “‘fictitious commodities’ of... land, labour and money....”¹⁰⁸⁶

Struggles” in *Not for Sale: Decommodifying Public Life* (eds.) G. Laxer & D. Soron (Peterborough: Garamond Press, 2006) at 79.

¹⁰⁸² M. Klein, *The Genesis of Industrial America, 1870-1920* (Cambridge: Cambridge University Press, 2007) at 62. By 1900, “[i]n less than a single lifetime the rail system became the lifeline of industrial America as well as the largest industry in the nation. Also, see: R.S. Cowan, *A Social History of American Technology* (Oxford: Oxford University Press, 1997).

¹⁰⁸³ M. Twain, “Pudd’head Wilson’s New Calendar” in *Following the Equator: A Journey Around the World, Vol. 2* (Hollcong: Wildside Press, 1897) at 215.

¹⁰⁸⁴ Too many parallels could be drawn as to the questionable ‘fiscal crisis’ of 2008, but that may overstate the case and its similarities. Yet, outside of America, the Panic of 1873 and the subsequent two-decade long economic slow-down was known as the “Long Depression” and was also known as the first industrial ‘Great Depression.’ See: E.J. Hobsbawm, *The Age of Empire 1875-1914* (London: Abacus, 1989) at 34. Also, see: M. Koskenniemi, *The Gentle Civilizer of Nations: The Rise and Fall of International Law 1870-1960* (Cambridge: Cambridge University Press, 2005) at 58. Also, see: H. Rosenberg, “Political and Social Consequences of the Great Depression of 1873-1896 in Central Europe” (1943) 13 (1-2) *Econ. Hist. Rev.* at 58. Also, see: Galbraith, *supra* note 872 at 108. According to Galbraith, it was the failure of the firm of Jay Cook and Company, on September 18, 1873, that precipitated the failure of 57 other stock market firms in subsequent weeks of that year being the *long depression*.

¹⁰⁸⁵ Polanyi, *supra* note 170 at 233.

¹⁰⁸⁶ Laxer, *supra* note 1081 at 79.

5.2.5 Regulating Panic Through Populism(s)

The Panic of 1873 saw a populist movement afoot for the (re)regulation of the American economy. Instead of regulating an economy to the step of a tawdry bejewelled *laissez-faire* economy, policy makers had to rethink the regulations of ‘non-regulation’ – which is just another form of regulation. Specifically, our recent and current debates about deregulation are really a debate about what kind of government is required to achieve, administrate or regulate particular ends. Oddly, as Perelman remarks, it was mostly due to the Panic of 1873 that there began to be a glacial movement toward regulation that quickly turned into a spring thaw. In other words, this slow movement quickly turned into a stampede by American business for particular types of regulation – regulations that would protect their interests and their monopolies. According to Perelman, one specific type of legislative protection that business began to favour were monopolies around intellectual property. What side of the intellectual property protection issue one was on was purely related to pragmatic and economic considerations. That is to say, “[t]he political and commercial morals of the United States are not merely food for laughter, they are an entire banquet.”¹⁰⁸⁷ Or as Perelman tends to frame the issue, intellectual property became a choice that sought to perpetually reproduce class relations in America and entrench and embed capitalist social relation of production.¹⁰⁸⁸

¹⁰⁸⁷ M. Twain, *Eruption: Hitherto Unpublished Pages About Men and Events* (ed.) B. De Voto (New York: Grosset & Dunlap, 1940) at 81.

¹⁰⁸⁸ See: M. Perelman, “The Political Economy of Intellectual Property” (2003) 54 *The Monthly Review*: 29-37. Also, see: G. Liodakis, “The Global Restructure of Capitalism: New Technologies and Intellectual Property” in *Innovation, Evolution and Economic Change: New Ideas in the Tradition of Galbraith* (eds.) B. Laperche, Jas.K. Galbraith & D. Uzunidis (Cheltenham: Edward Elgar, 2006) at 192.

5.2.6 The Panic Towards Patents – The Tanner Brake Case

For example, in the cryptic shadow of the Panic of 1873, and after a series of patent court battles in the late 1860s and 1870s, in October 1878, the U.S. *Supreme Court* ruled as to the “Tanner brake case” in favour of the patent infringements by railway companies concerning braking systems.¹⁰⁸⁹ What was at issue was a patent for a “double-action” braking system named after the assignee, Henry Tanner.¹⁰⁹⁰ The Tanner brake case at the U.S. *Supreme Court* overturned two federal courts in Illinois: federal courts that twice determined and subsequently affixed damages of several hundred dollars per car to the assignees¹⁰⁹¹ for every year that the railcar was in service. In the successful appeal of the lower courts judgements, Mr. Justice Joseph P. Bradley held that:

Like almost all other inventions, that of double brakes came when, in the progress of mechanical improvement, it was needed and being sought by many minds, it is not wonderful that it was developed in different and independent forms, all original and yet all bearing a somewhat general resemblance to each other. In such cases, if one inventor precedes all the rest and strikes out something which includes and underlies all that they produce, he acquires a monopoly and subjects them to tribute. But if the advance towards the thing desired is gradual and proceeds step by step, so that no one can claim the complete whole, then each is entitled only to the specific form of device which he produces, and every other inventor is entitled to his own specific form, so long as it differs from those of his competitors and does not include theirs. These general principles are so obvious that they need no argument or illustration to support them. We think they are specially applicable to the case before us.¹⁰⁹²

Bradley’s position could be interposed as to our current patent system in that they were “needed and being sought by many minds” as to *digital inventions*. Yet, the issue of innovative advances and “tribute” of a “double-brake system,” that are gradual and step-

¹⁰⁸⁹ See: *Railway Company. v. Sayles* [1878] 97 US 554.

¹⁰⁹⁰ S.W. Usselman, *Regulating Railroad Innovation: Business, Technology, and Politics in America, 1840-1920* (New York: Cambridge University Press, 2002) at 109. Also, see: F. Machlup & E. Penrose, “The Patent Controversy in the Nineteenth Century” (1950) 10(1) J. Econ. Hist. at 1.

¹⁰⁹¹ *Ibid* at 171.

¹⁰⁹² *Railway Company v. Sayles*, *supra* note 1089 at 96-97.

by-step, are perhaps more problematic than “obvious.” Mr. Justice Bradley’s “need for no argument or illustration to support them” is perhaps more tinged – or needs to be tinged – by the nuanced complexity of political economy and the form of tribute waged or waived at the time.

Mr. Justice Bradley’s insights on patent law are situated in a unique period in American law. In other words, his opinions appear to straddle and attempt to unite two different patent world-views. To be sure, his opinions overlays and encapsulates the ‘wild west’ on the threshold of antitrust legislation. On the one hand, Mr. Justice Bradley is acutely aware of the gradual nature of “innovation.” On the other, is the fact that there are rare moments of unique brilliance and innovation that can transform the world and he seems to understand that these moments do exist beyond the gradual and systematic processes of how human beings go about constructing their world. Although Mr. Justice Bradley seems to focus on the “technical” issues as to innovation what truly seems to matter is who benefits. In particular, the central issue for us to consider is the fact that “[s]ome will rob you with a six-gun, [a]nd some with a fountain pen...”¹⁰⁹³ For Mr. Justice Bradley, the issue of – “*cui bono*” – who benefits is simple: the one with the most power.

Almost five years after the Tanner brake case, Mr. Justice Bradley had a chance to expand his views about patent law in *Atlantic Works v. Brady*.¹⁰⁹⁴ In *Atlantic Works*, Mr. Justice Bradley held that:

The design of the patent laws is to reward those who make some substantial discovery or invention which adds to our knowledge and makes a step in advance in the useful arts. Such inventors are worthy of

¹⁰⁹³ W. Guthrie, “The Ballad of Pretty Boy Floyd” in *Dust Bowl Ballads* (New York: Buddah, 2000) at Track 3.

¹⁰⁹⁴ *Atlantic Works v. Brady* 107 U.S. 192 (1883).

all favor. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement and gather its foam in the form of patented monopolies which enable them to lay a heavy tax upon the industry of the country without contributing anything to the real advancement of the art. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to law suits and vexatious accountings for profits made in good faith.¹⁰⁹⁵

Mr. Justice Bradley's insights into the "speculative schemers" and "foam" of "patented monopolies" appear decisive. Bluntly, it appears that the 'honest pursuit of business' must be protected. But, what constitutes the 'honest pursuit'? Implicitly and explicitly, Mr. Justice Bradley's decisions supported the combines or trusts and their interests – at least in *Tanner* – as the honest pursuit. The smaller interests of assignees and/or actual "inventors" must be stowed accordingly so industry can safely ply the waters of monopoly competition and capital accumulation. Why? A logical answer is not readily available. A less tempered mind might ascribe this as to a judicial holding that one must render unto Caesar what is owed.¹⁰⁹⁶

It was during 1873 that combines and trusts sought to construct the first nationwide economic monopolies in America.¹⁰⁹⁷ It would appear that the courts or, at least, the U.S. *Supreme Court* were willing to support 'trusts' and their move to concentrate wealth and consolidate power during this supposed 'Gilded Age.' One must recall Smith's observation, a hundred years earlier, that a closed door on a room and a

¹⁰⁹⁵ *Ibid* at 200.

¹⁰⁹⁶ Matthew 22:21, *supra* note 472.

¹⁰⁹⁷ Canada, being the smaller, younger and northern cousin, was already very familiar with the iron grip of small oligopolies. See: D.W.L. Earl, *The Family Compact: Aristocracy or Oligarchy?* (Toronto: C. Clark Publishing Co., 1967).

handful of men in it is enough for conspiracies against the public to fix monopoly prices and concentrate wealth.¹⁰⁹⁸ What was common at this time appears to have been a common practice to 19th-century American business and it may have influenced decisions as to patents and infringement in the closed chambers of the judiciary.

Not surprisingly, the ‘long panic’, which led to American business’s efforts to stabilise and strengthen their economic positions, led to increased unfair competition and trusts or combines that vehemently sought to extend their monopoly concentration.¹⁰⁹⁹ Perelman points out that the practice and the rhetoric used by conventional economic theories claim to perfect competition and hold the ultimate triumph of *laissez-faire*. That *laissez-faire* actively works against government “manipulation” or constraints to establish economic equilibrium. Of course, this is the window dressing – or the impressive crêpe or façade of a Potemkin village – that belies the workings that went on behind 19th-century economic regulation, its policy formation and its implementation that is mostly the fables of the 20th-century economists in a “neoliberal era.”

¹⁰⁹⁸ Smith, *supra* note 163 at 116.

¹⁰⁹⁹ R. Chernow, *Titan: The Life of John D. Rockefeller, Sr.* (New York: Random House, 1997) at 171. Rockefeller’s kerosene monopoly, his oil shipping rebates from railroads and his active opposition to the competition of the from oil pipelines proved to significantly slowed down the introduction of “new technologies” and the rubric of ‘market forces’ that propelled pipeline innovation. Under Rockefeller’s influence, the railroads refused to allow pipeline companies to cross their land grants. This allowed Rockefeller to position his interests and secure a monopoly on the oil pipeline industry by purchasing distressed pipeline companies. In lieu of the event in Lac-Mégantic, these two old technologies appear to continue to have a resonating effect on our post-modern ‘new economy.’ See: S. Cousineau & J. Giovannetti, “Five confirmed dead, more than 40 missing after Quebec explosions” *The Globe and Mail*, July 7, 2013, at: <http://www.theglobeandmail.com/news/national/fire-continues-to-burn-after-deadly-explosions-in-lac-megantic/article13052357/> (last visited July 16, 2013). Also, see: A. Buncombe, Standing Rock Protest: Indigenous campaigners celebrate ‘historic decision’ to deny permission to pipeline” *The Independent*, December 5, 2016, at: <http://www.independent.co.uk/news/world/americas/north-dakota-access-pipeline-army-corps-of-engineers-deny-permission-celebrate-latest-a7455731.html> (last visited December 5, 2016). Also, see: L. Kane, “Liberals face flood of outrage in B.C. after approval of Trans Mountain pipeline” *The Toronto Star*, November 30, 2016, at: <https://www.thestar.com/news/canada/2016/11/30/liberals-face-flood-of-outrage-in-bc-after-approval-of-trans-mountain-pipeline.html> (last visited December 5, 2016).

5.2.7 Corporate Cartels Versus “Natural” Forces

The ‘long panic’ caused businesses and their owners to strategise and form “cartels and trusts to hobble competitive forces”¹¹⁰⁰ of the free enterprise system. The Panic of 1873 and the “long wave depression”¹¹⁰¹ that followed – even longer than the subsequent Great Crash of 1929 and the Great Depression of the 1930s¹¹⁰² – brought the legitimacy of American *laissez-faire* ideology into question and to some, for their lifetime, irrevocably shook or shattered its infallibility. Put differently, *laissez-faire*’s absolute certainty or, at any rate, the absolute faith in *laissez-faire* was radically called into question. For past advocates, the ‘natural’ forces of the market would not – could not – be trusted: common sense for many people held that *laissez-faire* could not go unchecked for an unforeseeable and unlimited time. As Perelman notes:

[The long depression caused m]any of the leading economists at the time... [to come] ...to grips with the destructive nature of market forces. Competition, which according to conventional economics is supposed to guide business to make decisions that will benefit everybody, was driving business into bankruptcy and common people into poverty.¹¹⁰³

Conventional economics in practice, then, as now, was proving to be a more complex process. That is to say, as theory confronted reality, it became obvious that benign government property policies were a complicated and convoluted process – perhaps one solely designed to maintain and strengthen the class divisions existing in American society.¹¹⁰⁴ The steady state of ‘equilibrium’ promoted by most mainstream

¹¹⁰⁰ Perelman, *supra* note 1088.

¹¹⁰¹ J.A. Schumpeter, “The Present World Depression: A Tentative Diagnosis” (1931) *Amer. Econ. Rev. Sup.* at 180.

¹¹⁰² See: Galbraith, *supra* note 872. Also, see: A.E. Musson, “The Great Depression in Britain, 1873-1896: A Reappraisal” (1959) 19(2) *J. Econ. Hist.* at 199.

¹¹⁰³ Perelman, *supra* note 1048 at 9.

¹¹⁰⁴ This has been a persistent or reoccurring phenomenon in America, see: R. Perrucci & E. Wysong, *New Class Society: Goodbye American Dream?* (Lanham: Rowman & Littlefield, 2008) at 384.

economists,¹¹⁰⁵ and the economic crises of yesteryear, consistently appear to run into a concrete real world that disrupts and disproves its process of evaluation. Econometric and equilibrium models of the free market are non-existing portraits of past economic life.¹¹⁰⁶ Most – if not all – econometric or ‘equilibration’ economists have been unpleasantly misguided when it comes to general or specific prognostication.¹¹⁰⁷ Yet, unlike taciturn econometric economists, and as Zinn notes, the long-wave depression of the late 19th-century had continuity to it:

[T]he government of the United States was behaving almost exactly as Karl Marx described a capitalist state: pretending neutrality to maintain order, but serving the interests of the rich. Not that the rich agreed among themselves; they had disputes over policies. But the purpose of the state was to settle upper-class disputes peacefully, control lower-class rebellion, and adopt policies that would further the long-range stability of the system.... [and ensure that] national policy would not change in any important way.¹¹⁰⁸

To be sure, if this Marxian observation is correct, then extending this logic to the suspicious modern and neoliberal law and economics approach to intellectual property reveals much – it reveals to degrees its ideological origins and purposes.

¹¹⁰⁵ See: D. Baker, “The Soft Bigotry of Incredibly Low Expectations: The Case of Economists” The Guardian Unlimited, September 13, 2010, at: <http://www.guardian.co.uk/commentisfree/cifamerica/2010/sep/13/unemployment-economy-structural-cyclical> (last visited September 15, 2010).

¹¹⁰⁶ F.J. Pratson, *Perspectives on Galbraith: Conversations and Opinions* (Boston: CBI Publishing Company, Inc., 1978) at 44. Galbraith suggests, as do other critical and progressive economists, that econometric models “have the great defect that they can only take into account past events.” Also, see: Galbraith, *supra* note 640 at 169. Galbraith profoundly understands that future economic management “would be greatly facilitated if resort could be occasionally had to witchcraft.”

¹¹⁰⁷ For an interesting description of America’s current situation, Chilean economist and environmentalist, Manfred Max-Neef has indicated that the United States, with 43 million people living in poverty, is now the leading “under-developing nation” in the world. Max-Neef injects into the suspicious ‘development debate’ that there are now three categories of nations: “developed nations”; “developing nation”; and, our current devolution into “under-developing nations.” See: M.A. Max-Neef, *Economics Unmasked: Creating a Value System for a Sustainable World* (eds. P.B. Smith M.A. & Max-Neef (London: Green Books, 2010). Also, see: M.A. Max-Neef, “Development and Human Needs” in *Real-life Economics: Understanding Wealth Creation* (eds. P. Ekins & M.A. Max-Neef (New York: Routledge, 1992) at 197.

¹¹⁰⁸ Zinn, *supra* note 400 at 258. Also, see: E.S. Herman, *Triumph of the Market: Essays on Economics, Politics, and the Media* (Boston: South End Press, 1995).

5.2.8 Devotional Crisis – Question One’s Faith in the Market

There was a lingering impression that the first ‘Great Depression’ experienced under American industrial capitalism caused dedicated experts to question their devotion to the market. They hesitated in their customary genuflection and refused to supplicate themselves to the often-unstated inertia of public policies promoting the “free market.” In the midst of the long panic,¹¹⁰⁹ and the rise of the “robber barons,”¹¹¹⁰ oligarchic or monopolistic capitalism became subject to modest doubts – if not a radical and Cartesian doubt.¹¹¹¹ Upward mobility, as the standard myth behind America’s Gilded Age,¹¹¹² came into question. It was during the 1880s that popular – or populist voters, who were typically “middle-class property owners with a moralistic bent to their politics”¹¹¹³ – dissatisfaction grew with the politics as usual of the day. As a consequence, during the long depression popular support grew for government regulation of capital. The populist point of view expressed a segment of the voting population that possessed a general hostility to banks, railroads and eastern elites – arguably, this is a sentiment similar to the one shared by shrill and vociferous members of the current “Tea Party movement”¹¹¹⁴ in

¹¹⁰⁹ See: R. Fels, “The Long-Wave Depression, 1873-97” (1949) 31 (1) Rev. of Econ. & Stats. at 69. According to Fels, the long panic lasted 65 months in America with the economic contraction ending in 1879.

¹¹¹⁰ See: M. Josephson, *The Robber Barons: The Great American Capitalists, 1861-1901* (New York: Harcourt, Brace and Company, 1934). This was an era that saw the rise of fortunes and of men such as: Andrew Carnegie; Henry Clay Frick; J.P. Morgan; and, John D. Rockefeller. In the case of Carnegie, one should note his philanthropy with the development of public libraries across North America and Carnegie Mellon University. Also, see: J.F. Wall, *Andrew Carnegie* (Oxford: Oxford University Press, 1970).

¹¹¹¹ See: Descartes, *supra* note 707.

¹¹¹² For an interesting overview of this period see: S.D. Cashman, *America in the Gilded Age: From the Death of Lincoln to the Rise of Theodore Roosevelt* (New York: New York University Press, 1994).

¹¹¹³ W.R. Miller “Farmers and Third-Party Politics” in *The Gilded Age: Essays on the Origins of Modern America* (ed.) C.W. Calhoun (Lanham: Rowman & Littlefield Publishers, 2007) at 284.

¹¹¹⁴ See: P. Nevins, *The Politics of Selfishness: How John Locke’s Legacy Is Paralyzing America* (Santa Barbara: Praeger, 2010) at 197. Also, see: J.M. Bernstein, “The Very Angry Tea Party” *The New York Times*, June 13, 2010, at: <http://opinionator.blogs.nytimes.com/2010/06/13/the-very-angry-tea-party/?scp=15&sq=tea%20party&st=cse> (last visited June 16, 2010). Bernstein waxes philosophically that these angry Americans make it difficult to figure out “where politics ends and metaphysics begins.” For an indepth history of populous anti-tax movements in America see: I. Martin, *Rich People’s Movements:*

America and their various hybrids in Canada.¹¹¹⁵ The populists demand for commercial regulation of industries and regulation of capital became one of their protean goals for reform to the system – conspicuously, this is the exact opposite position of the Tea Party’s questionable ‘populist’ movement.¹¹¹⁶

It was in lieu of the concentration of wealth in the select hands of the robber barons that the idea of regulating 19th-century capital and banks, industry, capitalists and regulating – or attempting to regulate – overall economic activity became a central pillar of late 19th-century populism and purportedly federal government policy. The principle demand of populism was initially for stronger regulation of the railroads.¹¹¹⁷ Richard Benseal remarks that a central demand in the Populist Party’s platform for stronger antitrust legislation was not uniform across the country. In other words, there was a distinct expression of populism for antitrust legislation but it had a regional flavour to it

Grassroots Campaigns to Untax the One Percent (Studies in Postwar American Political Development) (New York: Oxford University Press, 2013). Also, for a critical and yet sympathetic depiction of rank and file Tea Party members, see: M. Taibbi, *Griftopia: Bubble Machines, Vampire Squids, and the Long Con That Is Breaking America* (New York: Spiegel & Grau, 2010).

¹¹¹⁵ That is not to say that Canada is merely aping the “populist” trends in the U.S. Canadian history shows us that traditions of “Red Toryism,” French separatism, British Empire Loyalists, Catholic versus Protestant, and other traditions continue to influence the substantive structure, politics and law of this “multi-cultural” state. For a brilliant overview of the origins of this complex issue see: B. Curtis, *The Politics of Population: State Formation, Statistics, and the Census of Canada, 1840-1875* (Toronto: University of Toronto Press, 2002).

¹¹¹⁶ See: F. Rich, “The Billionaires Bankrolling the Tea Party” *The New York Times*, August 28, 2010, at: http://www.nytimes.com/2010/08/29/opinion/29rich.html?_r=1 (last visited August 30, 2010). Arguably, the “Occupy Wall Street” or “99 Per Cent” movements that began in autumn of 2011 attempted to, in varying degrees of success, spark a broad left popular movement. See: G. Bellafante, “Gunning for Wall Street, With Faulty Aim” *New York Times*, September 23, 2011, at: http://www.nytimes.com/2011/09/25/nyregion/protesters-are-gunning-for-wall-street-with-faulty-aim.html?_r=1&scp=4&sq=occupy%20wall%20street&st=cse (last visited October 5, 2011). S. Foley, “From California to New York, the tide of protest keeps rising” *The Independent*, October 5, 2011, at: <http://www.independent.co.uk/news/world/americas/from-california-to-new-york-the-tide-of-protest-keeps-rising-2365583.html> (last visited October 10, 2011). For a psychotic impression of “occupy” or any other “progressive” movement to rein-in the excesses of late-capitalism see: T. Perkins, “Progressive Kristallnacht Coming?” *The Wall Street Journal*, January 24, 2014, at: http://online.wsj.com/news/article_email/SB10001424052702304549504579316913982034286-IMyQjAxMTA0MDIwNzEyNDcyWj (last visited January 23, 2014).

¹¹¹⁷ This began as an initial issue about regulating the cost of infrastructure but soon shifted to regulating transport rates. See: Perelman, *supra* note 1048 at 92.

and was not purely uniform or national in its relish.¹¹¹⁸ It also had a post-Civil War tendency to become a constitutional issue of purported “state’s rights.” The constitutional issue concerned the granted political powers of the states versus the federal government: that is to say, the debate surrounding a state’s retained residual jurisdictional powers to support or disallow the federal government’s capacity to legislate. Then, as today, this was a constitutional battlefield.

Nevertheless, there was a sincere demand for regulatory legislation – a loose fox in the henhouse was no longer considered good public policy.¹¹¹⁹ Politicians, acting out, mostly from their own political self-interest, sought to break monopolistic and oligopolistic trends of American capital in the expectation that this would save their political hide from the spectre¹¹²⁰ of radicalism that was haunting Europe. As such, the *Sherman Anti-Trust Act* purported “to protect trade and commerce against unlawful restraints.”¹¹²¹

Indeed, the *Sherman Anti-Trust Act* set the stage for a century of government policy and judicial decisions as to the legitimacy or illegitimacy as to monopolies, cartels, oligopolies and overall economic regulation. The monopolies of trusts and combines were seen, to varying degrees, as antithetical to (naïve?) populist notions of fair play and the values purported to be embedded in the *Sherman Anti-Trust Act*. In general, the *Sherman Anti-Trust Act* sought to solve the problem of suspicious “capital’s capital

¹¹¹⁸ R.F. Bense, *The Political Economy of American Industrialization, 1877-1900* (Cambridge: Cambridge University Press, 2000) at 123-124. Due to the strong “state’s rights” movement in the U.S., the populist antitrust movement was a powerful lobby regionally and could – and did – influence federal government policy.

¹¹¹⁹ For a good contemporary overview of this age old problem see: S. Kahn and E.K. Minnich, *The Fox in the Henhouse: How Privatization Threatens Democracy* (San Francisco: Berrett-Koehler, 2005).

¹¹²⁰ For a brilliant anticipation or *reanimation* of our current economic and social justice problems, see: Derrida, *supra* note 727.

¹¹²¹ *Sherman Anti-Trust Act of July 2, 1890*, 26 Stat. 209, 15 U.S.C. §§ 1-7.

crimes.”¹¹²² Senator John Sherman argued, speaking in beguiling flourishes filled with populist sentiments:

[I]f we will not endure a king as a political power, we should not endure a king over the production, transportation and sale of any of the necessities of life. If we would not submit to an emperor we should not submit to an autocrat of trade, with power to prevent competition and to fix the price of any commodity.¹¹²³

In a not too surprising twist, although Sherman cited the need for an antitrust policy and law to rein in the robber barons, the first legal case to proceed to trial under the *Sherman Anti-Trust Act*¹¹²⁴ and the “restraint on trade” was not against a monopoly ‘trust’ but against a union.¹¹²⁵ The milquetoast rationale offered was:

The popular mind is agitated with problems that may disturb social order, and among them all none is more threatening than the inequality of condition, of wealth, and opportunity that has grown within a single generation out of the concentration of capital into vast combinations to control production and trade and to break down competition. These combinations already defy or control powerful transportation corporations and reach State authorities. They reach out their Briarean arms to every part of our country. They are imported from abroad.... They had monopolies... of old, but never before such giants as in our day. You must heed their appeal or be ready for the socialist, the communist, the nihilist. Society is now disturbed by forces never felt before....¹¹²⁶

The move to nationally regulated economies against monopolies and the “restraint of trade” was a continental movement and, to degrees, a global phenomenon. In North America, the tendency of the suspect “free market” to concentrate capital into fewer

¹¹²² M. Perelman, *Transcending the Economy: On the Potential of Passionate Labor and the Wastes of the Market* (New York: St. Martin’s Press, 2000) at 34.

¹¹²³ John Sherman cited in H.B. Thorelli, *The Federal Antitrust Policy: Origination of an American Tradition* (Baltimore: Johns Hopkins Press, 1955) at 180.

¹¹²⁴ *Sherman Act*, July 2, 1890, ch. 647, 26 Stat. 209, 15 U.S.C.

¹¹²⁵ R.G. Shelden, *Controlling the Dangerous Classes: A Critical Introduction to the History of Justice* (Boston: Allyn and Bacon, 2001) at 100. Also, see: T.G. Manning, *The Chicago Strike of 1894* (New York: Holt, Rinehart & Winston, 1960). This infamous strike case, involving Clarence Darrow, as defence counsel, Eugene V. Debs, as the leader and defendant for the American Railway Union versus the Pullman Palace Car Company. This case represents and demonstrates how antitrust legislation could be used to curb labour rights as opposed to limiting corporate rights.

¹¹²⁶ J. Sherman, *Trusts: Speech of Hon. John Sherman, of Ohio, delivered in the Senate of the United States, Friday, March 21, 1890* (Washington: US Government Printing Office, 1890) at 15.

hands and producing monopoly capitalism¹¹²⁷ was equally offensive on both sides of the border. Canada preceded the United States by approximately a year, in 1889, with the introduction of a federal competition law to deal with the extraordinary concentration of wealth that was occurring through combines in the newly formed Dominion.¹¹²⁸ By comparison, the *Sherman Anti-Trust Act* was purportedly a modern government regulation set up to foster, promote and preserve competition in the free market. As Galbraith observed, “the *Sherman Anti-Trust Act* prohibited combinations in restraint of trade and made it a misdemeanor to ‘monopolize or attempt to monopolize’ any interstate or foreign commerce”¹¹²⁹ and this could be viewed as a “useful futility.”¹¹³⁰ With Galbraith’s *misdemeanour* and *useful futility* qualifications in mind, anti-trust legislation and the courts had a tendency to devise its meaning into two definitions. Anti-trusts generally fell into two types of competitive restraints: 1) horizontal restraints; and, 2) vertical restraints. Horizontal restraints tended to fall into the general category of market pricing amongst competitors or oligopolies.¹¹³¹ Vertical restraints were usually of the type where manufacturers colluded with distributors to drive up the price of commodities or to control local, regional, national or international markets and pass on the higher costs to consumers.¹¹³² Horizontal constraints could be perfectly legal due to a company’s

¹¹²⁷ For the most comprehensive look at this phenomenon on American capitalism, at least as far as I am aware of, see: Baran & Sweezy, *supra* note 375.

¹¹²⁸ *An Act for the Prevention and Suppression of Combines Formed in Restraint of Trade* [1889] S.C. c. 41. Also, see: G.B. Doern, *Fairer Play: Canadian Competition Policy Institutions In a Global Market* (Toronto: C.D. Howe Institute, 1995).

¹¹²⁹ J.K. Galbraith, *The New Industrial State* (Princeton: Princeton University Press, 2007) at 229.

¹¹³⁰ Galbraith, *supra* note 466 at 207.

¹¹³¹ See: *American Tobacco Company vs. United States*, 328 U.S. 781 (1946).

¹¹³² For example, see: M. Williams Walsh & W. Bogdanich, “Syringe Manufacturer Settles Claim of Market Manipulation” *The New York Times*, July 3, 2004, at: <http://www.nytimes.com/2004/07/03/business/syringe-manufacturer-settles-claim-of-market-manipulation.html> (last visited July 1, 2014). The case involved an anti-trust suit brought by Retractable Technologies against Becton Dickinson and Company, the world’s largest medical manufacturer of syringes and needles. The allegations were that Becton Dickinson and Company’s anti-competitive

market share and dominance; vertical constrains, if proved, could be found to be “illegal.”

5.3 Bait and Switch or Rules?

5.3.1 The Shell-Game of Legislation and Intellectual Property

Anti-combines legislation on both sides of the border was a threat to corporate power at the end of the 19th-century. According to Perelman, it was the introduction of the *Sherman Anti-Trust Act* that caused business’s reliance on other statutory measures to maintain economic monopolies in America. The issue was how to do it and to do it within the law. As is often said, the law gives with one hand and takes away with the other: the issue was how to take advantage of this to and fro and when the legendary door is slammed shut to find the window that has been opened. One possible window that opened to maintain economic monopolies was a reliance on intellectual property measures.

To Perelman, the original “free-marketeers” in 19th-century America saw the constrains of intellectual property, the pith and substance of copyright and patent law, as feudalistic and as foreign dictates arriving as washed up castaways on the shores of the New World. At its best, foreign intellectual property laws were an attempt to hobble “American exceptionalism.”¹¹³³ Initially, American business saw intellectual property

behavior colluded with Health Maintenance Organizations (HMO) in the United States to exclude Retractable Technologies’ retractable and non-reusable syringe from the medical supply industry. In an out of court settlement, Becton Dickinson & Company paid Retractable Technologies \$100 million. Subsequent litigation between Retractable Technologies and Becton Dickinson and Company involed the patent infringement concerning the retractable syringe. See: *Retractable Technologies, Inc. vs. Becton Dickinson and Company* (Civil Action No. 2:07-cv-250, United States District Court, Eastern District of Texas).

¹¹³³ de Tocqueville, *supra* note 1066 at 43. Also, see: Turner, *supra*, 1066.

protection as the imposition of European “feudalistic monopolies.”¹¹³⁴ Intellectual property laws were seen and interpreted as a restraint on ‘free trade’ and ‘free enterprise.’ Intellectual property was seen as a threat to the American way of life, this despite intellectual property’s limited protection in the American constitution. Thus, demands as to enforcement of intellectual property, in particular, enforcement of patents, were seen as a way to stifle American industrial and economic progress and were generally dismissed by the courts.

Yet, the onset of the long depression of the 1870s saw a sea change in public policy, legislation and intellectual property enforcement. For lack of a better term, “American know-how” sought to stabilise economic growth and “[i]n the context of the economic crisis, business was desperate for anything that would return profits to what they considered to be an acceptable level.”¹¹³⁵ With the passage of the *Sherman Antitrust Act* “corporations were able to use patents, which were perfectly legal, as a convenient loophole to evade the intent of that law.”¹¹³⁶

[Corporations found that t]hrough patent pools, they could divide up the market and exclude new competitors. In this way, intellectual property rights were important in [re]establishing monopoly capitalism.¹¹³⁷

The significance and rise of enforceable patents leading to the economic protection of corporations’ economic monopoly cannot be over emphasised.¹¹³⁸

¹¹³⁴ Perelman, *supra* note 1088. For an interesting and compelling modern example on the theme of feudalism in knowledge see: Drahos & Braithwaite, *supra* note 692.

¹¹³⁵ Perelman, *supra* note 1088.

¹¹³⁶ *Ibid.*

¹¹³⁷ *Ibid.*

¹¹³⁸ For an interesting examination of this situation see: D. Baker, *The Conservative Nanny State: How the Wealthy Use the Government to Stay Rich and Get Richer* (Washington: Center for Economic and Policy Research, 2006). Baker can be somewhat shrill in making his point, but it is a point that is often overlooked or intentionally ignored.

5.3.2 The Rise of the Modern Regulatory State

As we know, the modern state is substantially about the administration, regulation and the focused application of state power for the benefit (or abuse) of its citizens.¹¹³⁹ Canada, for lack of a better example, is a country founded on the oft-parroted phrase of granting the federal government the power to “make laws for the peace, order, and good government of Canada.”¹¹⁴⁰ Several factors led to the construction of the modern regulatory state, but, at its root, the regulatory state should always be filtered through an understanding that is grounded on “regulation... characterized by relations of dominance and subordination.”¹¹⁴¹

Dominance and subordination have been a popular rallying cry against the nefarious and notorious “nanny” or regulatory state.¹¹⁴² As we have seen, the influence of neoliberal ideology against the regulatory state held that the “functional anonymity”¹¹⁴³ of markets and the private sector were *always-already* inherently superior, more efficient, more effective and more responsive to the public (“consumers”) than any public sector provider. As Galbraith noted:

A more comprehensive fraud dominates scholarly economic and political thought. That is the presumption of a market economy [being] separate from the state. Most economists concede a stabilizing role to the state, even those who urgently seek an escape from reality by assigning a masterful and benign role to Alan Greenspan and the central bank. And all but the most doctrinaire accept the need for regulation and legal restraint by the state. But few economists take note of the co-optation by private enterprise of what are commonly deemed to be functions of the

¹¹³⁹ Arguably, since the formation of human “civilization” an important aspect of the state has been a protective activity. For a fascinating description of the search for the “mother civilization” see: J.F. Ross, *The Lost Pyramids of Caral* (Smithsonian: Washington, 2002). Also, see: W.J. Duiker & J.J. Spielvogel, *World History, Vol. One (5th ed.)* (Belmont: Thomson & Wadsworth, 2007) at 9.

¹¹⁴⁰ *Constitution Act, 1982* (Schedule B of the *Canada Act 1982* (UK)) s. 91.

¹¹⁴¹ B. Curtis, “Knowledge and State Formation: Recent Scholarship by Edward Higgs” (2005) 38(76) *Social History* at: 494.

¹¹⁴² The recent fracas surrounding the mandatory long-form census in Canada is just one example of libertarian logic (sanity?) gone awry. See: S. Thorne, “Don’t mess with census, statisticians tell Tories” *The Globe and Mail*, July 09, 2010 at: <http://www.theglobeandmail.com/news/politics/dont-mess-with-census-statisticians-tell-tories/article1635031/print/> (last visited July 11, 2010).

¹¹⁴³ J.K. Galbraith, “Free Market Fraud” *The Progressive Magazine* January 1999 at: http://www.progressive.org/mag_galbraith0199 (last visited September 25, 2005).

state. This is hidden by the everyday reference to the public and private sectors, one of our clearest examples of [a suspicious] innocent fraud.¹¹⁴⁴

The rise of the modern regulatory state was not seamless. It occurred because of crisis and concern as to how to manage an ever increasing and obstreperous urban working class.¹¹⁴⁵ The failure of the common-law to bring about equitable solutions within the state meant that the state had to step into regulate. As James Anderson notes, the “term ‘regulatory state’ capsules one of the pervasive characteristics of American society.”¹¹⁴⁶ The lesson learnt from the “long depression” and the failure of the market meant that “[g]overnment regulation [would] determine... the framework within which economic activity is conducted”¹¹⁴⁷ and has become an essential and inseparable aspect – dismissive neoliberal rhetoric aside – of *any* modern economy.

5.3.3 The U.S. *Meat Inspection Act*, the *Pure Food and Drug Act* of 1906, and the Rise of the Regulatory State

Americans virtually invented the modern regulatory state, in the sense that the United States was the great pioneer of the administrative technology of controlling business through law-backed specialized agencies rather than through the technique of public ownership.

Michael Moran¹¹⁴⁸

At first blush, the American regulation of meat and drugs seems an odd place to understand the “not steering”¹¹⁴⁹ but lacklustre policy formation of modern drug patents, pharmacological regulation and its influence on university research. Yet, it was in the filth and stench of Chicago’s south-side slaughterhouses that the birth of modern health policies and

¹¹⁴⁴ *Ibid.*

¹¹⁴⁵ See: J.E. Anderson, *The Emergence of the Modern Regulatory State* (Washington: Public Affairs Press, 1962).

¹¹⁴⁶ *Ibid* at v.

¹¹⁴⁷ *Ibid.*

¹¹⁴⁸ M. Moran, “Misunderstanding the Regulatory State” (2002) 35(1) *Brit. J. Poli-Sci.* at 391.

¹¹⁴⁹ Pardon the pun but see: M. Moran, “Not Steering but Drowning: Policy Catastrophes and the Regulatory State” (2001) 72 *Pol. Quarterly* at: 414-427.

regulation began to govern food and drugs in America.¹¹⁵⁰ The history of the meatpacking industry is tied to the growth of industrial capitalism and the rise of the railroad as a transportation technology and of refrigeration technologies.¹¹⁵¹

Modern transportation and refrigeration technologies allowed for the transport of livestock to central locations where they could be industrially slaughtered, processed, packaged and shipped to various urban centres. It was principally the capacity to refrigerate meatpacking products that allowed these commodities to be transported throughout the nation without spoilage.¹¹⁵² The history of meatpacking plants and the industry, its treatment of workers, and capital's opposition to unionisation, has been consistent fodder for over 100 years of labour organising and politics in Canada and America.¹¹⁵³ It is also the beginning of the regulations and the administrative state that would lead to drug regulation.

5.3.4 Sinclair on Filth and Poverty – Development, Urbanisation and Government Regulation

¹¹⁵⁰ See: G.D. Libecap, "The Rise of the Chicago Packers and the Origins of Meat Inspection and Antitrust" (1992) 30 *Econ. Inq.* at 224. According to Libecap, it was the first *Meat Inspection Act*, of 1891, that was closely associated and allied with the objectives of the anti-trust policies of the *Sherman Act*.

¹¹⁵¹ J.A. Hogeland, "An Application of Steindl's Theory of Concentration to the US Meat Packing Industry, 1865-1988" in *Rethinking Capitalist Development: Essays on the Economics of Josef Steindl* (eds.) T. Mott & N. Shapiro (New York: Routledge, 2005) at 31.

¹¹⁵² It is important to note that James Harrison, the Australian inventor of modern refrigeration, on his maiden voyage met with disaster. Similar to Brunelleschi, Harrison's voyage from Australia to Britain with his invention of the "cold bank" for refrigerated meat ended in spoilage and the cargo of meat being tossed overboard. See: W.R. Lang, *James Harrison – Pioneering Genius* (Newtown: Neptune Press, 1982). Also, see: K.T.H. Farrer, *To Feed a Nation: A History of Australian Food Science and Technology* (Collingwood: CSIRO Pub., 2005).

¹¹⁵³ See: R. Albritton, "Eating the Future: Capitalism Out of Joint" in *Political Economy and Global Capitalism: The 21st Century, Present and Future* (eds.) R. Albritton, R. Jessop & R. Westra (London: Anthem Press, 2010) at 54. Also, see: P. Rachleff, *Hard-Pressed in the Heartland: The Hormel Strike and the Future of the Labor Movement* (Boston: South End Press, 1999). Also, see: B. Kopple, *American Dream* (New York: Cabin Creek, 1990). *American Dream*, the Academy Award winning documentary film, is a stunning example as to the horrific conditions that continue to plague meatpacking workers and their fight for a living wage. For a Canadian example, see: J. Stanford, *Paper Boom: Why Real Prosperity Requires a New Approach to Canada's Economy* (Toronto: J. Lorimer, 1999) at 372. As Stanford points out, one of the great ironies about the modern Canadian labour movement is how our pension system undermines labour. In a 1998 Edmonton strike, the Ontario Teachers' Pension Fund, which owned about one quarter of the shares in Maple Leaf Foods, tacitly supported the abusive labour practices and tactics of Maple Leaf's management. Also, see: J. Farrell, "Little taste for bacon jobs; Fletcher's holds no appeal for embittered workers" *The Edmonton Journal*, December 3, 1998, at B1.

It was not labour strife or the poverty of people working in the meatpacking industry but the lack of sanitary conditions in the Chicago's abattoirs that introduced a regulatory revolution in state governance. Chicago's Packingtown, also known as "Back-of-the-Yards,"¹¹⁵⁴ was the working-class district where "starving and penniless men... came, literally, by the thousands every single morning, fighting with each other for a chance for life."¹¹⁵⁵ It was not their working conditions, but what went into consumers' food and their mouths that would give birth and shape our modern regulatory system. In 1906, Upton Sinclair did what most lawyers or authors can only dream of doing: in particular, he helped create a new body of law through a work of fiction. The history of hygienic standards in food packaging and modern North American meatpacking can trace its legislative roots to the U.S. *Meat Inspection Act*¹¹⁵⁶ and the *Pure Food and Drug Act*¹¹⁵⁷ and, indeed, the work of Sinclair.¹¹⁵⁸

As a "proletarian writer,"¹¹⁵⁹ Sinclair held that an artist should think "no more of 'art for art's sake' than a man on a sinking ship thinks of painting a beautiful picture in the cabin; he thinks of getting ashore – and then there will be time enough for art."¹¹⁶⁰ Arguably, Sinclair's *The Jungle*, and the massive controversy it caused, was partly responsible for the emergence of the modern regulatory state – a regulatory state that is sometimes subject to sporadic activity.¹¹⁶¹

¹¹⁵⁴ J. Jacobs, *The Death and Life of Great American Cities* (New York : Vintage Books, 1992) at 424.

¹¹⁵⁵ U.B. Sinclair, *The Jungle* (New York: Random House, 1981) at 112.

¹¹⁵⁶ *Federal Meat Inspection Act (1906)* 34 Stat. L. 674.

¹¹⁵⁷ *Federal Food and Drugs Act (1906) (The "Wiley Act")* 34 Stat. L. 768.

¹¹⁵⁸ G. Trumbull, *Consumer Capitalism: Politics, Product Markets, and Firm Strategy in France and Germany* (Ithaca: Cornell Univ. Press, 2006) at 74; J. Healy, "Death of a Cow" in *Qualitative Inquiry and Social Justice: Toward a Politics of Hope* (eds.) N.K. Denzin & M.D. Giardina (Walnut Creek: Left Coast Press, 2009) at 233; S.L. Piott, *American Reformers, 1870-1920: Progressives in Word and Deed* (Lanham: Rowman & Littlefield, 2006) at 176.

¹¹⁵⁹ Sinclair, *supra* note 1155 at 594.

¹¹⁶⁰ *Ibid.*

¹¹⁶¹ J. Smith, "Sanitation, maintenance problems noted at Alberta plant where E. coli scare began" The Toronto Star, Friday October 5, 2012, at: <http://www.thestar.com/news/canada/politics/article/1267497--e-coli-scare-reaches-newfoundland-one-person-sick-with-same-strain-found-at-xl-foods-plant>. Also, see: B. Curry & S. Chase, "XL Foods too slow to alert food inspectors to contaminated meat, agency says" The Globe and Mail, Thursday October 4, 2012 at: <http://www.theglobeandmail.com/news/politics/xl-foods->

Released in February of 1906, *The Jungle* acted to solidify the public opinion required that led to the swift passage of the *Meat Inspection Act* and the *Pure Food and Drug Act* by June of 1906 – coming into force on January 1, 1907.

5.3.5 A Hobbesian Stock-Yard Jungle

Sinclair's novel follows the life of Jurgis Rudkus and his family, who have emigrated to late 19th-century Chicago from Lithuania. In Chicago, they struggle and fall prey to sickness, confidence men and swindlers, and unscrupulous realtors. Slowly, the family disintegrates and Jurgis's wife dies in childbirth. *The Jungle* is a re-telling of Hobbes and his theory of property, but backwards. For Sinclair, Chicago, its stockyards and early 20th-century industrial capitalism, with its centralised abattoirs for the livestock (and – metaphorically – for people) of the nation is an amalgam of Hobbes's amoral "state of nature." In this state of nature, where all is 'red in tooth and claw', everyone is measured by the individual price of their labour. All persons, it would appear, have a price: from workers; to government inspectors; to police; to judges; through to politicians. As Sinclair wrote:

And so Jurgis got a glimpse of the high-class criminal world of Chicago. The city, which was owned by an oligarchy of businessmen, being nominally ruled by the people, a huge army of graft was necessary for the purpose of effecting the transfer of power. Twice a year, in the spring and fall elections, millions of dollars were furnished by the businessmen and expended by this army; meetings were held and clever speakers were hired, bands played and rockets sizzled, tons of documents and reservoirs of drinks were distributed, and tens of thousands of votes were bought for cash. And this army of graft had, of course, to be maintained the year round. The leaders and organizers were maintained by the businessmen directly – aldermen and legislators by means of bribes, party officials out of the campaign funds, lobbyists and corporation lawyers in the form of

[too-slow-to-alert-food-inspectors-to-contaminated-meat-agency-says/article4589308/](http://www.healthzone.ca/health/article/486857) (last visited October 10, 2013). Also, see: B. Champion-Smith, R. Doolittle & J. Smith, "Listeria outbreak spurs food safety overhaul" *Toronto Star*, August 28, 2008 at: <http://healthzone.ca/health/article/486857> (last visited August 28, 2008). Also, see: Angell, *supra* note 212 at 32.

salaries, contractors by means of jobs, labor union leaders by subsidies, and newspaper proprietors and editors by advertisements. The rank and file, however, were either foisted upon the city, or else lived off the population directly. There was the police department, and the fire and water departments, and the whole balance of the civil list, from the meanest office boy to the head of a city department; and for the horde who could find no room in these, there was the world of vice and crime, there was license to seduce, to swindle and plunder and prey.¹¹⁶²

In his attempt to portray the travails of the working-class in Chicago's meatpacking plants, Sinclair revealed the health conditions as to the processing of meat in the industrial age. It was, to many, this famous passage that transformed, not concern for workers, and the conditions and consumption of their labour, but, rather, American's perception as to their food and the hygiene involved in its consumption:

This is no fairy story and no joke; the meat would be shoveled into carts, and the man who did the shoveling would not trouble to lift out a rat even when he saw one – there were things that went into the sausage in comparison with which a poisoned rat was a tidbit. There was no place for the men to wash their hands before they ate their dinner, and so they made a practice of washing them in the water that was to be ladled into the sausage. There were the butt-ends of smoked meat, and the scraps of corned beef, and all the odds and ends of the waste of the plants, that would be dumped into old barrels in the cellar and left there. Under the system of rigid economy which the packers enforced, there were some jobs that it only paid to do once in a long time, and among these was the cleaning out of the waste barrels. Every spring they did it; and in the barrels would be dirt and rust and old nails and stale water – and cartload after cartload of it would be taken up and dumped into the hoppers with fresh meat, and sent out to the public's breakfast.¹¹⁶³

The controversy surrounding meatpacking and the unsanitary conditions surrounding its production helped ratify and enact new laws surrounding food and drugs, but it did little to assist or remedy the conditions of the working-class. Sinclair may have caused a profound transformation in the hygiene practiced in the meatpacking industry, but it did nothing to change the conditions of Chicago's industrial slums or the working conditions

¹¹⁶² Sinclair, *supra* note 1155 at 375.

¹¹⁶³ *Ibid* at 190-191.

in the packinghouses. In a letter to Sinclair, President Roosevelt held that “action must be taken to do away with the effects of arrogant and selfish greed on the part of the capitalist,”¹¹⁶⁴ but Sinclair’s socialism was misplaced idealism. Alas, Sinclair had hope to write a book that would transform the conditions of the working class: to his own chagrin, he became one of the America’s first consumer advocates. As Sinclair noted: “I aimed at the public’s heart, and by accident I hit it in the stomach.”¹¹⁶⁵

5.3.6 “Where’s the Beef”™ – Regulation for Safety’s Sake

The enactment of the *Meat Inspection Act* and the *Pure Food and Drug Act* – coupled with the *Sherman Act* – represents a sea change in America’s regulatory framework.¹¹⁶⁶ It began a seventy-year expansion of the regulatory and administrative state in America – and, as goes America so goes Canada. The passage of the *Meat Inspection Act* and the *Pure Food and Drug Act* “began the modern era of U.S. food regulation.”¹¹⁶⁷ It also began the long battle as to food and drug regulation, which in many ways, we are still fighting to this day.¹¹⁶⁸ At times, this long mêlée oft-times pits solid science against capital and, at others, forges partnerships that miraculously and incidentally – and intentionally – advanced the public good. Yet, it was not until some significant advances were made in fighting bacteria that further legislation and regulation

¹¹⁶⁴ President Theodore Roosevelt, Letter to Upton Sinclair, March 15, 1906, at: <http://www.teachingamericanhistory.org/library/index.asp?document=1299> (last visited May 24, 2008).

¹¹⁶⁵ U.B. Sinclair, *The Profits of Religion: An Essay In Economic Interpretation* (New York: Vanguard Press, 1927) at 217.

¹¹⁶⁶ It would be incorrect to assume that the regulatory frameworks between America and Canada are identical. Yet, as the little brother or sister to this behemoth, we tend to follow their regulatory examples with respect to removing trade barriers and standardised commodities.

¹¹⁶⁷ N.D. Fortin, *Food Regulation: Law, Science, Policy, and Practice* (Hoboken: John Wiley & Sons, 2009) at 6.

¹¹⁶⁸ See: *Monsanto Canada Inc. v. Schmeiser* [2004] 1 S.C.R. 902. It should be noted that Mr. Schmeiser, in 2005, found his field again contaminated with more ‘round-up ready’ canola and sued Monsanto for \$660 in small claims court for the clean-up cost. On March 19, 2008, Monsanto settled out of court, paying Mr. Schmeiser the \$660. See: M. Hartley, “Grain Farmer Claims Moral Victory in Seed Battle Against Monsanto” *The Globe and Mail*, March 20, 2008, at:

<http://www.commondreams.org/archive/2008/03/20/7784> (last visited March 28, 2008).

solidified and pushed the *Pure Food and Drug Act* into a more active piece of the legislation. For most producers, the *Pure Food and Drug Act* was essentially an extension of unfair competition in trade and for most agricultural producers it was a law enacted against “adulterators and debasers.”¹¹⁶⁹ For the most part, the *Pure Food and Drug Act* only dealt with ‘snake-oil’ peddlers¹¹⁷⁰ and it would take another three decades before it would begin to regulate and shape the pharmaceutical industry.

5.4 The Modern Medical Revolution

5.4.1 Breakthroughs and Heroes

Andrea: “Unhappy is the land that breeds no hero.”

Galileo: “No, Andrea: Unhappy is the land that needs a hero.”

Bertolt Brecht¹¹⁷¹

In the land of antibiotics, heroes were needed. In this land, the one-eyed man is king and the heroes of scientific breakthroughs were rare – at least until the 20th-century. The remarkable innovators in this field of medicine were never heavily financed nor corporately back by multinational pharmaceutical corporations. They were typically

¹¹⁶⁹ D. Vogel, “The ‘New’ Social Regulation in Historical and Comparative Perspective” in *American Law and the Constitutional Order: Historical Perspectives* (eds.) L.M. Friedman & H.N. Scheiber (Cambridge: Harvard University Press, 1988) at 437. One cannot help but note the religious overtones in this phrase. The messianic “organic” food movement also has this terminological tendency as to physical – if not spiritual – purity.

¹¹⁷⁰ For an quick-witted take on the snake-oil salesman, see: M. Twain, “Letter from Mark Twain to a Snake Oil Peddler” November 20, 1905, at: <http://boingboing.net/2010/01/27/letter-from-mark-twa.html> (last visited August 30, 2010). “You, sir, are the scion of an ancestral procession of idiots stretching back to the Missing Link.” In lieu of this, it should be noted that it was not until 1962 that an approved drug in the United States did not have to prove safety or effectiveness. That is, after 1962, drugs had to have “proof-of-efficacy.” See: *1962 Amendment to the Federal Food, Drug, and Cosmetic Act* 76 Stat. 780 (1962). This act came into force in response to the thalidomide disaster. Thalidomide was a West German made sedative that caused severe birth defects when taken by expecting mothers in the late 1950s and early 1960s. See: L. Bren, “Frances Oldham Kelsey: FDA Medical Reviewer Leaves Her Mark on History” (Washington: FDA Consumer Magazine, March-April 2001) at: http://permanent.access.gpo.gov/lps1609/www.fda.gov/fdac/features/2001/201_kelsey.html (last visited November 1, 2010). Kelsey is widely lauded as the rookie reviewer at the F.D.A. who put a stop to the use of thalidomide during pregnancies in the United States by refusing to approve the drug.

¹¹⁷¹ B. Brecht, “The Life of Galileo” in *Bertolt Brecht Collected Plays* (trans.) H. Brenton (London: Vintage Books, 1972) at 456.

persons of science confronted with a problem that their curiosity sought to solve. Or as Kurt Vonnegut delicately asserts: “If you can do a half-assed job of anything, you’re a one-eyed man in a kingdom of the blind.”¹¹⁷²

5.4.2 Modern Miracles(?) or Hard Work

What we know as “modern” medicine, surgical and internal treatment, truly only became possible in the 1930s due to several technical discoveries but primarily by a way to systematically deal with secondary infections that result from invasive surgery.¹¹⁷³ The capacity to fight secondary infections was the beginning of the modern medical revolution. This was also a period that saw a revolution in the rise in wealth and power of modern pharmaceutical corporations and laid out the part that they would play in policy development, health care, and research in universities. It is the parallax between modern medicine and its standard of care and the objectives of pharmaceutical corporations and their obligation to shareholders that sets the stage for drama in funding research institutions in a neoliberal age.

Before 1930, effective and predictable drugs that could combat the simplest bacterial infection were unknown. Traditional medicines and herbal remedies had, to varying degrees, a certain amount of success in treating ailing individuals and in providing pain relief, but ultimately they were statistically poor in curing simple infections and most infectious diseases. Analgesics were available and worked,¹¹⁷⁴ but “cures”¹¹⁷⁵ were difficult if not impossible to find. As far as providing effective

¹¹⁷² K. Vonnegut, *The Piano Player* (New York: Dell Publishing, 1980) at 198.

¹¹⁷³ See: T. Hager, *The Demon Under the Microscope: From Battlefield Hospitals to Nazi Labs, One Doctor’s Heroic Search for the World’s First Miracle Drug* (New York: Harmony Books, 2007).

¹¹⁷⁴ T. Carnwath & I. Smith, *Heroin Century* (London: Routledge, 2002) at 137.

¹¹⁷⁵ See: Oxford Dictionaries Online at: <http://www.oxforddictionaries.com/definition/cure> (last visited August 2, 2010). The Oxford Dictionary defines one aspect of cure as being able to “eliminate (a disease

scientifically based cures against bacterial or viral infections, remedies that are statistically verifiable across a population, ‘traditional’ therapies and their efficacy were at best chequered. Traditional medical knowledge was limited. A surgeon’s solution to a person’s health problem was to wait, cut and/or drain, and, given the circumstances, these were the best solutions available. As Thomas Hager puts it:

In 1931, humans could fly across oceans and communicate instantaneously around the world. They studied quantum physics and practiced psychoanalysis, suffered mass advertising, got stuck in traffic jams, talked on the phone, erected skyscrapers, and worried about their weight. In Western nations people were cynical and ironic, greedy and thrill-happy, in love with movies and jazz, and enamored of all things new; they were, in most senses, thoroughly modern. But in at least one important way they had advanced little more than prehistoric humans: They were almost helpless in the face of any bacterial infection.¹¹⁷⁶

5.4.3 Nobels in Medicine and Anti-Biotics

It is interesting that in the history of the Nobel Prize in Medicine, it has been awarded at three different times to men who each discovered different types of antibiotics.¹¹⁷⁷ Antibiotics, with the accelerated development the development of surgical techniques, propelled modern medicine in new directions. This new combination of antibiotics and surgical methods proved that “[m]ixing one’s wines may be a mistake, but old and new wisdom mix admirably.”¹¹⁷⁸

We generally know of the Scottish physician and researcher, Alexander Fleming, who is presumed to have discovered penicillin.¹¹⁷⁹ Selman Waksman is slightly more

or condition) with medical treatment.” These days that is not necessarily the objective of modern pharmaceutical research.

¹¹⁷⁶ Hager, *supra* note 1173 at 1.

¹¹⁷⁷ That is, with the exception of Ernest Duchesne, and his revolutionary work, who was eventually awarded a posthumous Nobel for the antibacterial/mould link in 1949.

¹¹⁷⁸ B. Brecht, *The Caucasian Chalk Circle* (London: Methuen, 1965) at 6.

¹¹⁷⁹ It is clear that Ernest Duchesne, at the time a French medical student, made a scientific link between mould and bacteria after interviewing stable boys in 1897. The stable boys told him that tack was kept in dark damp rooms that encouraged mould development and that this cut down on saddle sores on horses and

obscure. If we are not familiar with his name, then we are certainly familiar with his discovery of streptomycin, which became the first effective treatment and cure for tuberculosis. In our “modernity,” the researcher, Gerhard Domagk, is not generally well known. Yet, it was Domagk’s research that represented the true start of the antibacterial revolution, at least as far as the “business” of antibiotics and the pharmaceutical industry. It was the discovery of sulphanilamide drugs – shortened to “sulfa drugs” – that would prove to be the monumental break that modern medicine needed to begin mass pharmaceutical production to combat toxic bacteria.

5.4.4 The Charade of Corporate Innovation in Bacteriology and Virology

As laypersons, we are often misled or under the misapprehension that the pharmaceutical revolution was the result of a tenacious and adventurous new industry to avoid germs. Mostly, it may have been evolution and in our nature.¹¹⁸⁰ In the ‘historicity’ of risk-benefit, it is regularly reiterated that the ‘market’ and corporate initiative is responsible for the miraculous world of medical breakthrough drugs and the

other related (staph) bacteria infections. Duchesne advanced this into clinical experiments using sick guinea pigs and made the first documented antibacterial link concerning mould over 30 years before Fleming rediscovered it. See: S. Duckett, “Ernest Duchesne and the Concept of Fungal Antibiotic Therapy” (1999) 354 *The Lancet* at: 2068-71. Also, see: K. Link, *Understanding New, Resurgent, and Resistant Diseases: How Man and Globalization Create and Spread Illness* (Westport: Praeger Publishers, 2007) at 13. Also, see: J. Lindsay, C.A. Perkins & M. Karanjikar, *Conquering Innovation Fatigue: Overcoming the Barriers to Personal and Corporate Success* (Hoboken: John Wiley & Sons Inc., 2009) at 77. Also, see: G. Macfarlane, *Alexander Fleming: The Man and the Myth* (Oxford: Oxford University Press, 1985).

¹¹⁸⁰ V. Curtis & A. Biran, “Dirt, Disgust, and Disease: Is Hygiene in Our Genes?” (2001) 44(1) *Perspectives in Bio. & Med.* at 17. Also, see: M. Rubio-Godoy, R. Aunger & V. Curtis, “Serotonin – A Link Between Disgust and Immunity?” (2006) 68(1) *Med. Hypothesis* at: 61-66. According to Curtis and Biran, prohibitions and avoidance of “excreta, rotten food, slime and bugs” are anthropologically universal in the avoidance of toxic substances and pathogens: this is an almost instinctual fear that modern detergent and pharmaceutical industries have perfected in exploiting and, it would appear, to be causing ‘unintended consequences’ as to human health. See: S.T. Weiss, “Eat dirt – the hygiene hypothesis and allergic diseases” (2002) 347(12) *N.E.J.M.* at 930. Also, see: M. Kalliomaki, *et. al.* “Probiotics in primary prevention of atopic disease: a randomised placebo-controlled trial” (2001) 357 *The Lancet* at: 1076-9.

pharmaceutical revolution. Yet, as Michel-Rolph Trouillot defines ‘historicity,’ we must remember that:

Human beings participate in history both as actors and as narrators, yet the boundaries between these two sides of historicity, necessary as they are as heuristic devices, are themselves historical, and thus fluid and changing. The interface between what happened and that which is said to have happened is thus always a matter of struggle, a contested field within which uneven power is deployed.¹¹⁸¹

As such, one must be conscious of the “uneven power” and the enormous financial resources spent by corporate narrators – or storytellers – in this debate. The continued investment spent on annual advertising in all media, and politically in electoral cycles, to advance the corporate position and highlight the good they do for society ought not to be under or unappreciated by the casual observer.¹¹⁸²

As an ideological narrative, the mavens of the pharmaceutical industries have been fairly successful at promoting their side of the story. They tell us of their great risks, their great triumphs and the passion that they bring to future innovation and that this explains the high cost of patented drugs. It is not profit, but their concern for people – the individual person – that promotes scientific innovation.¹¹⁸³ It is the daring “risks”

¹¹⁸¹ M.-R. Trouillot, *Global Transformations: Anthropology and the Modern World* (New York: Palgrave Macmillan, 2003) at 12. Also, see: E.J. Hobsbawm, “Introduction: Inventing Traditions” in *The Invention of Tradition* (eds.) E.J. Hobsbawm & T.O. Ranger (Cambridge: Cambridge University Press, 2009) at 2-3. As Hobsbawm assiduously frames the debate, ‘custom’ is the “motor and flywheel” of history whereas ‘traditions’ are concretisations of the imagination as ‘invented’ traditions.’ As Hobsbawm points out, appeals to “tradition” or “traditional” ways of doing or knowing things can be undone rather quickly once this narrative trope is explored and examined. For example in law, “[c]ustom’ is what judges do; ‘tradition’ (in this instance invented tradition) is the wig, robe and other formal paraphernalia and ritualized practices surrounding their substantial action.”

¹¹⁸² See: H.J. Glasbeek, “The Social Responsibility Movement: The Latest in Maginot Lines to Save Capitalism” (1988) 11 Dal. L.J. at 385. Also, see: P. Phillips *et. al.*, *Censored 2001: 25 Years of Censored News and the Top Censored Stories of the Year* (New York: Seven Stories Press, 2001) at 38-39. Also, see: J. Bendell & M. Bendell, “Facing Corporate Power” in *The Debate Over Corporate Social Responsibility* (eds.) G. Cheney, J. Roper & S. May (Oxford: Oxford University Press, 2007) at 62.

¹¹⁸³ See: M. Lechanteur, “A Message from our President” *Lilly, Canada*, at: <http://www.lilly.ca/servlets/sfs;jsessionid=FA30E28B3C7857B60DD0213C21A59A0A?s=Kmm1XSHTO SBKkj6ZRW&t=/contentManager/selectCatalog&i=1233164768976&b=1233164768976&l=0&e=UTF->

that they take, the associated regulatory costs of new drugs, “their” research and “their” development that merit the pharmaceutical industry’s high returns.¹¹⁸⁴ Without profit, so the industry rationale goes, the necessary funds to enable future innovation and research would not be present to fuel new revolutionary discoveries. Yet, there is one hitch to this story:

Every independent study that’s ever looked at the sources of medical innovation has concluded that research funded by the public sector – not the private sector – is chiefly responsible for a majority of the medically significant advances that have led to new treatments of disease. Moreover, the drug industry’s expense for bringing those advances from lab to market is well below the \$500-million claim. If one discounts the research clearly aimed at marketing and producing drugs whose contribution to public health does not exceed that of drugs already on the market, the assertion collapses on its face.¹¹⁸⁵

It would appear that the high cost of research and development, the rationale that provides the pharmaceutical industry with its strongest argument as to the high cost of prescription drugs, is questionable. If this is true, it is a damning to the rationale used to advance the cause of maximising patent protection and profit. Moreover, if that is true, it even goes further to question the minimal patent protection afforded pharmaceutical companies; patent and monopoly protection that relies on enormous amounts public financing for research and development.

[8&ParentID=1245343525612&intro=1&startRow=0&active=no](#) (last visited October 2, 2010). It is all “puff,” but as Marcel Lechanteur, President and General Manager of Lilly and Co., Canada, puts it: “Innovation is personal.” And because of this, “[a]t Lilly an idea becomes an innovation only when it makes a meaningful difference in a person’s life because personal experiences with illness are as important as the science of a disease.”

¹¹⁸⁴ There are seemingly countless amounts of literature advancing this argument; yet, for fairness’s sake see: R.A. Epstein, *Overdose: How Excessive Government Regulation Stifles Pharmaceutical Innovation* (New Haven: Yale University Press, 2006).

¹¹⁸⁵ M. Goozner “The Price Isn’t Right” *The American Prospect*, November 30, 2002 at: http://www.prospect.org/cs/articles?article=the_price_isnt_right (last visited June 20, 2008).

5.4.5 The Ideological Inertia of the \$800 Million Pill?

In *The \$800 Million Pill*,¹¹⁸⁶ Goozner fleshes out and unpacks a remarkable history as to the rise of the pharmaceutical corporation in America and the world. Goozner asks the rather simple question (most profound questions usually are simple): why do patented drugs cost so much? Pharmaceutical companies insist that the high cost of the current regulatory regime is partly responsible. Excessive regulation of drugs is reflected in the high cost of innovation and the millions drug companies invest yearly in research, development, and in drug trials. Goozner argues this sophistry.¹¹⁸⁷ Goozner holds that it is the taxpayer that has subsidised most of the research and development of new drugs. In fact, almost all of the new and important prescription drugs that have become available over the last quarter-century are taxpayer-funded.¹¹⁸⁸ Goozner's argument claims that it is through taxpayer-funded universities, non-profit organisations and the funders like the N.I.H. that are responsible for funding most of the new breakthrough drugs in America and Canada.¹¹⁸⁹ Yet, the standard narrative is one of private sector "innovation" and "risk." The pharmaceutical industry still claims it is the clothing of the private sector that protects and promotes innovation in new drug development. The ostensible narrative is that venture capitalists, regular investors and pension funds fuel the incentives for drug development: it is this pool of capital and

¹¹⁸⁶ Goozner, *supra* note 194. Merrill Goozner is the former chief economics correspondent for the Chicago Tribune; professor of journalism at New York University; and, is currently the director of the Integrity in Science Project at: <http://www.gooznews.com/>.

¹¹⁸⁷ It must be understood that I use the term "sophistry" in its post-Socratic and negative sense. Socrates, perhaps the greatest Athenian sophist, hated democracy and had axes to grind. Socrates did such a hatchet job on his contemporaries that we readily accept the terms "sophistry" and Sophists as negative expressions. Specifically, Socrates, who lived off an inheritance from his father – perhaps the first documented case of a "trustafarian" – derided the Sophists because they accepted money to teach. For an utterly refreshing and iconoclastic examination of the life of Socrates see: I.F. Stone, *The Trials of Socrates* (New York: Anchor Books, 1989).

¹¹⁸⁸ Goozner, *supra* note 194 at 206.

¹¹⁸⁹ *Ibid* at 8.

investors that take incredible risks to fund drug development and progress. This is the well-weathered (thread-bare?) argument that the free enterprise system works for the benefit of all.¹¹⁹⁰ The idea that free enterprise and the current patent system could be at radical variance with the progress of science and hinder research and development is rarely considered.¹¹⁹¹

But, is that how new drugs and compounds come about? According to Trevor Jones, it is a complicated process:

Breakthroughs in medical research occur rarely, and are the result of many years of painstaking, dedicated, and often frustrating toil. Those credited with the invention sit at the apex of a pyramid of knowledge hewn and built by thousands of researchers from many disciplines and countries. Occasionally, the concept lying at the heart of an invention is the result of a solitary and persistent endeavour-sometimes one that has challenged conventional theories and their champions – but usually it stems from dialectic interaction with peers and, importantly, the team that provides laboratory and intellectual support.¹¹⁹²

For Jones, “the specific case of new medicines, spectacular breakthroughs (dubious first-in-class products) are extremely rare...”¹¹⁹³ and, “[m]ore usually, products that provide additional therapeutic benefit arise from a series of incremental steps rather than a

¹¹⁹⁰ See: A.B. Jaffe & J. Lerner, *Innovation and Its Discontents: How Our Broken Patent System Is Endangering Innovation and Progress, and What To Do About It* (Princeton: Princeton University Press, 2004) at 17. Jaffe and Lerner do raise the point that: “For all its warts and periodic stumbles, our capitalist free-enterprise system has demonstrated a unique ability to generate new technology: industrialized economies have increased their economic productivity more in the last two centuries than in all the millennia of previous human history.” Yet, Jaffe and Lerner appear to fail to acknowledge Polanyi insights. Whereas, Galbraith or Mazzucato point out that the free market and the public/private distinctions are a rather unreliable ocular qualification. Indeed, it is clear that it is *public* investment that provides the foundation or engine for innovation and provides the inertia that eventually leads to private profit and wealth accumulation.

¹¹⁹¹ Bruce Patsner is one of many critics who sees conflicts arising between the free enterprise and patent systems and various regulatory bodies, yet, these voices are rarely heard in the mainstream. See: B. Patsner, “Keeping Generic Drugs off the Market: Do Patents Hinder Healthcare?” (July 2008) *Health Law Perspectives* U. of Houston, at: <http://www.law.uh.edu/healthlaw/perspectives/homepage.asp> (last visited September 24, 2010).

¹¹⁹² T.M. Jones, “Cheap at Half the Price?” (2004) 364(9431) *The Lancet* at: 321.

¹¹⁹³ *Ibid.*

quantum leap in understanding.”¹¹⁹⁴ Even though the steps are incremental, Jones accepts the \$800 million price tag for drug development and the industry’s hagiography and rationale for its pricing system. But, should he?

Goozner’s history of the prescription drug revolution occurs in three stages.¹¹⁹⁵ The first stage is traced to the discovery and birth of sulpha drugs in Germany that occurred over the decade and a half after WW I culminating with its popularisation during the Great Depression. The second stage occurred during the Great Depression leading to the innovative frenzy surrounding antibiotics during WW II. The third stage comprised mostly the post-WW II phase where the marketing of antibiotics and subsequent research would transform the pharmaceutical industry and make so much profit for its shareholders, patent lawyers and the firms that defend their interests.

In the developed world, we suffer from historical amnesia when it comes to the medical revolutions that have transformed “our” lives. With the rise of antibacterial drugs, simple infections and diseases that could kill by the thousands or millions are now mostly forgotten, even though they lurk behind the veil of drug resistance. Simple infections that would have readily killed our grandparents or our great-grandparents are, at least for the moment, mortality statistics from the past.

¹¹⁹⁴ *Ibid.*

¹¹⁹⁵ Others have different variations of this theme, see: J.E. Lesch, *The First Miracle Drugs: How the Sulfa Drugs Transformed Medicine* (Oxford: Oxford University Press, 2007) at 269. Also, see: M.J. Gordon & D.J. Fowler, *The Drug Industry: A Case Study in Foreign Control* (Toronto: J. Lorimer & The Canadian Institute for Economic Policy, 1981) at 12. Also, see: E. Grundmann, *Gerhard Domagk: The First Man to Triumph Over Infectious Diseases* (Münster: Lit, 2004).

5.5 Warfare Against Bacteria

5.5.1 Domagk and the Discovery of Sulpha Drugs

At the beginning of WW I, Gerhard Domagk, at the age of eighteen, joined as a Leibgrenadier in the German Army fighting for the interests of Emperor Wilhelm II. After being wounded in the first year of hostilities, he was reassigned as a medic and sent to a front-line dressing station in the Ukraine. There, he quickly became familiar with emergency medicine and became a battlefield surgeon through a crash course on front-line casualties. It was through this experience that Domagk was exposed to the various infections and “wounds [that] no one had ever seen before, [ironically] thanks to the advance of military and industrial science.”¹¹⁹⁶ These wounds and the infectious diseases that soldiers acquired in trench warfare were catastrophic.¹¹⁹⁷ It was here that Domagk was exposed to the worst contagion of the First World War, gas gangrene. Called “*gasbrand*” in German, gas gangrene is a contagious infection caused by the clostridium bacterium. Clostridium bacteria would quickly eat away at the wound and eventually the surrounding muscle causing the release of toxins and putrid gases into the blood. This would further poison the patient and increase the rate of infection. The patient’s resulting purification would balloon his wounds and usually once the gas gangrene infection had taken hold there was little chance of survival.

At the end of the war, Domagk took up a position as a professor in the Baltic city of Greifswald, Germany, to further his study of bacterial infections. In 1927, Domagk was offered and took a position as a physician on staff at Bayer Laboratories, in Elberfeld

¹¹⁹⁶ T. Hagar, *The Demon Under the Microscope: From Battlefield Hospitals to Nazi Labs, One Doctor’s Heroic Search for the World’s First Miracle Drug* (New York: Three Rivers Press, 2007) at 16.

¹¹⁹⁷ *Ibid.*

– part of the soon to be notorious IG Farben.¹¹⁹⁸ Throughout his tenure at Bayer, Domagk was inspired by Paul Ehrlich.¹¹⁹⁹ Ehrlich was the researcher who discovered the first effective drug regimen for syphilis – Salvarsan. Domagk’s research followed Ehrlich’s lead and consisted of spending five years screening and studying industrial dyes and their properties. The basic method of light assisted microscopic observation of cells or microscopic organisms require that the specimen be stained by a dye – a contrast medium. Without being stained, the internal structure of a cell or microscopic organisms are translucent and/or invisible. By staining a specimen with dye, microscopic observation of a cell and the microscopic internal structure of an organism became visible. It was a comparison of the non-toxic and the toxic properties of certain dyes that killed bacteria when examined that became a central research interest to Domagk.

Just before Christmas 1932, Domagk discovered that a handful of mice he had infected with lethal doses of staphylococci and haemolytic streptococci had been cured after ingesting a particular red dye.¹²⁰⁰ Subsequent testing demonstrated that this specific dye was toxic to the staphylococci and haemolytic streptococci bacteria. On the fifteenth of February 1935, Domagk published his findings in the then pre-eminent German medical journal, *Deutsche Medizinische Wochenschrift*.¹²⁰¹ Domagk’s published his

¹¹⁹⁸ At the time, IG Farben was the most powerful chemical company in the world and was soon to become the Nazi collaborator that produced the poisonous gas, Zyklon B, responsible for the death of millions during the Holocaust.

¹¹⁹⁹ See: E. Bäuml, *Paul Ehrlich: Scientist for Life* (Teaneck: Holmes & Meier Publishing, 1984).

¹²⁰⁰ Gozner, *supra* note 194 at 210.

¹²⁰¹ See: F. Ryan, *The Forgotten Plague: How the Battle Against Tuberculosis Was Won – and Lost* (Boston: Little, Brown, 1993) at 98-120. For his efforts surrounding the development of Prontosil, Domagk was awarded the 1939 Nobel Prize in Medicine. Unfortunately, due to Nazi government policy, Domagk was arrested by the Gestapo for a week prior to the award and forced to write the Caroline Institute to refuse the prize. G. Domagk, “Further progress in chemotherapy of bacterial infections” Nobel Lecture, December 12, 1947” in *Chemotherapy of Bacterial Infection* (Thieme: Stuttgart, 1947) at 490.

findings as to the toxic effect of the red dye – what was to be commercially marketed as the drug Prontosil – and this information spread throughout the medical community.

In 1936 in France, armed with Domagk’s findings as to the effects of Prontosil, the wife-and-husband team of Thérèse and Jacques Trefouel, and their team at the Pasteur Institute, conducted further research.¹²⁰² They soon discovered that it was not the dye but the metabolised sulphanilamide (para-aminophenylsulfonamide) present in the dye that killed the streptococci.¹²⁰³ The active ingredient, sulphanilamide, was an off-patent chemical that was first synthesized by a Viennese graduate student, Paul Gelmo, in 1909.¹²⁰⁴ With the expiration of the patent and no licensing requirement, sulphanilamide was quickly produced *en masse* by a number of laboratories internationally and became cheaply available across the industrialised world.

Although the scientific and medical breakthrough for Prontosil occurred earlier in the 1930s, it was the media storm in 1936, surrounding the illness of President Franklin Delano Roosevelt’s son, that was to make the new “sulpha” drugs infamous. The “miraculous recovery” of Franklin Delano Jr. through sulfa drugs, after a brush with blood poisoning due to tonsillitis, were heralded by medical experts and in the popular press with a front-page story in The New York Times. The New York Times headline claimed that there was a “New Control For Infections.”¹²⁰⁵ According to Goozner, “[t]he era of wonder drugs was underway”¹²⁰⁶ and it was during this era that drug companies

¹²⁰² F. Ryan, *Tuberculosis: The Greatest Story Never Told – The Human Story of the Search for the Cure for Tuberculosis and the New Global Threat* (Bromsgrove: Swift Publishers, 1992) at 106.

¹²⁰³ *Ibid.*

¹²⁰⁴ *Ibid* at 107.

¹²⁰⁵ W. Kaempffert, “New Control For Infections: The Chemical Given to F.D. Roosevelt Jr. for Streptococcus Hailed as Important Discovery – Key Ape to Be Studied” The New York Times, December 20, 1936, at 1.

¹²⁰⁶ Goozner, *supra* note 194 at 209.

would begin to form the marketing techniques and strategies that would mark them to this day.

As an off-patent chemical, there was no need for a licence to produce sulphanilamide and there was an explosion in the production of cheap ‘sulpha’ drugs that swept the industrial world. This led companies to search for new ways to market their sulphanilamide drug and gain market-share. In September of 1937, the small Tennessee firm, Massengill and Company, began to market their sulphanilamide drug in liquid form for oral consumption. Massengill believed that southerners and children would prefer the sulphanilamide in “sweet” liquid form. Yet, sulphanilamide is insoluble in water. Massengill’s chemists opted to suspend sulphanilamide in alcohol. Unfortunately, the alcohol they chose to suspend the drug for mass consumption was diethylene glycol – otherwise known, in today’s parlance, as antifreeze. Massengill’s management and its chemists failed to clinically test the sulphanilamide-diethyl glycol mixture for toxicity and rushed it to market.

In the 1930s in the US, there were no legal regulations requiring pharmaceutical companies to test new drugs for their safety. To be sure, poisonous drugs could enter the market and be sold with no animal testing – let alone even a limited clinically controlled human trial. In the subsequent court case against Massengill, “testimony showed that no one at the company [had] even bothered to look up diethylene glycol in a textbook.”¹²⁰⁷ Hence, the definition of a poison was lost on Massengill’s chemists and its management. Massengill’s marketing strategy for sulphanilamide suspended in diethylene glycol quickly led to the death of over a hundred people, the majority being predaciously viewed

¹²⁰⁷ *Ibid* at 211.

as the ‘market target group’ of children.¹²⁰⁸ Massengill was found guilty of mislabelling their concoction an “elixir” and paid a minimum fine under the provisions of the 1906 *Pure Food and Drugs Act*. Massengill’s owner, Dr. Samuel Evans Massengill remarked that:

My chemists and I deeply regret the fatal results, but there was no error in the manufacture of the product. We have been supplying a legitimate professional demand and not once could have foreseen the unlooked-for results. I do not feel that there was any responsibility on our part.¹²⁰⁹

Not only did Massengill go one step further in fooling the children of the drug marketing revolution, he killed them without accountability.¹²¹⁰ In comparison to Massengill’s comments, Domagk’s war belated Nobel Lecture, held that “I consider it my first duty in the development of chemotherapy to cure those diseases which have hitherto been incurable, so that in the first place those patients are helped who can be helped in no other way.”¹²¹¹

5.5.2 The Massengill Tragedy

I have also told... [my children] not to work for companies which make massacre machinery, and to express contempt for people who think we need machinery like that.

Kurt Vonnegut¹²¹²

¹²⁰⁸ M. Silverman & P.R. Lee, *Pills, Profits, and Politics*, (Berkeley: University of California Press ,1974) at 86.

¹²⁰⁹ S.E. Massengill, cite by C. Ballentine, “Taste of Raspberries, Taste of Death: The 1937 Elixir Sulfanilamide Incident” Federal Drug Administration Consumer Magazine, June 1981, at: <http://www.fda.gov/oc/history/elixir.html> (last visited June 21, 2008).

¹²¹⁰ *Ibid.*, It should be noted that, after realising his responsibility in the catastrophic deaths of the Massengill affair, Massengill’s chief chemist, Harold Watkins, who was responsible for creating the ‘elixir’, committed suicide.

¹²¹¹ Domagk, *supra* note 1201 at 525.

¹²¹² K. Vonnegut, *Slaughter-House Five, Or The Children’s Crusade: A Duty-dance with Death* (Thorndike: G.K. Hall, 1998) at 24. Also, see: W.H. Auden, “September 1, 1939” in *Selected Poems* (ed.) E. Mendelson (New York: Vintage Books, 1979) at 95. As Auden puts it:

*I and the public know
What all schoolchildren learn,
Those to whom evil is done
Do evil in return.*

The Massengill tragedy led to a congressional review of the 1906 *Pure Food and Drug Act*. Like many past and current regulatory laws on the books, the old *Act* emphasised and highlighted ‘purity’, but the *Act* did little to ensure purity. The *Act*’s own enforcement surrounding a drug was what was “pure” and left the discussion as to whether it was lethal when used as directed rather ambiguous. The public response and pressure exerted on Congress as to the Massengill tragedy meant that drug companies had to be held accountable for their products. In a sense, Congress’s actions were a statutory response that was the embodiment of a common law duty of care.¹²¹³ Yet, to reiterate Massengill, “I do not feel that there was any responsibility on our part.”¹²¹⁴ Oddly, the court accepted Massengill’s self-vindication and unemotional explanation. Massengill settled many of the deaths in out of court settlements and mobilised his supporters to dampen court actions: settlements never exceeded \$2,000.¹²¹⁵ Massengill was eventually fined for \$26,000, the maximum allowable fine under the 1906 *Act*.¹²¹⁶

The public pressure for reform was intense. Political inertia was pushed along, generally, by the tragic tales of children dying needlessly. In a letter to President Roosevelt, one unnamed woman told her story:

The first time I ever had occasion to call in a doctor for [Joan] and she was given Elixir of Sulfanilamide. All that is left to us is the caring for her little grave. Even the memory of her is mixed with sorrow for we can see her little body tossing to and fro and hear that little voice screaming with pain and it seems as though it would drive me insane.... It is my plea that you will take steps to prevent such sales of drugs that will take little lives

¹²¹³ See: *Heaven v. Pender* (1883) 11, Q.B.D. 503 at 217. Lord Esher’s judgement tabled the proposition that: “[W]henver one person is by circumstances placed in such a position with regard to another, that every one of ordinary sense who did think, would at once recognize that if he did not use ordinary care and skill in his own conduct with regard to those circumstances he would cause danger of injury to the person or property of the other, a duty arises to use ordinary care and skill to avoid such danger.”

¹²¹⁴ S.E. Massengill, cited in W.S. Pray, *A History of Nonprescription Product Regulation* (Binghamton: The Haworth Press, Inc., 2003) at 116.

¹²¹⁵ *Ibid* at 115.

¹²¹⁶ *Ibid* at 118.

and leave such suffering behind and such a bleak outlook on the future as I have tonight.¹²¹⁷

The old laws of the 1906 *Act* controlled purity and adulteration in food and drugs and were written in such a way that the law did not mandate prior toxicological testing for a drug. Prior to it going on the market, a drug could be poison. In essence, it was perfectly legal to market and sell a drug that was fatally toxic if used as directed.

The presidential and congressional response to the Massengill tragedy was the passage in 1938 of the *Food, Drug and Cosmetic Act*.¹²¹⁸ The new *Act* required pharmaceutical companies to submit proposals for all new drugs. Pharmaceutical companies were then required to perform safety tests – what was to become known as “clinical trials”¹²¹⁹ – and submit the data to the F.D.A. before being granted permission to bring their new drug to market. The new *Act* placed a regulatory onus as to safety on drug manufacturers – a notion of the ‘pre-cautionary principle.’¹²²⁰ In the United States, this was the legal beginning of the precautionary principle being supposedly incorporated

¹²¹⁷ Anonymous, “Letter to President Roosevelt,” cite by C. Ballentine, “Taste of Raspberries, Taste of Death: The 1937 Elixir Sulfanilamide Incident” Federal Drug Administration Consumer Magazine, June 1981, at: <http://www.fda.gov/oc/history/elixir.html> (last visited June 21, 2008).

¹²¹⁸ *Food, Drug and Cosmetic Act of 1938*, 52 US Stat. 1040.

¹²¹⁹ J. Lind, *A Treatise on the Scurvy in Three Parts: Containing an Inquiry into the Nature, Cause, and Cure, of that Disease* (London: Sands, 1753). Various medical historians hold that the modern method of scientific “clinical trials” occurred on the British Navy ship, H.M.S. Salisbury, in 1747, by ship’s surgeon James Lind. See: S.R. Bown, *Age of Scurvy: How a Surgeon, a Mariner, and a Gentlemen Solved the Greatest Medical Mystery of the Age of Sail* (London: St. Martin’s Press, 2005) at 9. According to Brown, “historians conservatively estimated that over two million sailors perished from scurvy during the age of sail.” Also, see: P. Laszlo, *Citrus: A History* (Chicago: University of Chicago Press, 2008) at 85. Contemporary “clinical trials” typically follow a three stage approach: phase one drug testing occurs on a small group of healthy volunteers to determine if the drug’s toxicity and whether it has any dangerous side-effects; phase two drug testing occurs on a larger group of healthy volunteers and patients to determine its drug’s toxicity and whether it has any dangerous side-effects on patients; and, phase three drug testing occurs on a much larger group of afflicted patients to determine the efficacy of the drug across cross-section of patients. See: J.I. Gallin, *Principles and Practice of Clinical Research* (San Diego: Academic Press, 2002) at 126.

¹²²⁰ The “precautionary principle” is a complex notion that has had many lives or incarnations over the centuries. First and foremost, at least in the “West,” it can be historically traced to the Hippocratic Oath as to the fact that a physician has a solemn obligation to first “do no harm.” See: Hippocrates, “The Hippocratic Oath.” *Infra*, note 1466.

into the marketing of pharmaceuticals. For the first time, drug companies were legally required to demonstrate that the drugs they manufactured for public consumption, as a minimum, did not possess the efficacy of curing the disease, infection or illness by principally by killing its host.

Before the F.D.A.'s new drug regulations, the traditional technique used to market drugs to consumers was through newspaper and magazine advertising. The old drug marketing strategy was the "step-right-up"¹²²¹ variety. It consisted of barkers at circuses or the infamous visiting "snake-oil salesman"¹²²² hocking their special remedy to an unwitting public. As Twain responded to the author of a sponsorship offer for a "new" product:

[You are] an idiot of the 33rd degree.... A few moments from now my resentment will have faded and passed and I shall probably even be praying for you; but while there is yet time I hasten to wish that you may take a dose of your own poison by mistake, and enter swiftly into the damnation which you and all other patent medicine assassins have so remorselessly earned and do so richly deserve. Adieu, adieu, adieu!¹²²³

Needless to say, in this instance, the efficacy and quality of the product sold – let alone its safety – was suspect, at least by Twain. By 1938, over thirty years after Twain's admonition, the F.D.A.'s new regulations galvanised – or at least tepidly transformed – the mass marketing of pharmaceuticals. It created regulatory and advertising guidelines that were purportedly enforceable, at least in the sense that these enforceable guidelines and regulations as to directly inflicting harm on users were curtailed. This change

¹²²¹ See: T. Waits, "Step Right Up" *Small Change* (Hollywood: Asylum, 1976) at Track 2.

¹²²² For the first English example of what is known as a snake-oil salesman see: R. Stoughton, *Patent of Richard Stoughton: Restorative Cordial and Medicine* (London: Great Seal Patent Office, 1857). Also, see: G. Fowler, *Mystic Healers and Medicine Shows: Blazing Trails to Wellness in the Old West and Beyond* (Santa Fe: Ancient City Press, 1997). Also, see: R.F. Karolevitz, *Doctors of the Old West: A Pictorial History of Medicine on the Frontier* (Seattle: Superior Publishing Company, 1967)

¹²²³ M. Twain cited in K.P. Ober, "Mark Twain and Medicine: 'Any Mummery Will Cure'" (Columbia: University of Missouri Press, 2003) at 68.

redirected the marketing strategies of drug companies. The pharmaceuticals marketed did not necessary need to have any efficacy, but for the manufacturer they had to have some responsibility for the product.

5.5.3 Society's Spurious Convoluted Logic

Society invents a spurious convoluted logic to absorb and change people whose behaviour is outside its mainstream. Suppose that a hunk of meat knows the pros and cons, know that a hunk of meat has a short life, a sound mind etcetera, etcetera, but still want to use smack? They won't let you do it. They won't let you do it, because it's seen as a sign of *their failure*.

Irvine Welsh¹²²⁴

Irvine Welsh's fictional heroin-addled character, "Renton," accurately sums up the history of drug regulation in a unique – if not terse – fashion. This is a history that tends to criminalise certain drugs, regulate and guarantee monopoly drug manufacturer's profit, and demonstrates how the marketing of 'legal' drugs for profit would transform the industry and amass profit unparalleled amongst other industries in the 'developed' world.¹²²⁵ What Renton sees as a "spurious convoluted logic" is, in fact, the logic of *capital*, mass marketing, and consumerism.¹²²⁶ If one wants to understand "mother's little helper,"¹²²⁷ "drugstore cowboys"¹²²⁸ or the "hillbilly heroin"¹²²⁹ users of today, then

¹²²⁴ I. Welsh, *Trainspotting* (New York: W.W. Norton & Company Ltd., 2002) at 187.

¹²²⁵ In the United States, the top 10 drug companies had an average profit margin of 17% per annum in 2002. This compared with an average profit of only 3.1% for all the other industries according to the Fortune 500 list. See: N. Pattison & L. Warren, "2002 Drug Industry Profits: Hefty Pharmaceutical Company Margins Dwarf Other Industries" (Washington: Public Citizen Congress Watch, 2003) at: www.citizen.org/documents/Pharma_Report.pdf (last visited October 4, 2007).

¹²²⁶ S. Aronowitz, *Roll Over Beethoven: The Return of Cultural Strife* (Hanover: Wesleyan University Press, 1993) at 193.

¹²²⁷ M. Jagger & K. Richards, "Mother's Little Helper" *Aftermath* (London: Decca, 1966) at Track 1.

¹²²⁸ See: J. Fogel, *Drugstore Cowboy* (New York: Dell Publishing, 1989).

¹²²⁹ S. McGraw, "The most dangerous drug to hit small-town America since cocaine?" (2001) 17(1) SPIN at: 106. P. Tough, "The Alchemy of OxyContin: From Pain Relief to Drug Addiction" *The New York Times Magazine*, July 29, 2001, at 32. Also, see: N. Ives, "The maker of OxyContin, a painkiller that is addictive, sponsors a campaign in drug abuse" *The New York Times*, September 4, 2003. Also, see: G. Galloway, "US senators urge Canada to stop 'hillbilly heroin'" *The Globe and Mail*, April 3, 2014, at A1. Also, see: D. Spence, "Bad Medicine: Pain" (2010) 340 B.J.M. at 5683. Also, see: R. Mendleson, "U of T

one ought to look at the hegemony of the modern “medical industrial complex”¹²³⁰ or our “pharmaceutical industrial complex.”¹²³¹ The history of the seeds sown by the pharmaceutical industrial complex and drug regulations cannot be understood as an isolated process in our society.¹²³² Indeed, the beginning of the formation of the pharmaceutical industrial complex is the same era, an era that we must return to, so we can understand how drug marketing and drug regulation placed money above research in the pharmaceutical regime.

5.5.4 Soda Fountains are as American as Apple™ Pie and Regulation

Drugstores, drugstore chains and patent medicines became important commercial entities and a powerful and profitable political lobby over the period of prohibition during the *Voltstead Act*.¹²³³ In late 1933, the ratification of the U.S. Constitution’s Twenty-first Amendment repealed the *Voltstead Act*. In effect, it made alcohol prohibition unconstitutional. Yet, for thirteen years under the *Voltstead Act* – “the greatest social experiment of modern times”¹²³⁴ – American drugstores prospered through the Great Depression. The reasons? One was that drugstores had a monopoly on the legal sale of

lectures coloured by Big Pharma: study” The Toronto Star, June 12, 2013, at:

http://www.thestar.com/news/gta/2013/06/12/u_of_toronto_lectures_coloured_by_big_pharma_study.html

(last visited June 15, 2013). Also, see: E. Andrew-Gee, “Toronto-area doctor, pharmacist charged with fentanyl trafficking” The Globe and Mail, April 6, 2016, at:

<http://www.theglobeandmail.com/news/national/toronto-area-doctor-pharmacist-charged-with-fentanyl-trafficking/article29548265/> (last visited April, 7, 2016).

¹²³⁰ A.S. Relman, “The New Medical-Industrial Complex” (1980) 303 N.E.J.M. at 963.

¹²³¹ S. Fried, *Bitter Pills: Inside the Hazardous World of Legal Drugs* (New York: Bantam, 1998) at 122.

Also, see: M.W. Fox, *Bringing Life to Ethics: Global Bioethics for a Humane Society* (Albany: State University of New York Press, 2001) at 198. Fox also uses the term “petrochemical-pharmaceutical industrial complex.” Also, see: K. Howlett, “Hospital visits for opioid overdose in Ontario spike by 72 per cent over past decade” The Globe and Mail, April 13, 2016, at:

<http://www.theglobeandmail.com/news/investigations/hospital-visits-for-opioid-overdose-in-ontario-spike-by-72-per-cent-in-decade/article29627974/> (last visited April, 16, 2016).

¹²³² S. Aronowitz & H.A. Giroux, *Postmodern Education: Politics, Culture, and Social Criticism* (Minneapolis: University of Minnesota Press, 1991) at 3-4.

¹²³³ *National Prohibition Act of 1920*, Pub.L. 66-66.

¹²³⁴ E. Behr, *Prohibition: Thirteen Years That Changed America* (New York: Arcade Publishing, 1996) at 3.

alcohol for “medicinal use.” “When national prohibition under the Volstead Act became a fact (1919) the fountain business reached its climax”¹²³⁵ in the 1920s. It was around these fountains that average people as customers would congregate and socialise as they waited for pharmacists to fill their various “prescriptions” and patent concoctions.¹²³⁶ Around these ‘roaring twenties’ soda fountains, people could chat about baseball and movies and learn the latest stock tips from a window cleaner or a nurse who overheard something from a bellicose rancher.¹²³⁷

Prohibition and the illegal sale of alcohol helped fuel and solidify in the American imagination as to the infamy of criminal syndicates such as the Irish Mob¹²³⁸ and the Italian Mafia.¹²³⁹ Yet, it was the “legal” sale of alcohol, and the criminalisation of other drugs,¹²⁴⁰ and the eventual sale of publicly regulated drugs that helped establish the ‘legitimacy’ and private wealth that set the stage for the rise of the American pharmaceutical industry. The new regulatory models were instrumental in assisting the

¹²³⁵ E. Kremers, G. Sonnedecker & G. Urdang, *Kremers and Urdang’s History of Pharmacy* (Madison: American Institute of the History of Pharmacy, 1976) at 309. Also, see: D. Okrent, *Last Call: The Rise and Fall of Prohibition* (New York: Scribner, 2010).

¹²³⁶ *Ibid.* It was during this period that drugstore chains began their climb to dominate patent and over-the-counter drugs in America. In 1935, approximately two years after the repeal of the *Volstead Act*, and after the zenith of 1920s soda fountains, soda fountains still earned profits of \$121 million in a depression economy.

¹²³⁷ R.J. Shiller, *Irrational Exuberance* (Princeton: Princeton University Press, 2005) at 112.

¹²³⁸ See: T.J. English, *Paddy Whacked: The Untold Story of the Irish American Gangster* (New York: Harper, 2006). To some, these Celtic criminals made the Italian gangs look like choirboys.

¹²³⁹ See: J. Durden-Smith, *Mafia: The Complete History of a Criminal World* (London: Arcturus, 2004). Also, see: M. Woodiwiss, *Organized Crime and American Power: A History* (Toronto: University of Toronto Press, 2001). Also, see: S. Schneider, *Iced: The Story of Organized Crime in Canada* (Mississauga: Wiley, 2009) at 205.

¹²⁴⁰ See: C. Marez, *Drug Wars: The Political Economy of Narcotics* (Minneapolis: University of Minnesota Press, 2004) at 151. As Marez points out, the criminalisation of drugs and narcotics is actually about *capital* criminalising particular social groups and classes. Also, see: M.B. Robinson & R.G. Scherlen, *Lies, Damned Lies, and Drug War Statistics: A Critical Analysis of Claims Made By the Office of National Drug Control Policy* (Albany: State University of New York Press, 2007) at 24-25. Also, see: *Harrison Narcotics Tax Act of 1914*, Ch. 1, 38 Stat. 785; *Narcotic Drugs Import and Export Act of 1922*, 42 Stat. 596; and *The 1937 Marijuana Tax Act*, Pub. 238, 50 Stat. 551. Also, see: A. Cockburn & J. Saint Clair, *Whiteout: The CIA, Drugs and the Press* (London: Verso, 1998) at 71. Cockburn and Saint Clair cite Dr. Christopher Koch, of Pennsylvania’s State Pharmacy Board, where he makes his racist and racialisation case for the criminalisation of cocaine before Congress, in 1914, by testifying that: “Most of the attacks upon the white women of the South are the direct result of a cocaine-crazed Negro brain.”

creation of the American pharmaceutical industrial complex. Assisted by various legal restrictions, and the criminalisation of certain drugs, the pharmaceutical industrial complex gained greater and ever greater legitimacy, power and accumulated capital.

5.5.5 Marketing Lessons Learned

Through trial and error, the pharmaceutical industrial complex gradually developed marketing models that learnt from the tragedy of the Massengill Incident. This would be a model that would target physicians and their clinical practises. That is, the marketing target was to evolve from the snake-oil model peddled to an unsuspecting general public, and transform into a multi-billion dollar business aimed at the professionals that prescribed drugs. This was a significant change from the traditional marketing strategies directed at the end-user – the general public. The burgeoning public relations industry was able to direct pharmaceutical marketing as an intense third-party marketing campaign – in Orwellian terms, “third-party... proprietary information sources.”¹²⁴¹ To be precise, pharmaceutical marketing was to rapidly develop to targeting a very specific, identifiable, quantifiable and homogenous group: a psychologically susceptible group identified as medical physicians.

As a result, current drug salespersons have become frequent visitors to doctors’ offices promoting their products. Indeed, it has even become routine for salespersons to *fête* doctors about their new drug with fine dining talks.¹²⁴² These talks are recognised

¹²⁴¹ M.C. Smith, *Principles of Pharmaceutical Marketing*, 3rd (ed.) (Philadelphia: Lea & Febiger, 1983) at 83.

¹²⁴² D. Tierney, D. Bruser, J. McLean & A. Bailey, “Drug companies wine and dine family physicians” The Toronto Star, February 16, 2016, at: <http://www.thestar.com/news/canada/2016/02/16/drug-companies-wine-and-dine-family-physicians.html> (last visited February 17, 2016).

by C.P.S.O. and other provincial colleges as being part of a doctor's required "continuing medical education." At times, these "talks" produce less than questionable results.¹²⁴³

But, for the most part, drug salespersons visits or "talks" provide physicians with the latest sales pitches and the most up-to-date (and self-interested) 'scientific' information on their new medicines.¹²⁴⁴ In addition, during their visits, salespersons bring information packages and a bevy of free samples for patients. In fairness, the free samples helped some patients that could not afford prescription medicines. Free samples were and are the archetypal marketing "hook." The free samples for poor patients were and are considered an effective promotional gimmick that has a 'humanitarian' appeal to it and, as the criminalised expression goes when referring to illicit drugs, are "entry level drugs"¹²⁴⁵ that cause "brand loyalty."¹²⁴⁶ Moreover, as a promotional tool, free samples help to introduce these new "wonder drugs" to the public and under the guise and gaze of "medical authority" and are purported to "educate" an ignorant and innocent population.

¹²⁴³ Angell, *supra* note 212 at 147. As Marcia Angell, "doctors pretend they believe drug companies are interested in education" because they benefit from this sham. Also, see: D. Healy, *Let Them Eat Prozac* (Toronto: James Lorimer & Company Ltd., 2008) at 190. As Healy indicates, "psychopharmacology trade fairs" will sponsor delegates "including travel costs, often business class flights with limousine service to and from airports, accommodation in better hotels, meals in better restaurants, and all registration and associated costs to attend the meeting" and might even get a tan or play golf. Also, see: S. Hensley, "As Drug-Sales Teams Multiply, Doctors Start to Tune Them Out" *Wall Street Journal*, Jun. 13, 2003, at A1.

¹²⁴⁴ S. Spithoff, J. Lexchin & C. Kitai, "It's time to examine pharma funding of doctor's education" *Healthy Debate*, December 2, 2015, at: <http://healthydebate.ca/opinions/more-transparency-needed-on-pharma-funding-of-education> (last visited February 17, 2016).

¹²⁴⁵ This problem is still with us, see: J. Hall, "Drug companies promoting bad health" *Toronto Star*, October 20, 2010, at A4.

¹²⁴⁶ See: N. Bowman, "Questionable Beauty: The Dangers and Delights of the Cigarette in American Society, 1880-1930" in *Beauty and Business: Commerce, Gender, and Culture in Modern America* (ed.) P. Scranton (New York: Routledge, 2001) at 81. Of course, it was Edward Bernays who developed and perfected the questionable art of "branding." Bernays's branding schemes were legendary and he hit his stride in 1919 with his New York City Easter Parade publicity stunt. Bernays got debutants to light up Lucky Strike cigarettes at the viewing stand in front of city dignitaries and journalists. Bernays got nationwide front-page coverage of the stunt claiming the debutants were "suffragists" and were "lighting torches of freedom" heralding equality and over-coming the taboo of women smoking. This stunt made Lucky Strike the most popular cigarette brand in America.

To put this into perspective, in 2000, it was estimated that pharmaceutical companies distributed almost \$8 billion worth of free drug sample to doctors annually.¹²⁴⁷

Slowly, public health initiatives helped to educate the public as to the real causes as to the transmission and contraction of communicable diseases. An added benefit for pharmaceutical companies was that their distribution of free samples of pharmaceuticals helped to inculcate and establish future “brand loyalty”¹²⁴⁸ in patients. The monopoly power of prescription was an invaluable marketing force. In the final analysis, the F.D.A.’s new regulations coupled with focused marketing techniques laid the groundwork for what was to become the multi-billion dollar business for the modern pharmaceutical industry – a relationship that some call questionable¹²⁴⁹ – but we are getting ahead of ourselves.

5.5.6 Alexander Fleming and the Story of Penicillin

The discovery and success of penicillin is complicated. Like many medical breakthroughs, the discovery of penicillin was the result of historical tragedy, curious and dogged scientists, good fortune, commercial disinterest and a distinct lack of resources, happenstance, and, eventually, massive government subsidisation. The traditional attribution as to the discovery of penicillin is to the Scotch¹²⁵⁰ scientist Alexander

¹²⁴⁷ As is known, you do not get something for nothing. See: S.S. Hall, “The Claritin Effect: Prescription for Profit” The New York Times Magazine, March, 11, 2001 at:

<http://www.nytimes.com/2001/03/11/magazine/the-claritin-effect-prescription-for-profit.html>.

¹²⁴⁸ J. Kuanpoth, “TRIPS – Plus Policies and the Pharmaceutical Industry in Thailand” in *Intellectual Property and Sustainable Development: Development Agendas in a Changing World* (eds.) R. Meléndez-Ortiz & P. Roffe (Cheltenham: Edward Elgar, 2009) at 152.

¹²⁴⁹ See: F. Hawthorne, *Inside the FDA: The Business and Politics Behind the Drugs We Take and the Food We Eat* (Hoboken: Wiley, 2005).

¹²⁵⁰ According to Galbraith, the term “Scotch” was the traditional reference, at least to the inhabitants of Dutton and Iona Station, used prior to the advent of the more recent vernacular “Scots.” See: Galbraith, *supra* note 529 at 12.

Fleming, on September 28, 1928, while working at St. Mary's Hospital in London.¹²⁵¹

Similar to Domagk's, Fleming's experience was partly informed through his exposure to WW I battlefield wounds as a captain in the British Royal Army Medical Corps.

It was Fleming's concern with the catastrophic wounds that he witnessed in the hospitals on the Western Front in France that lit his curiosity into antibacterial compounds. Fleming witnessed the death of many soldiers from the infectious wounds that led to septicaemia. At the time, the widespread use of antiseptics were used to effectively kill surface bacteria, but antiseptics did little to protect a patient's deep wounds. Deep wounds shelter anaerobic bacteria. Although antiseptics helped kill aerobic bacteria, they also kill the body's own immune response and were ineffective with deep wounds. Unfortunately, what appears as a sensible use of antiseptics on aerobic bacteria proved to be responsible – or the death knell – for increasing the casualty rates of wounded soldiers.

Even though penicillin was “discovered” before ‘sulpha’ drugs, and its efficacy was known to kill infectious bacteria, the central problems with penicillin were isolating the active ingredient and finding a means to mass produce the drug inexpensively for patients. Put differently, the cost of penicillin was high and its mass production was difficult. Pharmaceutical companies had little profit motivation as to bringing this drug to market. Penicillin and its use had a sputtering start and there was no significant progress in its development as an effective mass antibacterial treatment during the 1930s.

The conventional story as to Fleming's discovery of penicillin is that it happened by accident. Fleming was known as a brilliant scientist, but he was also known as an

¹²⁵¹ Like many anti-bacterial drugs, their generally unfounded “discovery” by an individual researcher is a complex and, mostly, a collective process of discovery. This fact tends to obscure their eventual application, production and the issue of “ownership.”

absent-minded and slapdash laboratory technician. In 1928, Fleming was investigating the properties of staphylococci and because his lab was generally in a chaotic state, it was not unusual for him to misplace or forget about experiments. It meant that various Petri dishes containing experimental specimen cultures would be litter around and throughout his laboratory. Supposedly, the “discovery” of penicillin consisted of Fleming returning to his laboratory after a long holiday to find his specimen dishes spoiled and contaminated with a fungus. In tidying up, he tossed most of Petri dishes in a disinfectant. But before discarding all of the dishes, he showed some of the dishes that he had forgotten to submerge in disinfectant to a visitor. On closer examination, Fleming noted that there were areas around the invading mould where the bacteria did not grow. As a curiosity, Fleming isolated an extract from the mould and was able to identify it as the fungus *penicillium notatum*.

In 1929, Fleming published his results as to penicillin in the British Journal of Experimental Pathology.¹²⁵² “It has been demonstrated that a species of penicillium produces in culture a very powerful antibacterial substance which affects different bacteria in different degrees.”¹²⁵³ The article collected dust and drew little clinical interest. Over the next decade, Fleming continued to work with penicillin. He found that the task of cultivating the mould difficult and the task of isolating the active antibiotic agent equally difficult. The active antibiotic agent derived from *penicillium notatum* is a secondary metabolite produced when the fungus feels threatened. This was the difficult puzzle that had to be solved.

¹²⁵² See: A. Fleming, “On the Antibacterial Action of Cultures of a Penicillium, with Special Reference to their Use in the Isolation of B. Influenzae” (1929) 10 Brit. J. Exp. Pathology at: 226-236.

¹²⁵³ *Ibid* at 235.

In the 'free marketplace' of the Great Depression of the 1930s, Fleming tried to find a chemist interested and skilled enough to assist in producing and refining usable quantities of penicillin. Fleming was frustrated in this end, yet continued his work on penicillin even though he became sceptical as to ever being able to produce it in utilisable quantities. He also resigned himself to the assumption that penicillin would never be of much value. He assumed that once the penicillin was ingested it would break down in the body too quickly to be efficacious, and without large quantities, it would be nearly useless.

In 1940, at Oxford, at the Sir William Dunn School of Pathology, Ernst Chain and Howard Florey began research into the mass production of penicillin. It must be recalled that this was during WW II, and, unlike Fleming, Chain and Florey had the assistance of research grants from the British and, eventually, the U.S. governments. Chain and Florey worked on deducing the chemical structure of penicillin¹²⁵⁴ and in the process sorted out the how to isolate the compound. Chain and Flory, along with other researchers on the project, including Norman Heatley,¹²⁵⁵ finally worked out the problem as to how to mass-produce penicillin.¹²⁵⁶ The mass production of penicillin began in earnest after the bombing of Pearl Harbour and, by the end of the war, penicillin was readily available to all wounded allied soldiers.

¹²⁵⁴ To most observers, knowledge of the chemical structure of penicillin was attributable to the X-ray crystallography techniques developed by Dorothy Crowfoot Hodgkin. Crowfoot Hodgkin was awarded the Nobel Prize in Chemistry in 1964. See: D.M. Crowfoot Hodgkin, "The X-ray Analysis of Complicated Molecules, Nobel Lecture, December 11, 1964" in *Nobel Lectures Chemistry: Including Presentation Speeches and Laureates' Biographies* (Amsterdam: Elsevier Publishing Company, 1964-1972).

¹²⁵⁵ J.M. Bishop, *How to Win the Nobel Prize: An Unexpected Life in Science* (Cambridge: Harvard University Press, 2004) at 128.

¹²⁵⁶ Heatley's sophisticated mass production "process" was in fact a series of bedpans. Heatley had deduced that the heavy metals in the bedpans provided the best environment for growing the penicillin. See: W.E. Herrell, *Penicillin and Other Antibiotic Agents* (Philadelphia: W. B. Saunders, 1945) at 5.

What becomes clear in the history surrounding the development of penicillin is the nature of the collaborative effort involved to produce it. Instead of a model of competitive secrecy, the greatest leap forward in the history of treating infections, aside from providing basic sanitation and potable water, was the collaborative effort and sharing of scientific knowledge around penicillin. The simplicity of the scientific algorithm is as Sir Henry Harris famously put it: “Without Fleming, no Chain; without Chain, no Florey; without Florey, no Heatley; without Heatley, no penicillin.”¹²⁵⁷ As Fleming declared in his acceptance of the Nobel:

[P]enicillin started as a chance observation. My only merit is that I did not neglect the observation and that I pursued the subject as a bacteriologist. My work in 1929 was the starting-point of the work of others who developed penicillin especially in the chemical field.¹²⁵⁸

The specificity and difference in the talents, skills and knowledge of the entire Oxford team and others demonstrate that the collaborative model, one not hemmed in by intellectual property considerations, was the model best able to engage productive research that could produce such a remarkable change in human health that lays as the cornerstone for much of modern medicine.¹²⁵⁹ Chain was admonished by some of his colleagues for wanting to patent the newer penicillin processes and for being “money

¹²⁵⁷ H. Harris, “Howard Florey and the Development of Penicillin” Florey Centenary Lecture, (Oxford: September 29, 1998), audio available at: <http://kittycat.nla.gov.au/Record/1610017> (last visited October 21, 2011). There is little question that Harris’s ‘Fleming-Chain’ of discovery has left out many people. But, it does indicate that the work of one creative inventor, a *singular genius*, is a naïve belief as to the production of pharmaceuticals.

¹²⁵⁸ A. Fleming, “‘Penicillin’, Nobel Lecture, December 11, 1954” in *Nobel Lectures: Physiology or Medicine, 1942-1962* (Amsterdam: Elsevier Publishing Company, 1965) at 83.

¹²⁵⁹ It is generally acknowledged that the discovery of penicillin was a collective process utilising the talents, at times, of the entire Sir William Dunn School of Pathology at Oxford. Fleming himself downplayed his own contribution referring to it as the “Fleming Myth” and lauded Florey and Chain and others with making it a practical and useful drug.

grubbing.”¹²⁶⁰ Chain was told that if he pursued a patent that he would have no future in British academics.¹²⁶¹ Subsequently, in 1947, Andrew J. Moyer, an American researcher, improved the process of making penicillin and was granted a patent for its mass production.¹²⁶²

In an effort to make the first miracle antibiotics available at the end of the war, “[t]he government, which had developed the mass production techniques for penicillin as a wartime measure, licensed the drug to five firms.”¹²⁶³ After subsidising the entire development of penicillin, and after the private-sector ignored Fleming’s discovery for twelve years, the government, by licensing penicillin to risk adverse pharmaceutical companies, set loose the hounds of the so-call free market. As Perelman notes, “if markets really worked as well as the dogmatic advocates of laissez faire would have us think, we would have no need for intellectual property rights at all.”¹²⁶⁴ But, the government seed money shrewdly activated perhaps the sole genius of the market, which is its capacity for “fierce competition,” and the scramble for penicillin sales and market-share was on. “Between 1945 and 1950, the price of penicillin plunged from \$3,955 to \$282 a pound.”¹²⁶⁵ If there is one particular lesson that can be learnt, it is that “[t]he reduction in the price of penicillin showed how a broadly held licence could benefit the general public.”¹²⁶⁶

With the mass production and success of penicillin, Fleming remained cautious as

¹²⁶⁰ Macfarlane, *supra* note 1179 at 206.

¹²⁶¹ R. Bud, “Many Happy Recoveries” (2004) 150 *The New Scientist* at: 48.

¹²⁶² R. Finn, *Nature’s Chemicals: The Natural Products that Shaped Our World* (Oxford: Oxford University Press, 2009) at 158.

¹²⁶³ Goozner, *supra* note 194 at 211.

¹²⁶⁴ Perelman, *supra* note 673 at 188.

¹²⁶⁵ Goozner, *supra* note 194 at 211.

¹²⁶⁶ P. Temin, “Technology, Regulation, and Market Structure in the Modern Pharmaceutical Industry” (1979) 10(2) *Bell J. of Econ.* at 429-46.

to its use. He remained seized as to the potential resistance of bacteria to penicillin and the loss of its efficacy.¹²⁶⁷ Fleming was well aware of Darwin's theory of evolution and cognizant that we, as a biological species, are continuously *interpellated* by the primeval conversation that is evolution:¹²⁶⁸ that is, evolution is *always-already* present and actively unfolding in the real world. Justifiably, Fleming understood that bacteria through reproduction, adaptation and evolution, would eventually develop resistance to penicillin. In particular, Fleming cautioned that when too little penicillin was prescribed or when it was used for too short a period, typically a result of a patient feeling better and discontinuing the prescription, that penicillin resistance would occur. Thus, penicillin was not the final panacea that was sought.¹²⁶⁹ It was an effective antibacterial for a number of infectious "gram- positive" bacteria, but not to others – those being "gram-negative" bacteria.

5.5.7 Selman Waksman: 'To Patent or Not to Patent'?

The second stage that was set to transform and revolutionise the modern pharmaceutical industry was the discovery of the next generation of antibiotics and the issuance of patents surrounding them. According to Goozner, this "watershed event in the evolution of the modern drug industry [gave a] ...seventeen-year [patent of] exclusivity to the chemical modifications and the processes that created... [the] product... streptomycin."¹²⁷⁰ To be sure, what was unique was that a patent could be granted to the

¹²⁶⁷ Fleming, *supra* note 1258 at 93.

¹²⁶⁸ For an interesting religiously inspired "new-age" story of evolution and the universe see: B. Swimme & T. Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era, A Celebration of the Unfolding of the Cosmos* (New York: Harper One, 1992).

¹²⁶⁹ Fleming, *supra* note 1258 at 93.

¹²⁷⁰ Goozner, *supra* note 194 at 212.

process of growing a mould, which when unmodified, still occurred “in its raw state [and] had been part of nature.”¹²⁷¹ In other words, a patent to let nature take its course.

Unlike Domagk and Fleming, Selman Waksman was not a medical doctor. Instead, Waksman was a professor of soil microbiology at Rutgers University.¹²⁷² Influenced by the discovery of penicillin, Waksman initiated a systemic and thorough search of various soils to discover other moulds that were toxic to microbes.¹²⁷³ From a relatively simple observation, Waksman noted: “that soil must contain something that killed bacteria since they didn’t survive burial.”¹²⁷⁴ As a result of his study, Waksman was able to isolate streptomycin.

In the late 1940s... Waksman and his colleagues at Rutgers University... developed streptomycin, a derivative of bacteria-killing microbes that he had found in soil.... His drug proved to be the first effective treatment for tuberculosis, earning Waksman the Nobel Prize and making him America’s most celebrated research scientist until Jonas Salk and the first polio vaccine came along in the mid-1950s.¹²⁷⁵

Aside from being efficacious against tuberculosis, streptomycin had other advantages. Penicillin proved to be effective against ‘gram-positive’ bacterial infections. Unfortunately, it was not effective with ‘gram-negative’ bacteria. It was streptomycin, and other newly developed and developing antibiotics, that proved to be another remarkable contribution to overall human health.

Yet, it was Waksman’s decision to patent streptomycin, and license it to Merck Research Laboratories, that was to prove one of the most truly revolutionary events in research history: that is, the economics and law shaping what was to become one of the

¹²⁷¹ *Ibid.*

¹²⁷² See: S.A. Waksman, *My Life With Microbes* (New York: Simon and Shuster, 1954).

¹²⁷³ Waksman’s is attributed with coining the term “antibiotic.” See: S.A. Waksman, “What Is an Antibiotic or an Antibiotic Substance” (1947) 39 (5) *Mycologia* at: 565.

¹²⁷⁴ Goozner, *supra* note 194 at 212.

¹²⁷⁵ *Ibid.*

most profitable businesses in America in the 20th and 21st-century.¹²⁷⁶ Still, what was notable was the fact that Merck was concerned as to its reputation as a “responsible” corporate citizen: its apprehension, its ethical dilemma, was the public perception related to the monopoly profit that they would be making under the exclusive licence of streptomycin. Owning a patent was one thing, acting on the exclusivity of its grant and the monopoly was another. In the mind-set of an older generation, human welfare seemed to matter more than profit. Merck was troubled that the massive profits that could be generated by their exclusive licence and sale of streptomycin would cause a public backlash against the reputation of the company. In lieu of this concern, Waksman was able to convince “Merck to return the license for streptomycin to the non-profit Rutgers Research Foundation”¹²⁷⁷ and streptomycin was “licensed broadly and sold generically” and cheaply for the benefit of all. Apparently, the patents and ambiguous “bottom-line” and “self-interest” were, once again, not the desired goals of researchers. This appears to be a stubborn and persistent problem with human beings more interested in discovering knowledge than maximising their fungible neoliberal self-interest.

5.5.8 Jonas Salk: You Are My Sunshine

[T]here is nothing new under the sun.

Ecclesiastes¹²⁷⁸

Edward R. Murrow: Who owns the patent on this [polio] vaccine?

¹²⁷⁶ According to Fortune Magazine, during 2004, the top 10 drug manufacturers in the United States earned a median profit margin of 17%. This must be compared with the median profit margin of all other industries of only 3.1%. See: Fortune Magazine, “Fortune 500: How the Industries Stack Up” (2004) 149 (7) Fortune at: 26. Also, see: Pattison & Warren, *supra* note 1225.

¹²⁷⁷ Goozner, *supra* note 194 at 212.

¹²⁷⁸ Ecclesiastes 1:9, *The Holy Bible* (New York: Thomas Nelson and Son, 1952) at 517.

Dr. Jonas Salk: Well, the people, I would say. There is no patent. Could you patent the sun?¹²⁷⁹

This oft-quoted anecdote surrounding the discovery of a vaccine against *poliomyelitis* helps remind us that intellectual property is fluid, dynamic by its very nature, and related to the ‘gift’ of medical research. In this light, by any measure of the pun, intellectual property is a social construct. Some argue that when Salk made this statement, it was a “simpler time.” Current apologists for propertising university medical research argue that Salk could not have anticipated the enormous scientific strides that have revolutionised medical research through genetic advances and its propertisation. Remarkably, champions of increasing intellectual property suggest that Salk could not have reasonably anticipated the advent of modern molecular genetics, computer enhanced magnetic imaging and the need to commodify and patent these processes. Others might suggest that Salk had an extremely sophisticated – if not progressive – understanding as to the pitfalls of propertising medical research.

Perhaps, for Salk’s generation, it was a simpler time. After the struggle against fascism and WW II, and, albeit, in the shadow of the cold war, there was an understanding and uncommodified project that struggled worldwide against pandemics and infectious diseases. To be sure, was there something more being expressed by Salk? Dare it to be asked, was Salk purporting that his research transcended to be or *aspire to be* a type of humanitarian mission beyond commodification? Perhaps.

Our current “norms” as to drug patents – our post-modern and commodified relations with the world – were yet to be hatched and were not normative values in Salk’s

¹²⁷⁹ Interview of E.R. Murrow with Dr. Jonas Salk, *See It Now* (New York: CBS, 1957) cited in J.S. Smith, *Patenting the Sun: Polio and the Salk Vaccine* (New York: William Morrow and Company, 1990) at 13. Also, see: R.J. Vogel, *Pharmaceutical Economics and Public Policy* (Binghamton: The Haworth Press, Inc., 2007) at 57.

day. As we have seen, the immediate post-war period as to the issue of the ownership of knowledge was not settled nor was the law surrounding patents as to pharmaceuticals. Our inherited situation and contemporary claims by some pundits concerning the inevitability, universality, and, who some believe, is the sanctity of intellectual property rights for new drugs would have appeared alien to America's "greatest generation."¹²⁸⁰ To a generation who had suffered through the Great Depression and just sacrificed much of their youth to a devastating world war, they had a life to get on with living. Had widespread arguments been proffered around the necessity of patenting the polio vaccine pandemic, at the time, lay people and the general public would have understandably found these arguments offensive. Perhaps, today, in our "material world," we would merely find them quaint. But, people who came of age in the 1930s and the Second World War, the idea of being held ransom by pharmaceuticals corporations as to the health and future welfare of their children, the generation to become known as the "baby boom," over a patent was unimaginable. In short, Salk got it right – at least for a while.¹²⁸¹

5.5.9 Market Myths About Scientific Discoveries

Until the 1980s, from almost all of the evidence available, it appears that it was not "the market" that drove scientific discovery in North America or the rest of the world. Scientific research was driven by publicly resourced institutions, a researcher's individual curiosity,¹²⁸² and a collective pooling and sharing of knowledge and other resources.¹²⁸³

¹²⁸⁰ See: T. Brokaw, *The Greatest Generation* (New York: Random House, 1998). For a more subtle and nuanced look at this historic juncture, see: S. Turkel, *The Good War: An Oral History of World War Two* (New York: Pantheon Books, 1984) at 583.

¹²⁸¹ It should be noted that Salk changed his tune as to patents and free "sunshine" near the end of his life. In the commercialised atmosphere of *Bayh-Dole*, Salk's Immune Response Corporation patented its failed HIV experimental vaccine, Remune. Also, see: Washburn, *supra* note 128 at 103-104

¹²⁸² An example that breaks the current widespread rule of secrecy and silence in the academy is the Toronto-based researcher, Rachel Harding, and her work on Huntington's disease, see: J. Hall, "A Toronto scientist's radical move: sharing lab notes" *The Toronto Star*, March 6, 2016, at:

As we can see from our brief but an inadequate survey of 20th-century antibiotics, and other drugs surrounding communicable diseases, the ingenious spark that fuels innovation is the curiosity of dedicated – if not ‘clinically’ then “certifiably” – obsessed scientists.

In our society, pharmaceutical firms are perhaps the most advanced type of late-capitalist firm. As a late-capitalist firm, they are fixatedly – if not rabidly – risk adverse. The mechanisms of corporate investment are exceptionally intolerant of an investment that does not have a quick return. Even at first blush, the logic motivating a biochemist or epidemiologist toiling away for twenty years in a university laboratory to discover a single blood protein receptor does not seem to be compatible with the risk adverse agenda of a typical Wall or Bay Street investor.

5.6 Conclusion

As has been argued, the political economy of the modern regulatory state had its origins within or accompanied by a powerful fictional narrative of 19th-century *laissez-faire* market mythology coupled with simplistic 18th-century conceptions of human

<http://www.thestar.com/news/insight/2016/03/06/a-toronto-scientists-radical-move-sharing-lab-notes.html>
(last visited March 16, 2016).

¹²⁸³ I have intentionally avoided scientific research that strays into the realm of putative “defence” spending. There is little doubt that tax-dollar spending – public subsidies – in the ‘military-industrial complex’ in America, and in Canada, is one of the proverbial-800 pound gorillas in room that many critics ignore. That is, “private” industry rarely takes into account the massive public funding and subsidisation that has created so much ‘wealth’ and patentable technology *visa via* the armament industry. An exploration of the tawdry explanations that justify this cash cow for the defence industries are not worth exploring in print in our current discussion: except, one should note that total military spending projections in the U.S. for 2010 were approximately 20 per cent of the federal budget, \$668 billion, or 4.7 of G.D.P. See: T. Harrison, “Analysis of the FY 2010 Defense Budget Request” (Washington: Center for Strategic and Budgetary Assessments, 2009) at:
<http://docs.google.com/viewer?a=v&q=cache:FFUItWTJbUoJ:www.csbaonline.org/wp-content/uploads/2011/02/2009.08.12-FY2010-Defense-Budget-Analysis.pdf+the+president%27s+fy+2010+defence+668&hl=en&gl=ca&pid=bl&srcid=ADGEESjmMgs8uYMzrSbGDIGaODsEpWOeCVhPHcDrwgpXgRsi5Ng8DWO8vk6ISMUVWUvFJB8xivtyPBaHtQaQ-ZTfC6EN9brps0TaT161WjZ6nJFbHVny7BnqkXlAYb3ALnD1ojxqvT3V&sig=AHIEtbQ2ZWxxydLY7BqKPNGqdu0k9RUxA> (last visited January 14, 2011).

nature and property. The technological advances that happened across industries in the 19th-century were punctuated by massive government intervention and regulation. In North America, the rise of the regulatory state was one that used the law to channel the wealth through land grants, pork-barrel politics, railroads, the petroleum industry, the steel industry and patents into the hands of the most deserving – the owners of capital. This fictive narrative established a template that would be used over and over again in various industries. In our case, it was a narrative that was used to justify the accumulation of capital in the pharmaceutical industry and establish the links to university researchers. A central plank has been the “innovative” and mythical “risk” involved in the research and development of new drugs.

A consistent theme in this discussion has been how the “silent partner” in capital accumulation has been the government. This goes far beyond the mere protection and enforcement of property interests. In our case, the development of heavy industry, the transportation grid of rail and highways of the 19th and 20th-century, the petrochemical industry through to the advanced infrastructure of, and technical support for, university researchers all shaped these advances. After the “low hanging fruit” of individual inventors of the 19th-century was harvested, the technological advances in the 20th-century became intensely collaborative – and mostly financed at public expense. Most new medicines were developed with massive public subsidies and within the confines of university sponsor laboratories. Contrary to the myth of the “lone wolf” innovator as a genius, a prophet and a patent holder, the ‘new’ knowledge model in the 20th-century was generated through a system of collective effort and by direct subsidisation or indirect public subsidisation. This wealth of knowledge has been typically turned over to

pharmaceutical companies with very little discussion. The established model has allowed for the transformation and “legal” conversion of public resources and publicly funded research into private property interests and been justified by the pragmatic argument that this system “works” best. The fact that there is no empirical evidence presented to support this claim appears to be irrelevant. Whether this amounts to Perelman’s ‘*corporate confiscation of creativity*’ remains to be seen. Yet, it does leave, in the minds of some, temperate and intemperate concerns as to the overall patent system. If Perelman’s observations are correct, the current patent system hampers the progress of medical science. Yet, why do we support it? If the intellectual property regime facilitates the massive transfer of wealth from the public institutions into private hands, how does it affect scientific progress and real innovation? The ownership of scientific research and knowledge as a commodity is problematic. Indeed, as has been suggested, knowledge and research as an extension of our private property regime do not bode well for the future of university research. As Brecht pointed out, “Science knows only one commandment: contribute to science.”¹²⁸⁴ It is to this ‘golden rule’ that we shall now turn and hope that the other shoe will drop.

¹²⁸⁴ B. Brecht, *The Life of Galileo* (trans.) H. Brenton (London: Methuen Publishing Ltd., 1980) at 83.

6 CHAPTER SIX: The Fertile Fields of Universities and Drug Pharming

6.1 Interesting Conflicts and Conflicts of Interest

6.1.1 Exploitation, Need or Greed?

Spiders spin webs. We spin yarns. We spin new technologies.

Steve Keen¹²⁸⁵

The law is simply and solely made for the exploitation of those who do not understand it or of those who, for naked need [or greed], cannot obey it.

Bertolt Brecht¹²⁸⁶

Brecht was a brilliant German playwright perhaps as original, and as important a modern playwright as Ibsen or Strindberg.¹²⁸⁷ Yet, he may not have been correct if we extend his observation as to patent law and its applicability in the 21st-century to intellectual property and university researchers. Nonetheless, there is little question that the law of intellectual property has become embedded within technology and the economic speculation that drives – and is concomitantly driven by – the global financial system and international and municipal business legislation. It is within this amalgam that there exists a conflict of laws: between the logic of law and the law of logic.¹²⁸⁸ In our case, it is the cacophony of conflict that results from the laws of the state, the purported laws of economics, the laws of social science, and the laws of morality and

¹²⁸⁵ S. Keen, “Interview” Talking Stick, May 13, 2013, at: https://www.youtube.com/watch?v=gyas_Pg0ckg (last visited December 15, 2014). Also, see: Keen, *supra* note 494.

¹²⁸⁶ B. Brecht, *The Threepenny Opera* (trans.) D. Vesey (New York: Grove Press, 1994) at 84.

¹²⁸⁷ R. Williams, *Drama from Ibsen to Brecht* (London: Hogarth, 1993) at 277.

¹²⁸⁸ J. Jewkes, D. Sawers & R. Stillerman, *The Sources of Invention* (London: MacMillan, 1969) at 25. As Jewkes, Sawers and Stillerman point out: “The patent system lacks logic.” An alternative suggestion if one rejects the notion of ‘economic efficiency’ is that the patent system is a thoroughly coherent and rational system, at least, in the scheme, service, and worldview of intellectual property *rentiers*. Put differently, the neoliberal model and its econometric logic is perfectly coherent... at least for kleptocratic mandarins who can exercise their monopoly.

ethics. It is possible that there is an amphiboly – a category mistake – that is deeply rooted in our thought and at play when we *talk* about *law* and the “rights talk”¹²⁸⁹ associated with intellectual property rights.¹²⁹⁰ Put differently, these are fallacies that conflate “law” and “rights.” In a research university, when science and funding come into conflict, these contradictions can span a range of claims from: the law of patents; the law of contract; the laws of human nature; the laws of economics; to professional and/or ethical rights and obligations. Yet, in an overview of intellectual property cases and, above all, two of the major cases in this chapter, Brecht’s overall observations appear to be at least partially sound as to law being “made for... exploitation.”

As has been suggested, capital markets are systems of wealth distribution and redistribution but are also processes that distribute economic crisis and social crises. These capitalist crises are processes that burst with contradictions.¹²⁹¹ Moreover, this is crystallised in the process of the neoliberal state and its state system: a system we have come to know as *late-capitalism* and come to know the *normative* state of the law under *late-capitalism* in Canada. As such, one of the most powerful instruments of intellectual

¹²⁸⁹ D. Cornell, “Freedom’s Conscience” in *Just Cause: Freedom, Identity, and Rights: Selected Essays* (Lanham: Rowman & Littlefield Publishers, 2000) at 68. Also, see: M.A. Glendon, *Rights Talk: The Impoverishment of Political Discourse* (New York: Free Press, 1991). Glendon’s general position is that late-20th-century “rights talk” over-emphasises the importance of individual rights against the balancing of society’s interests in the public sphere. For Glendon, she finds there is an irony that over-emphasising “rights-talk” in liberal society eventually undermines the values of those individual rights. Also, see: Hutchinson, *supra* note 820 at 25. According to Hutchinson, *legalised* “rights talk” in some critics mouths can quickly dissolve into a tawdry mush that is an “impoverished and partial notion of social life.” Also, see: M. Tushnet, “An Essay on Rights” (1982) 62 Tex. L. Rev. at 1363.

¹²⁹⁰ See: MacIntyre, *supra* note 550 at 69. Rights and rights-talk, including intellectual property rights, are historical constructs and products of what Marx would consider as specific and concrete periods of European social and historical development. For Alasdair MacIntyre, “there are no such [things as] rights [or intellectual property rights], and belief in them is one with belief in witches and in unicorns.” Nonetheless, we still seem to be enthralled by the power of witches, unicorns and “rights-talk” and, as noted earlier, according to Galbraith, occasionally resorting to economic witchcraft.

¹²⁹¹ Harvey, *supra* note 1005 at 78.

property are the “innovative financing mechanisms”¹²⁹² that can influence universities. These ‘innovative financing mechanisms’ are the clichéd tail that wags the dog known as capital. Capital, and in our case the innovative financing mechanisms – “money of the mind”¹²⁹³ – of intellectual property and must be understood as “a process of circulation and not [as] a thing.”¹²⁹⁴

6.1.2 Parasitism and Authoritarian Economics

As it has developed, neoliberalism, despite its avowed penchant for libertarian slogans, has more of a direct connection to a form of authoritarian state and economic regulation and control that predominantly favours corporate monopolies. That is, authoritarian economics is not just a fabrication of Stalin but has many sources. This type of economic control creeps into or sublates itself as a form of parasitism within the information economy and patent system¹²⁹⁵ and impacts badly on the pursuit of knowledge and the university. As Herbert and Anita Schiller suggest:

Transforming information [and education] into a saleable good, available only to those with the ability to pay for it, changes the goal of information [and education] access from an egalitarian to a privileged condition. The consequence of this is that the essential underpinning of a democratic order is seriously damaged. This is the ultimate outcome of

¹²⁹² K. Mara, “Confidential Documents From WHO R&D Finance Group, Industry, Raise Concern” Intellectual Property Watch, December 9, 2009, at: <http://www.ip-watch.org/weblog/2009/12/09/confidential-documents-released-from-who-rd-finance-group-pharmaceutical-industry/> (last visited January 8, 2010). Also, see: S.H. Rifkind, “US President’s Commission on the Patent System: ‘To Promote the Progress of... Useful Arts’ In the Age of Exploding Technology, Report to the Senate Judiciary Committee,” S. Doc. No. 5, 90th Cong., 1st Sess. (GPO 1967). As Justice Rifkind noted: “The patent system is more essential to getting together... risk capital....” In other words, and to varying degrees, the patent system could be construed as an arrangement to facilitate and fuel financial speculation.

¹²⁹³ See: J. Grant, *Money of the Mind: Borrowing and Lending in America from the Civil War to Michael Milken* (New York: Farrar, Straus & Giroux, 1994).

¹²⁹⁴ Harvey, *supra* note 1005 at 40.

¹²⁹⁵ See: W.H. Price, *The English Patents of Monopoly* (Clark: Lawbook Exchange, 2006) at 80. Although Price is referring to the parasitism of glass patents and monopoly granted to them in 1592, it is still a cogent metaphor as to the practice of manipulating knowledge and its “ownership.”

commercializing information [and education] throughout the social sphere.¹²⁹⁶

In the extreme, commercialising information and knowledge enters into a petty, scrounging and Kafkaesque universe. According to David Harvey:

Knowledge, which should be a commons for everybody, is now being enclosed. I was stuck somewhere and needed my own articles, and I couldn't find a copy of it, and I was traveling. I had to pay \$25 to get it off the web. And I thought, here I am paying \$25 for one of my own articles. This is ridiculous.¹²⁹⁷

Ridiculous, in this instance, is a rather tepid attestation.

By their nature, and their legislative intent, patents are instrumentally and economically parasitic. In a university tech-transfer office, with entrepreneurial academics, funding-starved universities, and M.B.A. minted university administrators, this is the unmentionable 800-pound gorilla in the corner (or one that does not speak the obvious).¹²⁹⁸ The issue of ownership and wealth locked in a patent licence is the dead hand of labour that “weighs like a nightmare on the brain of the living.”¹²⁹⁹ Within universities, particularly during the “age of Reaganism,”¹³⁰⁰ corporations became a rather boisterous silent partner. Instead of being an “invisible hand,” the market became a very

¹²⁹⁶ H.I. Schiller & R.A. Schiller, “Libraries, Public Access to Information and Commerce” in *The Political Economy of Information* (eds.) V. Mosco & J. Wasko (Madison: The University of Wisconsin Press, 1988) at 154. Also, see: N. Morris & O. Wright “Lords sound alarm over university ‘privatisation’ – but fees plan survives” *The Independent*, December 15, 2010, at: <http://www.independent.co.uk/news/education/education-news/lords-sound-alarm-over-university-privatisation-ndash-but-fees-plan-survives-2160615.html>.

¹²⁹⁷ D. Harvey, interview with Laura Flanders, “David Harvey: Looking Toward a Moneyless Economy and Sleeping Well at Night” *Truthout*, February 3, 2015, at: <http://www.truth-out.org/news/item/28879-looking-toward-a-moneyless-economy-and-sleeping-well-at-night> (last visited February 5, 2015).

¹²⁹⁸ As Marcia Angell highlights, this is an old joke in reference to Big Pharma that goes: “What does the 800-pound gorilla do? Anything it wants to.” Angell, *supra* note 212 at 3.

¹²⁹⁹ Marx, *supra* note 169 at 595.

¹³⁰⁰ See: S.F. Hayward, *The Age of Reagan: The Conservative Counterrevolution, 1980-1989* (New York: Crown Forum, 2009). Hayward neatly packages the so-call “age of Reagan” into a nine year period: as has been argued, “Dutch” and his presidency casts a long shadow but it is the larger neoliberal movement begun in the early 1970s that we are still experiencing as to the “counterrevolution” against Roosevelt.

visible boxing glove for corporate activism around higher education. Put differently, corporations became the *lively* “dead hand” (*mortmain*)¹³⁰¹ that became extremely influential in directing scientific research and public policy as to university research. Sadly, to Nobel laureate, John Polanyi, commercialisation means that “[a]t a certain point... we don’t have universities any more, but outlying branches of industry.”¹³⁰² And, this can lead to disastrous results because “all the things industry turns to universities for – breadth of knowledge, far time horizons and independent voice[s] – are lost.”¹³⁰³

6.1.3 Privatising Interests – ‘Going on the (*Bayh-*)Dole’

Brecht’s portrayal of Galileo and the claim that the earth moves – “*Eppur si move*; that is, *ftill it moves*”¹³⁰⁴ – must be understood as to the implications and pattern that it had for science and modernity. The “Copernican revolution”¹³⁰⁵ or “Copernican shifts”¹³⁰⁶ run parallel to our problem and logical development of scientific innovation and its dissemination. The putative “crisis in confidence”¹³⁰⁷ that occurred in 1979, and eventually led to the *Bayh-Dole Act*, marked the rise of neoliberalism as the underlying ideology – a Galileo-type papal edict of sorts? – as to the current public policy

¹³⁰¹ W. Blackstone, *Commentaries on the Laws of England, Vol. 1* (Philadelphia: E. Duyckinck, G. Long, Collins & Hannay, Collins & Co., & O.A. Roorbach & J. Grigg, 1916) at 196. Endowments have always been powerful tool in directing higher education and its purposes. Carnegie endowments are perhaps the best-known example of philanthropy in North America that range from the arts to public libraries. Bill and Melinda Gates are a current example: one touched by its corporate ethos.

¹³⁰² J. Polanyi cited in K. May, “‘Misguided’ policies driving out scientists” *The Ottawa Citizen* November 21, 1999, at A1.

¹³⁰³ *Ibid.*

¹³⁰⁴ This oft-quoted phrase is purported to be by Galileo, but it appears to be a fictionalised statement concocted by Giuseppe Baretta. See: G. Baretta, *Italian Library* (London: A. Millar, 1757) at 52.

¹³⁰⁵ T.S. Kuhn, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (Cambridge: Harvard University Press, 1957) at 138. Also, see: T.S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1996) at 8.

¹³⁰⁶ Also, see: H. Küng, *The Beginning of All Things: Science and Religion* (Grand Rapids: Eerdmans, 2007) at 46.

¹³⁰⁷ R.P. Ingalls & D.K. Johnson, *The United States Since 1945: A Documentary Reader* (Oxford: Blackwell Publishing, 2009) at 170.

surrounding intellectual property, the pharmaceutical industry and university research. *Bayh-Dole* ushered in an age of a public policy that established the watermark that sets the level of scientific research with public money. It blurred public funding and, to a degree, the privatising interests in university licences and patent law.¹³⁰⁸

This has become an age of corporate culture that has become pervasive in almost all facets of modern life. As Habermas points out, this is an era that has pockmarked our current *legitimation crisis* in modernity, within democracy, and under the umbrella of *late-capitalism*. This is the culture that surrounds our legitimation crisis as to intellectual property. Under the banner of globalisation, progress and efficiency, free trade and corporate culture, law has had to supplicate itself to capital and its demands. This dynamic has displaced, to a certain degree, the legacy of a liberal democracy, its purported concern for individual citizens and, in terms of the university, for academic freedom. Vested corporations with intellectual property interests promote the *inviolability* of un-taxable profit and ‘primitive accumulation’ of property with unlimited ends.¹³⁰⁹ This was and is still having a dramatic impact on the state of higher education and its prospects for the future.¹³¹⁰

¹³⁰⁸ Angell, *supra* note 212 at 105.

¹³⁰⁹ See: Johnston, *supra* note 133 at 700. Johnston’s convincing point is: “What does it profit us if we remove from our land the jobs of many who work with their hand [or minds]? How do we benefit as a society when government rules tell the owners of factories, patents and copyrights to go offshore?” Also, see: D.C. Johnston, “9 Things The Rich Don’t Want You To Know About Taxes” *The Willamette Week*, April 13, 2011, at: <http://wweek.com/portland/article-173509-things-the-rich-dont-want-you-to-know-about-taxes.html> (last visited January 22, 2015). As Johnston noted in a conversation with Warren Buffet, “there is class warfare and his [Buffet’s] side is winning....”

¹³¹⁰ Some solid examples are: S. Aronowitz & H.A. Giroux, *Education Still Under Siege* (Westport: Bergin & Garvey Press, 1992); S. Aronowitz, *The Knowledge Factory* (Boston: Beacon Press, 2000); H.A. Giroux, *Impure Acts: The Practical Politics of Cultural Studies* (New York: Routledge, 2000).

6.1.4 Innis on the Problem with University Boards

Over 70 years ago, Harold Innis understood the limited imagination of university boards:

The impression that universities can be bought and sold, held by businessmen and fostered by university administrators trained in playing for the highest bid, is a reflection of the deterioration of western civilization. To buy universities is to destroy them and with them the civilization for which they stand.¹³¹¹

Despite Innis's forewarning, most of Canadian universities and their boards of governors or trustees are populated with Canada's business elite.¹³¹² As such, it should not be surprising that the focus brought to bear on university governance is "the" or "its" putative *business model* for the new millennium. These individuals, from university boardrooms to corporate boardrooms, share an "interconnectedness" that "bolster[s] the goal of having government and the law continue to privilege private for-profit corporate activity."¹³¹³ This business rationale, the *raison d'être*, expressed by David Bond, former Chair of the Board of Governors at Simon Fraser University, holds that "[b]oard members are put on the board to give money or raise money. You either, give, get, or get out."¹³¹⁴

To be sure, one of the principle instruments or wedges used to open up educative spaces – places of higher learning – for neoliberal commercialisation are intellectual

¹³¹¹ H. Innis, *Political Economy of the Modern State* (Toronto: Ryerson Press, 1946) at 75.

¹³¹² Glancing briefly at the various boards that govern Canadian universities, one is quickly struck as to the selective membership that inhabits these positions – what Wally Clement refers to as the "Canadian corporate elite." See: C.A.U.T., "Universities and Colleges in the Public Interest" in *Research Report 1 & 2* (Ottawa: Canadian Association of University Teachers, 1999).

¹³¹³ Glassbeck, *supra* note 744 at 233.

¹³¹⁴ David Bond cited in M. Conlon, "Betrayal of the Public Trust: Corporate Governance of Canadian Universities" in *The Corporate Campus: Commercialization and the Dangers to Canada's Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Company Ltd., Publishers, 2000) at 145.

property rights.¹³¹⁵ That is, corporate involvement and corporate donations coupled with the capacity of a university to license intellectual property allows for “donors”¹³¹⁶ to exercise many of their own interests at public expense. As government funding decreased, or more correctly was “redirected,” corporate “donations” burgeoned. These donations are usually accompanied with various “vision statements” where a university commits to various “undertakings” that maintain the university’s “independence” but are, more often than not, aligned with the corporation’s own *vision (quid pro quo?)* and commitment to education. This creates awkward situations because as Wayne Renke frames it:

He who pays the piper calls the tune: if external businesses are funding research or have decisive influence on the availability of research funding, there is a risk that directly or indirectly, external businesses will dictate to researchers. Insofar as researchers are seeking external business dollars, there is a risk that they will constrain their selection of research topics, the type of research they perform, and the publication of results, to favour current or potential business clients.¹³¹⁷

Neil Tudiver’s thought-provoking and detailed study, *Universities for Sale*, suggests similar sentiments.¹³¹⁸ Indeed, there has been an aggressive commercialisation of *higher learning* and this is arguably a global attempt to embed a “business-friendly environment [and] to facilitate university-industry collaborations”¹³¹⁹ worldwide.

¹³¹⁵ Much has been written about the “commercialization” and the infiltration of corporate brands on university campuses. The most popular being the work of Naomi Klein’s *No Logo*. See: N. Klein, *No Logo: Taking Aim at Brand Bullies* (Toronto: Vintage Canada, 2000).

¹³¹⁶ If it is not already known, medical research donations to universities allow for a 100% tax deduction for the “donor.” See: “1999-2000 General Information Guide” Medical Research Council of Canada (Ottawa: Medical Research Council of Canada, 1999). As of April 2000, the Medical Research Council of Canada was replaced by the Canadian Institutes of Health Research (C.I.H.R.).

¹³¹⁷ Renke, *supra* note 78 at 32. Also, see: G. Blumenstyk, “Researchers Tell of Battling for the Right to Publish Negative Findings” (1999) 54(31) *Chron. H. Ed.* 44.

¹³¹⁸ N. Tudiver, *Universities for Sale: Resisting Corporate Control Over Canadian Higher Education* (Toronto: James Lorimer & Company Ltd., Publishers, 1999) at 155.

¹³¹⁹ M. Wright, “University-Industry Links: Regional Policies and Initiatives in the United Kingdom” in *How Universities Promote Economic Growth* (eds.) S. Yusuf & K. Nabeshima (Washington: The International Bank for Reconstruction and Development/The World Bank, 2007) at 153.

Ideally, this “business friendly” agenda would be aligned near or at the core of the university system and its ideological promotion of economic growth. Primarily, it puts at risk any semblance of academic independence and potentially has a destructive impact on academic freedom. In addition, it puts in jeopardy the public rôle that universities have had and, arguably, ought to continue to have within Canadian society.¹³²⁰ For Tudiver, the commercialisation of the university threatens and undermines the broadest goals and mission for higher education. The influence of corporate culture on the university has been profound. Universities have ceased to be spaces for the pursuit of ‘independent’ thought and have been reshaped by an odd collusion between universities, corporate culture and government/industry relations. The *realpolitik* of granting agencies, the civil service, and the world of politics and business all impact on research academics who “may be motivated by self-interest over threats to pay, tenure and academic freedom... [and all the while] ...confront the essential question of the university’s future – whether it will remain an independent force that contributes broadly to society, or instead be sold to the highest bidder.”¹³²¹

The traditional university produces knowledge through research, and distributes it freely in the public domain through teaching, publication, and community service. To the corporate university, knowledge is intellectual property, a commodity to be bought and sold.¹³²²

One has to understand that intellectual property and patents for academic entrepreneurs are bobbles that helped to change the mind-set towards this incentive system and the Canadian Association of University Teachers (C.A.U.T.) saw and sees this as a potential

¹³²⁰ Although I do not focus on the needs of students in this discussion, it must be noted that this is a central concern that is embedded and is unfortunately a sublimated aspect of this project.

¹³²¹ Tudiver, *supra* note 1318 at 196.

¹³²² *Ibid* at 155. For examples of this positions, see: C. Kerr, *The Uses of the University* (Cambridge: Harvard University Press, 2001) at XI. Also, see: H. W. Chesbrough, *Open Innovation: The New Imperative for Creating and Profiting from Technology* (Boston: Harvard Business School Press, 2006) at 191.

problem.¹³²³ As governments changed and the older publicly structured *incentive system* shifted, government policies prioritised privatising public money – funnelling or subsidising private interests – as a way to encourage “university researchers... [to be] drawn [in]to commercial opportunities....”¹³²⁴ According to Tudiver, government public policy and funding in universities encouraged “[r]easerch in disciplines close to the market, such as technologies fields, agriculture, engineering, and biological sciences, [ones that] can produce considerable commercial value.”¹³²⁵

6.1.5 Neoliberal Funding Policy in the 80s

Beginning in the 1980s, the rollback of government funding as to higher education was profound.¹³²⁶ Canada no longer tacitly supported the university system as a neutral democratic or democratising institution.¹³²⁷ During this time, the Natural Sciences and Engineering Research Council (N.S.E.R.C.) became one of the principle matchmaking tools that the Mulroney-Chrétien-Martin governments used to formulate industrial policy and organise its attendant intellectual capital in Canada¹³²⁸ – and, in so

¹³²³ C.A.U.T., “Intellectual Property & Academic Staff” (2004) 4(3) *CAUT Legal Review* at: 3; also available at CAUT Publications at: www.caut.ca. According to the C.A.U.T.: “The specific rules governing the treatment of intellectual property at universities are set down in collective agreements (at unionized institutions) and special plans (non-unionized institutions). In addition to contract language, some universities also have more amorphous ‘Intellectual Property Policies.’ These policies often apply more widely than the contractual terms, for example to cover students and researchers at affiliated institutions who are outside the purview of the collective agreement. Such policies often arise as employer initiatives and can be used to circumvent or pre-determine the collective bargaining process.”

¹³²⁴ Tudiver, *supra* note 1318 at 155.

¹³²⁵ *Ibid* at 155.

¹³²⁶ A.U.C.C., “University Operating Income By Source of Funds” in *Trends: The Canadian University in Profile* (Ottawa: Association of Universities and Colleges, 1999). One of the remarkable trends has been the steep decline in public funding of post-secondary education: the 20 years between 1977-78 and 1997-98 saw government funding decline from 83.4% to 63.4% of universities operating income.

¹³²⁷ J. Porter, “The Democratisation of the Canadian Universities and the Need for a National System” (1970) 8(3) *Minerva*, at 325. Needless to say, John Porter would be unsupportive and highly critical of our current national university system – one that is attempting to organised itself around the corporate model.

¹³²⁸ See: J.L. Turk, “Human Capital Theory: Bad for Education, Bad for the Economy” (1989) 1(3) *Our Schools/Our Selves*, at 4.

doing, attract business to invest in the knowledge economy.¹³²⁹ But, this is only half the story.

It is true that direct public funding decreased in real terms for the core programmes of universities from the heady days of the early 1980s, but the new incentive system shifted these public funds into the more complex and obscurant – if not murky and untraceable – realm of the tax system. These are “national granting councils... [directed] to match cash or in-kind contributions from corporations, foundations, trusts, non-profit organizations and crown corporations, provided the money went to a council or university.”¹³³⁰ As new (Copernican?) policies shifts began,¹³³¹ N.S.E.R.C. declared that:

Industry can no longer afford to do all of the long term-research it needs to survive; thus it is no longer looking at universities simply as an inexpensive source of trained people, but also as a vast reservoir of expertise which can perform that urgently needed long-term effort.¹³³²

As such, intellectual and academic reservoirs had to be tapped: they needed new conduits that could drain public resources toward self-interested private goals. This became a time where the tax system and the business model allowed for a new managerial apparatus to

¹³²⁹ T. Pocklington, “The Marketing of the University” in *Contested Classrooms: Education, Globalization, and Democracy in Alberta* (eds.) T.W. Harrison & J.L. Kachur, (Edmonton: University of Alberta Press, 1999) at 48. Also, see: N.S.E.R.C., *A Second Five-year Plan for the Programs of the Natural Sciences and Engineering Research Council: Completing the Bridge to the 90's: NSERC's Second Five-Year Plan* (Ottawa: Minister of Supply and Services, 1985). One cannot help but be somewhat amused that N.S.E.R.C. uses a version of Stalin's “Five Year Plan” as a programme preference. See: S. Fitzpatrick, *The Russian Revolution* (Oxford: Oxford University Press, 2008) at 133.

¹³³⁰ Tudiver, *supra* note 1318 at 149-150.

¹³³¹ See: Science Council of Canada, *University Spin-off Firms: Helping the Ivory Tower Get to Market* (Ottawa: Minister of Supply and Services, 1986).

¹³³² N.S.E.R.C., *supra* note 1329 at 74. It must be said that one cannot help but feel somewhat uncomfortable when a government body such as N.S.E.R.C. baldly states in unqualified terms that “[i]ndustry can no longer afford to do all of the long term-research.” This is a gross fictionalised account of Canadian economic history and development. As it has often been said, Canada is a country that has been built with public money for private gain. So, too, it can be said with respect to research and industry.

reshape universities in the corporate model in the hope that this system of self-interest would create what Keynes saw as an improbable social benefit.

6.1.6 Academic Capitalism and the Corporate University

We are in danger of producing an educated proletariat.

Governor Ronald Reagan¹³³³

Heaven forbid universities educate and do that! Or, should they? Modern universities, for good or for ill, have played an important democratic rôle in preserving and expanding knowledge in the service of human civilisation and the public domain. Yet, from the 1960s, and in lieu of Reagan's complaint, until today, universities have been actively engaged in and, to degrees, enthusiastically promoting their own self-privatisation and a type of "new tragedy of the commons."¹³³⁴ Corporate influence has been profound: yet, we must remind ourselves that medical researchers, clinicians and academicians have not been passive in this process. Indeed, many university administrations have modelled themselves as "businesses" and university principals and presidents come to see themselves as chief executive officers – entitled to private sector remuneration.¹³³⁵ Many medical researchers, clinicians and academicians have nurtured close and, at times, personally profitable ties to the pharmaceutical industry and have

¹³³³ R. Reagan cited in H.B. Franklin, *Vietnam and Other American Fantasies* (Amherst: University of Massachusetts Press, 2001) at 130. Needless to say, when he was Governor of California, Reagan was not particularly amused with the student protest movement. In addition, ironic derision against an 'educated underclass' seems to be a reoccurring theme in American politics, see: S. Peoples & N. Benac, "I love the poorly educated": Donald Trump celebrates big win in Nevada by thanking his supporters, young and old" *The National Post*, February 24, 2016, at: <http://news.nationalpost.com/news/world/i-love-the-poorly-educated-donald-trump-celebrates-big-win-in-nevada-by-thanking-his-supporters-young-and-old> (last visited February 29, 2016).

¹³³⁴ Brown, *supra* note 886 at 1701.

¹³³⁵ Boekoff, *supra* note 894. Also, see: R. Garner, "Fury at £105,000 pay rise for Sheffield University boss Sir Keith Burnett after he refused to raise employees' salaries to the living wage" *The Independent*, January 25, 2014, at: <http://www.independent.co.uk/student/news/fury-at-105000-pay-rise-for-sheffield-university-boss-sir-keith-burnett-after-he-refused-to-raise-employees-salaries-to-the-living-wage-9084027.html> (last visited January 26, 2014).

been encouraged to do so by their universities and various levels of government.¹³³⁶ Yet, for some, the jury is still out as to how “beneficial” these university/corporate partnerships¹³³⁷ have been or will be. It must be acknowledged that many research academics have resisted this pressure or subtle form of coercion. Nonetheless, a popular sentiment is that we must adapt to the structure of new ‘information’ and the ‘knowledge-based economy’ to remain competitive in the context of emerging global markets.

6.1.7 The New Normal of Emerging Markets? Market Triumphalism in the Shaping of Bio-Medical Researchers

These new markets demand that academic work, positions, and research be restructured to adapt to the “new normal.” Slaughter and Leslie note that:

During the second half of the twentieth century, professors, like other professionals, gradually became more involved in the market. In the 1980s globalization accelerated the movement of faculty and universities towards the market. Participation in the market began to undercut the tacit contract between professors and society because the market put as much emphasis on the bottom line as on client welfare. The *raison d’être* for special treatment for universities, the training ground of professionals, as well as for professional privilege, was undermined, increasing the likelihood that universities, in the future, will be treated more like other organizations and professionals more like other workers.¹³³⁸

Needless but needed to be said, the process of globalisation is a dubious project.¹³³⁹

¹³³⁶ See: H. Thorp & B. Goldstein, *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century* (Chapel Hill: University of North Carolina Press, 2010).

¹³³⁷ According to Jennifer Washburn, the effort and energy expended to form these “partnerships” between universities and corporations are more than merely disappointing – they are costly. See: Washburn, *supra* note 128.

¹³³⁸ S. Slaughter & L.L. Leslie, *Academic Capitalism: Politics, Policies and the Entrepreneurial University* (Baltimore: Johns Hopkins University Press, 1997) at 5. Also, see: Bollier, *supra* note 1007. Also, see: S.A. Shane, *Academic Entrepreneurship: University Spinoffs and Wealth Creation* (Cheltenham: Elgar 2005).

¹³³⁹ See: T.L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Farrar, Straus and Giroux, 1999) at 443-444. Friedman view of the free-market is somewhat telling: “The hidden hand of the market will never work without the hidden fist – McDonald’s cannot flourish without McDonnell Douglas, the designer of the F-15. And the hidden fist that keeps the world safe for Silicon Valley’s technologies is called the United States Army, Air Force, Navy, and Marine Corps.” More

In an age of market triumphalism, the corporatisation of the university does not appear to be a surprising situation:¹³⁴⁰ but, is it intractable? As the gauntlet was thrown down, an ample length of rope has been given to academic biomedical researchers and some have managed to hang themselves with it. That is, as universities warmed to the idea of increasing revenue from patent licensing agreements, academic biomedical researchers and other academic researchers were encouraged to engage in projects with outside partners to develop pharmaceuticals and medical *apparatus* for treatment.¹³⁴¹ Many of these academic researchers, swept-up in the high-tech and biotech bubbles of the 1980s and 1990s, drifted toward or actively pursued academic entrepreneurialism. As academic entrepreneurs, they were encouraged to start their own companies, to take advantage of their research, to smooth the potential knowledge transfer for future development and commercialisation with an outside “partner,” and, ultimately, assist and benefit the university through licencing agreements. In doing so, many researchers have

recently, a good example of globalisation’s coercive fingers – if not “the hidden fist” – is the example of foreign workers being employed instead of Canadians. B. Curry, “Service sector sees spike in temporary foreign workers” *The Globe and Mail*, April 22, 2014, at:

<http://www.theglobeandmail.com/news/politics/service-sector-sees-spike-in-temporary-foreign-workers/article18119462/> (last visited April 23, 2014).

¹³⁴⁰ That is, the other ‘Golden Rule’: “He who has the gold, make the rules.”

¹³⁴¹ As is generally known, there is no absolute right in patents that can be attached to *direct* medical treatments. Yet, patents are issuable as to “new” or “improved” apparatuses used in medical treatments – that is, if someone comes up with ‘a better scalpel’, then a patent can be issued. See: P. Lima, “Scalpel... clamp... patience” *The Globe and Mail*, November 8, 2005, at: <http://www.theglobeandmail.com/report-on-business/article918569.ece> (last visited November 29, 2007). Also, see: *Tennessee Eastman Co. v. Comm’r of Patents* (1970), 62 C.P.R. 117 (Ex.Ct.), aff’d 8 C.P.R. (2d) 202, 33 D.L.R. (3d) 459 (S.C.C.). As an aside, one of the best-known cases of a medical apparatus remaining a “trade secret” is the story of the brothers Chamberlen. The two brothers, Peter the Elder and Peter the Younger, were sons of the Huguenot surgeon, William Chamberlen. Aside from sharing their first names, the Chamberlens and their family also shared the secret of what would become the modern obstetrical forceps: they and their family held a virtual monopoly over the obstetrical forceps for over a hundred years and were in the service of many royal houses across Europe. The obstetrical forceps were a revolution in cases of difficult or obstructed labour. Prior to the obstetrical forceps, the only other option available in a difficult birth was the use of caesarean section. Without knowledge of sterile fields or adequate (rudimentary) surgical knowledge, caesareans were often fatal to the mother. See: J.H. Aveling, *The Chamberlens and the Midwifery Forceps, Memorials of the Family, and An Essay on the Invention of the Instrument* (New York: A.M.S. Press, 1977).

been willing to break fundamental ethical rules¹³⁴² to advance their personal interest and the institutional – bottom-line – interests of the university.¹³⁴³ Others were and are actively excluded from these questionable partnerships.

Traditionally, the research model at most universities has taken – and joyfully subsumed – portions of unpaid labour and resources. Under the new model, what became cautionary was how to account – or rather not account – for it.¹³⁴⁴ In the past,

¹³⁴² It must be noted that although some may feel that “laws are made to be broken,” the ethical obligations university researchers owe to patients in bio-tech and pharmaceutical tests, procedures, and clinical trials, at least the ones reviewed for this minor dissertation, are supposed to be beyond inviolable. Yet, this is unfortunately not the case. See: M. Angell, “The Clinical Trial Business” in *Buying In or Selling Out?: The Commercialization of the American Research University* (ed.) D.G. Stein (New Brunswick: Rutgers University Press, 2004). Also, see: S. Krinsky, *Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research?* (Lanham: Rowman and Littlefield, 2003) at 147. In addition, there is some fairly clear evidence that the “off-shoring” of clinical trials to poor countries and uninformed participants are quickly becoming an option for Big Pharma. That is, Big Pharma has for years done clinical trials on willing, but perhaps financially strapped individuals in the ‘developed’ world; it now sees off-shoring clinical trials as a way to cut costs by conducting them in the ‘developing world.’ See: V. Sundaram, “Big Pharma Testing Drugs on India’s Poor” *Alternet*, August 7, 2011, at: http://www.alternet.org/story/151934/big_pharma_testing_drugs_on_india%E2%80%99s_poor?page=1 (last visited August 10, 2011).

¹³⁴³ See: *Moore v. The Regents of University of California*, 793 P.2d 479 (Cal. 1990). *Moore* is the well-known case where Mr. Moore had a medically necessary splenectomy as a result from being diagnosed, in 1976, with “hairy cell leukaemia.” Without consent, Mr. Moore’s extracted spleen was used by Moore’s doctor, David Golde, and the University of California, to develop genetic information and material valued at approximately \$3 billion. From Moore’s splenectomy until 1984, Drs. Golde and Shirley Quan, experimented on Moore’s spleen. They developed a cell line from his tissue and his genetic material. It was in his rôle as a researcher that Golde helped the research team at U.C.L.A. isolate a protein called GM-CSF. A purified form of GM-CSF was found to increase the body’s production of white blood cells. By March 1984, Golde and Quan, after negotiating a licensing agreement with the Regents of the University of California, had a licence assigned to the Regents on the cell line of Moore’s T-lymphocytes. All of this was derived from Moore’s spleen and genetic material. The patent licence allowed for the commercial exploitation and development of the cell line: it also meant healthy remuneration for the university, and Golde and Quan. Mr. Moore sued Golde and the Regents for, amongst other things, unlawful conversion. The Supreme Court of California held that Mr. Moore had no property interest in the cells from his spleen and/or no proprietary interest in his D.N.A. See: R. Gold, *Body Parts: Property Rights and the Ownership of Human Biological Materials* (Washington: Georgetown University Press, 1996). Also, see: R.S. Eisenberg, “Re-Examining the Role of Patents in Appropriating the Value of DNA Sequences” (2000) 49 *Emory L.J.* Also, see: J. Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* (Cambridge: Harvard University Press, 1996). Also, for an interesting obituary as to the impact of Golde’s life and its impact on bio-technology see: J. Pearce, “Dr. David Golde, 63, Expert On Blood Disorders, Is Dead” *The New York Times*, August 14, 2004, at: <http://query.nytimes.com/gst/fullpage.html?res=9D06EFD8153FF937A2575BC0A9629C8B63> (last visited August 22, 2008).

¹³⁴⁴ *Board of Regents of the State of Florida v. Taborsky*, 648 So.2d 748 (Fla. 2d DCA 1994). *Taborsky* is another dramatic example as to intellectual property abuse and protection by a university. Petr Táborský was the first person to be criminally prosecuted and incarcerated for intellectual property “theft” (Vaver’s

professors, clinical researchers and graduate students shared a collective experience. Testing old and new ideas, old and new methods, was part of the educative experience. The corporate need and requirement for secrecy surrounding science was not. Corporate secrecy prohibits sharing and, hence, hobbles the advance of knowledge. When knowledge and its patentable application fuse together, a ‘rational self-maximiser’ – a *self-interested individual* – can prove to be either a small pebble in the shoe of progress or become a spanner that thoroughly breaks down the gears of scientific progress and advancement.

6.1.8 Invaluable Public Funding of Research

The real public expense (or investment) in scientific research in universities is – or almost is – immeasurable. Researchers, access to publicly funded resources, and the extensive post-graduate education they receive and contribute to – its real value – is invaluable. It is infrequently (if *ever*) factored into the “cost” of a drug. Indeed, this public contribution and its value, and its impact on human health, is always restrained or downplayed by the private sector. Moreover, the entire research enterprise that may have

definition and exception being duly noted) in the United States. As an undergraduate, at the University of South Florida, Táborský had worked as a research assistant on a project sponsored by the university and the Florida Progress Corporation. The project ended with no resolution to the problem of removing ammonia from wastewater. Interested in the problem, Táborský claimed to have asked a dean in the College of Engineering, Robert Carnahan, if he could pursue the problem as to the elimination of ammonia in wastewater for his master’s thesis. Carnahan purportedly granted Táborský permission to pursue his research topic on the ammonia problem. Carnahan understood that Táborský would use a different approach. Once the commercial utility of Táborský’s invention became known and showed promise, the University of South Florida and the Florida Progress Corporation claimed ownership. Táborský patented his idea and the patent office held that his experiments were a novel and non-obvious approach to the problem of removing ammonia from wastewater and had clear commercial utility. The patent office issued Táborský a patent. It appears, in part, that the criminal charge was related to Táborský removing and retaining his research notes from the laboratory. He was in contempt and refused a court order to transfer the notes and ownership of the patent to the university and to Florida Progress Corporation. In 1996, Táborský spent time on a chain gang due to the criminal conviction. The, then, Florida governor, Lawton Chiles, offered Táborský clemency. Táborský refused it. He claimed that if he accepted clemency, it would be tantamount to admitting guilt. See: S. Shulman, *Owning the Future* (Boston: Houghton Mifflin, 1999) at 106-109. Also, see: J. DeQuine “Volatile Mix of Corporate Cash and Academic Ideals” *The Christian Science Monitor*, July 11, 1996, at: <http://www.cptech.org/ip/csm.html> (last visited August 10, 2010).

begun in a university laboratory, and from time to time recognises (or pays lip service to) the contribution of others, does little to give a full spectrum of public support versus the public relations lauding private tax-deductible contributions. Research with federal support by N.S.E.R.C. in Canada (the N.I.H. in America), has the subsidised use of university laboratories, postdoctoral fellows and their contributions, and the additional work of graduate students. All these benefits are rarely factored into a full accounting of the development of a pharmaceutical product. It is purported that the neoliberal economic system prides itself on econometric accuracy; that is, it is proud of its accuracy in measuring efficiency. Indeed, it self-promotes its rationale for a user-pay system, its transparency, its full cost accounting, and, of course, the sanctity and liberty of private property as the source of the investment. But, this is rarely achieved in a putative “free market rhetoric.”¹³⁴⁵

These are economic-legal issues, but they are also cultural, political and ethical issues. Yet, there has been a deafening silence in the industry (and collusion?) as they relate to these latter issues. If it is not obvious, non-obvious, then it should be said that there are tensions and contradictions as to the ‘multiple identities’ of a researcher mixed-up in the market with the pharmaceutical industry. As a knowledge worker and disinterested observer, one attempts to wear many hats and become the master of many trades. Yet, matching commercial research and a medical skill set makes for an uncomfortable – if not catastrophic – concinnity when one dons the hat of a venture knowledge capitalist.¹³⁴⁶ Put differently, the profit motive versus the disinterested

¹³⁴⁵ Angell, *supra* note 212 at 221. Also, see: C. Adams & G. Harris, “When NIH Helps Discover Drugs, Should Taxpayers Share the Wealth” Wall Street Journal June 5, 2000, at B1.

¹³⁴⁶ J.N. Axelrod, “Universities Learn of Start-ups’ Pitfalls” Wall Street Journal, August 27, 1996, at C1.

observer, the rôle that raises commerce above the art of science and has become the *raison d'être* of our time, is not always compatible.

6.1.9 Profit Motive and the Production of Knowledge

The profit motive complicates the issues surrounding the production of knowledge and the university. It conflicts researchers and amplifies conflicts of interest.¹³⁴⁷ Interestingly, institutions and researchers are easily compromised and as Angell warns:

Academic medical institutions are themselves growing increasingly beholden to industry. ...Some academic institutions have entered into partnerships with drug companies to set up research centers and teaching programs in which students and faculty members essentially carry out industry research. Both sides see great benefit in this arrangement. For financially struggling medical centers, it means cash. For the companies that make the drugs and devices, it means access to research talent, as well as affiliation with a prestigious “brand.” The time-honored custom of drug companies’ gaining entry into teaching hospitals by bestowing small gifts on house officers has reached new levels of munificence.¹³⁴⁸

It is somewhat astonishing how little remuneration it takes to gain wide and open access that can influence the direction of academic research and programme policy at these medical centres. It is submitted that this has been a “Faustian bargain.”¹³⁴⁹ A bargain struck during the hay-day ascendancy of neoliberalism, but one that is now experiencing a crisis and its possible dissent – a decline that has had many unintended consequences.¹³⁵⁰

¹³⁴⁷ See: M. Angell, “Is Academic Medicine for Sale?” (2000) 342 N.E.J.M.

¹³⁴⁸ *Ibid* at 1516-1517.

¹³⁴⁹ D. Hakim, “Scientists Loved and Loathed by an Agrochemical Giant” The New York Times, December 31, 2016, at: <http://www.nytimes.com/2016/12/31/business/scientists-loved-and-loathed-by-syngenta-an-agrochemical-giant.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=first-column-region®ion=top-news&WT.nav=top-news> (last visited January 4, 2017).

¹³⁵⁰ Berman, *supra* note 12 at 50. The Faustian bargain that we have struck with modernity, and in the case with the pharmaceutical industry, is multifaceted. As Berman puts it for doctor Faust “what matters is the process, not the result....” Also, see: von Geothe, *supra* note 12.

6.1.10 Academic Freedom and the Conflict of Interest

Since the beginning of the modern age or at least since the time of Galileo, the conflict between the “canon” (ownership) of proprietary knowledge (in Galileo’s instance, the Roman Catholic Church) and science (reason) has been profound.¹³⁵¹ The capacity of established orders and their capacity to influence what is studied, what knowledge is acceptable, what knowledge can be dismissed, disregarded, printed, suppressed and/or controlled is vast. Patent law as to inventions sought to disentangle this conundrum through disclosure, but, like a bad penny in a trouser pocket, full disclosure, proprietary ownership over intellectual property, ‘secrecy’ and academic freedom continue to reappear as a *post-Bayh-Dole* problem.¹³⁵² As Arthur Koestler suggests: “Corporate orthodoxy [and ownership] has been the curse of genius from Aristarchus to Galileo, to Harvey, Darwin and Freud; throughout the centuries its phalanxes have sturdily defended habit against originality.”¹³⁵³

6.1.11 Corporate Orthodoxies for Higher Education?

In our case, this is a situation where academic freedom and a variety of *corporate orthodoxies* come into conflict and in the matrix of the incredulous “corporate campus” and becomes a place where commitment to academic freedom can become a millstone. A millstone that Eric Gould sees as a situation where the “higher education market

¹³⁵¹ K. Marx, “On Freedom of the Press – [Freedom in General] – Proceedings of the Sixth Rhine Provincial Assembly” *Marx-Engels Collected Works* at: <http://www.marxists.org/archive/marx/works/1842/free-press/ch06.htm> (last visited March 9, 2011). As Marx mischievously puts it: “Evil astronomy! What a fine time that was when the earth, like a respectable townsman, still sat in the centre of the universe, calmly smoked its clay pipe, and did not even have to put on the light for itself, since the sun, moon and stars like so many obedient night lamps and ‘fine things’ revolved around it.”

¹³⁵² See: Blumenstyk, *supra* at 44.

¹³⁵³ A. Koestler, *The Act of Creation* (New York: Penguin Books, 1969) at 239.

propels itself forward blindly....”¹³⁵⁴ To Gould, this is “largely in response to the growing public need for credentials and work skills... [and it is a disaster that occurs due to] the market’s inability to assess quality carefully beyond the criteria of supply and demand.”¹³⁵⁵ Put differently, beyond the nebulous qualities of “supply and demand,” the “free market” is remarkably helpless in finding other sources of governance. Because the “free market” bases its ‘first principle’ on a demonstratively false premise of self-interest, it should come as no surprise that the neoliberal education model is incapable of objectively assessing its own weaknesses.

Unlike medieval European universities and their contemporary descendants, where universities were and are seen as autonomous and relatively independent institutions, North American universities and, specifically, the institutions in Canadian and “American higher education... [are understood as] deviants among the educational systems of the Western world.”¹³⁵⁶ Canadian and American universities are part of instrumental and pragmatic considerations. Andrew Carnegie held that the development of a university’s curriculum ought to allow students to dabble “a little... [in the] barbarous and petty squabbles of a far-distant past... [but] the future captain of industry... [ought to be] ...hotly engaged in the school experience... [to] obtain... the very knowledge required for his future triumphs.”¹³⁵⁷ Put differently, as Hofstadter and De Witt Hardy observed almost 60 years ago: “It has been the fate of American higher

¹³⁵⁴ See: E. Gould, *The University in a Corporate Culture* (New Haven: Yale University Press, 2003) at 32.

¹³⁵⁵ *Ibid.*

¹³⁵⁶ R. Hofstadter & C. De Witt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1952) at 129. Indeed, to Hofstadter and De Witt Hardy, “[F]ew Americans find it at all surprising that the governing decisions of American [higher] learning are formally in the hands of laymen whose substantive knowledge of education as such, or of the various disciplines they preside over, is about as limited as the ordinary layman’s knowledge of medicine or law.”

¹³⁵⁷ A. Carnegie cited in L. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965) at 13-14.

education to develop in a pre-eminently business-like culture.”¹³⁵⁸ “Education is justified apologetically as a useful instrument in attaining other ends: it is good for business or professional careers, ...[but r]arely, however, does anyone presume to say that it is good for [human beings].”¹³⁵⁹

6.1.12 Disseminating Information for Future Benefit

Ideally viewed, the patent system is a process used to disseminate valuable information and compensate inventors with a limited monopoly. The two prominent reasons are: to remunerate the creative labour – “the sweat of their brows and brains”¹³⁶⁰ – of inventors; and, second, to promote further works of invention.¹³⁶¹ Yet, the Nobel Prize-winning biochemist, Paul Berg, disagrees. Berg’s ground-breaking work in D.N.A. splicing, work that laid the foundation for Herbert Boyer and Stanley Cohen to build the first hybrid molecules,¹³⁶² suggests that private investment places limits on research. Berg was partly responsible for the burgeoning billion-dollar biotechnology industry and saw the “inventiveness” inherent in the patent system – dollars for curiosity – as a suspect premise for an incentive claim. According to Berg:

The biotech revolution itself would not have happened had the whole thing been left up to industry.... Venture-capital people steered clear of anything that [does not] ...have obvious commercial value or short-term impact. They didn’t fund the basic research that made biotechnology

¹³⁵⁸ Hofstadter & De Witt Hardy, *supra* note 1356 at 134. Also E. Press & J. Washburn, “The Kept University” in *AAAS Science and Technology Policy Yearbook, 2001* (eds.) A.H. Teich (Washington: American Association for the Advancement of Science, 2001) at 317.

¹³⁵⁹ Hofstadter & De Witt Hardy, *supra* note 1356 at 49.

¹³⁶⁰ K. Marx, “Letter to the Labour Parliament -1854” in *Collected Works, Vol. 3* (ed.) J. Cohen *et. al.* (London: Lawrence and Wishart, 1975) at: 459.

¹³⁶¹ I. Mgbeoji & B. Allen, “Patent First, Litigate Later! The Scramble for Speculative and Overly Broad Genetic Patents: Implications for Access to Health Care and Biomedical Research” *Can. J.L.T.* at 83.

¹³⁶² Building on Berg’s work, Cohen and Boyer were the first to transfer genetic material from an African clawed toad into a bacterium and replicate it as a clone. It was Cohen and Boyer’s breakthrough that opened up the possibility of using bacteria to manufacture various human proteins: that is, using cells as living mini-factories that could provide synthesised human proteins needed to combat human diseases. See: L. Marsa, *Prescription for Profits* (New York: Scribner, 1997).

possible.”¹³⁶³

To Berg, pharmaceuticals companies have limits as to how far they will support “blue sky” research. For a concrete example, Berg notes that “Merck was [and is] widely championed for its support of research, [but] they wouldn’t... go beyond a certain point... and that is just one of the limitations of corporate research.”¹³⁶⁴

6.2 Trading Free Thought as a Business

6.2.1 *The Bayh-Dole Act and Its Legacy*

Galileo: Your protection of freedom of thought is rather good business, isn’t it? You get good teachers for low pay.... [But] what is the use of free investigation without free time to investigate? What happens to the results?I get it: free trade, free research. Free trade in research, is that it?¹³⁶⁵

Prior to 1980, and the coming into effect of *Bayh-Dole*, there was a fairly broad consensus amongst academic researchers and many university administrators, and, to degrees, various politicians, that the research produced and funded through federal research dollars should remain in the public domain. Namely, that publicly funded research should not become the object of desire for Bay Street or Wall Street. Yet, three significant changes altered this perception – even though the patent system remained constant. The first was the enactment of the *Stevenson-Wydler Technology Innovation Act*.¹³⁶⁶ The *Stevenson-Wydler Act* meant that technology developed at federally funded laboratories could now facilitate and were mandated to transfer technology that could be useful in the private sector. Secondly, was the enactment of *Bayh-Dole Act*. *Bayh-Dole*

¹³⁶³ P. Berg cited in Press & Washburn, *supra* note 1358 at 39.

¹³⁶⁴ *Ibid.* Also, see: G. Harris, “How Merck Survived While Others Merged – Drug Maker Relied on Inspired Research” Wall Street Journal, January 10, 2000, at A1.

¹³⁶⁵ Brecht, *supra* note 1171 at 12.

¹³⁶⁶ *Stevenson-Wydler Technology Innovation Act of 1980*, Pub. L. 96-480. Also, see: *Federal Technology Transfer Act of 1986*, Pub. L. No. 99-502. The *Federal Technology Transfer Act of 1986* was an expansion on *Stevenson-Wydler*.

enabled faculty members and universities to obtain the patent to their inventions from federally supported research.¹³⁶⁷ Lastly, the U.S. Supreme Court's holding in *Diamond v. Chakrabarty* opened the door for the patenting genetically modified living microorganisms. As noted by Fred Warshofsky,¹³⁶⁸ the underlying economic milieu was one where globalisation exported manufacturing and could accumulate foreign capital and intellectual property was seen as an additional possible strategy to recapture profit and wealth domestically. Ronald Reagan valued speculation and its form of accumulation through intellectual property. Domestic workers, working class unions and their values stood in the path of globalising profit maximisation. Globalisation liberated the profit from domestic labour and its accumulation by foreign owed American capital. In addition, it was the monopolies of intellectual property that would and did fuel and contribute to the stock market bubbles of Wall Street in the 1980s and Silicon Valley in the 1990s. This 'reversal' opened the door so patents could be issued on inventions from genes to bacteria, from seeds to transgenic animals, because of a sentiment that you can patent anything made by human beings and touched by sunlight. Put differently, Jonas Salk might claim that it is impossible to patent the sun; but if sunlight touches it, then it is

¹³⁶⁷ In Canada, the terms of intellectual property rights vary according to employment contracts at various universities.

¹³⁶⁸ Warshofsky, *supra* note 908 at 8. As a recent aside, a patent dispute between Apple™ and Samsung™ commenced as to computing tablets. Apple™ claimed that Samsung™ and its computing tablet infringes the "design patent" of the iPad®. Samsung™ had countered with the "Kubrick defence." In short, the "Kubrick defence" was based on the design of computing tablets used by astronauts in Kubrick's *2001: A Space Odyssey*. That is, the design of the computing tablets was already a common design from a science-fiction film: a film made in 1968 and, thus, the proprietary knowledge in the "design" has been in the public domain for over 40 years. See: S. Farooq, "Samsung Invokes Kubrick Defense in iPad Suit" NBC Bay Area, August 23, 2011, at: <http://www.nbcbayarea.com/results/?keywords=%22Sajid+Farooq%22&author=y>. Also, see: Reuters Wire Service, "Daybook: August 25 – Technology Tablet Wars" The Globe and Mail, August 25, 2011, at B2. Also, see: B. MacInnes, "What if Samsung's Kubrick Defence had succeeded?" Computer Weekly, September 19, 2011, at: <http://www.computerweekly.com/microscope/opinion/What-if-Samsungs-Kubrick-Defence-had-succeeded> (last visited February 28, 2017).

patentable.¹³⁶⁹

6.2.2 Six Patents One Hand, Half Dozen In the Other

This new patent regime was not necessarily “different” from the old patent system, but what had changed was the political economy that surrounded it and the corporate values that were now being brought to bear on and impact upon academic researchers and the university. For critic Sheldon Krimsky, this new link between universities and corporations (the new corporatism?) were and remain a serious threat to society, universities, scientific progress and academic freedom.

The consequences are that secrecy has replaced openness; privatization of knowledge has replaced communitarian values; commodification of discovery has replaced the idea that university generated knowledge is a free good, a part of the social commons... [and] an unprecedented rise in conflicts of interest... As universities turn their scientific laboratories into commercial enterprise zones and as they select their faculty to realize these goals, fewer opportunities will exist in academia for public-interest science – an inestimable loss to society.¹³⁷⁰

To Noam Chomsky: “as the university has... shifted toward corporate funding... the atmosphere has changed.”¹³⁷¹ The St. Elmo’s fire of corporate illumination that is the information economy and that struck university research has meant that the course and navigation through the sea of intellectual property issues have changed:

Corporate funding is more restrictive, more secretive, less concerned with nourishing the subversive function of the university and more interested in short-term applied gain, and that’s for perfectly natural reasons. A corporation is not in the business of creating the science and technology of the future for the business sector to profit from thirty years from now. They’re in the business of raising their profits and market share in the next quarter. That’s the job of the corporation.¹³⁷²

¹³⁶⁹ See: *Diamond v. Chakrabarty*, 447 U.S. 303 (1980). Canada may be ambivalent to this interpretation, but according to Mr. Chief Justice Warren E. Burger oft-quoted phrase that “anything under the Sun made by Man” is patentable subject matter – means, to some, that we best get used to it.

¹³⁷⁰ Krimsky, *supra* note 1342 at 7.

¹³⁷¹ N. Chomsky “Business School: An Interview with Noam Chomsky” in *Campus Inc.: Corporate Power in the Ivory Tower* (ed.) G.D. White (Amherst: Prometheus Books, 2000) at 446.

¹³⁷² *Ibid.*

What has become the bottom line for university research in the new “atmosphere” is not science or science’s progress – and, is certainly not protection of academic freedom – but, to be expected, what matters is the next fiscal quarter. Otherwise known as the condition of “short-termism.”¹³⁷³ Mazzucato holds that “[p]rivate finance has become too short-termist and is increasingly dependent on government labs that engage in high-risk portions of the innovation chain before committing its own funds.”¹³⁷⁴

The problem is more nuanced but still comes down to access to material resources – or, more to the point, the funding and labour¹³⁷⁵ that can build – or even maintain – university faculty or infrastructure. Theoretically, the patent system appears as a measured process to achieve for the inventor and society mutually beneficial outcomes. Though, in the context of higher education, the pharmaceutical industry and the university in the neoliberal age, the possible “revenue stream” that patent licences might afford are seen as one of the possible solutions to the fiscal crisis. That is to say, in the neoliberal age, all things must be disciplined by market forces, marketable values, and be assessed solely by the putative market.¹³⁷⁶ What has occurred by fiscally challenged universities is that the patent system is used as a wedge to insert market discipline. Despite the corporate influence of boards of trustees that govern North American

¹³⁷³ Mazzucato, *supra* note 207 at 108. Also, see: R.J. Brodd, “Factors Affecting U.S. Production Decisions: Why Are There No Volume Lithium-Ion Battery Manufacturers in the United States?” Advanced Technology Program Working Paper No. 05-01, at: <http://www.atp.nist.gov/eao/wp05-01/wp05-01.pdf>, at: xii.

¹³⁷⁴ Mazzucato, *supra* note 207 at xxii.

¹³⁷⁵ Labour in this discussion is used in a Marxian and Gramscian sense. Labour is understood in its holistic sense as *praxis*: there is little and no point to emphasising “physical” over or versus “mental” labour – they both require complex thought, human intelligence and action. A. Gramsci, *Selections from the Prison Notebooks* (eds.) Q. Hoare & G. Nowell-Smith (New York: International Publishers, 1971) at 9. As Gramsci points out: “All men are intellectuals: but not all men have in society the function of intellectuals.”

¹³⁷⁶ Marx, *supra* note 2 at 34.

universities, in the neoliberal era, greater influence is needed to correct and curb previous democratic intemperance and excesses so the system does not produce an educated or Reagan's over-educated proletariat.¹³⁷⁷ The patent system as an economic lever afforded corporate interests a relatively open space – a blank canvas so to speak – where they could outline the future direction of university research.

6.2.3 Window Dressing as an Unlimited or Exclusive and Limited Right

Historically, Thomas Jefferson held that: “[T]he exclusive right to invention is given not of natural right, but for the benefit of society....”¹³⁷⁸ Jefferson's sincerity may be suspect, but that is another matter:¹³⁷⁹ nonetheless, to some, at first blush, if they did not know the author they might mistake it as the ranting's of a socialist. Benefit for society? Some might suggest that this is mere “window dressing.” A hard-nosed assessment is that:

[T]he patent system, in the shadow of reduced general government funding, no longer cares about values, specific ideologies, or even such mundane matters as learning how to think. It is simply a market for the production, exchange, and consumption of useful information – useful, that is, to corporations, governments, and their prospective employees. Of course, this is contingent on the system being the outside influence of political considerations – ones that are always open to political manipulation.¹³⁸⁰

¹³⁷⁷ Reagan, note 1333. Following the Great Depression and the post-war era, the theory of “home ownership” and indentured servitude to mortgage companies or the banks is one of the best forms of social control to maintain the *status quo* and keep the working class in their place.

¹³⁷⁸ T. Jefferson, *The Writings of Thomas Jefferson: Correspondence* (ed.) H.A. Washington (New York: Derby & Jackson, 1859) at 181.

¹³⁷⁹ C.M. Rose, “‘Takings’ and the Practices of Property” in *Property and Persuasion: Essays on the History, Theory and Rhetoric of Ownership* (Boulder: Westview Press, 1994) at 62. According to Rose, Jefferson's *republicanism* held “uneasiness about manufacturing and commercial forms of property.” That is, he held “that land was [the] genuine and real [storehouse of value], while money was merely transient, dependent, effeminate, and unsturdy.”

¹³⁸⁰ D. Harvey, “University Inc.” in (1998) 10 *The Atlantic* at: <http://www.theatlantic.com/past/docs/issues/98oct/ruins.htm>.

This was not good enough for Hyman Rickover. Admiral Rickover, a cold warrior's 'cold warrior' and the man who nuclearized the United States Navy, sees intellectual property differently or, at least, its utility as needing to serve the public good. During the Senate Committee hearings surrounding *Bayh-Dole*, Admiral Rickover clearly held that: "If the taxpayer funds the research, the taxpayer should own the ideas produced.... These inventions are paid for by the public and therefore should be available for any citizen to use or not as [s]he sees fit."¹³⁸¹ Or, as the sensible songstress and peripatetic philosopher Patti Smith put it: "We created this, let's take it over."¹³⁸²

Yet in 1980, a sea change and tempest was occurring: that is, and as noted, Reaganism was about to sweep into the White House, a return to so-call economic 'fundamentals' was to occur and the "biotech revolution" was in the offing. As James Watson noted as to the latter, "Wall Street [had] decided that genes really were useful."¹³⁸³ Was this a newly developed sense of scientific curiosity on Wall Street's part? Alternatively, had Wall Street's developed social conscience? No. In the dull humdrum of economic life, Wall Street had discovered that when it came to genes, you can "make money if you patented them."¹³⁸⁴ Watson may be a Nobel Prize winner, but, arguably, he did not need a Nobel laureate to attend to this deadly observation. Nonetheless, it is important to note this fact and disengage it from the more commendable goals that are claimed to align themselves with scientific discoveries.

Before *Bayh-Dole*, publicly funded research generally enter the public domain -

¹³⁸¹ Admiral Hyman Rickover cited in "The University And Small Business Patent Procedures Act" Hearings Before the Senate Committee on Judiciary, 96th Cong., 1st Sess., (Washington: Government Printing Office, 1979) at 157.

¹³⁸² Patti Smith, cited by M. Engler, *How to Rule the World: The Coming Battle Over the Global Economy* (New York: Nation Books, 2008) at 225.

¹³⁸³ McElheny, *supra* note 199 at 315.

¹³⁸⁴ *Ibid.*

or if it was to be licensed, then at a nominal fee. Moreover, it would be licensed on a non-exclusive basis.¹³⁸⁵ As imperfect as this arrangement may have been, there was, at least, a shared and tacit understanding that federal funding was paid for by citizens and it meant that the public should be returned the full value of their investment. From 1945 to 1980, the ethos surrounding research was robustly expressed by Vannevar Bush where “[t]he Government should accept new responsibilities for promoting the flow of new scientific knowledge and development of scientific talent in our youth. These responsibilities are the proper concern of the Government, for they vitally affect our jobs, our health, our security.”¹³⁸⁶ Bush went on to hold that “[i]f the colleges, universities, and research institutes are to meet the rapidly increasing demands of industry and Government for new scientific knowledge, their basic research should be strengthened by use of public funds.”¹³⁸⁷ To be sure, government “[s]upport of basic research in the public and private colleges, universities, and research institutes must leave the internal control of policy, personnel, and the method and scope of the research to the institutions themselves.”¹³⁸⁸ Sadly, this position has been all but abandoned. As Perelman remarks, while the idea behind *Bayh-Dole* seemed “innocent enough, in practice, the Bayh-Dole Act has meant that corporations on the ‘dole’ would be able to ‘buy’ universities.”¹³⁸⁹

¹³⁸⁵ One must reiterate and be sensitive to the fact that much of the “military-industrial-complex” and its funds for research and development are publically subsidised by citizens.

¹³⁸⁶ V. Bush, “Science: The Endless Frontier” in *A Report to the President by Vannevar Bush, Director of the Office of Scientific Research and Development, July 1945* (Washington: Government Printing Office: 1945) at 8.

¹³⁸⁷ *Ibid* at 7

¹³⁸⁸ *Ibid* at 33.

¹³⁸⁹ Perelman, *supra* note 673 at 88.

6.2.4 Academic Freedom and the Conflict for Academic-Corporate Partnerships

Freedom of thought from Socrates¹³⁹⁰ to Galileo,¹³⁹¹ from the birth of modern science to our late-capitalist patent system, has much in common with ‘the first victim of war being the truth.’ In our current milieu, the academic-industrial complex has set up an untenable situation where science is impeded at the expense of securing property rights.

In science, intellectual property rights encourage secrecy and wasteful duplication of effort. They hold back economic progress by fostering inefficient monopolies. They encourage costly litigation that dissipates an unimaginable amount of time and resources.¹³⁹²

Critics note that over the last three decades, universities have been subjected to – if not bombarded with – the discourse of public/private “synergy.” As to the objective merits of a merger between academia and industry, the proponents of this model declare its intrinsic worth – its questionable “efficiency” – and its self-evident value. Often this position consists of broad claims and summaries that define the strategic and common goals between the university and private sector investor as ‘building partnerships to maximise your investment with our university.’¹³⁹³ If there are substantial problems or conflicts with these arrangements, then they are generally underplayed. Yet, there are cracks in this façade.

¹³⁹⁰ Stone, *supra* note 1187. Stone’s clear-headed analysis of Socrates shows that Socrates was in favour of his own freedom of thought: yet, Socrates and his thought was an antidemocratic and elitist defence of *truth* and was ultimately an ethical justification for a totalitarian and militarised Athens.

¹³⁹¹ See: F.S. Taylor, *Galileo and the Freedom of Thought* (Madison: University of Wisconsin, 1938).

¹³⁹² Perelman, *supra* note 673. As Perelman doggedly points out here and elsewhere, the litigation costs alone as to intellectual property rights make no logical, reasonable or any economic sense with the average cost per side in a dispute being \$1.5 million.

¹³⁹³ For a good example of this type of rhetoric, see: “Corporate Partnerships” in Queen’s Partnership Program, at: <https://adv.queensu.ca/dod/dynamic.php?first=42e7d2571e10a&second=42e7eada7865b> (last visited July 15, 2008). “The Queen’s Partnership Program (QPP) is a development project created by the Office of Advancement to provide alternative ways to generate non-philanthropic revenues for capital projects, student life programs and future campus development... We will work with your organization to ensure philanthropic support aligns with your strategic business goals. At the same time, your support will assist Queen’s to build on its strengths - students, faculty, staff and alumni - and to be among the best of internationally known universities in Canada....”

6.2.5 Success of University-Corporate Partnerships?

Even if we grant that the various efforts of university-corporate partnerships are laudable, one has to eventually come to terms with some basic facts and conflicts. Remarkably, if we just focus on the biotechnology partnerships at work in America the conflicts and facts are grim.¹³⁹⁴ According to a 2002 report by the (right-wing!) Brookings Institute, there are little signs of successful university-corporate partnerships in the U.S.¹³⁹⁵ Twenty-two years after the passage of *Bayh-Dole*, the Brookings Institute concluded that “to date, even successful biotechnology industry clusters have produced only modest returns to their regional economies.”¹³⁹⁶ To be sure, according to Michael Crow,¹³⁹⁷ former executive vice provost of Columbia University’s tech-transfer office, Science and Technology Ventures, successful tech-transfer offices are very scarce. According to Crow, a ranking below fifteenth on the U.S. list of research universities, published by the Association of University Technology Managers, is not a competitive university. It also meant that tech-transfer offices not in the list of the top fifteen were not economically viable. That is, Crow holds that a university outside the top fifteen simply does not possess the talent, resources or research capacity to commercialise patents or intellectual property successfully.¹³⁹⁸ University tech-transfer offices outside of the listed top fifteen denote that “[t]hey’re basically getting nothing out of it, except a

¹³⁹⁴ Yet, on a lighter note, as Twain suggests: “Get your facts first, and then you can distort them as much as you please.” Mark Twain cited in R. Kipling, “An Interview with Mark Twain” in *From Sea to Sea: Letters of Travel Vol. 2* (New York: MacMillian and Co., 1900) at 197.

¹³⁹⁵ See: J. Cortright & H. Mayer, *Signs of Life: The Growth of Biotechnology Centers in the U.S.* (Washington: Brookings Institution, 2002).

¹³⁹⁶ *Ibid* at 35.

¹³⁹⁷ Mr. Crow is currently the president of the University of Arizona. See: Office of the President, University of Arizona, at: <http://president.asu.edu/node/762> (last visited March 1, 2011).

¹³⁹⁸ In a comparative context, Crow’s assessment does not bode well as it pertains to a Canadian attempts to incorporate “free enterprise” and entrepreneurial academicians within the tech-transfer office system. Canadian university tech-transfer offices may possess well-meaning and dedicated individuals who, perhaps, represent brilliant researchers. Yet, in terms of economies of scale, Canadian research centres must compete successfully in the overstated terms of neoliberal rhetoric of tech-transfer offices globally.

lot of economic development rhetoric.”¹³⁹⁹ As Crow points out: “universities... [that] start thinking like companies [are] ...bad at [it].”¹⁴⁰⁰ According to Washburn:

[O]nly a small minority of schools prove successful at licensing research to industry, despite the enormous time, energy, and money that they have devoted to such efforts in recent years. Although every university president eagerly awaits that blockbuster discovery – a cure for cancer, an inexpensive way to desalinate sea water – that would generate millions in royalties, in reality a mere two dozen universities in the entire country make significant profits from technology licensing. Many others barely break even – or lose money. The more universities try to sell politicians on the idea that they can serve as engines of economic growth, the more they are setting themselves up for failure and undermining the basis for their public support.¹⁴⁰¹

If Crow and Washburn’s assessments of the windfall royalties and licencing fees going to a little over a dozen or under two dozen universities, then performance based incentives are clearly not delivering on the mandates that almost all *other* North American research universities apparently agreed to – and hope to succeed at – in the *post Bayh-Dole* era. Yet, neoliberal “economic development rhetoric” continues to fuel university tech-transfer offices: “economic development rhetoric” and its optimism continues to percolate through universities and pepper their various “vision/mission” statements with promises of pots of gold at the end of the rainbow. These positions are rarely questioned outside of the university.¹⁴⁰²

6.2.6 Conflicts of Interest – Driving Under Corporate Influence

The neoliberal economics that advocates public-private-partnerships around universities, a narrative that emphasises the economic necessity of corporate-academic

¹³⁹⁹ Michael Crow cited in Washburn, *supra* note 128 at 188.

¹⁴⁰⁰ *Ibid.*

¹⁴⁰¹ *Ibid* at XII.

¹⁴⁰² This is a type of “economic rhetoric” that is not too dissimilar to the lottery slogan holds: “You can’t win, if you don’t play.” What fails to sink into general consciousness is that for a few people to win, everyone else must lose.

cooperation, holds that this model merely makes economic sense. That conflicts of interest between academic researchers and partner corporations can be appropriately managed. That undue influence can be thwarted with proper guidelines: after all, all parties in these partnerships want the same thing – that is, results. Put differently, if we hand public-private-partnerships the keys to university research, they will be able to drive scientific progress and economic development toward success and economic prosperity. Yet, when critically viewed the empirical evidence shows that the economic rationale is inaccurate, hollow and, perhaps, unintentionally (or intentionally) dishonest – if not morally bankrupt. As Twain recommends, and whose advice would probably fall on deaf ears: “We ought never to do wrong when people are looking.”¹⁴⁰³

6.2.7 ‘To Tenure Or Not to Tenure – That Is the Conflict’

A relatively recent example of what might be tacitly called moral bankruptcy was a tenure dispute at the University of California Berkeley (Berkeley).¹⁴⁰⁴ The “slings and arrows” of name calling at Berkeley smouldered around the activities of a microbial

¹⁴⁰³ M. Twain, “A Double-Barreled Detective Story” in *The Man that Corrupted Hadleyburg and Other Essays and Stories* (Holicong: Wildside Press, 2003) at 284.

¹⁴⁰⁴ An even more recent case at Berkeley is that of Tyrone Hayes. This was and is an ongoing attempt by Syngenta to silence a full-professor and his research on the herbicide atrazine and its effects on amphibian development. See: R. Aviv, “A Valuable Reputation: After Tyrone Hayes said that a chemical was harmful, its maker pursued him” *The New Yorker*, February 10, 2014, at: http://www.newyorker.com/reporting/2014/02/10/140210fa_fact_aviv?currentPage=all (last visited April 2, 2014). Syngenta appears to have gone to extremes to silence Professor Hayes: having hecklers placed in public debates; intimidation of his wife and family; investigating his graduate students; threatening legal action against him and Berkeley; and, last but not least, questioning his mental stability as a African-American academic. See: *Holiday Shores Sanitary District v. Syngenta Crop Protection Inc et al*, Illinois Southern District Court, Case No. 3:04-cv-00688, docket://gov.uscourts.ilsd.3-04-cv-00688, in “Court-released documents: Exhibit 19, part 1,” Source Watch - Center for Media and Democracy at: http://www.sourcewatch.org/images/f/f6/Exhibit_19_Part1.pdf (accessed April 2, 2014). Also, see: C. Howard, “Special Report: Syngenta’s campaign to protect atrazine, discredit critics” *100Reporters and Environmental Health News*, June 17, 2013, at: <http://www.environmentalhealthnews.org/ehs/news/2013/atrazine> (last visited April 2, 2014). Also, see: T. Hayes, “Silencing the Scientist: Tyrone Hayes on Being Targeted by Herbicide Firm Syngenta – Interview with Juan González,” *Democracy Now*, February 21, 2014, at: http://www.democracynow.org/2014/2/21/silencing_the_scientist_tyrone_hayes_on# (last visited April 2, 2014).

biology professor, Ignacio Chapela. Chapela was a professor in the College of Natural Resources (C.N.R.). He had been critical of a deal signed between Berkeley and the Swiss-based agribiotech conglomerate, Novartis (soon to become Syngenta), and was denied tenure – allegedly, because of his academic opinions. “Chapela was an outspoken critic of Berkeley’s controversial academic–industrial partnership with the Swiss agribiotech firm Syngenta.”¹⁴⁰⁵ The area that Novartis-Syngenta was exploring was the relatively new field of biotechnology in gene splicing for agriculture commodities.

In 2001, Chapela and his graduate student, David Quist, published a paper on genetically modified (G.M.) material appearing in D.N.A. in native corn varieties in southern Mexico. This occurred despite a 1998 Mexican ban on G.M. corn.¹⁴⁰⁶ Syngenta was not pleased as to the findings and the resulting press and controversy. Many of Chapela’s colleagues¹⁴⁰⁷ in Berkeley’s Department of Plant and Microbiology (DPM), who had “partnered” with Novartis-Syngenta, were critical of Chapela and Quist’s findings.¹⁴⁰⁸ The situation became so heated that Chapela, despite a rigorous teaching and peer reviewed publishing record at Berkeley, was denied tenure. Ultimately, an academic senate report held that Chapela’s academic rights *may* have been violated when he was denied tenure in 2003. Although Novartis-Syngenta was not directly named as a puppeteer in the matter, it became common knowledge as to the indirect and direct

¹⁴⁰⁵ R. Dalton, “Review of tenure refusal uncovers conflicts of interest” (2004) 430 *Nature*, at 598.

¹⁴⁰⁶ D. Quist & I. Chapela, “Transgenic DNA Introgressed into Traditional Maize Landraces in Oaxaca, Mexico” (2001) 414 *Nature* at: 541.

¹⁴⁰⁷ As an shrewd (albeit grim) aside, David Healy refers to these types (industry provocateurs) as “academic stalkers.” They are individuals that range from colleagues in one’s department, who may or may not have a legitimate objection to your research, to pharmaceutical companies planting critics at public lectures to promote the corporations interests and “challenge [the] claims you make.” See: D. Healy, “The Drug Trial: Review” (2005) 24(4) *Monash Bioethics Rev.* at 55.

¹⁴⁰⁸ In fact, at least seven scientists from Berkeley’s DPM, a department that had received the bulk of Novartis-Syngenta “grants,” published papers critical of Quist and Chapela’s findings. See: Washburn, *supra* note 128 at 255, n.51. Chapela’s critics held that the appearance of G.M. in Southern Mexican corn was “natural.” That is, it was residual genetic material that had not been accounted for. In Althusserian terms, it was “always-already” there.

influence being applied by Chapela's sponsored critics. Some of Chapela's critics may have had legitimate concerns as to the quality of his research, but, indeed, the issues framed as they were, meant that Chapela's critics could not shake the substantive appearance of being biased. The academic senate holding in the matter was that there were underlying issues not properly addressed. Issues not properly addressed as to the denial of Chapela's tenure could be construed that there was an *appearance* as to a conflict of interest. That is, Chapela's tenure was not granted because of the university's association with Novartis-Syngenta. The conflicts that may occur in "high-tech" and "biotech" raise troubling ethical questions. But by comparison, these are trivial questions when the "patentable subject matter" has the potential for, and actually does, physical harm. That is, academic conflicts as to tenure appointments surrounding research on corn D.N.A. seems rather provincial and trivial. Yet, when profit-seeking and profit-making pharmaceutical companies become involved, the level of pressure applied can be enormous and not just to university faculty or a university's board of governors but to the democratic process and governments themselves.¹⁴⁰⁹

¹⁴⁰⁹ As we shall see, drug companies can sway university boards and clinical trials the way they sway senate and parliamentary committees. In the case of Merck's VIOXX,TM Merck was able to stall the F.D.A.'s action to remove VIOXX from the market for approximately five years and at tremendous human cost. See: New Scientist – Staff, "US drugs agency accused of hindering Vioxx report" New Scientist, December 4, 2004 at: <http://www.newscientist.com/article.ns?id=mg18424760.700> (last visited July 4, 2008). Also, see: D. Graham, "Dr. Graham's Testimony to Senate Committee on Vioxx, FDA Failures" November 18, 2004 at: <http://www.finance.senate.gov/imo/media/doc/111804dgttest.pdf> at 2 (last visited Oct 2, 2014). David Graham, the associate director at the F.D.A.'s Office of Drug Safety, asked the committee to: "Imagine that instead of a serious side-effect of a widely used prescription drug, we were talking about jetliners. Please ignore the obvious difference in fatality rates between a heart attack and a plane crash, and focus on the larger analogy I'm trying to draw. If there were an average of 150 to 200 people on an aircraft, this range of 88,000 to 138,000 would be the rough equivalent of 500 to 900 aircraft dropping from the sky. This translates to 2-4 aircraft every week, week in and week out, for the past 5 years. If you were confronted by this situation, what would be your reaction, what would you want to know and what would you do about it?" The answer to these troubling questions might simply come down to political lobbies and re-election financing: but, alas, that is just personal conjecture. Also, see: E.J. Topol, "Failing the Public Health – Rofecoxib, Merck, and the FDA" (2004) N.E.J.M. at: <http://www.nejm.org/doi/full/10.1056/NEJMp048286> (last visited May 20, 2011). As Topol put it: "Sadly, it is clear that Merck's commercial interest exceeded its concern about the drug's toxicity. Had the

6.2.8 “Who Must be Answerable?”

Whose property is my body? Probably mine. I so regard it. If I experiment with it, who must be answerable? I, not the State. If I choose injudiciously, does the State die?

Mark Twain¹⁴¹⁰

Conflicts do not just appear in cases of tenure. Conflicts and conflicts of interest can also appear in research malpractice cases where altruism can be and is distorted by human pettiness and kindness converted by lucre and greed into “a warrant for and a title to cruelty.”¹⁴¹¹ The long reach of intellectual property and patents can indirectly alter clear heads once obligated to ‘do no harm.’ According to Twain, an individual is the mistress or master of her or his domain: that is, a person has propriety over their own body.¹⁴¹² Individuals may choose to “experiment” on their own body by self-administering drugs or alcohol, through sexual or spiritual diversions or excursions, becoming a fruitarian or a vegan, “being” or “becoming” a stockbroker or a waiter,¹⁴¹³ but what happens if you allow others to experiment on you? What is offered for exchange? What is the obligation – if any – that is put into play. Twain is correct that if you experiment “injudiciously” on your body that you may personally suffer and pay the ultimate penalty for such hubris. But, if you allow others to experiment on you, what are you agreeing to? If you agree to experimentation, what are you consenting to? What constitutes “consent” let alone “informed consent”? Is it legal? Is it ethical?

company not valued sales over safety, a suitable [drug] trial could have been initiated rapidly at a fraction of the cost of Merck’s direct-to-consumer advertising campaign.” Also, see: T. Nesi, *Poison Pills: The Untold Story of the Vioxx Drug Scandal* (New York: Thomas Dunne Books, 2008).

¹⁴¹⁰ M. Twain, “Osteopathy” in *Mark Twain’s Speeches* (New York: Harper & Brothers, 1910) at 253.

¹⁴¹¹ F. Nietzsche, “Second Essay” in *On the Genealogy of Morals*, (trans.) W. Kaufmann & R.J. Hollingdale (New York: Vintage, 1967) at 65.

¹⁴¹² Also, see: Hobbes, *supra* note 548 at 90.

¹⁴¹³ See: J.-P. Sartre, *Being and Nothingness: An Essay in Phenomenological Ontology* (trans.) H.E. Barnes (London: Methun & Co. Ltd., 1957) at 83.

Marcia Angell holds that the traditional experimental model was disrupted with the introduction of *Bayh-Dole*. As the first woman editor-in-chief of the New England Journal of Medicine, since its founding in 1812, Angell should not be construed as some overindulgent, champagne socialist, anti-corporatist radical – this is partly why her criticisms of the U.S. health-care system and the pharmaceutical industry are so stark and damning. Whether correct or not, Angell holds that many of the problems originated in the inward turn that American public policy took under Reaganism.

Under Reaganism, along with the rise of “shareholder activism,” drug companies became similarly more “active” and discovered the inherent *goodness of greed*¹⁴¹⁴ and got drunk on credit,¹⁴¹⁵ profit and expansion. In the realm of university drug research under *Bayh-Dole*, relatively benign benefactors were transformed and sought new “partnerships” and incentives for innovation. According to Angell, this transformed the motivation of researchers, the methods of science pursued, and “incentivised” many – if not all – aspects of research process:

Until the mid-1980s, drug companies simply gave grants to medical centers for researchers to test their products, and then waited for the results and hoped their products looked good. Usually the research was investigator-initiated, that is, the question was something the academic researcher thought scientifically important. Sponsors had no part in designing or analyzing the studies, they did not claim to own the data, and they certainly did not write the papers or control publication. Grants were at arm’s length.¹⁴¹⁶

The winds of economic change unleashed by *Bayh-Dole* set corporate-university

¹⁴¹⁴ Stone, *supra* note 931.

¹⁴¹⁵ This is a play on the old Turkish proverb: “Who drinks on credit gets twice as drunk.” As well, prior to the recent “housing bubble,” one must keep in mind that the 1980s were the era of the “savings and loans scandal,” of Ivan Boesky and Michael Milken, and other high rolling crooks. This was a period where insider-traders were protected by questionable “Chinese Walls” – that is, as long as they kept their greed in check, they would generally not be caught. See: Madrick, *supra* note 833 at 95.

¹⁴¹⁶ M. Angell, “Big Pharma, Bad Medicine: How corporate dollars corrupt research and education” Boston Review (May/June 2010) at: <http://bostonreview.net/BR35.3/angell.php> (September 10, 2010).

research on a different course. Passive grants were replaced with “goal-oriented” research. Disinterested investigators were replaced – or became – *interested* and *activist* research entrepreneurs. This became a volatile situation where an *objective* and disinterested scientist could be (easily?) swayed or transformed into an emotional self-interested entrepreneur – *homo oeconomicus*. This is a circumstance where the forces of “market sentiments” might cause a dedicated researcher to “ape unreason proleptically.”¹⁴¹⁷ Mimicking may not pose a problem but, to paraphrase Keynes, ‘intellectual property rentiers and academic entrepreneurs may do no harm as bubbles on a steady stream of innovation and invention. But the situation is serious when innovation and invention become the bubble on a whirlpool of pharmaceutical monopolies and rentiers tithes that fuel academic entrepreneurs interests and their speculative research.’¹⁴¹⁸

6.2.9 Gene Therapy and the Homicide of Jesse Gelsinger

In 1999 at the University of Pennsylvania, Human Gene Therapy Institute, eighteen-year-old Jesse Gelsinger became the first reported death as to a gene therapy experiment. Gelsinger was born with a X-chromosomal linked genetic disease, ornithine transcarbamylase deficiency. One of the principle symptoms of ornithine transcarbamylase deficiency is the inability of the liver to metabolise ammonia, which is a by-product of protein breakdown in cells. Ornithine transcarbamylase deficiency is postnatally fatal. However, in Gelsinger’s case, he did not suffer directly from inherited ornithine transcarbamylase deficiency but a mutated variant. With Gelsinger’s variant of

¹⁴¹⁷ See: J.M. Keynes, *The Collected Writings of John Maynard Keynes, Vol. VI* (ed.) D. Moggridge (London: Macmillan, 1973) at 323. Put differently, a perfectly reasonable Dr. Jekyll imbibing the magical elixir of *Bayh-Dole* capital could be transformed into a predacious and wanton Mr. Hyde. See: R.L. Stevenson, *The Strange Case of Dr. Jekyll and Mr. Hyde* (New York: John W. Lovell Company, 1886).

¹⁴¹⁸ *Ibid* at 159.

the disease, the symptoms could be controlled with special medications and a restricted diet. Gelsinger “treatment” during the “phase one clinical trial”¹⁴¹⁹ was designed to test the safety of the gene therapy for infants born with the fatal form of ornithine transcarbamylase deficiency. Gelsinger underwent the gene therapy trial at the university’s medical centre on September 13, 1999, and died four days later.

Even though Gelsinger’s form or expression of ornithine transcarbamylase deficiency was manageable, he volunteered to undergo the gene therapy. Even if Gelsinger was “informed” as to the procedure and the background science and theory as to the gene therapy, he was not fully “informed.” Gelsinger was not informed as to the full extent of the possible immune reactions he would have as to the adenoviral vector injected into him. His immune response to the adenoviral vector quickly led to multiple organ failures and brain death. Aside from all the issues as to a lack of “informed consent” as to the medical treatment,¹⁴²⁰ what Gelsinger was also not informed about were the pecuniary interests at play in the drug trial. Gelsinger had no knowledge as to the various financial interests of the “stakeholders” who had a claim as to the “patentable subject matter” that was at work ‘deconstructing’ him during his drug trial.

¹⁴¹⁹ By definition, a “phase one clinical trial” is typically conducted on a relatively small group of individuals, between 20 to 100, who are “healthy” volunteers. As you will recall, a “clinical” or “phase one trial” is used to test the toxicity and safety of drug. Gelsinger, by suffering from a variant of ornithine transcarbamylase deficiency, was not a “healthy” individual. For further information on the definitions as to “clinical trials” see: National Institute of Health, “Understanding Clinical Trials” N.I.H. – Clinical Trials at: <http://clinicaltrials.gov/ct2/info/understand#Q01> (last visited November 10, 2010). It was held out to Gelsinger that the “phase one clinical trial” might have a net benefit as to the symptoms he suffered from his variant of ornithine transcarbamylase deficiency. Also, see: J.B. Powers, “Technology Transfer, Commercialization, and Proprietary Science” in *The Business of Higher Education, Vol. 2: Management and Fiscal Strategies* (eds.) J.C. Knapp & D.J. Siegel (Santa Barbara: Praeger, 2009) at 85.

¹⁴²⁰ Greenberg, *supra* note 886 at 105. The F.D.A. investigation into the death of Gelsinger found that he had not truly given what we call “informed consent.” Gelsinger had not been “informed” as to: the death of monkeys who underwent similar clinical trials; that, in spite of his high ammonia levels, he was used to replace a volunteer who had dropped out of the trial; and, he had not been informed as to two patients who had suffered severe side effects from the trial.

What became known after Gelsinger's death was that James M. Wilson, the principal investigator in the adenoviral gene therapy research, held a patent on the adenoviral vector used in the trial. Wilson was found to have "repeatedly and deliberately violated federal regulations... [in his] capacity as investigator in [the] clinical trials..."¹⁴²¹ In addition, it was not disclosed that there were financial conflicts of interest where: Wilson held a 33 per cent stake in the shares of Genova, the company that produced the adenoviral vector; and, in an additional conflict, the University of Pennsylvania had a financial interest in Genova. In 2000, a year after Gelsinger's death, Genova was sold to Targeted Genetics Corporation for \$89.9 million. Wilson is purported to have received \$13.5 million in the sale and the University of Pennsylvania received \$1.4 million for its troubles.¹⁴²² In the overhanging shadow of Gelsinger's death, profitable and "patentable subject matter" had been produced. Put differently, Gelsinger's death was tragic but not a financial loss. As Bob Taber, vice chancellor of science and technology development, at Duke University, remarked concerning the Gelsinger affair: "officials at Penn... [were] happy with [the sale] because all the PR problems with... [Genova] will go away, and they're liquidating their investment at a

¹⁴²¹ Dennis E. Baker, letter to James M. Wilson, "DHHS-FDA Notice of Opportunity for Hearing; James M. Wilson, M.D., Ph.D." – February 8, 2002, F.D.A. – Regulatory Information at: <http://www.fda.gov/RegulatoryInformation/FOI/ElectronicReadingRoom/ucm144564.htm> (last visited March 1, 2010). Also, see: S.G. Stolberg, "Institute Restricted After Gene Therapy Death" The New York Times, May 25, 2000, at: <http://www.nytimes.com/2000/05/25/us/institute-restricted-after-gene-therapy-death.html?ref=jesseGelsinger> (last visited June 4, 2010).

¹⁴²² See: D.C. Bok, *Universities in the Marketplace: The Commercialization of Higher Education* (Princeton: Princeton University Press, 2003.). Other reported figures have Wilson's interest in Genova as being between \$28.5 to \$33 million. See: Memorandum from Kathleen A. Denis, Dir., Ctr. for Tech. Transfer, to Neil Nathanson, Chair, Conflict of Interest Standing Comm., at 1, 3 (Dec. 15, 1994) on file with R.F. Wilson, "The Death of Jesse Gelsinger: New Evidence of the Influence of Money and Prestige in Human Research" (2010) Am. J.L. & Med. Also, see: See: A. Milstein, "Bioethical Lessons From the Gelsinger Case: Three Myths of Human Experimentation" (Moorestown: Sherman, Silverstein, Kohl, Rose, Podolsky, 2001) at: <http://www.sskrplaw.com/lawyer-attorney-1482386.html> (last visited March 10, 2010). Also, see: R. Helms, "No Charges Filed: The Medical Manslaughter of Jesse Gelsinger" in *Guinea Pig Zero: An Anthology of the Journal for Human Research Subjects* (ed.) R. Helms (New Orleans: Garrett County Press, 2002) at 164.

reasonable value....¹⁴²³ Gelsinger's parents, who received an out of court settlement as to the death of their son, might find the "reasonable value" generated by the emotional loss of their son as too costly and, perhaps, even find the settlement they received as an 'unreasonable value.' In the almost twenty years since Gelsinger's death, 571 stem cell clinics in the United States¹⁴²⁴ are proving to be an unregulated "wild west."¹⁴²⁵ According to a recent study, with direct-to-consumer advertising, stem cell clinics are promoting a "commercial activity [that] generates a host of serious ethical, scientific, legal, regulatory, and policy concerns... [and are exposing] ...vulnerable individuals to unjustifiable risks."¹⁴²⁶

6.3 Drug 'Pharming' in America

I tell you that the less a man knows the bigger noise he makes and the higher the salary he commands. Heaven knows if I had but been ignorant instead of cultivated, and impudent instead of diffident, I could have made a name for myself in this cold, selfish world.

Mark Twain¹⁴²⁷

In *How I Edited an Agricultural Paper Once*, Twain made outrageous – or tongue in cheek – claims in the editorial page from how to pick turnips from turnip-trees, to how to properly raise guano, "a fine bird," to "planting... buck-wheat cakes."¹⁴²⁸ His purpose

¹⁴²³ Bob Taber cited in S. Hensley, "'Targeted Genetics' Genova Deal Leads to Windfall for Researcher" Wall Street Journal, August, 9, 2000 at: B12. Also, see: R.F. Wilson, "The Death of Jesse Gelsinger: New Evidence of the Influence of Money and Prestige in Human Research" (2010) Am. J.L. & Med. at 295.

¹⁴²⁴ L. Turner & P. Knoepfler, "Selling Stem Cells in the USA: Assessing the Direct-to-Consumer Industry" (2016) Cell Stem Cell, at: <http://dx.doi.org/10.1016/j.stem.2016.06.007> (last visited July 8, 2016).

¹⁴²⁵ J. Yang, "U.S. overlooked in debate over 'stem-cell tourism'" The Toronto Star, June 30, 2016, at: <https://www.thestar.com/news/world/2016/06/30/us-overlooked-in-debate-over-stem-cell-tourism.html> (last visited July 8, 2016).

¹⁴²⁶ Turner & Knoepfler, *supra* note, 1424.

¹⁴²⁷ M. Twain, "How I Edited an Agricultural Paper Once" in *The Best Short Stories of Mark Twain* (New York: Modern Library, 2004) at 38. Twain's truism as to "bigger noise" might apply to many of our current "captains of industry."

¹⁴²⁸ *Ibid* at 36.

was to “churn”¹⁴²⁹ the farming newspaper’s readership into buying and reading more papers and, in turn, sell more papers and increasing the rates for advertising. As already said that in the land of the blind the one-eyed man is king: yet, in the land of pharmaceuticals and the ‘bio-tech revolution’ there is no Twain, there are no kings and, perhaps, there are no heroes. Arguably, though, there is a ready and ample supply of guano to go around. Similar to Twain’s “churning” of his readership, since the passage of *Bayh-Dole*, bio-pharmaceuticals corporations, their investment bankers (backers), and the universities they favoured, have learned how to “churn” the market and spin the penny stocks of many a “start-up” company and turn share prices and their patents on “lifestyle” drugs into gold.¹⁴³⁰

6.3.1 Ploughing the Field for the Growth of Big Pharma

In the 1980s, with their eye on the prize, the industrial pharmaceutical complex exercised market power in a way that eclipsed most industries in late-capitalist economies. In terms of profit margins, the industrial pharmaceutical complex broke just about every theoretical law of the so-called “free market.” The various libertarian dreams that neo-classical economists purport to hold dear witnessed bio-tech and pharmaceutical companies take advantage of vast public subsidies, public research and market monopoly through stronger intellectual property protection for projects that were partly or wholly

¹⁴²⁹ “Churn” or churning is an amusingly appropriate term: it retains the innocence of making butter along with a lingering sense of devilish magic that Shakespeare’s witches possessed over their boiling caldron in *MacBeth*. According to the U.S. Security and Exchange Commission (S.E.C.): “Churning refers to the excessive buying and selling of securities in your account by your broker, specifically, for the purpose of generating commissions and without regard to your investment objectives.” See: S.E.C., “Churn” U.S. Security and Exchange Commission (Washington: April 15, 2009) at:

<http://www.sec.gov/answers/churning.htm> (last visited April 1, 2010).

¹⁴³⁰ If you are in doubt of the generalised truth of this claim, merely recall the last drug advertisement you saw and “just ask your doctor.” See: Angell, *supra* note 212. Also, see: K. Silverstein, “Millions For Viagra, Pennies For Diseases Of The Poor” *The Nation*, July 19, 1999, at: 13-19. Also, see: N. Angier, “The Search for the Female Equivalent of Viagra” *The New York Times*, April 10, 2007, at: <http://www.nytimes.com/2007/04/10/science/10wome.html> (last visited April 18, 2008).

publicly funded.¹⁴³¹ Ironically, under the banner of freeing up resources, *Bayh-Dole* was just one more layer of protection used to protect the monopolies of parasitic sponging by gargantuan pharmaceutical corporations – that is, Big Pharma. As a further irony, Stiglitz as an economist *ethically* notes that “[i]ntellectual property rights typically make some better off (the drug companies) and many worse off (those who otherwise might have been able to purchase the drugs).”¹⁴³²

The influence of Big Pharma, at least to many proponents, was seen as inexorable, ineluctable and *natural*.¹⁴³³ Natural or not, one must keep in mind that worldwide the pharmaceutical industry is a massive network of combinations that make it one of – if not – the most profitable and successful sectors in late-capitalism. Moreover, in the U.S., with on average higher prescription drug prices, means that it represents approximately 60 percent of the profits generated by the global pharmaceutical industry.¹⁴³⁴ The high cost of U.S. drug prices are, oddly, partly a result of a political rhetoric that seems completely Orwellian (or, more to the point, Huxleyan)¹⁴³⁵ to an outside observer. For example, in one instance, America favours “free trade,”¹⁴³⁶ but not in pharmaceuticals –

¹⁴³¹ See: Goozner, *supra* note 194 at 61-82. Goozner provides clear evidence that the technical, financial and material support for the ambiguous “human genome project” was solely the result of public initiatives and most of its funding. Amongst others, Goozner claims that private industry contributions are just not well thought out, they are statistically unreliable, and, typically, are not critically investigated.

¹⁴³² Stiglitz, *supra* note 833 at 209.

¹⁴³³ Needless to say and attempting to be cognizant and incorporate Polanyi’s point, there is nothing *natural* about the market (and that goes for patents, intellectual property or university research and education).

¹⁴³⁴ C. Bowe, A. Michaels & N. Tait, “Bankers See Quick Gains In Tough Times From Drug Disposals” *Financial Times*, May 8, 2001, at F21 & 23.

¹⁴³⁵ See: A. Huxley, *The Doors of Perception and Heaven and Hell* (London: Chatto and Windus, 1968). It is relatively well known that Huxley visited the South Saskatchewan Mental Hospital, in Weyburn, Saskatchewan, in the 1950s, to conduct personal experiments with LSD: these essays were a result of that experience. Also, see: Huxley, *supra* note 5.

¹⁴³⁶ Congressional Budget Office, “How Preferential Trade Agreements Affect the U.S. Economy” (Washington: Congressional Budget Office, 2016) at 2. Ironically, even “[i]n the Congressional Budget Office’s view, the consensus among economic studies is that [Preferential Trade Agreements] ... have had relatively small positive effects on total U.S. trade (exports plus imports) and, primarily through that channel, on the U.S. economy.” Not exactly a ringing endorsement of ‘free trade’ policies.

they ban importation of foreign made pharmaceuticals.¹⁴³⁷ That is, America favours “free enterprise”, but not when it comes to pharmaceuticals.¹⁴³⁸ It reminds one of Adam Smith’s observation about self-interest where a “savage injustice... [by a few] rendered an event, which ought to have been beneficial to all, ruinous and destructive to [many].”¹⁴³⁹

6.3.2 Sowing and Reaping from Secrecy

The rhetoric of the free market may dominate late-capitalism, yet, it rings hollow. When placed in the context and literature of the university, academic research, and the siren call of ‘primitive accumulation’ represented by stronger patent laws, then *Bayh-Dole* becomes a catalyst that breaks apart the bonds that allow for free inquiry and research to occur. Angell holds that this fact is perplexing for many researchers (an *interregnum* of a “legitimation crisis”?) because:

The boundaries between academic medicine – medical schools, teaching hospitals, and their faculty – and the pharmaceutical industry have been dissolving since the 1980s, and the important differences between their missions are becoming blurred. Medical research, education, and clinical practice have suffered as a result.¹⁴⁴⁰

¹⁴³⁷ In the “home of the brave” where “free trade” is considered almost sacrosanct, the U.S. government went all out in its “War on Drugs” and prohibited the importation of foreign pharmaceuticals claiming issues surrounding quality control. See: *The Drug Price Competition and Patent Term Restoration Act*, P.L. 98-417 (1984). Currently, Maine is attempting to circumvent this ban. See: J. Levitz & T.W. Martin, “Maine opens door to Canadian drugs: However, manufacturer and pharmacy groups mount legal challenge” *The Globe and Mail*, October 10, 2013, at B9. The Klobuchar Amendment, which would have allowed the importation of cheaper Canadian drugs, was rejected on January 11, 2017, by the U.S. Senate 52 to 46. See: U.S. Senate Roll Call Votes 115th Congress - 1st Session, *Klobuchar Amendment* No. 178 to S.Con.Res. 3. at https://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=115&session=1&vote=00020#position (last visited February 2, 2017).

¹⁴³⁸ Also, see: P. Krugman, “A Serious Drug Problem” *The New York Times*, May 6, 2005, at: <http://www.nytimes.com/2005/05/06/opinion/06krugman.html?hp=&pagewanted=print> (last visited October 12, 2007). As Krugman points out: “If all this sounds like a story of a corrupt deal created by a corrupt system, it is. And it was a very expensive deal indeed. According to the Medicare trustees, the fiscal gap over the next 75 years created by the 2003 law – not the financing gap for Medicare as a whole, just the additional gap created by legislation passed 18 months ago – will be \$8.7 trillion.” Also, see: Goozner, *supra* note 1185.

¹⁴³⁹ Smith, *supra* note 163 at 348.

¹⁴⁴⁰ Angell, *supra* note 1416.

For Angell, *Bayh-Dole* adversely influences, and continues to influence, the independence of researchers and is, in a Polanyian-like rhyme, substantially corrosive to pharmacological and biomedical research. The “new” relationship – even though it is over thirty years old – has changed the incentives used in the research game. This new incentive game creates a calibrated and loaded response that the research system has not (and cannot?) recover from these “morbid symptoms.”¹⁴⁴¹ Now, Big Pharma’s influence, whether direct or indirect, acts as an institutional filter and/or constraint (dead-weight?) not only on researchers but the type of research they do, the type of research they become interested in, and in the type of results produced.

Bayh-Dole was not the cause of the degeneration of university biomedical and pharmacological research, but it is a significant symptom and influence in the course of the overall disease. That is to say, the milieu constructed by neoliberalism economic imperatives acts as a form of “general corruption” and “universal venality” where “everything, moral or physical... [has] a marketable value... [and must be] brought to the market to be assessed at its truest value.”¹⁴⁴² The patent system may not be directly to blame for this state of affairs though one must emphasise its essential rôle and as a major player and actor in this narrative.¹⁴⁴³

The patent system and its accompanying incentive model consistently act as a catalyst in the environment of the neoliberal university that leads to this disruptive

¹⁴⁴¹ Gramsci, *supra* note 1361 at 210.

¹⁴⁴² Marx, *supra* note 2.

¹⁴⁴³ W. Shakespeare, *Julius Caesar* (Hauppauge: Barron’s Educational Series Inc., 2002) at 120. “Et tu, Brute?.” See also: H. Mintzberg, “Patent nonsense: Evidence tells of an industry out of social control” (2006) 175(4) C.A.M.J. at 1. As Mintzberg points out: “What enables the patent-dependent pharmaceutical companies to set the prices they do? Two factors. The first is economic: the companies that make (or at least secure the right to) the discoveries in this marketplace of ideas reap the rewards. The second is legal: governments grant those companies monopolies, in the form of patent protection, for what is called their “intellectual property.”

amalgam of values. Similar to the system of automobility, the incentive system of pecuniary rewards becomes almost “autopoietic.” The corruption of values is the ‘storm we call progress’ and is where human lives – like Gelsinger’s – are swept up as the playthings and gamble or of “greater” – or lesser – men. The parasitic incentive system – the one that is considered an essential part of the patent system – fails to acknowledge that it is a Janus-faced coin toss: innovation for industry becomes ‘venal corruption’ when there is so much at stake.

6.3.3 Legal Enforcement, Patent Shakedowns or Legal Muggings

Additionally, the current incentive system used to extract surplus labour from university researchers is also used as a way to squeeze, tweak, and extract value from an unwitting public. According to Gary Reback, named one of the “100 Most Influential Lawyers in America” by the National Law Journal, put it:

In corporate America, [the drug patent system is a] ...type of shakedown [that] is repeated weekly. The patent as stimulant to invention has long since given way to the patent as blunt instrument for establishing an innovation stranglehold. Sometimes the antagonist is a large corporation, short on revenue-generating products but long on royalty-generating patents. On other occasions, an opportunistic “entrepreneur” who only produces patent applications uses the system’s overly broad and undisciplined patent grant to shake down a potential competitor.”¹⁴⁴⁴

In the context of university research, Reback’s assessment of a “blunt instrument” for generating revenue means that someone has to pay: at first, the price paid maybe the science, universities, individual researchers and programmes, but ultimately it is patients that pay the “butcher’s bill.”¹⁴⁴⁵ We are told that in an ever more competitive global economy, we need stronger intellectual property enforcement. But to what end? In a

¹⁴⁴⁴ G.L. Reback, “Patently Absurd” Forbes Magazine, June 24, 2002, at: <http://www.forbes.com/asap/2002/0624/044.html> (last visited May 23, 2008).

¹⁴⁴⁵ W.H.D. Adams, *England on the Sea; or, The Story of the British Navy* (London: F.V. White, 1885) at 116.

world where 97 percent of all patents are held in industrialised (monopolising?) “developed” countries, it – at least if Keynes’s “nasty” assessment is correct¹⁴⁴⁶ – is not going to directly benefit the “developing economies.”¹⁴⁴⁷

6.4 The Nancy Olivieri Affair

6.4.1 Making Knowledge versus Making Money

To be in business your first mandate is to make money, and money has no heart, soul, conscience, or homeland.

Frank Stronach¹⁴⁴⁸

In describing the tribulations of Lara [the character is loosely based on Olivieri] in Chapter 18, I drew on several cases, particularly in the North American continent, where highly qualified medical researchers have dared to disagree with their pharmaceutical paymasters and suffered vilification and persecution for their pains. The issue is not about whether their inconvenient findings were correct. It is about individual conscience in conflict with corporate greed. It is about the elementary right of doctors to express unbought medical opinions, and their duty to acquaint patients with the risks they believe to be inherent in the treatments they prescribe.

John Le Carré¹⁴⁴⁹

She’s (Olivieri) nuts.

¹⁴⁴⁶ Keynes, *supra* note 1003.

¹⁴⁴⁷ A.R. Chapman, “Core Obligations Related to ICESCR Article 15(1) C” in *Core Obligations: Building a Framework for Economic, Social and Cultural Rights* (eds.) A.R. Chapman & S. Russell (Oxford: Hart Publishing, 2002) at 321. Chapman sees the only benefit created being to “developed economies” who extract financial profit. Also, see: Perelman, *supra* note 673 at 6. Perelman concurs with 97 per cent patent estimate and adds that: “Compounding the inequity, more than 80 per cent of patents granted in developing countries belong to residents of industrial countries. No doubt this situation has worsened in the intervening years.” W. Churchill, “Speech in the House of Commons, August 20, 1940” cited in S. Lawlor, *Churchill and the Politics of War, 1940-1941* (Cambridge: Cambridge University Press, 1994) at 83. To parody Winston Churchill, “seldom has so much [intellectual property rent] been owed by so many to so few.” Some may argue that “developed” economies can manage patents in a more “efficient” (better?) way, for the benefit of all humanity. So it goes that we are the famed road to hell paved with good intentions.

¹⁴⁴⁸ Frank Stronach cited J. Stanford, *The Paper Boom: Why Real Prosperity Requires a New Approach to Canada’s Economy* (Toronto: J. Lorimer, 1999) at 343. Milton Friedman would concur. As noted, for a clear and concise articulation of Friedman’s position on the ever doubtful issue that portends that there exists something such as “corporate social responsibility,” see: Friedman, *supra* note 26.

¹⁴⁴⁹ D.J.M. Cornwell (a.k.a. John le Carré) “Author’s Note” in *The Constant Gardener* (New York: Simon & Schuster, 2001) at 491. It is charming and delightful that a novelist and former MI5 and MI6 ‘spook’ should have to hammer this point home so clearly to corporate apologists who claim that most of corporate criticism consists of “conspiracy theories.”

Dr. Olivieri and her story are generally well known in Canada¹⁴⁵¹ and internationally.¹⁴⁵² In terms of the patent system, it is not directly about intellectual property rights but is a story about professional responsibility and – “I ain’t – embarrassed to use the word – I’m talkin’ about ethics”¹⁴⁵³ – medical ethics. Nevertheless, the patent system and its incentive system play its part. Needless to say, Sherman’s opinion as to Olivieri’s mental state would perhaps not welcome a feminist critique of his opinion, but his observation reveals much.¹⁴⁵⁴ If it were fiction, Olivieri’s sojourn could be compared to, and is reminiscent of, the life of Franz Kafka’s K in *The Trial*,¹⁴⁵⁵ to the life of Brecht’s Galileo, or to the slightly less colourful travail and tale of Job. Any which way, Olivieri’s struggle, although not being as restricted as a prisoner under lock and key, became a life held in suspension. Since the controversy broke, it

¹⁴⁵⁰ Barry Sherman interview with Lesley Stahl, *60 Minutes* (New York: C.B.S. News Productions, air-date December 19, 1999).

¹⁴⁵¹ A digression into *some* of the facts in Olivieri’s story is needed, but the reader must note this is only a partial and problematic rendering of her tale. Nonetheless, Olivieri’s story sold newsprint and she was featured on the front cover of Maclean’s Magazine and in numerous books. See: “Whistle Blower” Maclean’s Magazine, November 16, 1998. Also, see: Glasbeek, *supra* note 744 at 244-245. Also, see: M. Shuchman, *The Drug Trial: Nancy Olivieri and the Science Scandal that Rocked the Hospital for Sick Children* (Toronto: Random House: 2005). Also, see: M.A. Somerville, “A postmodern tale: the ethics of research relationships (2002) 1 Nat. Rev. Drug Discovery, at 316-320. In addition, numerous newspaper archives possess articles on Olivieri if one needs to confirm the status of this conflict. And, as noted above, there is an element of Olivieri’s story in le Carré’s novel *The Constant Gardener*.

¹⁴⁵² J.P. Kassirer, *On the Take: How America’s Complicity with Big Business Can Endanger Your Health* (New York: Oxford University Press, 2004) at 59; Krimsky, *supra* note 1342 at 45-47; and see: T.O. McGarity & W.E. Wagner, *Bending Science: How Special Interests Corrupt Public Health Research* (Cambridge: Harvard University Press, 2008) at 97-101.

¹⁴⁵³ J. Coen & E. Coen, *Miller’s Crossing* (Hollywood: Script City, 1988) at 1.

¹⁴⁵⁴ For a thorough overview, see: L. Code, “Women, Science, and the Politics of Representation” in *Figuring It Out: Science, Gender, and Visual Culture* (eds.) A.B. Shteir & B.V. Lightman (Hanover: Dartmouth College Press, 2006) at 289. Lorraine Code’s brilliant analysis of the Olivieri affair is perhaps the best, the most succinct, and articulate rendering of the tale from a feminist perspective that I have come across.

¹⁴⁵⁵ See: F. Kafka, *The Trial* (New York: Vintage Books, 1956). As is generally well known, Kafka’s tale tells the story of a life suspended: “K,” a bank clerk, is held indefinitely by authorities and brought to trial on undisclosed charges – one could call it an existential *Guantanamo*.

meant that the resources that a medical researcher would need – specifically in order to conduct meaningful research in the area of blood disorders – would be severely curtailed and limited. Access to investigatory tools such as labs, fellow researchers and colleagues, and, patients – not to mention research funding and one’s livelihood – would be limited and inadequate. In essence, this would eliminate all the necessary elements for a research scientist to live a productive life.

6.4.2 The Problem of Research “Agreements” or Contracts

When pharmaceutical corporations enter into university research agreements, they may do so (and certainly claim to do so) for many laudable reasons. But as Stronach warned us, corporations and money have no heart or conscience. Put differently, even when one believes that there are noble intentions surrounding the patent system and innovation, that belief may be shaken when confronted with a dispute where “costly litigation... dissipates an unimaginable amount of time and resources.”¹⁴⁵⁶ In terms of university research, there can be – and generally is – a considerable legal “chill effect” on academics attempting to exercise her or his “academic freedom.” So much so, that it can appear to flout common sense.¹⁴⁵⁷ In the attempt to deal with – “silence”? – the issues as to Olivieri, one cannot help but see a consistent *disciplinary* pattern (what Twain might call a ‘Foucaultian’ rhyme of sorts?).¹⁴⁵⁸ By applying a general presence and “pressure,” similar to the ironically named “invisible fence” for dogs, brilliantly learned scientists

¹⁴⁵⁶ Perelman, *supra* note 673 at 3.

¹⁴⁵⁷ C.A.U.T., “Apotex Inc. v. Olivieri: An Attack on Academic Freedom” Issues & Campaigns (Ottawa: C.A.U.T., December 1, 2008) <http://www.caut.ca/pages.asp?page=760>. Apotex has seen “disparagement” at many turns in this protracted saga. After agreeing to an \$800,000 settlement to Olivieri, Apotex again pursued her through the courts. Apotex alleged that Olivieri “either directly disparaged Apotex and/or deferiprone or acquiesced or consented to the disparagement.” According to the C.A.U.T., this is a blanket attempt to infringe Olivieri’s academic freedom and, in doing so, silence her and silence third parties from commenting on Apotex and its activities.

¹⁴⁵⁸ Twain, *supra* note 1037 at 1.

become quick studies. Arguably, they become savants as to (or are disciplined into?) the limits or boundaries in which they may move and, more importantly, learn what is formally and informally “out of bounds.”¹⁴⁵⁹ This situation is not directly a product of the patent system and surrounding legislation: it is its medium that is its nexus of power and its “relationship”¹⁴⁶⁰ with academic freedom and the independence of the university research.

By applying pressure on cash-strapped universities, on research programmes, on research scientists, and, of course, the heavy hand of legal action, corporate “partners” can control and can have a tremendous impact on the public’s *perception* of corporate conduct and purported corporate social responsibility.¹⁴⁶¹ As we have seen,¹⁴⁶² effective information management (otherwise known as “spin”) is remarkable: but, sometimes, even with the enormous resources at their disposal, private corporate interests that feel threatened apparently fail to heed Twain’s sound advice about harming people when other people are looking.¹⁴⁶³ Nonetheless, “[o]ver and above these problems, intellectual

¹⁴⁵⁹ J. Strummer, M. Jones, P. Simonon & T. Headon (a.k.a. “The Clash”) “Something About England” on *Sandinista!* (New York: Epic, 1980) at Track 6. “There was masters an’ servants an’ servants an’ dogs They taught you how to touch your cap” – all this being a part of capital’s “disciplining” process.

¹⁴⁶⁰ Thompson, *supra* note 262 at 11.

¹⁴⁶¹ Glasbeek, *supra* note 744 at 183-205.

¹⁴⁶² Bernays, *supra* note 737.

¹⁴⁶³ See: Liebling, *supra* note 51. But, even that, sometimes, it isn’t enough own a newspaper. “Self-censorship” is a well-known practice and problem in the media. For example, see: S. Dredge, “Mark Zuckerberg defends censorship policies despite Charlie Hebdo support” *The Guardian*, January 15, 2015, at: <http://www.theguardian.com/technology/2015/jan/15/mark-zuckerberg-facebook-charlie-hebdo> (last visited January 15, 2015). The issue of “self-censorship” is a slightly different beast in scientific and academic journals. Scientific journals, a not unprofitable venture in and of themselves, have had a vested interest of the success of their advertisers. This can and has placed journals in uncomfortable, difficult, unfavourable and/or biased positions. Prior to Olivieri becoming headline news, the case of Dr. Betty Dong, a clinical pharmacist at the University of California at San Francisco (UCSF), garnered attention through a study into the quality of generic synthetic thyroid hormone pills. Dong conducted a ‘bioequivalency’ study into generic synthetic thyroid hormone pills and patent thyroid hormone pill, Synthroid. The study was sponsored by the Boots Company, a British pharmaceutical firm who owned the patent to Synthroid. Believing Synthroid to be superior to generics, Boots awarded Dong a \$250,000 contract to do the study. Dong found no difference between the Synthroid and the generics and sought to publish her results. Fearing financial loss, Boots, and its successor, German based BASF A.G., blocked the

property rights pervert the entire scientific process by undermining the traditional incentives to engage in the basic scientific research essential to developing future improvements in technology.”¹⁴⁶⁴

6.4.3 The ‘Inconvenient’ Facts of Olivieri

As in love, so in technique; innocent confidence is weak.

Richard Sennett¹⁴⁶⁵

I will prescribe regimens for the good of my patients according to my ability and my judgment and never do harm to anyone.

Hippocrates¹⁴⁶⁶

In the late 1980s and early 1990s, Olivieri, a qualified specialist in the treatment of hereditary blood diseases, sought funding to do research into the disease of thalassemia and conduct clinical trials on an experimental iron-chelation drug, deferiprone.¹⁴⁶⁷ Deferiprone had shown promise in an earlier pilot study at the Hospital for Sick Children (H.S.C.). The H.S.C. is a fully affiliated teaching hospital associated with the University of Toronto and its Faculty of Medicine. Deferiprone appeared to reduce tissue iron loading in a group of transfusion-dependent thalassemia patients. Thalassemia is a particularly debilitating genetic disorder. “Thalassemia and sickle cell disease are the

publication of the study. UCSF initially supported Dong’s attempt to publish, but grew faint when the financial research repercussions became apparent. Dong’s study was eventually published: B.J. Dong, “Bioequivalence of generic and brand-name levothyroxine products in the treatment of hypothyroidism” (1997) 277 J.A.M.A. at 1205-13. Also, see: R. T. King, Jr., “Bitter Pill: How a Drug Firm Paid for University Study, Then Undermined It,” *The Wall Street Journal*, April 12, 1996, at 1 & 6. Also, see: L. K. Altman, “Drug Firm, Relenting, Allows Unflattering Study to Appear” *The New York Times*, April 16, 1997, at A1 & A12.

¹⁴⁶⁴ Perelman, *supra* note 673 at 3.

¹⁴⁶⁵ R. Sennett, “Labours of Love” *The Guardian*, February 2, 2008, at:

<http://www.theguardian.com/books/2008/feb/02/featuresreviews.guardianreview14> (last visited January 15, 2015).

¹⁴⁶⁶ Hippocrates, “The Hippocratic Oath” in L. Edelstein, *The Hippocratic Oath: Text Translation and Interpretation* (Baltimore: John Hopkins University Press, 1967) at 3. Also, see: P. Taylor, “New meds aren’t always ‘safe and effective’” *The Globe and Mail*, August 29, 2008, at L4.

¹⁴⁶⁷ Deferiprone is typically referred to as “L1” in the medical literature.

most common hemoglobinopathies, and in their severe forms result in premature death, if untreated.”¹⁴⁶⁸

For Olivieri to pursue her research into deferiprone, funding was required to proceed to the next stage of testing and development. To do so, the option she entertained and pursued was to secure funding from a pharmaceutical company. One of Olivieri’s colleagues and scientific collaborators was Dr. Gideon Koren, a clinical pharmacologist and the Associate Director of Clinical Research at Sick Children’s. In his capacity as director, Koren entered into negotiations with Apotex to acquire commercial development rights for deferiprone in return for Apotex sponsoring deferiprone’s clinical trials. For Apotex, a major generic drug manufacturer, this would be a major initiative. It would represent Apotex’s first foray into the lucrative patent drug market.¹⁴⁶⁹

During the clinical trials of deferiprone, Olivieri believed she had discovered unexpected risks associated with the new drug treatment. She informed Apotex of the problem with deferiprone and also informed them of her ethical obligations to inform her patients of these “new” or *perceived* risks.¹⁴⁷⁰ Apotex disputed the results. Acting on this information, Apotex terminated the trials and threatened Olivieri with legal action if she disclosed the risks to her patients or to H.S.C. or to U. of T.

Under the threat of legal action, Olivieri turned to her employers, the H.S.C. and to U. of T., and asked for assistance to help resolve the matter. No immediate assistance was forthcoming. In general, the H.S.C. and U. of T. provided less than effective assistance to Olivieri. Despite the lack of institutional support from her employers, and

¹⁴⁶⁸ Complaints Committee, “Complaints Committee Reason and Decisions” – C.P.S.O., November 2001, 1-18. Also, see: J. Thompson, P. Baird & J. Downie, *The Olivieri Report* (Toronto: James Lorimer & Co. Ltd., 2001) at 67.

¹⁴⁶⁹ Complaints Committee, *supra* note 1468.

¹⁴⁷⁰ Hippocrates, *supra* note 1466.

threats of legal action from Apotex, Olivieri informed her patients and published her findings on deferiprone.¹⁴⁷¹ Olivieri's publication on her deferiprone findings sparked international publicity and controversy as to the conduct of Apotex, the H.S.C. and U. of T. At this time, it became public that U. of T. was engaged in discussions as to a corporate donation by Apotex. The proposed Apotex donation would have been U. of T.'s largest public donation to date, valued at \$20 million, and directed to the University Centre for Cellular and Molecular Biology Research.¹⁴⁷²

Olivieri's dispute with Apotex, the H.S.C. and U. of T. was a layered process. It involved numerous players from: hospital panels; domestic and international public granting institutions; regulatory bodies; faculty associations; disciplining and review committees; and various medical boards. These are all the elements in the Olivieri's story but they are also part of the requirements and conditions that all professional researchers work under. Moreover, being a research physician in a teaching hospital in the province of Ontario does not lessen but – if anything – increases the ethical obligations of a physician. Nonetheless, a patient undergoing experimental treatment is vulnerable to the procedure and means a research physician must provide a “reasonable standard of care”¹⁴⁷³ in conducting human research therapies. When a physician enters into a human research project they may sign a contract for funding, but they cannot escape or avoid the inviolable relationship outlined in their obligation to their patients to ‘do no harm.’

¹⁴⁷¹ N.F. Olivieri, *et. al.* “Long-term Safety and Effectiveness of Iron-chelation Therapy with Deferiprone for Thalassemia Major” (1998) 339(7) N.E.J.M. at 417-423.

¹⁴⁷² Thompson, Baird & Downie, *supra* note 1468 at 100.

¹⁴⁷³ Complaints Committee, “Complaints Committee Reason and Decisions – C.P.S.O.” November 2001, at 16.

To attempt to understand the matter, the Canadian Associations of University Teachers (C.A.U.T.) commissioned what they referred to as an “independent committee of inquiry” as to the case of Olivieri, the H.S.C., U. of T., and Apotex Inc.¹⁴⁷⁴ C.A.U.T.’s central concern as to *The Olivieri Report* (the *Report*) was to attempt to evaluate the “issues of research ethics and academic freedom... [that is so essential] to the public interest.”¹⁴⁷⁵ The *Report* recognised that the “increased pressures on universities, teaching hospitals and individual researchers to seek corporate sponsorship for projects”¹⁴⁷⁶ were enormous. Individual university researchers, specialists in their field, lacked the experience or resources to navigate the mind-fields and layers of intellectual property interests that had come to encompass the practices surrounding institutions of higher education. Moreover, universities as “institutions were not conscious of the inadequacy of their policy infrastructures for protecting the public interest in this new environment, and policies and practices had not been changed to take into account the new circumstances.”¹⁴⁷⁷

For Apotex, the Olivieri matter was simple: it was a contractual matter – specifically a non-disclosure clause. At the beginning of their contractual relationship, Olivieri was required to sign a contract with Apotex and the confidentiality provisions contained in the “LA-01” contract were extremely restrictive. The LA-01 contract between Olivieri and Apotex was signed on April 23, 1993. Clause 7 of the contract purported to give Apotex control over *all* communications of the findings of the research for the life of the contract and for one year following its termination:

¹⁴⁷⁴ Thompson, Baird & Downie, *supra* note 1468,

¹⁴⁷⁵ *Ibid* at 3.

¹⁴⁷⁶ *Ibid*.

¹⁴⁷⁷ *Ibid*.

[7] Confidential: All information, whether written or not, obtained or generated by the investigators during the term of this agreement and for a period of one year thereafter, shall be and remain secret and confidential and shall not be disclosed in any manner whatsoever to any third party, except to an appropriate regulatory agency for the purpose of obtaining regulatory approval for manufacture, use or sell L1 [sic] unless the information has been previously disclosed to the public with the consent of Apotex. The investigator shall not submit any information for publication without the prior written approval of Apotex.¹⁴⁷⁸

It is Clause 7 of the “LA-01” contract that “[a]ll information... obtained or generated by the investigators... shall be and remain secret and confidential and shall not be disclose in any manner to any third party”¹⁴⁷⁹ that is highly disturbing. On its face, the intellectual property interest being asserted by Apotex is radically absolute and appears to or attempts to override and interfere with the doctor-patient relationship. What it meant was that Olivieri could be placed in situations where her ethical and legal obligations could come into conflict with Apotex. In effect, the contract framed patients as “third parties” – who happen to be children – to the matter. The contract clause effectively meant that patients and their families would not be entitled to details as to the therapy and the issue of on-going consent. This blanket clause essentially attempted to subordinate medical ethics to the clinical research agenda and interests of the corporate sponsor. In doing so, it harms not only the doctor-patient relationship but also challenges the model of academic freedom.¹⁴⁸⁰ To David Healy, the key issue in Olivieri’s case was “whether in the face of ambiguous clinical trial data, a clinician treating patients should err on the side of the patient or on the side of the corporation that hopes to make money out of future patients

¹⁴⁷⁸ “LA-01 contract, signed by Drs. Olivieri and Koren, April 23, 1993” in Thompson, Baird & Downie, *supra* note 1468 at 115.

¹⁴⁷⁹ *Ibid.*

¹⁴⁸⁰ D.G. Nathan & D. Weatherall, “Academic Freedom in Clinical Research” (2002) 347 (17) N.E.J.M. at 1368-1371.

[and patents].”¹⁴⁸¹

For certain observers, the Olivieri affair was an aberrant occurrence.¹⁴⁸² The Olivieri affair emerged during a period of transition. To Miriam Shuchman, the principle problem was that the new rules needed to effectively regulate the interaction, behaviour and agreements between corporations, universities and clinical researchers were either absent or not clearly defined. She recognises that during the early 1990s, deficit-obsessed federal and provincial governments were redefining their involvement in education. In doing so, the particular relationship between the university, government funding and corporate sponsorship were changing. However, Shuchman suggests that since new rules have been implemented at U. of T., with “clear” disclosure rules, the kinks have been worked out between corporate sponsors, the university and clinical researchers. All is well, for the most part. That is, that academic freedom and the professional and ethical obligations of researchers are no longer in conflict and are not put in jeopardy by the participation of corporate funding at U. of T. Others beg to differ and Shuchman’s own statements and arguments ironically undermine her own argument.¹⁴⁸³

¹⁴⁸¹ Healy, *supra* note 1407 at 55-56.

¹⁴⁸² See: Shuchman, *supra* note 1451. Also, see: M. Shuchman, (2002) 166 “The Olivieri dispute: no end in sight?” C.M.A.J. at 487. Indeed, in Shuchman’s version of events, Olivieri was scientifically wrong about the efficacy of deferiprone. In terms of full disclosure, at least according to Olivieri, Shuchman is a biased observer because she had a dog in the fight. That is, Shuchman overlooks or fails to inform the reader that her husband was co-author of a 2003 paper with Dr. Koren: Koren being one of Olivieri’s major foes at H.S.C. and a beneficiary of Apotex’s *largesse*. See N. Olivieri, “A Response from Dr. Nancy Olivieri” (2006) 174(5) C.M.A.J. at 661-662. I will not digress too much as to Koren’s anonymous “poison pen” campaign against Olivier. Ample ink has been spilt in the press as to Koren’s anonymous and scandalous slanders as to Olivieri during the dispute: suffice it to say, to deem Koren’s behaviour as juvenile would be overestimating his maturity.

¹⁴⁸³ See: D. Weatherall, “Research conduct and the case of Nancy Olivieri” (2005) 366 *The Lancet* at: 445-446. Weatherall indicates that Shuchman’s optimism as to the new “disclosure rules” at U. of T. are still partial. Moreover, Weatherall points out that Shuchman’s anonymous use of “sources,” both medical and university administration at U. of T., is contradictory. According to Weatherall, quoting Shuchman, that: “many of the doctors and scientists who witnessed the events described here [Shuchman’s book] feared for

6.4.4 C.A.U.T. and Its Independent Committee of Inquiry Concerning Olivieri

The C.A.U.T., founded in 1951, is the national labour organisation that represents “65,000 teachers, librarians, researchers and other academic professionals.”¹⁴⁸⁴ Aside from lobbying government and assisting in the collective bargaining process, one of the areas that the C.A.U.T. is active in protecting is the “academic freedom” of its members.

According to the “Policy Statement on Academic Freedom,” the C.A.U.T. holds that:

Post-secondary educational institutions serve the common good of society through searching for, and disseminating, knowledge, truth, and understanding and through fostering independent thinking and expression in academic staff and students. Robust democracies require no less. These ends cannot be achieved without academic freedom.¹⁴⁸⁵

As such, disputes such as Olivieri’s with Apotex, H.S.C. and U. of T. caused grave concern to C.A.U.T. as the national representative body for academics.

To attempt to understand the matter, C.A.U.T. commissioned what it referred to as an “independent committee of inquiry” on the case involving Olivieri, the H.S.C., U. of T. and Apotex and subsequently published *The Olivieri Report*.¹⁴⁸⁶ The *Report* was an attempt to evaluate the “issues of research ethics and academic freedom... [that is so essential] to the public interest.”¹⁴⁸⁷ The *Report* recognised that the “increased pressures on universities, teaching hospitals and individual researchers to seek corporate sponsorship for projects”¹⁴⁸⁸ were enormous.

their reputations if they were quoted, and some worried that they would be fired from their jobs or sued for libel.” As Weatherall puts it, “[t]hings have come to a sorry pass if scientists who tell the truth run the risk of professional dissolution....”

¹⁴⁸⁴ C.A.U.T. “Overview and CAUT Profile” at: <http://www.caut.ca/pages.asp?page=6> (last visited October 10, 2010).

¹⁴⁸⁵ C.A.U.T., “Policy Statement on Academic Freedom” – General CAUT Policy (Ottawa: C.A.U.T.) at: <http://www.caut.ca/pages.asp?page=247&lang=1> (last visited October 10, 2010).

¹⁴⁸⁶ Thompson, Baird & Downie, *supra* note 1468.

¹⁴⁸⁷ *Ibid* at 3.

¹⁴⁸⁸ *Ibid*.

Individual university researchers, specialists in their field, lacked the resources or experience to navigate the minefields and layers of intellectual property interests that had encompassed institutions of higher education. Moreover, universities as “institutions were not conscious of the inadequacy of their policy infrastructures for protecting the public interest in this new environment, and policies and practices had not been changed to take into account the new circumstances.”¹⁴⁸⁹ To be sure, institutions and their representatives could potentially be compromised. Funding constraints tend to make individuals do peculiar things.¹⁴⁹⁰

6.4.5 Academic Freedom and Informed Consent

The major issue in front of the “independent” committee assembled by C.A.U.T. was whether it was possible for clinical investigators and researchers to implicitly enter into questionable financial arrangements and, then, explicitly sign contracts that placed the interests of the sponsor a head of the safety of trial participants. In this instance, it would mean that patients at H.S.C. would not be fully informed concerning their treatment. This was a private constraint or limit placed on research academics and their rôle as physicians. It was also a clear constraint of their academic freedom. For the C.A.U.T., what it meant was that researchers, who were affiliated with a public-private-

¹⁴⁸⁹ *Ibid.*

¹⁴⁹⁰ For instance, one of the aspects of the Olivieri’s dispute was her professional relationship and clinical reporting with the H.S.C.’s M.A.C. In the midst of the on-going dispute on “disclosure” with Apotex’s “proprietary” information, Olivieri was undergoing a Complaints Committee review of a complaint filed by Dr. Laurence Becker. Becker alleged that Olivieri was unprofessional, conducted unnecessary biopsies and failed to report her findings to the M.A.C. All allegations were determined to be unfounded. The Complaints Committee held that Olivieri acted in an exemplary fashion. This finding by the Complaints Committee was subsequently appealed the H.P.A.R.B. At that time, the administrative ‘test’ to overturn a decision of the Complaints Committee was “patently unreasonable.” It is possible that Becker may have been acting as a proxy in the appeal of the Complaints Committee’s Decision. That is, Becker may have been appealing the decision for someone who deemed Olivieri’s mental state to be similar to an *angiospermae fagales* – “nuts.” Nevertheless, even if the ‘test’ had been “correctness” or “reasonableness,” it is unlikely that the H.P.A.R.B. would have overturned the Complaints Committee’s Decision. For further reference as to standard of review, see: *Dunsmuir v. New Brunswick* [2008] 1 S.C.R. 190; 2008 SCC 9.

partnership with a university, were placed in jeopardy. By signing contracts with an industrial or commercial sponsor, researchers could be placed in situations where academic freedom and ethical obligations take a back seat to the corporate sponsor. Indeed, by signing a non-disclosure clause in a “partnership” contract muddies the waters concerning ethical obligations. Put differently, in the context of an experimental medical treatment, does a contract trump ethical obligations? As Healy noted, the problem or issue in dispute is a “means” or an “end” argument.¹⁴⁹¹ That is, does one put the needs of the patient ahead of the corporation that intends to profit from the experiment and future patent drug?

6.4.6 Professional Responsibility – Soberman’s Assessment

The issue of professional responsibility and informed consent were one of the central issues at the centre of the Olivieri dispute. The duty to fully inform a patient and gain consent prior to undergoing a medical procedure is well known. Arguably, for a patient undergoing an experimental treatment, the duty is not just the same but is greater. As Daniel Soberman put it, in his drafted legal opinion to the Committee of Inquiry, informed consent and disclosure are at the heart of the ethical and legal obligations owed by a doctor to her patient. A doctor-patient relationship, for lack of a better example, enters into the ethical realm of a Kantian absolute or *categorical imperative*.¹⁴⁹² For Soberman:

The setting of professional standards has a special application in the doctor patient relationship. Many kinds of medical treatment involve risk-taking even when the procedure is carried out to the highest standards of care and skill; there may be a small chance that a patient will not respond well and will be worse off afterwards. The patient who has been harmed may complain that, had the risks been explained, he or she would never

¹⁴⁹¹ Healy, *supra* note 1407 at 55-56.

¹⁴⁹² Kant, *supra* note 710.

have submitted to the treatment; the doctor in failing to inform the patient fully of the risks did not obtain a proper consent. In effect, the treatment was not authorized.¹⁴⁹³

It is proper consent that forms the foundation and basis of the doctor-patient relationship. The non-disclosure clause, in the contract between Olivieri and Apotex, sought to “carve-out” this essential professional obligation. In a situation involving a drug trial, a relationship being “experimental” and subject to economic concerns (Apotex’s share prices?) does not alter the trust relationship between a doctor and a patient. In fact, informed consent and disclosure in an experimental treatment situation heighten an already near sacrosanct relationship.

6.4.7 (No?) Freedom to Inform Your Patient

The non-disclosure portion of the signed agreement between Olivieri and Apotex is perhaps one of the most disturbing aspects of the Olivieri affair. Its vague language, if interpreted the way Apotex intended, would have eliminated the ability of Olivieri to communicate freely with her patients. As Soberman correctly notes in his analysis of the agreement between Oliveri and Apotex, “[i]t seems clear that... clause [7] is so broad and sweeping in its wording that ‘in any manner to any third party’ includes patients.”¹⁴⁹⁴ Apotex in its attempt to enforce its proprietary information was attempting to circumvent public policy. As Soberman indicates: “under common law, any contractual clause is void to the extent it offends public policy.”¹⁴⁹⁵ Olivieri believed that it was possible that she was harming her patients and “to the extent that such a clause prohibits disclosure of information about a medicine that might reasonably be believed by a researcher to cause

¹⁴⁹³ J.E. Smyth, D.A. Soberman, & A.J. Easson, *The Law and Business Administration in Canada* (8th ed.) (Toronto: Prentice-Hall Canada Inc., 1998) at 99.

¹⁴⁹⁴ Thompson, Baird & Downie, *supra* note 1468 at 115.

¹⁴⁹⁵ D. Soberman, “Letter to MacLean’s Magazine” November 23, 1998.

harm to the health of a person taking that medicine, the clause is void.”¹⁴⁹⁶ It was what Olivieri *reasonably believed* as a medical researcher and physician that mattered, not Apotex and its attempt to protect its investment. Working at a teaching hospital, such as H.S.C., meant that Olivieri had a duty to inform but also had an academic right to express her concerns. Both of these concerns were so intimately linked that they cannot be separated without doing damage to either. The idea that the conflict between academic freedom and a corporation’s proprietary interests to suppress informed consent and prevent the publication of research findings goes directly to the heart of academic freedom and public policy. Had Olivieri been a private researcher, without a duty to inform, then, as the saying goes: ‘if the situation were otherwise, things would be different.’¹⁴⁹⁷

¹⁴⁹⁶ *Ibid.*

¹⁴⁹⁷ See: B. Goldstein, “Overview of Technology Development” in *Principles and Practice of Clinical Research* (ed.) J.I. Gallin & F.P. Ognibene (Boston: Elsevier/Academic Press, 2007) at 294. The case of David Kern shows the limits of academic freedom. Kern, a doctor and former head of the Occupational and Environmental Health Service at the Memorial Hospital in Pawtucket, Rhode Island, affiliated with Brown University, was hired to study the air quality at a textile fiber plant, Microfiber Inc. His work identified an ailment that would eventually be labeled “flock worker’s lung.” Microfiber claimed a non-disclosure contract signed between itself and two students from Kern’s department from two years earlier covered Kern’s findings. Kern disagreed and published his results and findings. He was subsequently fired from the Memorial Hospital and, in addition, his related contract with Brown University was not renewed. Without the benefit of “academic freedom,” Kern had no protection. This despite the “AAUP Policy Statement on Academic Freedom in the Medical School, where: “[t]he freedom to pursue research and the correlative right to transmit the fruits of inquiry to the wider community – without limitations from corporate or political interests and without prior restraint or fear of subsequent punishment – are essential to the advancement of knowledge. Accordingly, principles of academic freedom allow professors to publish research findings that may offend the commercial sponsors of the research, potential donors, or political interests....” See: A.A.U.P., “Report: Academic freedom in the medical school” AAUP Policy Documents and Reports (Ann Arbor: University of Michigan Press, 1999); also available at: http://findarticles.com/p/articles/mi_qa3860/is_199907/ai_n8868497/ (last visited October 10, 2010). Also, the origins for this quote as to the “situation” and “difference” comes from an observation by Harry Church. H. Church, personal communication with J.W. McGillivray (Weyburn Arena Rink: Saskatchewan, 1944).

6.5 David Healy, C.A.M.H. and the University of Toronto

6.5.1 Protecting Academic Freedom?

Unlike Olivieri, the case of Dr. David Healy is relatively straightforward.¹⁴⁹⁸ Nonetheless, Healy's case is unique in that it was the first suit in Canada to use as a cause of action a right to the protection of "academic freedom." Healy is a world famous clinical psychiatrist. Beginning in July 1999, he was actively recruited by the Centre for Addiction and Mental Health and the University of Toronto. Healy eventually accepted the employment offer in September 2000. The offer that Healy had accepted was a cross-appointed position as Clinical Director, Mood and Anxiety Program, at C.A.M.H., and Professor of Psychiatry at U. of T. Alas, after a lecture Healy gave in Toronto, on November 30, 2000, his job offer at C.A.M.H. and U. of T. was rescinded.

Healy is a remarkably affable, brilliant, cogent, precise and amusing lecturer. This also makes his public persona highly visible in a media age and could, potentially, make him a highly dangerous critic to those who may feel threatened by his approach to psychopharmacology. As a psychiatrist and as a research academic, Healy is well versed in the history of psychiatry and the pharmaceutical industry: and, he is acutely aware that "mood disorders" are a complex human problem. Healy is critical of the widespread use of S.S.R.I.s, such as Prozac, Paxil and Zoloft, in cases involving patients with "mild" forms of depression.¹⁴⁹⁹ Being expertly familiar with psychopharmacology, Healy is also aware that this is a highly profitable sector for pharmaceutical manufacturers. As such, Healy was and is capable and cogent in presenting controversial material about

¹⁴⁹⁸ Yet, again, the issue in dispute is not directly about "patentable subject matter" in the patent system. Rather, it is about the proprietary incentive system and whether an academic researcher will comply with the interests of capital.

¹⁴⁹⁹ S.S.R.I.s are clinically and brand named as: Fluoxetine (Prozac®); Citalopram (Celexa®); Fluvoxamine (Luvox®); Paroxetine (Paxil®) and, Sertraline (Zoloft®)

psychiatric patient care and on trends affecting psychopharmacology. What makes Healy particularly dangerous from a pharmacological marketing point of view is that he takes his patients suffering seriously. As a clinical research physician, Healy is no “pill pusher:” he is no purveyor of “snake oil” and he is definitely not a “scion of an ancestral procession of idiots stretching back to the Missing Link.”¹⁵⁰⁰ If Healy’s position were merely the public rants of an unqualified cult-following celebrity, they could be and would be easily ignored.¹⁵⁰¹ Healy, on the other hand, is a well-respected and peer-reviewed published psychiatrist and is currently the Head of the Sub-Department of Psychological Medicine at Cardiff University.¹⁵⁰²

6.5.2 Healy’s University of Toronto Lecture

As the incoming director at C.A.M.H. and professor at U. of T., Healy was asked to deliver a lecture to an internationally attended colloquium at U. of T. on the history and future of psychiatry. Healy’s November 30th talk was entitled “Pharmacology and the Government of the Self.”¹⁵⁰³ It was a wide-ranging lecture that covered diverse areas as to the culture and history surrounding mental health. The lecture ranged from: the Enlightenment and its influence; the history of psychiatry; the anti-psychiatric movement; issues as to the “the colonisation of women’s minds by men”;¹⁵⁰⁴ and, “the colonisation

¹⁵⁰⁰ Twain, *supra* note 1170.

¹⁵⁰¹ S.P. Hinshaw, *The Mark of Shame: Stigma of Mental Illness and an Agenda for Change* (Oxford: Oxford University Press, 2007) at X. Hinshaw is referring to Tom Cruise and his ‘Scientologically’ motivated criticisms of psychiatry and mental health patients.

¹⁵⁰² Homepage, Professor David Healy, School of Medicine, Cardiff University, at: <http://medicine.cf.ac.uk/person/prof-david-thomas-healy/> (last visited December 1, 2010).

¹⁵⁰³ D. Healy, “Pharmacology and the Government of the Self” (Farmington Hills: Academy for the Study of the Psychoanalytic Arts, 200 at: <http://www.academyanalyticarts.org/healy.htm> (last visited November 10, 2010).

¹⁵⁰⁴ *Ibid.*, A recent example of this ‘quest’ to colonise women’s minds and bodies is the attempt to find the so-called female Viagra and the failure of the F.D.A. to approve drugs as sexist, see: E. Laan & L. Tiefer, “The sham drug idea of the year: ‘pink Viagra’” *The Los Angeles Times*, November 13, 2014, at: <http://www.latimes.com/opinion/op-ed/la-oe-laan-tiefer-pink-viagra-20141114-story.html> (last visited November 20, 2014). Laan and Tiefer highlight the 1994 misquoted and misrepresented statistics that the

of the minds of ethnic groups by white Europeans.”¹⁵⁰⁵ In addition, his lecture sought to discuss the rôle various drugs play in treating mental disorders and the rôle that pharmaceutical companies play in mental health.

The lecture referred to peer-reviewed studies that showed there was statistical evidence that antipsychotics and antidepressants were being overused and overprescribed to patients. In addition, Healy indicated that there was statistical evidence that certain antidepressants, specifically selective serotonin reuptake inhibitors (S.S.R.I.s), had a marked tendency to cause suicidality in some patients.¹⁵⁰⁶ As noted, after his talk, the cross appointment position at C.A.M.H. and U. of T. and were quickly rescinded.¹⁵⁰⁷

6.5.3 A Fate Worse Than Prozac?

Healy’s lecture, and the topics that he appeared to stress, caused concern amongst some of his future colleagues. In particular, it was Healy’s position that S.S.R.I.s, such as Prozac®, may be over-prescribed. Most disturbing was his claim that there appeared to be statistical evidence that S.S.R.I.s increased suicidality in some patients and that S.S.R.I.s may be responsible for a death a day in North America.

industry uses that 43% of American women (with a “yes or no” answer) were asked if they had “any kind of sexual problem... and whether the problem bothered them.” Needless to say, with such open-ended and dubious question, one is surprised that the figure is so low.

¹⁵⁰⁵ *Ibid.*

¹⁵⁰⁶ There were already studies existing ten years earlier questioning whether there was an increase in incidences of suicidality in S.S.R.I. users. See: M.H. Teicher, C. Glod & J.O. Cole, “Emergence of intense suicidal preoccupation during fluoxetine treatment” (1990) 147 *Amer. J. Psyc.* at 207-210; and, C.M. Beasley et al. “Fluoxetine and suicide: a meta-analysis of controlled trials of treatment of depression” (1991) 3(3) *B.M.J.* at 685-92. Healy’s subsequent work has shown that S.S.R.I.s could cause an increase in suicidality in a healthy control group of individuals not suffering from depression. Healy, *supra* note 1243 at 279. According to Healy, although he admits the statistics are somewhat suspect, a healthy person taking Zoloft is up to “2,000 times more likely to be suicidal than normal.” Also, see: P.R. Breggin, *Medication Madness: A Psychiatrist Exposes the Dangers of Mood-Altering Medications* (New York: St. Martin’s Press, 2008).

¹⁵⁰⁷ A. McIlroy “Prozac Critic Sees U of T Job Revoked” *Globe & Mail*, April 14, 2001. Also, see: K. Birchard, “University of Toronto Settles Dispute Over Academic Freedom and Company-sponsored Research” (2002) *Chron. H. Ed.* (November 1). Also, see: T. Booth & J.L. Turk, Letter to R. Birgeneau, President, University of Toronto, August 20, 2001 at: www.pharmapolitics.com/birgeneau.html (last visited September 15, 2014).

I happen to believe that Prozac and other SSRIs can lead to suicide. These drugs may have been responsible for 1 death for every day that “Prozac” has been on the market in North America. In all likelihood many of you will not agree with me on this – you haven’t seen the information that I have seen. However we can all agree that there has been a controversy about whether there may be a problem or not. What I believe you will also have to agree with is the fact since the controversy blew up, there has not been a single piece of research carried out to answer the questions of whether “Prozac” does cause suicide or not. Designed yes, carried out – no.¹⁵⁰⁸

After the lecture, at the “gala” dinner, celebrating 75 years of psychiatry at U. of T., Healy approached Dr. David Goldbloom, the physician in chief at the C.A.M.H., to discuss his lecture. Goldbloom was apoplectic. According to Healy, in a letter to Herb Solway, the chair of the Board of Trustees Ethics Committee at C.A.M.H.:

...I thought [this] would be a simple conversation with Dr Goldbloom. He was too livid to engage in any constructive discussion. But he managed to say that people only ever remembered three things from a talk and that all they would remember from mine were claims that Prozac could cause suicide, that Lilly knew about this, and that high dose antipsychotics had caused brain damage.¹⁵⁰⁹

Healy is not a neophyte when it comes to pharmacological funding and research in universities. He must have been aware that Eli Lilly was one of the research funders at C.A.M.H. and to U. of T.’s department of psychiatry.¹⁵¹⁰ That said, Healy was not concocting this information. The peer-reviewed studies on S.S.R.I.s were widely known

¹⁵⁰⁸ Healy, *supra* note 1504.

¹⁵⁰⁹ D. Healy, “Letter to Herb Solway, February 15, 2001, at: <http://www.pharmapolitics.com/garfinkel.html> (last visited December 10, 2010).

¹⁵¹⁰ According to Sarah Boseley, C.A.M.H. annually receives approximately \$1.5 million from Eli Lilly. S. Boseley, “Bitter Pill” *The Guardian*, May 7, 2001, at: <http://www.guardian.co.uk/education/2001/may/07/medicalscience.highereducation> (last visited September 30, 2010). Recently, C.A.M.H. has come under fire, rightly or wrongly, for not following up on a donator’s request that his million dollar donation be spent on research for mental health and workplace safety: S. Hudes, “Philanthropist ‘questioned the credibility’ of CAMH before rescinding donation” *The Toronto Star*, October 1, 2016, at: <https://www.thestar.com/news/gta/2016/10/01/philanthropist-questioned-the-credibility-of-camh-before-rescinding-donation.html> (last visited October 2, 2016).

and Goldbloom must be aware that “[f]acts do not cease to exist because they are ignored.”¹⁵¹¹

Healy would have known that some – perhaps – many or most of his future colleagues would disagree – perhaps strongly – with his opinions and be sceptical of the evidence he offered during his lecture. Yet, as an exercise in free and open dialogue and inquiry within an academic setting, one would hope that the subject matter of the lecture would be widely debated. What Healy perhaps did not realise was that he was challenging vested institutional and corporately connected interests at U. of T., interests that had substantial links and allegiances to Ely Lilly. As executive director of C.A.U.T., Jim Turk delicately put it: “Healy’s presentation received the highest participant evaluation for content of the nine presenters and panels, it must have touched a sore nerve.”¹⁵¹²

6.5.4 The “Bestselling Drug of All Time” (Next to the Sale of Aspirin and Marijuana?)

As the brand-name patent holder of the S.S.R.I. Prozac, Ely Lilly has been referred to as the producer of the “bestselling drug of all time.”¹⁵¹³ Prozac, and other S.S.R.I. prescription drugs, have been estimated to have been exposed to one in ten Americans. In 2001, Prozac had an annual sale of \$2.6 billion.¹⁵¹⁴ Prozac is popular and it is profitable and many psychiatrists have found various S.S.R.I.s useful and helpful to their patients. Thus, it is not surprising that Healy’s comments and criticisms as to

¹⁵¹¹ A. Huxley, “Proper Studies” in *Complete Essays – Vol. 2, 1926-1929* (Chicago: Ivan R. Dee, 2000) at 248.

¹⁵¹² Jim Turk cited in C.A.U.T., “Academic Freedom in Jeopardy at Toronto” (2001) 48(5) C.A.U.T. Bulletin” at:

<http://www.cautbulletin.ca/default.asp?SectionID=0&SectionName=&VolID=176&VolumeName=No%205&VolumeStartDate=May%201,%202001&EditionID=20&EditionName=Vol%2048&EditionStartDate=January%2001,%202001&ArticleID=0>.

¹⁵¹³ Boseley, *supra* note 1510.

¹⁵¹⁴ *Ibid.*

Prozac's efficacy and its link to suicidality would be greeted by some scepticism during his lecture. As an academic dispute, the debate surrounding S.S.R.I.s are a legitimate topic: one open for further study and debate. Experts may disagree about S.S.R.I.s – and their efficacy – but this is a legitimate concern for discussion. A university, which has a tradition of protecting open and honest¹⁵¹⁵ debate, has been and is the appropriate forum for this debate.

Yet, representing C.A.M.H. and U. of T., Goldbloom did not hesitate and his response to Healy's lecture was swift. Healy's presentation had clearly affected Goldbloom's professional opinion of him. By December 7, 2000, Goldbloom emailed Healy stating that:

Essentially, we believe that it is not a good fit between you and the role as leader of an academic program in mood and anxiety disorders at the centre and in relation to the university.... This view was solidified by your recent appearance at the centre in the context of an academic lecture. While you are held in high regard as a scholar of the history of modern psychiatry, we do not feel your approach is compatible with the goals for development of the academic and clinical resource that we have.¹⁵¹⁶

What is remarkable is that Healy is not a radical anti-psychiatric psychiatrist.¹⁵¹⁷ It is not that Healy opposes the use of drugs in treating mental disorders. It is just that he does not

¹⁵¹⁵ The use of the term "honest" is used loosely because one cannot help but remember the ludicrous work of Dr. Phillippe Rushton, at the University of Western Ontario. See: J.P. Rushton & A.R. Jensen, "Thirty Years of Research on Race Differences in Cognitive Ability" (2005) 11 *Psyc. Pub. Pol. & L.* at 235. Academic freedom is a double-edged sword. In Rushton's case, he exercised his academic freedom to promote the most odious of positions surrounding "race" and human intelligence. Racism permeates the work of Rushton and, as much as one must hate his position, he retained his "offer" of an academic post. Healy, by voicing a measured and rational voice around mental health (something that is dubitable in Rushton's case), S.S.R.I.s, and the pharmaceutical industry, lost his position.

¹⁵¹⁶ David Goldbloom cited by D. Healy, *Let Them Eat Prozac: The Unhealthy Relationship Between Pharmaceutical Industry and Depression* (New York: New York University Press, 2004) at 216.

¹⁵¹⁷ See: R.D. Lang, *The Self and Others* (London: Tavistock Publications, 1961); *The Politics of Experience and the Bird of Paradise* (Harmondsworth: Penguin, 1967).

think that they are merely the only solution amongst options. Indeed, S.S.R.I.s play an important rôle in the risk management of certain psychiatric patients.

To a business like Eli Lilly with \$2.6 billion in revenue in 2001, Healy's opinions as to S.S.R.I.s, and as a professor and a director at a prominent North American mental health institute, could pose a problem and be a platform to express concerns as to its use. By expressing concerns about "modern pharmaceutical companies and corporations hav[ing] grown to be the most profitable organisations on the planet... [and being] run by business managers who rotate in from Big Oil or Big Tobacco," Healy's views are disturbing to those who wish he would use language that is more neutral. By holding that it is usually the same lawyers who advised Big Oil and Big Tobacco that are now advising Big Pharma, it is not surprising that Healy sees there is a similar pattern of "legal liabilities" appearing in the industry. Albeit, speculating that a person a day commits suicide in North America as a result of using Prozac is cold comfort to Eli Lilly's in-house counsel. Put differently, Healy's estimate of a suicide a day over the life of Prozac's patent would make most members of Eli Lilly's board of directors uneasy as to the company's liability. Speculating aloud that approximately 7,300 individuals over a twenty-year patent period will commit suicide, puts a dent in Eli Lilly's marketing budget. As the C.A.U.T. framed the matter, when Healy accepted the offer of employment at C.A.M.H. and U. of T., he understood that some of his professional opinions would be put to the test, but "he had no idea that academic freedom was not part of the deal."¹⁵¹⁸

¹⁵¹⁸ C.A.U.T. "David Healy" in Issues and Campaigns (Ottawa: C.A.U.T., 2002) at: <http://www.caut.ca/pages.asp?page=201> (November 10, 2010).

6.5.5 Brand Protection and Suicidality

Eli Lilly has protected its brand Prozac vigorously.¹⁵¹⁹ In lieu of Healy's declaration and analysis, subsequent data as to suicidality and the efficacy of S.S.R.I.s were released in the United Kingdom.¹⁵²⁰ Nonetheless, the use of S.S.R.I.s in children signalled a new potential market for Prozac. In 2003, Prozac was approved in children and adolescents in the U.S. In 2004, the Centers for Disease Control (C.D.C.) noted an 8 percent increase in suicide in 10 to 24-year-olds – the single largest increase in suicide in this age group in 15 years.¹⁵²¹ Combined with other studies, serious doubts as to the safe use and efficacy of antidepressants in children have come to light.¹⁵²² Further

¹⁵¹⁹ In 2000, in response to published articles linking suicidality to Prozac, Eli Lilly withdrew its annual donation of \$25,000 to the Hastings Institute. See: A. McIlroy, "Prozac critic sees U of T job revoked" *The Globe and Mail*, April 14, 2001, at:

<http://www.antidepressantsfacts.com/prozaccriticU-T.htm>. One of the articles critical of Prozac published by the Hastings Institute was by Healy. See: D. Healy, "Good Science or Good Business?" (2000) 30(2) *The Hastings Rep.* at 19-22.

¹⁵²⁰ See: D. Gunnell & D. Ashby, "Antidepressants and Suicide: What is the Balance of Benefit and Harm" (2004) 329 *B.M.J.* at 34; C. Medawar *et. al.*, "Paroxetine, Panorama and user reporting of ADRs: Consumer intelligence matters in clinical practice and post-marketing drug surveillance" (2002) 15 *Int. J. Risk Saf. Med.* at 161-9; D. Healy, "Lines of evidence on the risks of suicide with selective serotonin reuptake inhibitors" (2003) 72 *Psychother. Psychosom.* at 71-79.

¹⁵²¹ C.D.C. "Suicide Trends Among Youths and Young Adults Aged 10-24 Years - United States, 1990-2004" (2007) 56(35) *Morbidity and Mortality Weekly Report* at: 905. To the best of my knowledge, there are few studies that link Prozac/S.S.R.I. use to this group of suicides – a disturbing fact in itself. Also, see: S. Kirkey, "Threefold increase in children taking Prozac" *The National Post*, February 19, 2014, at A8.

¹⁵²² See: J. Le Noury, *et. al.* "Restoring Study 329: efficacy and harms of paroxetine and imipramine in treatment of major depression in adolescence" (2015) 351 *B.M.J.* Also, see: J.N. Jureidini, *et. al.* "Efficacy and Safety of Antidepressants for Children and Adolescents" (2004) 328 *B.M.J.* at 879-883. Also, see: Editorial, "Depressing Research" (2004) 363 *Lancet* at: 1335. Also, see: Y. Molero, *et. al.*, "Selective Serotonin Reuptake Inhibitors and Violent Crime: A Cohort Study" (2015) *PLOS* at:

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001875> (last visited September 17, 2015). Also, see: K. Kelland, "Young people taking antidepressants more prone to violence: study" *The Globe and Mail*, September 16, 2015, at: <http://www.theglobeandmail.com/life/health-and-fitness/health/study-finds-young-people-on-antidepressants-more-prone-to-violence/article26382929/> (last visited September 17, 2015). Also, see: C. Weeks, "Some antidepressants linked to aggression and suicide in young people, study says" *The Globe and Mail*, January 27, 2016, at:

<http://www.theglobeandmail.com/life/health-and-fitness/health/some-antidepressants-linked-to-aggression-and-suicide-in-young-people-study-says/article28422986/> (last visited January 28, 2016). Also, see: A. Cipriani, *et. al.*, "Comparative efficacy and tolerability of antidepressants for major depressive disorder in children and adolescents: a network meta-analysis" (2016) *The Lancet On-Line* at:

[http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)30385-3.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)30385-3.pdf) (last visited June 10, 2016). Also, see: M. Cheng, "Most antidepressants don't work for young patients, study says" *The Toronto Star*,

information was released in the United States calling into question the efficacious use of S.S.R.I.s in children and the increase in suicidality in children.¹⁵²³ One of Goldbloom's central complaints in late 2000 to Healy was that his talk would leave the impression that Prozac causes suicides and that Eli Lilly knew this (Healy never made that claim). By 2003, Eli Lilly could not have ignored ("they knew") that there was mounting evidence that linked suicidality to Prozac and the C.D.C.'s own findings.

Healy's dispute with C.A.M.H. and U. of T. was settled out of court, in April 2002, seven months after it began.¹⁵²⁴ Arguably, the fact that Healy's case settled so quickly and in his favour is somewhat unfortunate. In one sense, it is unfortunate in that greater public scrutiny surrounding the issues of "academic freedom" and S.S.R.I. use was and are needed. Nonetheless, the president of the C.A.U.T., Vic Catano, stated that "the settlement [w]as a complete vindication for Dr. Healy."¹⁵²⁵ With F.D.A. approval of Prozac for children in 2003, it is purely speculative whether Healy's presence at C.A.M.H. and U. of T. would have made a difference in the psychiatric and existential outcomes of these future 'users.' As senior drug safety researcher at the F.D.A., David Graham noted that the "FDA is not able to adequately protect the American public. It's more interested in protecting the interests of industry."¹⁵²⁶

June 8, 2016, at: <https://www.thestar.com/news/world/2016/06/08/study-most-antidepressants-dont-work-for-young-patients.html> (last visited June 9, 2016).

¹⁵²³ Memo from A.D. Mosholder, "Suicidality in pediatric clinical trials with paroxetine and other antidepressant drugs: follow-up to 9-4-03 consult" (2004) Alliance for Human Research Protection at: <http://www.ahrp.org/risks/SSRImosholder/index.html> (last visited October 15, 2005).

¹⁵²⁴ See: N. Keung, "MS settles lawsuit with U of T over job" Toronto Star, May 1, 2002.

¹⁵²⁵ C.A.U.T. "Settlement in Healy Dispute a 'Vindication'" Issues and Campaigns - C.A.U.T., April 29, 2002 at: <http://www.caut.ca/pages.asp?page=378&lang=1> (last visited October 10, 2010).

¹⁵²⁶ M. Loudon, "The FDA Exposed: An Interview with Dr. David Graham, the Vioxx Whistleblower" Natural News, August 30, 2005 at:

http://www.naturalnews.com/011401_Dr_David_Graham_the_FDA.html (last visited February 15, 2011).

Also, see: R. Smith, "Medical Journals Are an Extension of the Marketing Arm of Pharmaceutical Companies" (2005) 2 P.L.O.S. Med. at:

<http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0020138> (last visited May 1, 2006).

6.5.6 Academic Freedom in a Post-Prozac Era

The issue of academic freedom in the Olivieri and Healy cases tell us much about how *not* to fund research on our university campuses. The problem of government underfunding of universities and university research is generally “downsized” to the adage of making universities ‘act more like a businesses.’ That is, market solutions are the right solutions to curb ‘inefficiencies’ and make universities more accountable. Through an incentive system based on the – ubiquitous and ill defined – ‘business model’ and patent system, circumstances make research academics into reckless ‘academic entrepreneurs;’ in addition, scientific progress and its objectives become distorted. That is, market discipline(s) takes away a researcher’s independence. Ironically, for a patent system that purports to promote novelty, creativity and innovation, independence and practicality, the kind that Brunelleschi ‘genius’ sought to protect, we have not done well. In pharmacological research, the current system implicitly, explicitly, and slanderously undermines independent researchers and the very foundations that support their work and that make scientific breakthroughs possible.

The older flawed model of medical research in universities was not perfect. Yet, compared to the ‘innovating’ model promoted by entrepreneurial-academic-industrial (“complex”) partnerships, one cannot help but see the older model somewhat nostalgically. The market argument assumes that by allowing private donations and contracts to have ‘more of a say’ in the direction of universities and their programmes, we will produce usable research for what the market needs and that the market will do so in a timely fashion. If the market needs more M.B.A.s, M.D.s, computer programmers or

Also, see: J. Lenzer, “Drug secrets: What the FDA isn’t telling” Slate, September 27, 2005 at: <http://www.slate.com/id/2126918/> (last visited February 10, 2010).

drugs, then market forces ought to direct decision-making. Simply, academic freedom, if it is exercised at all, must accommodate itself to the new environment. Needless to say, if one sees the world through this lens, then rational objections to it are seen as trivial and inconsequential.

6.5.7 Corporate Tendrils in University Research

In the case of Healy, C.A.M.H., U. of T. and Prozac, what becomes an unavoidable conclusion are the deep tendrils that are embedded in the university research system and the pharmaceutical industry. In hindsight, it may be simple to say that this was just a misunderstanding: a skirmish of opposing ideas, unclear relationships and temporary clashes between belief systems.¹⁵²⁷ Yet, Healy maintained throughout the dispute that one of his concerns was as to what happened to his “academic freedom generally.”¹⁵²⁸ Also, Healy, unlike Olivieri, was not fighting with his back up against the wall. That is, he was less materially vulnerable than Olivieri. He returned to Cardiff and has thrived. Olivieri’s research career lost institutional support from U. of T. and H.S.C. and almost cost her academic posting and her professional license. Her actions inflamed Apotex management, and, for all intents and purposes, made her a pariah at least as far as securing future private research funding. The new ‘academic-entrepreneurial model’ that wants to fast-track drugs, at least for Olivieri, has been a disaster.¹⁵²⁹

¹⁵²⁷ See: Shuchman, *supra* note 1451.

¹⁵²⁸ C.A.U.T. “Law Suit Launched Against U of T and CAMH in Dr. David Healy Controversy” in Issues and Campaigns (Ottawa: C.A.U.T., 2001) at: <http://www.caut.ca/pages.asp?page=380&lang=1> (last visited October 5, 2010).

¹⁵²⁹ J. McLean, “Fast-tracked new drugs more dangerous, study finds” The Toronto Star, October 8, 2012, at: <http://www.thestar.com/news/investigations/adhd/article/1268288--fast-tracked-new-drugs-more-dangerous-study-finds> (last visited November 4, 2012). Also, see: T. Walkom: “The link between drug fast-tracking and Canada’s XL meat scare” The Toronto Star, October 9, 2012, at: <http://www.thestar.com/news/canada/politics/article/1268653--walkom-the-link-between-drug-fast-tracking-and-canada-s-xl-meat-scare> (last visited November 4, 2012).

In the case of Prozac, the billion of dollars in prescriptions, which is just the tip of the iceberg as to overall mental health care costs in treating ‘mild’ depression, has been a debacle. In North America, the issue of S.S.R.I.s link to increased suicidality in adults, children and adolescence and to homicides are a pharmacological disaster that is comparable to and larger numerically than the thalidomide disaster.¹⁵³⁰ The case of Prozac and other S.S.R.I. incidents can appear to be anecdotal, but their impact has been life altering and ending for many. Eli Lilly’s attempt to control the reception of the drug, thus, maintaining shareholder value, has been appalling. Tramping on Healy’s academic freedom is one thing, but jury tampering is another.¹⁵³¹

¹⁵³⁰ See: I. Peritz, “The fight of their lives: After years of neglect, Canadian Thalidomide survivors make a plea for help” *The Globe and Mail*, November 21, 2014, at: <http://www.theglobeandmail.com/news/national/the-aftermath-of-thalidomide/article21689771/> (last visited November 23, 2014). Also, see: S. Chase & I. Peritz, “A terrible series of events” *The Globe and Mail*, November 27, 2014, at 1&16. Also, see: Deutsche Welle – Staff, “Thalidomide Victims Demand More Compensation, Inquest” *Deutsche Welle*, January 7, 2008, at: <http://www.dw-world.de/dw/article/0,,3042708,00.html> (last visited October 5, 2010). According to *Deutsche Welle*, there were worldwide 10,000 infant thalidomide victims: approximately, 5,000 being born in Germany. Also, see: “Where is Canada’s apology?” *The Globe and Mail*, September 4, 2012, at L6. Also, see: I. Peritz, “Drug firms refused to contribute to fund for thalidomide survivors” *The Globe and Mail*, July 10, 2016, at: <http://www.theglobeandmail.com/news/national/drug-firms-refused-to-contribute-to-fund-for-thalidomide-survivors/article30848096/> (last visited July 11, 2016).

¹⁵³¹ *Fentress v. Shea Communications*, No. 90-CI-06033 (Jefferson. Cir. Ct., Ky. March 29, 1991). In *Fentress*, Joseph Wesbecker, a 47-year old pressman on disability for mental illness, committed murder/suicide and it was linked his prescription to Prozac. On September 14, 1989, Wesbecker entered his former workplace, Standard Gravure, and shot twenty people. He killed eight, injured twelve, and, then, committed suicide. Police linked his actions to Prozac. In the subsequent lawsuit brought against Eli Lilly, a jury found, 9 to 3, in Eli Lilly’s favour. What was not known at the time was that Eli Lilly had “bought off the plaintiffs.” That is Eli Lilly “bribed” the plaintiffs not to introduce critical evidence at trial. The missing critical evidence not introduced at trial sought to causally link Prozac’s use to the homicides and to suicidality. In *Fentress*, in the strictest sense, Eli Lilly cannot be accused of “jury tampering” but “plaintiff tampering” – this is, even to a cynical mind, a somewhat more odious activity. See: J. Cornwell, *The Power to Harm: Mind, Murder, and Drugs on Trial* (Allen Lane and Penguin, 1996). Also, see: B.E. Levine, *Commonsense Rebellion: Taking Back Your Life from Drugs, Shrinks, Corporations and a World Gone Crazy* (New York: Continuum, 2003) at: 234. As Bruce Levine put it: the judge in the trial “smelled a rat and demanded an investigation – and the verdict was changed.” In a later interview, as to *Fentress*, Judge John Potter held that he thought there was something inherently wrong for a defendant to “pay money to the other side to pull their punches” – what we know as “throwing the fight.” Mark Ames, in *Going Postal*, has proposed an alternate perspective as to mass rage and the murders committed by “disgruntled workers” or students. Ames suggests that work and school related mass shooting have a social cause. Ames argues that Wesbecker and other murderous rampages are a lashing out that is rooted in neoliberal economic restructuring in Reagan’s America. See: M. Ames, *Going Postal: Rage, Murder, and Rebellion: From Reagan’s Workplaces to Clinton’s Columbine and Beyond* (Brooklyn:

6.5.8 Placebo or Cure?

Recent long term studies have been released, conveniently after the expiration of Eli Lilly's patent on Prozac, that show that Prozac is about as effective as a placebo.¹⁵³² It appears that for people suffering from 'mild' depression that the prescription and consumption of Prozac can be simply offset by an hour of exercise. For the life of Prozac's twenty-year patent, Eli Lilly protected its "brand" – its turf – with a dedication that would make most honest criminals blush. It is difficult to lay the blame of deteriorating pharmaceutical conduct on a global fraud,¹⁵³³ but one could begin to see a pattern of behaviour and might make a logical inference from such a position.¹⁵³⁴ When

Soft Skull Press, 2005). It seems probable that there could be a combination of factors; that is, unemployment, alienation and/or depression leading to prescription drug use and violence. Also, see: P. Breggin, "Suicidality, Violence and Mania Caused by Selective Serotonin Reuptake Inhibitors (SSRIs): A Review and Analysis" (2003/2004) 16 Int'l J. Risk & Saft. Med. at 31-49. For further litigation as to S.S.R.I.s and their link to murder/suicides, see: *Forsyth v. Eli Lilly & Co.*, 904 F. Supp. 1153 (D. Haw. 1995). In *Forsyth*, William Forsyth, ten days after going on Prozac, stabbed his wife fifteen times before impaling himself on a serrated knife. Also, see: *Tobin v. SmithKline Beecham Pharmaceuticals*, 164 F. Supp. 2d 1278 (D.Wy. 2001). In *Tobin*, Don Schell, forty-eight hours after going on Paxil, loaded two guns and proceeded to shoot his wife, daughter and granddaughter through their heads. Then, he turned one of the guns on himself and shot himself through the head.

¹⁵³² After two decades of fleecing the pockets of consumers, the wonder drug was nothing but "snake-oil" in a post-modern pill form. According to various peer-reviewed articles, S.S.R.I.s are of little clinical value – at least in the way they are typically used when prescribed to the general public. See: J.C. Fournier *et. al.*, "Antidepressant Drug Effects and Depression Severity: A Patient-Level Meta-analysis" (2010) 303(1) J.A.M.A. at 47-53; I. Kirsch *et. al.* "Initial Severity and Antidepressant Benefits: A Meta-analysis of Data Submitted to the Food and Drug Administration" (2008) 5 PLoS Med. at 45. Also, see: I. Kirsch, *The Emperor's New Drugs: Exploding the Antidepressant Myth* (New York: Basic Books, 2010). Arguably, cases of 'mild' depression are as sophisticated and complex as the mass marketing strategies that are deployed to capture this market and its "market share" and, partly, what make Prozac and other S.S.R.I.s so popular – and problematic. Ironically, in Canadian patent law *utility* is a specific concept that means that an invention must meet two requirements: 1) it is not useful if it does not operate; or, 2) it does not do what the outlined specification promises that it will do. See: *Consolboard Inc. v. MacMillan Bloedel (Saskatchewan) Ltd.* (1981), 56 C.P.R. (2d) 145, 122 D.L.R. (3d) 203 (S.C.C.). It could be argued that Prozac has little or no utility; of course, contingent on the individual.

¹⁵³³ M. Goozner, "Revolving Door – Former U.S. Attorney Now Advising Big PhRMA on How to Avoid Meeting His Successors" GoozNews, September 13, 2010, at: <http://gooznews.com/?p=191> (last visited September 24, 2010). Goozner provides an interesting list of 14 settlements reached by U.S. Attorney Michael Loucks. Loucks's office settled these 14 fraud cases that were in the billions of dollars.

¹⁵³⁴ S. Almashat, *et. al.* "Rapidly Increasing Criminal and Civil Monetary Penalties Against the Pharmaceutical Industry: 1991 to 2010" (Washington: Public Citizen, December 16, 2010) at <http://www.citizen.org/hrg1924> (last visited January 10, 2011). According to Public Citizen, the pharmaceutical industry is now a bigger "defrauder" than the defence industry in the U.S. This means that "25 percent of the total federal False Claims Act (FCA) payouts over the past 10 years have originated in

legal containment fails, it appears that players in the pharmaceutical industry will go the extra distance to maintain market share. If massive criminal fraud does not deter Big Pharma, why would the infringement of somebody's academic freedom? It is within this context that academic freedom and the independence of university researchers find themselves and must be considered.

6.6 Conclusion

[T]he penny-wisdom of Gladstonian finance and to a state system which "could not afford" hospitals, open spaces, noble buildings, even the preservation of its ancient monuments, far less the splendours of music and the drama... [means that all of our futures are] consigned to the private charity or magnanimity of improvident individuals.

J.M. Keynes¹⁵³⁵

So much has changed and, yet, much remains the same. The search for life-saving drugs remains to the pharmaceutical industry a business and not a charity.¹⁵³⁶ As

the pharmaceutical industry. The defense industry, once the biggest defrauder of government, accounted for only 11 percent." Moreover, only "[f]our companies (GlaxoSmithKline, Pfizer, Eli Lilly, and Schering-Plough) account... for more than half (53 percent or \$10.5 billion) of all financial penalties imposed over the past two decades. These leading violators were among the world's largest pharmaceutical companies." Also, see: K. Thomas & M.S. Schmit, "Glaxo Agrees to Pay \$3 Billion in Fraud Settlement" The New York Times, July 2, 2012 at: http://www.nytimes.com/2012/07/03/business/glaxosmithkline-agrees-to-pay-3-billion-in-fraud-settlement.html?_r=1&hp (last visited July 2, 2012). Also, see: D. Ingram & R. Krasny, "Johnson & Johnson to pay \$2.2 billion to end U.S. drug probes" Reuters, November 4, 2013, at: <http://www.reuters.com/article/2013/11/04/us-jnj-settlement-idUSBRE9A30MM20131104> (last visited December 1, 2013). This is the case where Risperdal, an anti-psychotic, was marketed off label for dementia patients. Also, see: K. Thomas, "J.&J. to Pay \$2.2 Billion in Risperdal Settlement" The New York Times, November 4, 2013, at: http://www.nytimes.com/2013/11/05/business/johnson-johnson-to-settle-risperdal-improper-marketing-case.html?_r=0 (last visited January 3, 2014). As Al Capone put it: "Americanism, call it capitalism, ... gives to each and every one of us a great opportunity if we only seize it with both hands and make the most of it." C. Cockburn, "Mr. Capone, Philosopher" in *Cockburn Sums Up* (London: Quartet Books, 1981) at 82. This seemingly puts things into perspective: what is a little fraud and 'academic freedom infringement' amongst friends? As the saying goes: "If a thing is worth having, it's worth cheating for." M. West, *My Little Chickadee* (Hollywood: Universal Studios, 1940). There is a dispute as to the authorship of this screenplay, with W.C. Fields sharing credit. Knowing the acerbic wit of Mae West, one could reasonably suggest that the line was solely authored by her. Also, see: S.D. Levitt & S.J. Dubner, *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything* (New York: Harper Perennial, 2009) at 21.

¹⁵³⁵ J.M. Keynes, *The General Theory of Employment, Interest and Money* (New Delhi: Atlantic Publishers & Distributors, 2006) at 330.

businesses, they may make public declarations and displays about being firms that are part of a higher calling. They make various assertions and claim that they are doing the work of the angels, but they are not.¹⁵³⁷ Yet, they understand how to recruit willing research scientists, because, at the end of the day, the dull humdrum of everyday economic life must be satisfied. But does it produce results? For Healy, “[d]oes this put academia at odds with the new health care corporations?”¹⁵³⁸

Far from it! For twenty years now, most universities have actively encouraged their researchers to patent anything produced in or discovered in university laboratories, or built laboratories jointly with pharmaceutical or other corporations. The products of research are likely to be sold to the highest bidder. The scientific rush to make important research findings public has been checked in many universities and hospitals by patent officers. Protesting academics are likely to fall foul of their institutions.¹⁵³⁹

If this is in question – in an age of decreased public funding – ‘falling afoul’ amounts to career suicide and one only need to ask Olivieri for the answer.

According to Healy and Michael Thase, the influence of the pharmaceutical industry on academic research and medicine is an almost all-encompassing and systemic problem. Healy and Thase point out that: “Almost 90% of authors published in the Journal of the American Medical Association have received research funding from, or

¹⁵³⁶ G. Harris, “India’s Efforts to Aid Poor Worry Drug Makers” The New York Times, December 29, 2013, at: <http://www.nytimes.com/2013/12/30/health/indias-efforts-to-aid-poor-worry-drugmakers.html?src=recg&r=1&> (last visited January 2, 2014).

¹⁵³⁷ Silverstein, *supra* note 1430 at 13-19. For the other side of the coin, see: Lilly Canada, “Our Brand Promise and Core Values” at: <http://www.lilly.ca/en?t=/contentManager/selectCatalog&i=1306943185696&l=0&e=UTF-8&ParentID=1245711063268&intro=1&startRow=0&active=no> (last visited April 1, 2011). Also, see: Dr. Daniel Vasella cited H. Brody, *Hooked: Ethics, the Medical Profession, and the Pharmaceutical Industry* (Lanham: Rowman & Littlefield, 2008) at 13. According to Vasella, C.E.O. of Novartis, “Our goal is to benefit the human race in a unique way; we want to be true innovators, bringing new, important drugs to our patients, drugs that cure and prevent diseases, drugs that improve the quality of life.”

¹⁵³⁸ Healy, *supra* note 1243 at 12.

¹⁵³⁹ Healy, *supra* note 1243 at 12.

acted as a consultant for, a drug company.”¹⁵⁴⁰ Moreover, the practice of “ghost-writing” studies and articles,¹⁵⁴¹ suppressing poor results and touting the benefits of certain drugs is notorious in medical journals.¹⁵⁴² From the 1970s and 1980s onward, pharmaceutical companies have “pharmed out”¹⁵⁴³ and financially “funded” many of the articles and studies written for publication in peer-reviewed journals: that is, many of these articles have been authored by ghost-writers.¹⁵⁴⁴ As such, hairy-shirted ghost-writers took on the rôle of scientists and scientist took on the rôle of “‘ghost’ scientists.” As Healy puts it:

The other side of this coin is that many of the most senior figures in the field are becoming “ghost” scientists; an ever-larger part of their work is not theirs in any meaningful sense of the word. These academics become opinion leaders in a therapeutics field because they appear to have their names on a larger proportion of the literature in the most prestigious journals than do others, and because they get asked to international meetings to present the data, with which they may not have firsthand acquaintance.¹⁵⁴⁵

¹⁵⁴⁰ D. Healy & M.E. Thase, “Is Academic Psychiatry For Sale?” (2003) *Brit. J. Psych.* at 388.

¹⁵⁴¹ Healy, *supra* note 1243. Also, see: A.J. Fugh-Berman, “The Haunting of Medical Journals: How Ghostwriting Sold ‘HRT’” “PLoS” September 7, 2010, at: <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000335> (last visited October 21, 2010).

¹⁵⁴² See: A. Becker, *et. al.*, “The association between a journal’s source of revenue and the drug recommendations made in the articles it publishes” (2011) 185(5) *C.A.M.J.* at 544-548. Also, see: D. Rennie & L.A. Bero, “Throw it away, Sam: the controlled circulation journals” (1990) 155 *A.J.R. Am. J. Roentgenol* at: 889-892. Also, see: L.S. Friedman & E.D. Richter, “Relationship between conflicts of interest and research results” (2004) 19 *J. Gen. Intern. Med.* at 51-56. Also, see: O. Dyer, “Journal rejects article after objections from marketing department” (2004) 328 *B.J.M.* at 244. Also, see: J. Lexchin, *et. al.*, “Pharmaceutical industry sponsorship and research outcome and quality: systemic review” (2003) 326 *B.M.J.* at 1167-1170. Also, see: M.C. Oved, “Canadian medical journals hijacked for junk science” *The Toronto Star*, September 29, 2016, at: <https://www.thestar.com/news/world/2016/09/29/canadian-medical-journals-hijacked-for-junk-science.html> (last visited September 30, 2016).

¹⁵⁴³ PharmedOut, “Journal Articles - Publications” (Georgetown: PharmedOut Publications, 2010) at: <http://www.pharmedout.org/publications.htm> (last visited September 9, 2010).

¹⁵⁴⁴ S. Gaidos, “Ghostwriters in the Medical Literature” *Science*, November 12, 2010, at: http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2010_11_12/caredit.a1000110 (last visited November 17, 2010). Also, see: D. Gutierrez, “Busted: Wyeth Used Ghostwriters To Place Over 40 ‘Scientific’ Articles In Medical Journals” July 8, 2010, *Natural News* at: http://www.naturalnews.com/029160_medical_journals_ghostwriters.html (last visited September 10, 2010). Also, see: C.B.S., “Ghostwriting Articles for Medical Journals” *C.B.S. News*, February 11, 2009, at: <http://www.cbsnews.com/stories/2002/01/31/health/main327012.shtml> (last visited March 13, 2010).

¹⁵⁴⁵ Healy, *supra* note 1516 at 118.

Hence, is there any wonder that conflict of interest and the uncertain nature of the quality of the research being produced comes into question. For example, in 2004, Richard Horton, the editor-in-chief of *The Lancet*, baldly stated that: “Journals have devolved into information laundering operations for the pharmaceutical industry.”¹⁵⁴⁶ To be sure, it has led critic Ben Goldacre to suggest that all papers have “film credits”¹⁵⁴⁷ at the end of papers listing all those involved in its publication.

The contemporary system of intellectual property in university research, in particular with medical research, appears to hinder innovation and scientific progress. Rather than promoting academic freedom, the incentive system built around patents creates and inculcates an atmosphere of intimidation and secrecy.¹⁵⁴⁸ This *new* incentive model flies in the face of the past. In North America, the post-war economy was stimulated by the growth of public funding in public education. It opened affordable access to universities and, in turn, this was accompanied by increased public spending on university research. This was not done by the market. Any serious analysis indicates that proponents of the ‘free market system’ in the post-war education and research system disliked public spending then as much as they do now. Yet, they do not object to public spending. What they object to is public spending for public benefit. In an age dominated by financial manipulation and short-term corporate profit, policies surrounding public spending must *always-already* have a way of trickling into the hands of private owners.

¹⁵⁴⁶ R. Horton, “The Dawn of McScience” *New York Review of Books*, March 11, 2004, at 7-9. Also, see: Influence of the Pharmaceutical Industry, *Formal Minutes, Oral and Written Evidence, Report of Session, House of Commons, Health Committee, Vol. 2* (London: Stationary Office, 2005) at 239. Also, see: M. Brezis, “Big pharma and health care: unsolvable conflict of interests between private enterprise and public health” (2008) 45(2) *Isr. J. Psychiatry Relat. Sci.* at 83.

¹⁵⁴⁷ B. Goldacre, *Bad Pharma: How Drug Companies Mislead Doctors and Harm Patients* (New York: Farber & Farber, 2012) at 302.

¹⁵⁴⁸ K. Birchard, “U of Toronto settles dispute over academic freedom and company-sponsored research” (2002) *Chron. Higher Ed.*; Nathan & Weatherall, *supra* note 1480.

In the environment of the corporatised university, one that abuses academic freedom, the patent system is an essential tool and ritual for this transubstantiation: it is a sacrament that transforms water into wine and knowledge into property and property into profit. Whether it saves souls or damns them is another matter.

7 CHAPTER SEVEN – CONCLUSION

7.1 A Summary

Everything has its limit – iron ore cannot be educated into gold.

Mark Twain¹⁵⁴⁹

No human being is constituted to know the truth, the whole truth, and nothing but the truth; and even the best of men must be content with fragments, with partial glimpses, never the full fruition.

William Osler¹⁵⁵⁰

When a man talks of acquiring invention and of learning how to produce original conception he must expect to be called a fool by men of understanding; but such a hired knave cares not for the few... [h]is eye is on... the money.

William Blake¹⁵⁵¹

Pick yourself up; dust yourself off; start all over again.

Dorothy Fields¹⁵⁵²

Between or in-between the above positions are the spaces that this study has sought to embrace: that is, it has attempted to uncover the successful conditions for pharmaceutical research and development to occur in the university and promote academic freedom. In this examination of academic freedom, intellectual property and the university, it is difficult to come to a *definitive* conclusion. That said, this study has raised more questions than it has answered. Indeed, that seems completely appropriate. As pharmaceutical research becomes more expensive and targeted, future research that

¹⁵⁴⁹ M. Twain, "What is Man?" in *The Complete Essays of Mark Twain* (ed.) C. Neider (Cambridge: Da Capo Press, 2000) at 337.

¹⁵⁵⁰ W. Osler, "The Student Life" (1906) 39 *The Canada Lancet*, at 122.

¹⁵⁵¹ W. Blake, "Annotations to the Works of Sir Joshua Reynolds" in *The Complete Poetry and Prose of William Blake* (ed.) D.V. Erdman (New York: Random House Inc., 1988) at 655.

¹⁵⁵² D. Fields, "Pick Yourself Up" in *Swing Time* (New York: RKO Radio Pictures, 1936).

may prove promising should explore “open access” and possible ways to make publically funded research work for the *public* interest and for future generations. “Fencing off ideas”¹⁵⁵³ in pharmaceutical research has become an anachronism and new ways of thinking and imagining our common future are quickly becoming an existential necessity.

Neoliberal economic policy has subsumed most – if not all – public policy-making in Canada and America over the last thirty-five years. And this study has sought to understand how researchers “are often corrupted; by those whom it pays to corrupt, by those who have the power to do it.”¹⁵⁵⁴ In doing so, this study tried to uncover the negative neoliberal influences that afflict university policies and procedures, administrations, and faculties. In doing so, neoliberal policies have affected universities and potentially will have a dramatic impact on the way that science and scientific research will progress in the university in the future. We have been looking at only a small, but vital, area that affects university research surrounding pharmaceutical development. Academic freedom has been directly and indirectly impacted upon by the pharmaceutical industry within the ‘ivory tower’ – partly because it is (has been?) such a profitable sector of the economy. As such, it is the legendary canary in the coalmine. In Twainian alchemy, the neoliberal incentive system used to promote drug research is a perverse system; it is dross, for the most part, and will never be educated into gold. In general, the neoliberal incentive system has not and will not substantially improve our lot or “make a difference in the quality of human life in our time.”¹⁵⁵⁵

In *Pirates and Emperors*, Noam Chomsky recounts an interesting tale about power: and, it resonates with the Twainian rhyme that intellectual property is power. It is

¹⁵⁵³ Boyle, *supra* note 408.

¹⁵⁵⁴ Miliband, *supra* note 226 at 16.

¹⁵⁵⁵ Mills, *supra* note 743 at: 226.

in the context of geo-politics (what was then the Mediterranean Sea), but similar to the political economy of intellectual property, Chomsky recalls a parable by St. Augustine:

St. Augustine tells the story of a pirate captured by Alexander the Great, who asked him “how he dares molest the sea.” “How dare you molest the whole world?” the pirate replied, “because I do it with a little ship only, I am called a thief; you, doing it with a great navy, are called an Emperor.”¹⁵⁵⁶

This parable is telling. It reveals the colonising power of Alexander’s capacity to deem certain forms of exploitation legitimate while deeming others illegitimate. The pirate in question, Dionides, is challenging Alexander in that “dominion without justice does not make a kingdom, but [produces rather] a *latrocinium*, a robber-kingdom.”¹⁵⁵⁷ The issue reduces down to whether one exercises dominion in a just manner. Without justice, even a sceptic must accept that one cannot exercise a just dominion. Hence, the seemingly perpetual question arises as to whether there are ethical issues that attach to patents on medicine? Conventionally and “progressively” it is possible that we have (not?) come a long way since the “first code of ethics of the American Medical Association, written in 1847, [that] counted the patenting and advertising of medicines as unethical.”¹⁵⁵⁸ Now, that’s honesty in advertising... or, perhaps, ethics.

The notion of intellectual property as power introduced at the beginning of this discussion held that one must be sensitive to the issues of colonialism (of all types).

¹⁵⁵⁶ N. Chomsky, *Pirates and Emperors: International Terrorism in the Real World* (New York: Claremont Research and Publications, 1986) at 1. Also, see: R. W. Dyson, *St. Augustine of Hippo: The Christian Transformation of Political Philosophy* (New York: Continuum, 2005) at 65. In terms of authorship, imitation, flattery, plagiarism, borrowing and copyright, it appears St. Augustine lifted the parable from Cicero: who knows whom Cicero lifted it from. See: M.T. Cicero, *The Republic and the Laws* (trans.) C.D. Younge (Lawrence: Digireads.com Publishing, 2009) at 48. According to Cicero: “For when he inquired of a pirate by what right he dared to infest the sea with his little brigantine: ‘By the same right’ he replied, ‘which is your warrant for conquering the world.’”

¹⁵⁵⁷ G. Cary, *The Medieval Alexander* (London: Cambridge University Press, 1967) at 95.

¹⁵⁵⁸ P.J. Hilts, *Protecting America’s Health: The FDA, Business, and One Hundred Years of Regulation* (Chapel Hill: University of North Carolina Press, 2004) at 97.

Colonialism, whether in its imperial form(s),¹⁵⁵⁹ the (post?) neo-colonial form(s),¹⁵⁶⁰ the transnational corporate form(s),¹⁵⁶¹ “colonisation of minds”¹⁵⁶² or the “[i]deas of colonizing”¹⁵⁶³ and the colonisation of ideas¹⁵⁶⁴ (and perhaps for some of our “unrequited dreams”).¹⁵⁶⁵ One should bear in mind that the logic and sentiment of the advocates for expansive intellectual property rights are not unlike an Alexander or the immodest coloniser Cecil Rhodes. If only we could make the advocates of expansive intellectual property opine so sorrowfully and explicitly as Rhodes instead of their measured neoliberal banter, then we would, at least, hear the truth. That is, like Rhodes the sentiments would show that:

The world is nearly all parceled out, and what there is left of it is being divided up, conquered, and colonised. To think of these stars that you see

¹⁵⁵⁹ See: K. Marx, *On Colonialism: Articles from the New York Tribune and Other Writings* (New York: International Publishers, 1972). Also, see: U. Mehta, *Liberalism and Empire: A Study in Nineteenth-Century British Liberal Thought* (Chicago: University of Chicago Press, 1999). Also, see: R.B Morris, “That’s How Every Empire Falls” in *Spies Lies and Burning Eyes* (Knoxville: Rich Mountain Bound, 2010) at Track 10. As Morris puts it: “You were only taking orders and that’s how every empire falls.”

¹⁵⁶⁰ Saïd, *supra* note 244; G. Spivak “Can the Subaltern Speak?” in *Marxism and the Interpretation of Culture* (eds.) C. Nelson & L. Grossberg, (Urbana: University of Illinois Press, 1988); L. Gandhi, *Postcolonial Theory: A Critical Introduction* (New York: Columbia University Press, 1988); R. Young, *Postcolonialism: An Historical Introduction* (Oxford: Blackwell, 2001).

¹⁵⁶¹ See: Chomsky, *supra* note 853; D. Korten, “The Mythic Victory of Market Capitalism” in *The Case Against the Global Economy: And For a Turn Towards Localization* (eds.) E. Goldsmith & J. Mander (London: Earthscan, 2001); and, I. Wallerstein, *The Modern World System, 3 Vols.* (New York: Academic Press, 1989). In our context, this pattern of colonisation exists as a “pricing” – fencing-off? – issue for affordable patent drugs for the poor.

¹⁵⁶² Healy, *supra* note 1504.

¹⁵⁶³ P.C. Sluby, *The Inventive Spirit of African Americans: Patented Ingenuity* (London: Praeger, 2004) at 30. Also, see: H. Collins, *Marxism and Law* (Oxford: Clarendon Press, 1982). Also, see: Hunt, *supra* note 867 at 53.

¹⁵⁶⁴ K. Basu, *Beyond the Invisible Hand: Groundwork for a New Economics* (Princeton: Princeton University Press, 2011) at 206. Basu makes an interesting case as to how particular ideas, such as Smith’s invisible hand, and in our case the law, can be used to distort and colonise various “ways of seeing” the world. As we know, this is not all negative. In the case of law it can also transform the world in positive ways. Many political economists acknowledge that this is one of the most powerful aspects as to the ideology of ‘the rule of law.’ E.P. Thompson, perhaps, summed it up best when he held that “law was an unqualified human good.” E.P. Thompson, *Whigs and Hunters: The Origin of the Black Act* (New York: Pantheon Books, 1975) at 266. Thompson’s comments as to law garnered him rather harsh criticism(s) by some of the so-called “left” – yet, most of these criticisms were generally intolerant or uninformed as to Thompson’s rather eloquent point. Also, see: Y. Ghai, “The Rule of Law, Legitimacy and Governance” in *The Political Economy of Law: A Third World Reader* (eds.) Y. Ghai, R. Luckham, & F. Snyder (New York: Oxford University Press, 1987).

¹⁵⁶⁵ See: W. Johnston, *The Colony of Unrequited Dreams* (New York: Anchor Books, 2000).

overhead at night, these vast worlds which we can never reach. I would annex the planets if I could; I often think of that. It makes me sad to see them so clear and yet so far.¹⁵⁶⁶

As such, this banter has to stop. The “proptertising” and “colonising” *ethos* of Rhodes is embedded in a certain sense, and as has been argued,¹⁵⁶⁷ in the law and economics model and in the incentive system for patents in university tech-transfer offices and does not work. ‘To patent or not to patent?’ comes down resoundingly on side that one must patent first and ask questions later¹⁵⁶⁸ and it is the persistent mind-set of some – if not many – legislators who are concerned with purported “balance.”¹⁵⁶⁹ Possibly, this is imaginatively, emotionally, intellectually and spiritually a “wasteland,”¹⁵⁷⁰ but this view of intellectual property does have a tendency to pay the bills – at least, in the short term.¹⁵⁷¹

¹⁵⁶⁶ Millin, *supra* note 929 at: 138. One can take solace and pleasure in the fact that distance and the “curved” nature of space and time means that had Rhodes had his heart’s desires he would have been colonising burnt out cinders and black holes. Also, see: Varoufakis, *supra* note 410 at 123. As Varoufakis puts it, commodification and “its tentacles have reached into the microcosm, patenting genomes and claiming hybrid organisms as someone’s ‘property’. Given time, it will privatize the moon and the planets, even the sun and the stars.”

¹⁵⁶⁷ Hunt, *supra* note 630.

¹⁵⁶⁸ Mgbeoji & Allen, *supra* note 1361 at 83.

¹⁵⁶⁹ Although Tony Clement, former Industry Minister is speaking about the copyright system, his position can be expanded to patents: that is, that the patent “system must find a balance between... consumers who want access to material... and innovators who want to be and should be rewarded for their creativity.” See: T. Clement, cited in Editorial, “Copyright bill: Go ahead, with changes” Toronto Star, November 14, 2010, at: <http://www.thestar.com/opinion/editorials/article/890170--copyright-bill-go-ahead-with-changes> (last visited November 15, 2010). The issue of “balance” is open to interpretation and the interpretive scheme of Clement can lead to outright contradiction: although he will never state it baldly, he favours not “innovators” but neoliberal capital accumulation and corporate profit for C.E.O.s and shareholders. Also, see: *Bill C-32, An Act to amend the Copyright Act*, at:

<http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=4580265&Language=e&Mode=1> (last visited December 1, 2010). For a good summary of the expansive nature as to trends in Canadian copyright law, see: M. Geist, “Bill C-32: My Perspective on Key Issues” Blog, September 12, 2010, at:

<http://www.michaelgeist.ca/content/view/5316/125/> (last visited September 15, 2010). This bill died on the order paper but its content will reappear in some form – perhaps with even more draconian restrictions. Geist is somewhat more optimistic as to the bill’s content.

¹⁵⁷⁰ See: T.S. Elliot, “The Waste Land” (London: Hogarth Press, 1923).

¹⁵⁷¹ It is difficult to arrive at a clear determination of the cost, expense and profit of patent litigation (at least for lawyers). See: T. Takenaka, *Patent Law and Theory: A Handbook of Contemporary Research* (Cheltenham: Edward Elgar Publishing, 2008) at 254. Various estimates exist as to the cost of an average patent litigation case. Legal Affairs, “Patent Litigation: Is it Worth the Expense?” (2006) 26(7) G.E.N. at:

In intellectual property circles, due to copyright violations, we generally avoid the problematic and divisive term “pirate.”¹⁵⁷² In patent law, a comparable nautical reference to some patent holders in the pharmaceutical industry might be “pyrates”¹⁵⁷³ and that they need to become ‘privateers.’ That is, the captains of industry go forth on the high seas of venture capital to secure the financing required for the next generation of ‘breakthrough drugs’ for their own gain and supposedly ours. Yet, the only problem to this nautical yarn is that it is a wholly fabricated fish story.¹⁵⁷⁴ As Angell and Goozner, and others, have taken pains to point out, the central justification as to the incentive system is a

<http://www.genengnews.com/gen-articles/patent-litigation-is-it-worth-the-expense/1454/> (last visited June 10, 2011). According to Genetic Engineering and Biotechnology News, citing the Intellectual Property Law Association, “the average litigation cost was \$769,000 per party in cases where less than \$1 million was at risk. That figure more than tripled to over \$2.6 million where \$1 million or more was at risk.” Needless to say, the commotion surrounding a patent case is expensive to patent holders, but always profitable to lawyers. Nevertheless, as has been indicated, its social costs, the waste as to the progress to science, personal and professional cost to researchers, let alone the future of their career prospects, are immeasurable. Also, see: J. Bessen & M. Meurer, “The Private Cost of Patent Litigation” B.U.S.L. Working Paper Series, at: <http://www.bu.edu/law/faculty/scholarship/workingpapers/2007.html> (last visited December 10, 2010).

¹⁵⁷² The idea of copyright piracy has entered such a level of lunacy that an Ojibway woman, Ms. Jammie Thomas (now Thomas-Rasset), has been successfully sued for \$1.7 million. See: M. Harvey, “Digital Pirate Jammie Thomas-Rasset Must Pay \$80,000 Per Song” The Times, June 19, 2009, at: http://technology.timesonline.co.uk/tol/news/tech_and_web/article6534542.ece (last visited January 10, 2011). Thomas-Rasset eventually had the award reduced, but, to anyone aware of the European conquest of North and South America, Thomas-Rasset’s case has those historical overtones that cannot be culturally ignored. It is admitted that Thomas-Rasset did digitally download twenty-two songs, but in the context of her Amer-Indian background, what we in Canada call ‘first nation’ status, a stolen continent compared to an Aerosmith song seems rather a trifle. Whatever constitutes “cultural” or commercial appropriation or a “taking” in this case pales in comparison to the systemic genocide and annihilation of the indigenous peoples of the “New World.” As Chomsky points out, post-Columbian America was “one of the greatest exercises in genocide in human history.” Chomsky, *supra* note 1049 at 121. Considering Chomsky’s point, copyright is less than a trifle. K. Vonnegut, *Breakfast of Champions* (New York: Rosetta Books, 2000) at 10. Vonnegut makes a similar point: “Teachers of children in the United States of America wrote this date on blackboards again and again, and asked the children to memorize it with pride and joy: **1492**. The teachers told the children that this was when their continent was discovered by human beings. Actually, millions of human beings were already living full and imaginative lives on the continent in 1492. That was simply the year in which sea pirates began to cheat and rob and kill them.”

¹⁵⁷³ D. Defoe, *A General History of the Pyrates* (ed.) M. Schonhorn (Mineola: Dover Publications, Inc., 1972).

¹⁵⁷⁴ M. Twain, “More Maxims of Mark” in *Mark Twain: Collected Tales, Sketches, Speeches, and Essays, 1891-1910* (New York: Library of America, 1992) at 942. As Twain points out: “Do not tell fish stories where the people know you; but particularly, don’t tell them where they know the fish.”

myth.¹⁵⁷⁵ It is based on greed and a capacity to influence government policy either directly or indirectly.

Historically, in English law, privateers received a *letter of marque*¹⁵⁷⁶ from the King or Queen that allowed them certain grants to legally seize a “prize” on the open seas. Compared to pirates, privateers were given *letters of marque* in return for serving ‘King and country’ and for profit. Once a “prize” and its cargo were seized, it was brought before the admiralty court for a determination of the proceeds.¹⁵⁷⁷ The Crown granted privateers a limited monopoly, but it was a monopoly judicially arrived at and was one that would ultimately benefit the state (and the commons). Arguably, pharmaceutical patents attempt to do this, but they target the benefit to the wrong legal entity. That is, the beneficiary is the corporation, not the creative “innovator.” The prize is rendered to a risk adverse organisation that has little or no interest in it other than its commercial value and the bottom-line as to the next fiscal quarter. By analogy, an academic researcher is like a privateer in search of a cure or a “prize” and it has a certain

¹⁵⁷⁵ As noted in this discussion, Angell and Goozner unpack the pharmaceutical myth and point out the ersatz and sham costs of drug development. The \$800 million or \$1.3 billion cost of a drug’s research and development are, for all intents and purposes, an accounting fraud. The fact that “marketing,” “educational” and “patent litigation” costs are rolled into aspects of so-called “development” should cause a neophyte accountant to question the methods and practice at work. In addition, a recent study by Donald Light and Rebecca Warbuton question the figures and “show how high estimates have been constructed by industry-supported economists.” D.W. Light & R. Warburton, “Demythologizing the high costs of pharmaceutical research” (2011) 6 *BioSocieties* at: 1.

¹⁵⁷⁶ See: F.P. Miller, A.F. Vandome & J. McBrewster, *Letter of Marque: Warrant (law), Letters Patent, Government, Public International Law, Ship Transport, Declaration of War* (eds.) F.P. Miller, A.F. Vandome & J. McBrewster (Beau Bassin: Alphascript Publishing, 2010). Also, see: D.J. Starkey, *British Privateering Enterprise in the Eighteenth Century* (Exeter: University of Exeter Press, 1990). Also, in fiction, see the brilliant nautical literary work(s) of Patrick O’Brian: P. O’Brian, *The Letter of Marque* (New York: W.W. Norton, 1990).

¹⁵⁷⁷ W. Blackstone, *Commentaries on the Laws of England: In Four Books, Volume 2, Parts 3-4* (Philadelphia: Childs & Peterson, 1860) at 52. Also, see: D. Owen, *Maritime Warfare and Merchant Shipping: A Summary of the Rights of Capture at Sea* (London: Stevens and Sons, 1898) at 45. Also, see: H. Grotius, *Commentary on the Law of Prize and Booty* (Indianapolis: Liberty Fund, 2006). Also, see: F. Kalshoven, “Commentary – 1909 London Declaration” in *The Law of Naval Warfare: A Collection of Agreements and Documents with Commentaries* (ed) N. Ronzitti (Dordrecht: Kluwer Academic Publishers, 1988) at 266.

romantic flare or panache about it. Innovators can spend a life (time) searching for solutions;¹⁵⁷⁸ a life in natural or medical science searching for a solution or a cure. A medical researcher has made a life searching for a “prize” and, according to Stiglitz, the solution we need are “prizes, not patents.”¹⁵⁷⁹

The current incentive system that purportedly supports pharmaceutical research is nothing less than scandalous – it funds an industry of pirates.¹⁵⁸⁰ With the industry more concerned in introducing and marketing 85 per cent of their *new* “me-too”¹⁵⁸¹ or life-style drugs indicates that the drug patent system is broken or badly formed. According to the assistant director of bioinformatics, at the National Institute of Statistical Sciences, S. Stanley Young: “Whether two molecules are (dis)similar is in the eye of the beholder... [s]cientists look to fool the receptor – but you really want to fool the patent office.”¹⁵⁸² Don Light holds that the promotion of “new drugs as ‘more effective,’ even though 85% offer no advantage and may put patients at greater risk... [are eliciting] response[s where] ...a number of reports, Congressional bills, and articles are strongly urging medical societies, medical centers, and physicians to sever ties with the industry in order to

¹⁵⁷⁸ See: D. Sobel, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time* (New York: Walker Publishing Ltd., 1995).

¹⁵⁷⁹ J.E. Stiglitz, “Prizes, Not Patents” Project Syndicate, March 7, 2007, at: <http://www.project-syndicate.org/commentary/stiglitz81/English> (last visited March 28, 2008).

¹⁵⁸⁰ Vonnegut, *supra* note 1573 at 12. Vonnegut would agree that: “The chief weapon of sea pirates [and Big Pharma is] ...their capacity to astonish. Nobody else could believe, until it was too late, how heartless and greedy they... [are].”

¹⁵⁸¹ “Me-too” drugs are patented drugs that are very similar to other patented drugs: yet, on a molecular level they are sufficiently different to warrant the granting of a patent. The fact that a “me-too” drug never gets compared in its efficacy to its competition leads to one of the gapping holes as to the purported “utility” of any given drug or granting it a patent. That is, granting a patent on the basis that it is only better (perhaps?) than a placebo seems disingenuous. Angell wryly holds that “me-too” drugs were the gastronomic delight of her mother meals, which always seemed to consist of left-overs. “My brother and I often marveled... [and] eventually settled on what we came to call the big bang theory of Mom’s cooking. Sometime in the distant past, we decided, before we were born, our mother had cooked a single stupendous meal, and the family had been living on it ever since. We were only sorry we had missed the [original] meal. ...So it is with big pharma.” Angell, *supra* note 212 at 74.

¹⁵⁸² S. Stanley Young cited in E. Lipp “Novel Approaches to Lead Optimization: Scientists Seek to Develop New and Better Ways to Look at Existing Data” (2008) 28(14) GEN at: <http://www.genengnews.com/articles/chitem.aspx?aid=2550> (last visited December 6, 2009).

restore the trust worthiness in the profession.”¹⁵⁸³ That is, “new” drugs or patentable modifications on “old” drugs are not even required to offer efficacious improvements.¹⁵⁸⁴

From the small sample we have seen, the current pharmaceutical industry is peppered with personalities and individuals that Twain might hold as having “nasty mind[s]”¹⁵⁸⁵ or distorted objectives. Perhaps some of them embody Keynes’s “nastiest of men” with “nastiest of motives.” That is to say, that they seek profit at every turn and actively deprive or attempt to impede people from acquiring affordable life saving drugs.¹⁵⁸⁶ The promoters within the pharmaceutical and bio-genetics industry reminds one of the oft-repeated adage as to these promoters that a ‘goldmine is a hole in the ground with a liar on top.’¹⁵⁸⁷ Arguably, the current patent system generally does little to spur innovation¹⁵⁸⁸ – and in the pharmaceutical industry a twenty-year monopoly on a drug only makes them more intransigent and glacial in their movement.

The idea of developing better incentive mechanisms to facilitate “breakthrough” research is not uncommon. Many observers of drug development are abundantly aware

¹⁵⁸³ D. Light, *The Risk of Prescription Drugs* (New York: Columbia University Press) at 20. Also, see: S. Saul “Senators ask drug giant to explain grants to doctors” *The New York Times*, July 6, 2005, at C3.

¹⁵⁸⁴ Goldacre, *supra* note 1547 at 143ff.

¹⁵⁸⁵ M. Twain, *Autobiography of Mark Twain: The Complete and Authoritative Edition, Vol. 1* (Berkeley: University of California Press, 2010) at 312.

¹⁵⁸⁶ It is submitted that the pressure to make cheap anti-retroviral drugs available for H.I.V. and A.I.D.S. patients was a titanic struggle. See: Also, see: K.H. Mayer, *The AIDS Pandemic: Impact on Science and Society* (San Diego: Elsevier Academic Press, 2005). Also, see: Swarns, *supra* note 621. Also, see: WHO, UNAIDS & UNICEF, *Towards Universal Access: Scaling Up Priority HIV/AIDS Interventions in the Health Sector: Progress Report 2010* at:

<http://www.who.int/hiv/pub/2010progressreport/report/en/index.html> (last visited January 10, 2011).

¹⁵⁸⁷ This quip is often attributed to Mark Twain. This appears to be a misattribution and that this anonymous wisdom was a widely held opinion by prospectors, gold miners and the general public.

¹⁵⁸⁸ Bessen & Meurer, *supra* note 1571. According to Bessen and Meurer, in the U.S. in 1999, the aggregate annual cost of litigation to alleged infringers was \$16.1 billion, which represents approximately 19.3 per cent of research and development costs. Also, see: J. Bessen & M. Meurer, “Do Patents Perform Like Property?” (2008) 22(3) *Acad. Man. Perspec.* at 8-20. Bessen and Meurer are perhaps correct as to the overall economic “efficiency” (or lack thereof) of patent enforcement in most industries: however, they are short-sighted in understanding the “me-too drug” phenomenon and the “life-style” drugs which have little or no social or economic utility.

as to the almost impenetrable “shareholder value” clot in the bottleneck of drug research and development.¹⁵⁸⁹ Stiglitz notes:

The fundamental problem with the patent system is simple: it is based on restricting the use of knowledge. Because there is no extra cost associated with an additional individual enjoying the benefits of any piece of knowledge, restricting knowledge is inefficient. But the patent system not only restricts the use of knowledge; by granting (temporary) monopoly power, it often makes medications unaffordable for people who don't have insurance. In the Third World, this can be a matter of life and death for people who cannot afford new brand-name drugs but might be able to afford generics. For example, generic drugs for first-line AIDS defenses have brought down the cost of treatment by almost 99% since 2000 alone, from \$10,000 to \$130.¹⁵⁹⁰

But as Stiglitz also observes:

Intellectual property rights need to balance the concern of users of knowledge with those of producers. Too tight an intellectual property regime can actually harm the pace of innovation; after all, knowledge is the most important input into the production of knowledge. We knew that the argument that without intellectual property rights, research would be stifled was just wrong: in fact, basic research, the production of ideas that underlay so many of the advances in technology, from transistors to lasers, from computers to the internet was not protected by intellectual property rights....¹⁵⁹¹

This would not have happened had monopolies not been threatened by thoughtful common sense. In a more honest time, Dr. Edward Squibb, the founder of Squibb Corporation, the precursor of what was to become the giant Bristol-Meyers Squibb noted:

¹⁵⁸⁹ Critics often cite regulatory “bottlenecks” as the reason for the lack of newer drugs. See: P.B. Watkins, “Drug Safety Sciences and the Bottleneck in Drug Development” (2011) 89 Clin. Pharma. & Therapeutics at: 788-790. Yet, they rarely point out that the reluctance of C.E.O.s and board of directors as to drug development and share price, see: S. Frantz, “The genomics evolution” (2004) 3 Nat. Rev. Drug Discovery at: 629. As Frantz points out, a year after “the publication of the human genome sequence from the public consortium and Celera in hand, share prices had fallen by 70% and fell another 50% the following year.” This essentially dried up the initial capital for “genes-to-drugs” business model and further research resources. Also, see: D.K. Nelson, “Conflict of Interest: Recruitment Incentives” in *Institutional Review Board: Management and Function* (eds.) R.J. Amdur & E.A. Bankert (Boston: Jones & Bartlett Publishers, 2002) at 199. Comparatively, Nelson holds that the venture capital partnership model has not worked and that “industry has begun to return to [its] ... traditional base... [and f]or the first time in a decade, academic centers are reporting increases in revenue from industry grants.”

¹⁵⁹⁰ Stiglitz, *supra* note 1578.

¹⁵⁹¹ Stiglitz, *supra* note 833 at 208.

“I do not myself think that anything should be patented by either physician or pharmacist; I am sure that the patient would not be benefited thereby.”¹⁵⁹² Put differently, citing Squibb, Mr. Justice Finkelstein, of the Australian Federal Court, in *Bristol-Myers Squibb v. FH Faulding*¹⁵⁹³ held that: “The important question: ‘is it ethical to patent a pharmaceutical substance or a method of medical treatment?’ admits of no satisfactory answer.”¹⁵⁹⁴ Sadly, proprietary interests have favoured pharmaceutical corporations, and their share price, and monopolies have become a dead anchor that weighs down scientific progress and impedes success in drug development and health sciences. With all due respect to Mr. Justice Finkelstein, there is a satisfactory answer and it is one that no longer tolerates the *status quo*. To reiterate Steve Keen’s point: “It is neat, plausible, and it’s wrong.”¹⁵⁹⁵ That is to say, there are satisfactory answers and there are affirmative answer concerning patents and pharmaceuticals; these answers are answers that no longer stomachs intellectual property regimes that favour corporation interests.

In the robust field of market speculation, we are often told that the “stock exchange funds “productive enterprise.”¹⁵⁹⁶ In the pharmaceutical industry, this is the standard justification used as to financial incentives and the need to support and “partner” with academic researchers. A particular problem with the narrative of the “incentive” system around the pharmaceutical-university development is that we have followed a

¹⁵⁹² E.R. Squibb, cited in M. Fishbein & W.L. Bierring, *A History of the American Medical Association, 1847 to 1947* (Ann Arbor: University of Michigan, 1947) at 187. Also, see: E.R. Squibb, cited in M. Fishbein, “A History of the American Medical Association” (1947) 133(1) J.A.M.A. at 23. One of Squibb’s contributions to surgery was an improved ether, an anaesthetic, and its production method, which he gave away and made freely available rather than patent it.

¹⁵⁹³ *Bristol-Myers Squibb v. FH Faulding* (1998) 41 I.P.R.

¹⁵⁹⁴ *Ibid* at 467.

¹⁵⁹⁵ Keen, *supra* note 563.

¹⁵⁹⁶ L. Fell, *An Introduction to Financial Products and Markets* (New York: Continuum, 2000) at 29.

“market” approach that purports to do so efficiently. It does not.¹⁵⁹⁷ This is a rather rudimentary point, as to the financing of “research,” but the market model that is purported to finance investment and innovation is highly suspicious.¹⁵⁹⁸ As Roberto Mangabeira Unger points out:

Corporations in all major Western countries fund almost all their capital expenditures – investment in plant, machinery, and inventories – internally, through retained earnings, in other words through profits and depreciation. Since 1952, retained earnings have covered ninety-five percent of capital expenditures. Since the early 1980s, through mergers and acquisitions, buy backs, and dividends distribution, more stock has been retrieved from stock markets than has been issued. As a result, new equity as a net source of finance is negative!¹⁵⁹⁹

¹⁵⁹⁷ A similar type of misleading impression (or scam) is perpetrated by many of the foundations that we innocently believe are doing “good works. See: E. Johnson, “Cancer Society spends more on fundraising than research” CBC News, July 6, 2011, at: <http://www.cbc.ca/news/canada/story/2011/07/04/cancer-society-funding.html> (last visited July 7, 2011). The point seems obvious but when less than 22 cents on every dollar raised goes to cancer research, it seems that the tax deductible donations funding administration and further fund raising can be better spent.

¹⁵⁹⁸ There is not too much of a stretch between a “legitimate” business and an “illegitimate” business. That is, the “pump and dump” strategy of Enron was illegal due to the fact they did not truly have a “product.” See: B. McLean & P. Elkind, *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron* (New York: Portfolio, 2003). Also, see: J.A. Lozano, “Enron boss agrees to stop appeals: gets sentence cut” *The Financial Post*, June 22, 2013, at FP5. Ethically, marketing “me-too” drugs as “new and improved” when they are the same or less effective seems very close to the “pump and dump” strategy of ‘creating wealth.’ For a good example of this, Angell cuttingly unpacks the marketing strategy used by AstraZeneca as Prilosec® went off patent and they began to market ‘the next best thing’ - Nexium®. Angell, *supra* note 212 at 77-78.

¹⁵⁹⁹ R.M. Unger, *Democracy Realized: The Progressive Alternative* (London: Verso, 1998) at 283. Also, see: C. Mayer, “The City and Corporate Performance” (1997) *Cam. J. Econ.* at 291. Also, Henwood, *supra* note 143 at: 72. Also, see: D. Henwood, “Wall Street: Class Racket” *Left Business Observer*, June 25, 1997, at: http://www.leftbusinessobserver.com/WS_Brecht.html (last visited January 29, 2011). Also, see: Reuters Staff, “Apple buys back \$14 billion of shares in two weeks since results” *Reuters*, February 6, 2014, at: <http://www.reuters.com/article/2014/02/07/us-apple-repurchase-idUSBREA1606820140207> (last visited February 7, 2014). Recently, the former Governor of the Bank of Canada, Mark Carney, indicated that Canadian corporation are sitting on so-called “dead money”. Carney holds that Canadian corporations are holding hundreds of billions of dollars deposited in Canadian and foreign currencies, corporations are not doing their part and investing in economic development. What eludes Carney or what he does not go on to conclude is that this ‘cash stash’ is used by the corporation to buy back stock and maintain inflated share price. Simply put, this money is not wasted on infrastructure or research and development – that is, it is not wasted in the purported *real* economy but shores up the *financial* economy. See: M. Robinson & J. O’Kane, “Corporate ‘dead money’ rises to buoy GDP” *The Globe and Mail*, Saturday September 1, 2012, at B6. Also, see: K. Carmichael, R. Blackwell & money, ‘Carney exhorts corporate Canada’ *The Globe and Mail*, August 22, 2012, at: http://www.theglobeandmail.com/report-on-business/economy/free-up-dead-money-carney-exhorts-corporate-canada/article4493091/?utm_source=Shared+Article+Sent+to+User&utm_medium=E-mail:+Newsletters++E-Blasts++etc.&utm_campaign=Shared+Web+Article+Links (last visited January 13, 2014). Also, see: J. Lorinc, “Dead money: There are good reasons for hoarding cash” *Canadian*

After a corporation has issued its initial purchase offer of company stock, that capital is fixed. The trading and speculation as to the value of the stock is merely being bought and sold by speculators while corporate investment occurs internally from earned revenue. Put differently, investment banking and venture capital firms may offer “seed” money for start-up companies but that is a miniscule amount of capital as to the activities of the stock market. The stock market brings no new revenue stream into a company; it does not spur innovation, it just fuels further speculation on the market and pays the stock options of C.E.O.s and major corporate executives.¹⁶⁰⁰ As business professor Ralph Estes puts it:

Corporate stock transactions are sort of like used car sales. Ford is affected when it sells new cars. Later, when these cars are traded, maybe a number of times, in the used car market, Ford is not involved. The company does not receive a dime, and it is hardly affected by the prices its cars bring in the used car market. So too with Ford stock: after a stock issue is first sold (and for most outstanding stock that would have been years ago), all the stock market transactions we hear about have no direct effect on Ford. And if Ford never issues new stock again – which is more

Business, February 12, 2013, at: <http://www.canadianbusiness.com/economy/dead-money/> (last visited September 1, 2015).

¹⁶⁰⁰ D. Henwood, “Wall Street Ascendant” (2005) 26(1) *Multinational Monitor* at: <http://multinationalmonitor.org/mm2005/012005/henwood.html> (last visited May 2, 2011). As Henwood points out: “When Business Week started doing its annual compensation survey in 1950, the highest-paid CEO was GM’s Charles Wilson, who took home 229 times as much as the average worker. In 2001, the peak of the boom, the pay champ was Oracle’s Larry Ellison, who exercised some long-held options and pulled in 28,193 times as much as the average worker. Those are extreme cases compared over the very long term, but even nonextreme comparisons are stunning: the average CEO pulled down more than 400 times as much as the average hourly worker in 2001, up from a mere 42 times in 1980.” This situation has only gotten worse. As Henwood notes elsewhere: “share flotation is a crucial coming-of-age ritual... though typically the proceeds are used to cash out the initial investors rather than funding investment and hiring.” D. Henwood, “Pension fund socialism: the illusion that just won’t die” *Pension Fund Capitalism and the Crisis of Old-Age Security in the United States Conference*, New School University, September 11, 2004, at: <http://www.leftbusinessobserver.com/NSPensions.html> (last visited October 9, 2011). Also, see: E. Reguly, “Apple sacrificing innovation on the altar of shareholder value” *The Globe and Mail*, August 31, 2013, at B1&9. As Reguly notes, Apple committed “as much as \$100-billion (U.S.) to shareholders by way of stock buybacks and cash dividends by the end of 2015.” For a Canadian example, see: J. McFarland, “Canadian charged in high-frequency trading scheme” *The Globe and Mail*, January 13, 2015, at B1&10.

than a possibility – then the market price of its stock can go sky high or sink to the cellar without changing a dollar on Ford’s balance sheet.¹⁶⁰¹

Thus, claims concerning the need to find investors in the stock market to fuel future innovation can only be viewed as popular fiction – if not fraud.

This is the problem that we encountered earlier in the case of Berg’s observations:¹⁶⁰² that is, pharmaceutical corporations are risk averse and loath to spend capital on research if short-term profit is demonstrable – after all, quarterly reports and exercising a retiring C.E.O.’s stock option are their paramount concern.¹⁶⁰³ In theory, as Keynes suggested, “[t]he social object of skilled investment should be to defeat the dark forces of time and ignorance which envelop our future.”¹⁶⁰⁴ But, in practice, “[t]he actual, private object of the most skilled investment to-day is to ‘beat the gun,’ [or avoid “getting a “haircut”]”¹⁶⁰⁵ as the Americans so well express it, to outwit the crowd, and to pass the bad, or depreciating, half-crown to the other fellow.”¹⁶⁰⁶ Arguably, the management of capital and increasing shareholder value are antithetical to pharmaceutical and biomedical research. It is submitted that corporate management’s disposition to accumulate capital conflicts with a reasonably diligent research agenda that may take decades as to the development of a new drug.

Thus the professional investor is forced to concern himself with the anticipation of impending changes, in the news or in the atmosphere, of

¹⁶⁰¹ R.W. Estes, *Tyranny of the Bottom Line: Why Corporations Make Good People Do Bad Things* (San Francisco: Berrett-Koehler Publishers, 1996) at 50.

¹⁶⁰² Press & Washburn, *supra* note 1358 at 39.

¹⁶⁰³ P.C. Jain, *Buffett Beyond Value: Why Warren Buffett Looks to Growth and Management When Investing* (Hoboken: John Wiley & Sons, 2010) at 285-286. Unlike many American capitalists, Warren Buffett is sceptical of the CEO pay-package process.

¹⁶⁰⁴ Keynes, *supra* note 1417 at 155.

¹⁶⁰⁵ In print media, on radio and television, this is an annoying term that trips off the tongue of many a bobble-headed so-called “business reporter.” “Taking a haircut” comes in various forms, but it generally means that one maximises the higher price of a stock or security and limits one’s exposure to its substantial decline.

¹⁶⁰⁶ Keynes, *supra* note 1417 at: 155.

the kind by which experience shows that the mass psychology of the market is most influenced. This is the inevitable result of investment markets organized with a view to so-called “liquidity.” Of the maxims of orthodox finance none, surely, is more anti-social than the fetish of liquidity.... It forgets that there is no such thing as liquidity of investment for the community as a whole.¹⁶⁰⁷

Accordingly, the buying and selling of securities between other “investors” have little to do with the type and kinds of “investment” that remunerates and “rewards” inventors. It is submitted that investment money does not go to the corporation for drug research, it does not go to some innovating “war chest.” Truthfully, “investment” in the stock market is, and always had been, merely speculative money that goes to other investors.¹⁶⁰⁸ The idea that somehow these exchanges of securities stimulate investment and money for research are merely window dressing. The notion that speculative capital is raised and somehow finds its way back to “innovative” research are narratives that amount to fairy tales and unicorns.¹⁶⁰⁹ Nonetheless, this is the tripe that advocates for a stronger patent system and enforcement use to pacify critics. In the case of Barrie Sherman, Apotex and Olivieri, it was really not a debate about whether the drug was useful, or whether it helped or harmed patients, it was about share price.¹⁶¹⁰ The same goes for the Healy affair and the share price of Eli Lilly. The issue was not about the need for capital to

¹⁶⁰⁷ Keynes, *supra* note 97 at 139.

¹⁶⁰⁸ See: P.S. Lynch & J. Rothchild, *Learn to Earn: A Beginner's Guide to the Basics of Investing and Business* (New York: Fireside, 1996). Also, see: J.C. Ott, *When Wall Street Met Main Street: The Quest for an Investors' Democracy* (Cambridge: Harvard University Press, 2011). Ott's critical overview of so-called ‘investor democracy’ is an abundantly accurate ‘unpacking’ of the proverbial ‘sales job’ and public relations of the “stock-jobber” and the mythopoeticism of the neoliberal market.

¹⁶⁰⁹ MacIntyre, *supra* note 550 at 69. As noted earlier, in this instance, MacIntyre is questioning the fiction of *rights*; in our case, it is the fiction intellectual property *rights* being tied to innovation.

¹⁶¹⁰ To say the least, brand name and generic drug companies are businesses. See: A. Attaran, “Canada is needlessly bleeding money on generic drugs” *The Toronto Star*, February 17, 2016, at: <http://www.thestar.com/opinion/commentary/2016/02/17/canada-is-needlessly-bleeding-money-on-generic-drugs.html> (last visited February 18, 2016).

finance research, it was about speculation, profit on speculation, “the vile maxim”¹⁶¹¹ of “maximizing shareholder value”¹⁶¹² and padding the stock options and compensation of corporate directors.¹⁶¹³ This is not about developing a break through drug that would change the world, or make one child or person better off. In rare cases, it may have involved raising funds for a small biotech start-up company, but generally it ends there. The rescission of Healy’s job was about maintaining market share, shareholder value and the system of speculation and the principle of the “innovation bottleneck.”¹⁶¹⁴ As alluded to earlier, Keynes observed that:

Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country[’s pharmaceutical industry] becomes the by-product of the activities of a casino, the job is likely to be ill-done.¹⁶¹⁵

This current system is one of venal corruption and there is little value in it. As Stiglitz observes, “[t]he market is... rife with distortions... [and i]t is accordingly not surprising that in the area of health, the patent system, with all of its distortions, has failed... [us] in so many ways.”¹⁶¹⁶ For example, there is the recent resurrection of a type of *Longitude Prize*¹⁶¹⁷ as a strategy to address the defects of patent regimes and the current problems facing humanity.¹⁶¹⁸

¹⁶¹¹ Smith, *supra* note 163 at 326.

¹⁶¹² W. Lazonick & M. Sullivan, “Maximizing Shareholder Value: A New Ideology for Corporate Governance” (2000) 29 (1) *Econ. & Soc’y* at 13.

¹⁶¹³ Lazonick & Mazzucato, *supra* note 202.

¹⁶¹⁴ K. Yakabuski, “Burned Out: The Search for a New Innovation Identity” *The Globe and Mail*, August 17, 2013, at B7.

¹⁶¹⁵ Keynes, *supra* note 1417 at 159.

¹⁶¹⁶ Stiglitz, *supra* note 1578.

¹⁶¹⁷ *An Act for Providing a Publick Reward for such Person or Persons as shall Discover the Longitude at Sea* (1714) 12 *A. St.2. c.15*.

¹⁶¹⁸ See: M. Rees, “A Longitude Prize for the twenty-first century” *Nature*, May 20, 2014, at: <http://www.nature.com/news/a-longitude-prize-for-the-twenty-first-century-1.15259> (last visited December 5, 2014). Also, see: J. White, “Why it’s time to resurrect a centuries” (2014) 222 (2970) *New Scientist*.

According to Stiglitz, the issue surrounding innovation is whether “the incentives provided by the patent system [are] appropriate, so that all this money is well spent and contributes to treatments for diseases [that are] of the greatest concern?”¹⁶¹⁹ His conclusion is “[s]adly... a resounding ‘no’.”¹⁶²⁰ The basic science, the development and developmental timeline, the marginal “profit” of diseases that afflict the poor – Fanon’s “wretched of the earth” – provides little incentive to pharmaceutical corporations or their shareholders to invest and innovate. This is due, in part, to our fundamental misunderstanding as to financial speculation as the vehicle for funding a system of scientific research.

After years of propagating untruths (or, more precisely, lies) as to the costs of manufacturing “new” drugs,¹⁶²¹ the pharmaceutical industry is facing a real crisis. The pharmaceutical industry has been adept at manipulating its short-term interests and manufacturing illnesses for its drugs and for profit.¹⁶²² As Stuart Hall wryly observed,

Also, see: J. Bland, R. Higgitt & J. Kingsland, “Longitude Prize 2014: six great challenges of our time – as it happened” *The Guardian*, May 19, 2014, at: <http://www.theguardian.com/science/political-science/2014/may/19/longitude-prize-2014-six-challenges-live-blog> (last visited December 15, 2014). Also, see: Nesta, *The Longitude Prize, 2014* (London: Nesta, 2014) at: <https://longitudeprize.org/> (last visited December 15, 2014). The new prize focuses general human issues confronting: flight; food; antibiotics; paralysis; water; and, dementia.

¹⁶¹⁹ Stiglitz, *supra* note 1578. Also, see: Stiglitz, *supra* note 157.

¹⁶²⁰ *Ibid.*

¹⁶²¹ D.W. Light & R. Warburton, “Demythologizing the high costs of pharmaceutical research” (2011) 6 *BioSocieties* at: 13. According to Light and Warburton, using the some of the same material used to come up with the oft-quoted \$800 million dollar cost of a new drug, they find: “The overall mean and median net corporate R&D costs [for a new drug] were \$80.3 million and \$59.4 million, respectively.” Also, see: D.W. Light & R. Warburton, “Drug R&D Costs Questioned” (2011) 31(13) *G.E.N.* at: <http://www.genengnews.com/gen-articles/drug-r-d-costs-questioned/3707> (last visited July 10, 2011). Also, see: T. Noah, “The Make-Believe Billion: How drug companies exaggerate research costs to justify absurd profits” *Slate*, March 3, 2011, at: <http://www.slate.com/id/2287227/> (last visited March 25, 2011).

¹⁶²² G. Greenberg, *Manufacturing Depression: The Secret History of a Modern Disease* (New York: Simon & Shuster, 2010). Also, see: D. Healy, *Mania: A Short History of Bipolar Disorder* (Baltimore: Johns Hopkins University Press, 2008) at 247. According to Thomas Szasz, the manufacture of mental disorder is part of a larger cultural process. T.S. Szasz, *The Manufacture of Madness: A Comparative Study of the Inquisition and the Mental Health Movement* (Syracuse: Syracuse University Press, 1997) at 74. R. Mayes, C. Bagwell & J.L. Erkulwater, *Medicating Children: ADHD and Pediatric Mental Health* (Cambridge: Harvard University Press, 2009) at 11. Also, see: S.L. Kaplan, *Your Child Does Not Have Bipolar*

rightly or wrongly: “Politics does not reflect majorities, it constructs them.”¹⁶²³ As such, over the last thirty years, the politics of pharmaceutical industry did and has done an awful lot of political and legal “construction.”¹⁶²⁴ Yet, its façade, its largesse, the industry’s profitability, and its ability to bamboozle the public, may be coming to an end. That is, the pharmaceutical industry may have to do some honest work – indeed, it may have to “innovate” new drugs.¹⁶²⁵ The problem, however, is there are little or no “new” blockbuster drugs in the “pipeline.”¹⁶²⁶ To some, pharmaceutical and biotechnology industries are going to be shocked into action after years of dithering: but they have squandered so much of their resources and capital. It is forecast that they will lose \$15 billion worth of annual drugs sales that will go off patent in 2011.¹⁶²⁷ Subsequently,

Disorder: How Bad Science and Good Public Relations Created the Diagnosis (Santa Barbara: Praeger, 2011) at 58. Also, see: J. Bakan, *Childhood Under Siege: How Big Business Targets Children* (New York: Free Press, 2011) at 67.

¹⁶²³ S. Hall, *The Hard Road to Renewal: Thatcherism and the Crisis of the Left* (London: Verso, 1988) at 266.

¹⁶²⁴ In 2007, the world market for pharmaceuticals was a \$663.5 billion. Not exactly chump change. See: Investment Canada, “Invest in Canada – Biopharmaceutical” (Ottawa: Government of Canada) at: <http://investincanada.gc.ca/eng/publications/biopharm.aspx#ft1b> (last visited January 20, 2011).

¹⁶²⁵ J. Benson, “Drug companies panic as thirteen ‘blockbuster’ drugs about to lose patent protection” February 07, 2011, at: http://www.naturalnews.com/031234_drug_patents.html (last visited March 15, 2011). Also, see: PRNewswire – Staff, “Pharmaceutical Industry Bracing for Record Patent Expiries, EvaluatePharma Data Reveals” PRNewswire, February 2, 2011, at: <http://www.prnewswire.com/news-releases/pharmaceutical-industry-bracing-for-record-patent-expiries-evaluatepharma-data-reveals-115099789.html> (last visited February 23, 2011).

¹⁶²⁶ See: D. Hipwell, “Big pharma kisses its blockbuster years goodbye” *The Independent*, August 29, 2010, at: <http://www.independent.co.uk/news/business/analysis-and-features/big-pharma-kisses-its-blockbuster-years-goodbye-2064636.html> (last visited January 10, 2011). J. Kollwe, “Drug companies: Big Pharma besieged from all sides” *The Guardian*, August 30, 2008, at: <http://www.guardian.co.uk/business/2008/aug/30/pharmaceuticals.medicalresearch> (last visited August 9, 2010). Also, see: Euractiv – Staff, “Pharma industry prepares for end of ‘blockbuster medicines’” Euractiv, December 3, 2009, at: <http://www.euractiv.com/en/health/pharma-industry-prepares-blockbuster-medicines/article-187965> (last visited September 10, 2010). Also, see: C. Arnst, *et. al.*, “The Waning Of The Blockbuster Drug” *Business Week*, October 18, 2004, at: http://www.businessweek.com/magazine/content/04_42/b3904034_mz011.htm (last visited September 21, 2011).

¹⁶²⁷ K. Grogan, “2012, real ‘annus horribilis’ for patent expiries – EvaluatePharma” *Pharma Times*, February 3, 2011, at: http://www.pharmatimes.com/article/11-02-03/2012_real_annus_horribilis_for_patent_expiries_-_EvaluatePharma.aspx (last visited February 20, 2011). In theory, one of the benefits to the patent expiration of drugs will be the lower cost of generics to government. See: A. Picard, “Patent expiry for some blockbuster drugs presents huge saving opportunity” *The Globe and Mail*, June 23, 2010 at: <http://www.theglobeandmail.com/life/health/patent-expiry-for->

another “\$133 billion worth of drugs in the next six years”¹⁶²⁸ will come off patent. As to this crisis, Big Pharma has few, little, or no options. At best, Big Pharma will offer old wine in new bottles, and, being kind: “What are [they] ...going to offer... [us]? The exact same thing as before, But a different way to wear it, And the promise of a whole lot more.”¹⁶²⁹

For Stiglitz, speaking as an economist, the patent incentive regime undermines progress in “breakthrough” drugs and does nothing to improve the lot of millions:

[D]espite the high price they pay, developing countries get little in return. Drug companies spend far more money on advertising and marketing than they do on research, far more on research for lifestyle drugs (for conditions like impotence and hair loss) than for lifesaving drugs, and almost no money on diseases that afflict hundreds of millions of poor people, such as malaria. It is a matter of simple economics: companies direct their research where the money is, regardless of the relative value to society. The poor can’t pay for drugs, so there is little research on their diseases, no matter what the overall costs.¹⁶³⁰

There is little question as to the need for cheap effective drugs for millions of people, the difficulty is that the so-called ‘free enterprise system’ has little or no interest in doing the necessary research to solve these problems. Moreover, it appears that most of the low-

[some-blockbuster-drugs-presents-huge-saving-opportunity/article1615338/](http://www.nytimes.com/2011/03/07/business/07drug.html) (last visited September 4, 2010). The loss of Pfizer’s patent on Lipitor is estimated at \$10.7 billion annually. Also, see: Bloomberg, “Sale of pain drugs power Pfizer results” *The Globe and Mail*, August 3, 2011, at B8. Also, see: D. Wilson, “Drug Firms Face Billions in Losses in ‘11 as Patents End” March 6, 2011 at: <http://www.nytimes.com/2011/03/07/business/07drug.html> (last visited March 25, 2011). Pfizer had recently attempted to get F.D.A. approval for over-the-counter sale for Lipitor once its patent expires. A. Pollack, “Pfizer Is Said to Pursue Nonprescription Lipitor” *The New York Times*, August 3, 2011, at: <http://www.nytimes.com/2011/08/04/business/pfizer-is-said-to-be-pursuing-nonprescription-lipitor.html>. Arguably, one could be accused of being *cynical* if one thought Pfizer was trying to blunt competition from generic drug manufacturers: the term *realistic* is more descriptive and accurate.

¹⁶²⁸ *Ibid.*

¹⁶²⁹ B. Bragg, “I Don’t Need This Pressure Ron” in *Reaching To The Converted* (Los Angeles: Rhino Records, 1999) at Track 17.

¹⁶³⁰ Stiglitz, *supra* note 1578.

hanging fruit of the pharmaceutical industry have been plucked.¹⁶³¹ As R.J. Gordon notes: “research for new blockbuster drugs is encountering diminishing returns, with a substantial numbers of failures and rapidly escalating costs of experimentation per successful new drug found.”¹⁶³² The issue, then, is how do we change the incentive system, an incentive system that not only harms the poor in the developing world, and mangles lives in the developed world, that undermines university research and attacks academic freedom.

According to Stiglitz, there are alternatives to the financing and “incentivizing research that... could do a far better job than patents, both in directing innovation and ensuring that the benefits of that knowledge... [is] enjoyed as widely as possible: a medical prize fund that would reward those who discover cures and vaccines.”¹⁶³³ Since government indirectly or directly pays the cost of drug research from grants, the subsidised status of universities, tax breaks,¹⁶³⁴ subsidised drug programmes, governments could create and direct a “prize fund [that] ...would award the biggest prizes for developers of treatments or preventions for costly diseases affecting hundreds

¹⁶³¹ F.M. Abbott *et. al.*, *Global Pharmaceutical Policy: Ensuring Medicines for Tomorrow's World* (Cheltenham: Edward Elgar, 2009) at 3.

¹⁶³² Gordon, *supra* note 229 at 9. From a business perspective, according to the founder of PayPal and the first outside investor in Facebook, Peter Thiel, current innovation in America ranges from “somewhere between dire straits and dead.” See: The Economist – Staff, “Has the ideas machine broken down?” The Economist, January 12, 2013, at: <http://www.economist.com/news/briefing/21569381-idea-innovation-and-new-technology-have-stopped-driving-growth-getting-increasing> (last visited February 2, 2013). In contrast, see: The Economist – Staff, “The great innovation debate: Fears that innovation is slowing are exaggerated, but governments need to help it along” The Economist, January 12, 2013, at: <http://www.economist.com/news/leaders/21569393-fears-innovation-slowng-are-exaggerated-governments-need-help-it-along-great> (last visited February 2, 2013). The headline says it all: that is, ‘a subsidy is a subsidy by any other name.’

¹⁶³³ Stiglitz, *supra* note 1578.

¹⁶³⁴ B. McKenna, “Canadian patents applications in steady decline: study” The Globe and Mail, November 28, 2014, at <http://www.theglobeandmail.com/globe-investor/patent-applications-declining-study/article21820380/> (last visited December 14, 2014). According to McKenna: “Federal and provincial R&D tax breaks cost as much as \$5-billion a year. Tax credits make up the bulk of the government’s contribution to R&D in Canada.” Also, see: R. Brydon, N. Chesterley, B. Dachis & A. Jacobs, “Measuring Innovation in Canada: The Tale Told by Patent Applications” (Toronto: C.D. Howe Institute, 2014).

of millions of people.”¹⁶³⁵ In essence, what Stiglitz is advocating is a type of “gift:” that is, that the development of a “gift economy” should be pursued concerning pharmaceuticals and biotechnology.

With the staggering degree of indifference present in current pharmaceutical development, prizes appear as one of the more attractive and sensible solutions to the impasse. Moreover, it can re-direct research toward meaningful therapies rather than a *mélange* of “lifestyle”¹⁶³⁶ and “me-too” drugs that finance Big Pharma and some medical journals suspect practices.¹⁶³⁷ Put differently, the neutron bomb of *Bayh-Dole* and neoliberalism has damaged many research facilities university campuses across North America; but they still stand. Despite corporate malfeasance and irresponsibility, dedicated researchers like Olivieri and Healy are still working, pursuing their careers (or attempting to) and upholding their ethical obligations. Targeting talent through a prize system concerning pharmaceuticals and biotechnology development seems a better option to distribute resources than the patent system.

In the controversial lecture that cost Healy his posts at C.A.M.H. and U. of T., he observes that many psychiatrists, psychopharmacologists and university researchers have a tendency to consistently blame whatever disease they are studying for the disorder. They rarely question that the therapy they are offering is doubtful. As Healy puts it:

¹⁶³⁵ Stiglitz, *supra* note 1578.

¹⁶³⁶ See: Silverstein, *supra* note 1430. Also, see: Angier, *supra* note 1430. Also, see: R. Moynihan “The Marketing of a Disease: Female Sexual Dysfunction” (2005) 330 (7484) B.M.J. at 192. Also, see: D. Wilson, “Push to Market Pill Stirs Debate on Sexual Desire” The New York Times, June 16, 2010, at: www.nytimes.com/2010/06/17/business/17sexpill.html?_r=0 (last visited July 20, 2011). Also, see: J. Laurance, “Female sexual dysfunction ‘was invented by drugs industry’” The Independent, October 1, 2010, at: <http://www.independent.co.uk/life-style/health-and-families/health-news/female-sexual-dysfunction-was-invented-by-drugs-industry-2094578.html> (last visited November 15, 2010).

¹⁶³⁷ See: B. Djulbegovic, *et. al.* “The Uncertainty Principle and Industry-sponsored Research” (2000) 356 Lancet at: 635-638. Also, see: B. Als-Nielsen, *et. al.* “Association of Funding and Conclusions in Randomized Drug Trials: A Reflection of Treatment Effect or Adverse Events?” (2003) 290 J.A.M.A. at 921-928.

“When the treatment fail[s] to work, they claimed it was the disease, not the treatment that was at fault.”¹⁶³⁸ Like the patent system, neoliberals hold that there is too much regulation, not enough incentives, inadequate patent protection, and a situation that stymies and confounds creativity and drug innovation. In our case, in a neoliberal post-*Bayh-Dole* world, we know better. It is clearly the “treatment” that has failed to work. Neoliberalism and neoliberal economics are not “science,” they are ideologies. Ideologies that happen to direct public policy and the formation of law; at best, they remind of us of our mistakes and our fallibility. Yet, just as a person “that started in to carry a cat home by the tail was getting [sic] knowledge that was always going to be useful to him,”¹⁶³⁹ the knowledge gleaned from neoliberal policies surround drug development have taught us, at least, one valuable lesson: that is, that there are better ways to fund pharmaceutical research. As economist Alfred Marshall, in a stodgy, stayed, but considered opinion, put it:

The chemist or the physicist may happen to make money by his inventions, but that is seldom the chief motive of his work. He wants to earn somehow the means of a cultured life for himself and his family: but, that being once provided, he spends himself in seeking knowledge partly for its own sake, partly for the good it may do to others, and last, and often not least, for the honour it may do himself. His discoveries become collective property as soon as they are made, and altogether he would not be a very bad citizen of Utopia just as he is.¹⁶⁴⁰

Earlier in this discussion, the general economy of the “gift” was outlined. In a certain sense, patents are a form of “gift.” Just as corporate legal personality is

¹⁶³⁸ Healy, *supra* note 1504.

¹⁶³⁹ M. Twain, *Tom Sawyer Abroad* (Whitefish: Kessinger Publishing, 2004) at 59.

¹⁶⁴⁰ A. Marshall, cited in A.C. Pigou, *Memorials of Alfred Marshall* (New York: Kelley and Millman, 1956) at 281.

“essentially a gift of the state,”¹⁶⁴¹ so too, as we have seen, patents are a gift of the state. As we know, they are a limited monopoly gifts by governments. They are gifts that grant, that *give*, a corporation a letter of patent to protect its monopoly for twenty years or more. These *gifts* are given in the hope that this will *give* them the necessary and sufficient motives to earn a profit – an incentive – and this will allow them the resources that they need to innovate. All this with the ‘great expectations’¹⁶⁴² that patents will allow pharmaceutical corporations to create a better future. But, these expectations have been misplaced.

The conundrum as to intellectual property, the patent system, and its incentive system for university research is that it has led us to a modicum of stark conclusions but few solutions. If there is a clear solution it is as obvious as a circle being “a round straight line with a hole in the middle.”¹⁶⁴³ In trying to see over neoliberal glasses or think of a way to reform the current incentive system one is sadly lacking in an “original thought.”¹⁶⁴⁴ The neoliberal economic rationale that backs the current industry-academic model as to incentives holds that the “business model” is the “right,” correct – perhaps the sole – path to future innovation and prosperity (and salvation?). Unfortunately, in the free market realm of university research surrounding biotech and pharmaceuticals, Keynesian scepticism as to achieving a Panglossian “best of all possible worlds”¹⁶⁴⁵ is

¹⁶⁴¹ Henwood, *supra* note 143 at: 263. Also, see: *Santa Clara County v. Southern Pacific Railroad*, 118 U.S. 394 (1886). *Santa Clara* was a case as to the route for a railroad bed. What made it unusual was that the U.S. Supreme Court’s holding transformed the nature of private corporations and deemed them to be a “natural persons.” Also, see: *Salomon v. A. Salomon & Co. Ltd* [1897] AC 22. The ‘wisdom of Solomon’ arrived at in *Salomon* upheld the principle of corporate (split?) personality. The issue was whether an insolvent company’s shareholders could be sued for the outstanding debts of the company. They could not.

¹⁶⁴² C. Dickens, *Great Expectations* (New York: W. W. Norton, 1999).

¹⁶⁴³ M. Twain, *English as She Is Taught* (Cambridge: Da Capo Press, 2000) at 40.

¹⁶⁴⁴ B. Dylan & S. Shepard, “Brownsville Girl” on *Knocked Out Loaded* (New York: Columbia, 1986) at Track 6. As Bob Dylan sings: “Oh if there’s an original thought out there, I could use it right now.”

¹⁶⁴⁵ Voltaire, *Candide and Related Texts* (Indianapolis: Hackett Publishing Co., 2000) at 135.

prescient and sensible. To believe that “best practices” can sway the “nastiest of motives... [by] the nastiest of men”¹⁶⁴⁶ is – to be polite – naïve. As we have seen, tending one’s garden is a constant act; and, in tending the proverbial tree of knowledge, snakes and, as we have seen, “snake-oil salesmen” abound. For Angell “the claim that extensive ties between academic researchers and industry are necessary for technology transfer... [are] greatly exaggerated, particularly with regard to clinical research”¹⁶⁴⁷ and, in addition, it puts at great risk future scientific research and academic freedom.

Marx would probably agree that academic freedom and freedom of the press have much in common and that “[w]hat rightly holds good of both, holds good also of *their application*.”¹⁶⁴⁸ To paraphrase (or misinterpret) Marx:

[Academic freedom] ...is the ubiquitous vigilant eye of a people’s soul, the embodiment of a people’s faith in itself, the eloquent link that connects the individual with the state and the world, the embodied culture that transforms material struggles into intellectual struggles and idealises their crude material form. It is a people’s frank confession to itself, and the redeeming power of confession is well known. It is the spiritual mirror in which a people can see itself, and self-examination is the first condition of wisdom. It is the spirit of the state... and is all-sided, ubiquitous, omniscient. It is the ideal world which always wells up out of the real world and flows back into it with ever greater spiritual riches and renews its soul.¹⁶⁴⁹

In the grand scheme of things, Keynes is dryly observant: “[i]n the long run we are all dead.”¹⁶⁵⁰ Yet, in the post-*Bayh-Dole* era, what matters is how we intend to construct funding for pharmaceutical research in the university and guard against “the loss of scientific objectivity.”¹⁶⁵¹ It is time to create a system that can act ethically as to drug

¹⁶⁴⁶ Keynes, *supra* note 1003.

¹⁶⁴⁷ Angell, *supra* note 1347 at 1516.

¹⁶⁴⁸ K. Marx, “Freedom of the Press – Proceedings of the Sixth Rhine Provincial Assembly” in *Marx-Engels Collected Works Vol. 1.*, (New York: International Publishers, 1975) at 165.

¹⁶⁴⁹ *Ibid* at 164-165

¹⁶⁵⁰ J.M. Keynes, *A Tract on Monetary Reform* (London: Macmillian & Co. Limited, 1923) at 80.

¹⁶⁵¹ Angell, *supra* note 1342 at 128.

research and to develop respect for researchers, protect their academic freedom, and plot a course that can enrich and renew our collective soul – the commons. We must acknowledge that “one of the civilising aspects of capital [is] that it [can] enforce... in a manner and under conditions which are more advantageous to the development of... productive forces, social relations, and the creation of the elements for a new and higher form than under the preceding forms....”¹⁶⁵²

As such, Thomas Jefferson’s old chestnut reminds us: “He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.”¹⁶⁵³ We ought not to entertain or encourage what Thompson brusquely refers to as a ‘sturdy Platonism’ as to intellectual property but perhaps it is time for us to incorporate a ‘flexible Platonism’ and break the chains of neoliberal orthodoxy surrounding medical research and liberate it – and us – into the sunlight.¹⁶⁵⁴ It is time to take up Keynes challenge about ‘being dead in the long run’ and focus our attention as to how we intend to live, educate and be educated in and by the present and the future. Moreover, it is high time we intend to support an ‘incentive system’ (or return to one?) that fosters free association amongst medical researchers.

The objective is to construct or re-construct an incentive system that encourages the free flow of scientific research, innovation and progress. What must be analysed and

¹⁶⁵² K. Marx, *Capital, Vol. III: The Process of Capitalist Production as a Whole* (New York: International Publishers, 1967) at 819.

¹⁶⁵³ T. Jefferson, “Letter to Issac McPherson” in *Thomas Jefferson: A Chronology of His Thoughts* (Lanham: Rowman & Littlefield, 2002) at 242.

¹⁶⁵⁴ Plato, *The Republic of Plato* (ed. & trans.) A.D. Bloom (New York: Basic Books, 1991) at 195. The cave is one of Plato most well-known parables. Yet, Plato, for all his errs, is correct that: “[The sun is] source of the seasons and the years, and is the steward of all things in the visible place, and is in a certain way the cause of all those things he and his companions had been seeing [and thinking].”

restructured are the legal institutions and the “*foundations* of policies”¹⁶⁵⁵ of our public sphere. It is time we begin a solid push back against the relentless disputation of private financial interests surrounding pharmaceutical research. As Angell argues:

The pharmaceutical industry is extraordinarily privileged. It benefits enormously from publicly funded research, government-granted patents, and large tax breaks, and it reaps lavish profits. For these reasons, and because it makes products of vital importance to the public health, it should be accountable not only to its shareholders, but also to society at large.¹⁶⁵⁶

Real “pressure must be made more pressing by adding to it consciousness of pressure”¹⁶⁵⁷ and against the private interests that hobble the expansion of free inquiry. The so-called private “market” model does not promote academic freedom or innovation. It is the public sphere, not the private sector, that generates the ‘gifts’ of knowledge and innovation. It is the public sphere, not the private sector, that generates these ‘gifts’ through public funding and institutions.¹⁶⁵⁸ Our current state of development is a product of publicly driven and funded innovation. It is not one swarmed by the rhetoric of privatised hyperbola and free market mythology.¹⁶⁵⁹ Beyond our personal circumstances, there is a present and presence where “conscience does [not] make cowards of us all;”¹⁶⁶⁰ our collective future, our “vndifcouer’d country,”¹⁶⁶¹ is one that must acknowledge that it lies through *public* re-investment in free academic research, universities and the

¹⁶⁵⁵ C.W. Mill, “Letter to the New Left” (1960) 5 *New Left Review* at: <http://www.marxists.org/subject/humanism/mills-c-wright/letter-new-left.htm> (last visited January 12, 2017).

¹⁶⁵⁶ M. Angell, “The Pharmaceutical Industry – To Whom is It Accountable?” (2000) 342 *N.E.J.M.* at 1904.

¹⁶⁵⁷ K. Marx, “A Contribution to the Critique of Hegel’s Philosophy of Right” in *Karl Marx: Selected Writings* (Indianapolis: Hackett, 1994) at 30.

¹⁶⁵⁸ Mazzucato, *supra* note 207 at 115.

¹⁶⁵⁹ *Ibid.*

¹⁶⁶⁰ W. Shakespeare, *Hamlet* (London: Sampson Low, Son, & Co., 1860) at 44.

¹⁶⁶¹ *Ibid.*

‘knowledge economy.’ “[T]here is nothing that cannot happen today”¹⁶⁶² and this is a future that is still within our grasp.

¹⁶⁶² M. Twain, *Mark Twain’s Autobiography, Vol. 1.* (ed.) A.B. Paine (New York: Harper & Brothers, 1924) at 90. Or, as Walter Benjamin put it: “It is only for the sake of those without hope that hope is given to us.” W. Benjamin cited by Marcuse, *supra* note 281 at 261.

BIBLIOGRAPHY

MONOGRAPHS

H.J. Aaron & R.D. Reischauer, *Countdown to Reform: The Great Social Security Debate* (New York: Century Foundation Press, 2001).

F.M. Abbott, et. al. *Global Pharmaceutical Policy: Ensuring Medicines for Tomorrow's World* (Cheltenham: Edward Elgar, 2009).

A.L.K. Acheson, J.F. Chant & M.F.J. Prachowny, *Bretton Woods Revisited: Evaluations of the International Monetary Fund and the International Bank for Reconstruction and Development* (Toronto: University of Toronto Press, 1972).

W.H.D. Adams, *England on the Sea; or, The Story of the British Navy* (London: F.V. White, 1885).

T.W. Adorno, *Negative Dialectics* (London: Routledge, 1990).

T.W. Adorno & M. Horkheimer, "The Culture Industry: Enlightenment as Mass Deception" in *Dialectic of Enlightenment* (trans.) E. Jephcott (ed.) G.S. Noerr (Stanford: Stanford University Press, 2002).

R. Albritton, "Eating the Future: Capitalism Out of Joint" in *Political Economy and Global Capitalism: The 21st Century, Present and Future* (eds.) R. Albritton, R. Jessop & R. Westra (London: Anthem Press, 2010).

R.C. Allen, *Enclosure and the Yeoman* (Oxford: Clarendon Press, 1992).

R.E. Allen, *Greek Philosophy: Thales to Aristotle* (ed.) R.E. Allen (New York: The Free Press, 1985).

E.A. Alman & D. Alman, *Exoneration: The Trial of Julius and Ethel Rosenberg and Morton Sobell — Prosecutorial Deceptions, Suborned Perjuries, Anti-Semitism, and Precedent for Today's Unconstitutional Trials* (Seattle: Green Elms Press, 2010).

L. Althusser, *Lenin and Philosophy and Other Essays* (New York: Monthly Review Press, 1972).

L. Althusser, *The Future Lasts Forever* (eds.) O. Corpet & Y.M. Boutang (New York: New Press, 1995).

M. Ames, *Going Postal – Rage, Murder, and Rebellion: From Reagan's Workplaces to Clinton's Columbine and Beyond* (Brooklyn: Soft Skull Press, 2005).

- D. Anderson, "Government's Role in Property Ownership: Hobbes Meets Gilligan" in *The Fundamental Interrelationship Between Government and Property* (ed.) N. Mercurio & W.J. Samuels (Stamford: JAI Press Inc., 1999).
- J.E. Anderson, *The Emergence of the Modern Regulatory State* (Washington: Public Affairs Press, 1962).
- P. Anderson, *In the Tracks of Historical Materialism* (London: Verso, 1983).
- P. Anderson, *Lineages of the Absolutist State* (London: Verso Editions, 1978).
- R.D. Anderson, *European Universities from the Enlightenment to 1914* (Oxford: Oxford University Press, 2004).
- R. Andrews & K. Hughes, *The New Penguin Dictionary of Modern Quotations* (eds.) R. Andrews & K. Hughes (London: Penguin Books, 2000).
- M. Angell, *The Truth About Drug Companies: How They Deceive Us and What to do About It* (New York: Random House, 2005).
- M. Angell, "The Clinical Trial Business" in *Buying In or Selling Out?: The Commercialization of the American Research University* (ed.) D.G. Stein (New Brunswick: Rutgers University Press, 2004).
- R.J. Antonio, "Introduction: Marx and Modernity" in *Marx and Modernity: Key Readings and Commentary* (ed.) R.J. Antonio (Oxford: Blackwell, 2003).
- K. Aoki, "Neocolonialism, Anticommons Property, and Biopiracy in the (Not-So-Brave) New World Order of International Intellectual Property Protection" in *Law and Power: Critical and Socio-Legal Essays* (eds.) K. Tuori, Z. Bankowski & J. Uusitalo (Liverpool: Deborah Charles Publications, 1997).
- H. Applebaum, *The Concept of Work: Ancient, Medieval, and Modern* (Albany: State University of New York Press, 1992).
- T. Aquinas, *Introduction to St. Thomas Aquinas: The Summa Theologica* (ed.) A.C. Pegis (New York: The Modern Library, 1948).
- Aristotle, *Aristotle: The Nicomachean Ethics* (trans.) W.D. Ross (Oxford: Clarendon Press, 1908).
- Aristotle, *Aristotle: The Politics and the Constitution of Athens* (ed.) S. Everson (Cambridge: Cambridge University Press New York, 2005).
- L. Armstrong & S. Jenkins, *It's Not About the Bike: My Journey Back to Life* (New York: Putnam, 2000).

- P. Armstrong & H. Armstrong, *Wasting Away: The Undermining of Canadian Health Care* (Don Mills: Oxford University Press, 2010).
- R.L. Armstrong, *Metaphysics and British Empiricism* (Lincoln: University of Nebraska Press, 1970).
- S. Aronowitz, *Science as Power: Discourse and Ideology in Modern Society* (Minneapolis: University of Minnesota Press, 1988)
- S. Aronowitz, *The Crisis in Historical Materialism: Class, Politics, and Culture in Marxist Theory* (Minneapolis: The University of Minnesota Press, 1990).
- S. Aronowitz, *The Knowledge Factory* (Boston: Beacon Press, 2000).
- S. Aronowitz & W. Difazio, *The Jobless Future: Sci-Tech and the Dogma of Work* (Cambridge: Harvard University Press, 1997).
- S. Aronowitz, *Roll Over Beethoven: The Return of Cultural Strife* (Hanover: Wesleyan University Press, 1993).
- S. Aronowitz, *False Promises: The Shaping of American Working Class Consciousness* (Durham: Duke University Press, 1992).
- S. Aronowitz & H.A. Giroux, *Education Still Under Siege* (Westport: Bergin & Garvey Press, 1992).
- S. Aronowitz & H.A. Giroux, *Postmodern Education: Politics, Culture, and Social Criticism* (Minneapolis: University of Minnesota Press, 1991).
- S. Aronowitz, *The Crisis in Historical Materialism: Class, Politics, and Culture in Marxist Theory* (Minneapolis: The University of Minnesota Press, 1990).
- S. Aronowitz, *Science as Power: Discourse and Ideology in Modern Society* (Minneapolis: University of Minnesota Press, 1988).
- K.J. Arrow, "Economic Welfare and the Allocation of Resources for Invention" in *The Rate and Direction of Inventive Activity* (ed.) R. Nelson (Princeton: Princeton University Press, 1962).
- E. Åsbrink, *Och i Wienerwald står träden kvar* (Stockholm: Natur & Kultur, 2011).
- Association of American Universities Task Force on Research Accountability, *Report on Individual and Institutional Financial Conflict of Interest* (Washington: Association of American Universities, 2001).

Association of Universities and Colleges of Canada, *Putting Knowledge to Work, Sustaining Canada as an Innovative Society: An Action Agenda* (Ottawa: Association of Universities and Colleges of Canada, 1996).

R.D. Atkinson, *Supply-side Follies: Why Conservative Economics Fails, Liberal Economics Falts, and Innovation Economics Is the Answer* (Lanham: Rowman & Littlefield, 2006).

M. Atwood, *Survival: A Thematic Guide to Canadian Literature* (Toronto: Anansi, 1972).

A.U.C.C., "University Operating Income By Source of Funds" in *Trends: The Canadian University in Profile* (Ottawa: Association of Universities and Colleges, 1999).

J. Austen, *Mansfield Park* (London: Penguin Books, 1996).

J.H. Aveling, *The Chamberlens and the Midwifery Forceps, Memorials of the Family, and An Essay on the Invention of the Instrument* (New York: A.M.S. Press, 1977).

A.J. Ayer, *Language, Truth, and Logic* (Harmondsworth: Penguin Books, 1971).

F. Bacon, *Collected Works of Francis Bacon: Philosophical Works: Vol. 3, Part 2* (London: Routledge, 1996).

J. Bakan, *Childhood Under Siege: How Big Business Targets Children* (New York: Free Press, 2011).

D. Baker, *The Conservative Nanny State: How the Wealthy Use the Government to Stay Rich and Get Richer* (Washington: Center for Economic and Policy Research, 2006).

J.H. Baker, *An Introduction to English Legal History* (London: Butterworths, 1990).

M. Bakunin, *Bakunin on Anarchy* (ed.) S. Dolgoff (New York: A.A. Knopf, 1972).

M. Bakunin, *From Out of the Dustbin: Bakunin's Basic Writings, 1869-1871* (ed.) R.M. Cutler (Ann Arbor: Ardis, 1985).

H. de Balzac, *Father Goriot* (Charleston: Biblio Bazaar, LLC, 2006).

P.A. Baran & P.M. Sweezy, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966).

G. Baretta, *Italian Library* (London: A. Millar, 1757).

M. Barlow & H.-J. Robertson, *Class Warfare: The Assault on Canada's Schools* (Toronto: Key Porter Books, 1994).

M. Barlow & B. Campbell, *Straight Through the Heart: How the Liberals Abandoned the Just Society* (Toronto: Harper Collins Publishers Ltd., 1995).

M. Barlow & T. Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water* (New York: New Press, 2002).

K. Basu, *Beyond the Invisible Hand: Groundwork for a New Economics* (Princeton: Princeton University Press, 2011).

G. Bataille, *Visions of Excess: Selected Writings, 1927-1939* (Minneapolis: University of Minnesota Press, 1985).

G. Bataille, *The Accursed Share: An Essay On General Economy, Vol. I: Consumption* (trans.) R. Hurley (New York: Zone Books, 1988).

J. Baudrillard, *Forget Foucault* (New York: Semiotext(e), 1983).

J. Baudrillard, *Simulations* (New York: Semiotext(e), 1983).

J. Baudrillard, *For a Critique of the Political Economy of the Sign* (trans.) C. Levin (St. Louis: Telos Press, 1981).

J. Baudrillard, *The Mirror of Production* (trans.) M. Poster (St. Louis: Telos Press, 1975).

R.W. Bauman, *Critical Legal Studies: A Guide to the Literature* (Boulder: Westview Press, 1996).

E. Bäumlér, *Paul Ehrlich: Scientist for Life* (Teaneck: Holmes & Meier Publishing, 1984).

K. Baynes, "Democracy and the Rechtsstaat" in *The Cambridge Companion to Habermas* (ed.) S.K. White (Cambridge: Cambridge University Press, 1995).

U. Beck, *Risk Society: Towards a New Modernity* (New Delhi: Sage, 2004).

E. Behr, *Prohibition: Thirteen Years That Changed America* (New York: Arcade Publishing, 1996).

D. Bell, *The Coming of Post-Industrial Society* (New York: Basic Books, 1976).

D. Bell, *Science, Technology and Culture* (Maidenhead: Open University Press, 2005).

J. Bendell & M. Bendell, "Facing Corporate Power" in *The Debate Over Corporate Social Responsibility* (eds.) G. Cheney, J. Roper & S. May (Oxford: Oxford University Press, 2007).

O.J. Benedictow, *The Black Death 1346-1353: The Complete History* (Woodbridge: The Boydell Press, 2004).

W. Benjamin, *Illuminations* (ed.) H. Arendt (New York: Schocken Books, 1988).

Y. Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006).

J. Bentham, *An Introduction to the Principles of Morals and Legislation* (Oxford: Clarendon Press, 1996).

J. Bentham, *The Defence of Usury* (New York: Theodore Foster, 1837).

J. Bentham, *The Rationale of Reward* (London: Robert Heward, 1830).

R.F. Bense, *The Political Economy of American Industrialization, 1877-1900* (Cambridge: Cambridge University Press, 2000).

M. Berg, *Wuthering Heights: The Writing in the Margin* (London: Prentice Hall, 1996).

J. Berger, *The Ways of Seeing* (Penguin: London, 1972).

I. Berlin, *Two Concepts of Liberty: An Inaugural Lecture* (Oxford: Clarendon, 1958).

M. Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (New York: Penguin Books, 1982).

M. Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (New York: Penguin Books, 1988).

R.J. Bernstein, "Incommensurability and Otherness Revisited" in *Culture and Modernity: East-West Philosophic Perspectives* (ed.) E. Deutsch (Honolulu: University of Hawaii Press, 1991).

E.L. Bernays, *Crystallizing Public Opinion* (New York: Boni & Liveright, 1923).

E.L. Bernays, *Propaganda* (New York: Horace Liveright, 1928).

E.L. Bernays, *Public Relations* (Norman: University of Oklahoma Press, 1952).

L.P. Berra, *The Yogi Book* (New York: Workman Publishing, 1998).

P. Berton, *The National Dream: The Great Railway, 1871-1881* (Toronto: McClelland & Stewart, 1970).

- A. Bierce, *The Devil's Dictionary* (New York: Dover Publications, Inc., 1993).
- G. Bigelow, *Fiction, Famine, and the Rise of Economics in Victorian Britain and Ireland* (Cambridge: Cambridge University Press, 2003).
- R. Billstein, K. Fings & A. Kugler, *Working for the Enemy: Ford, General Motors, and Forced Labor in Germany During the Second World War* (ed. & trans.) N. Levis (New York: Berghahn, 2000).
- H.C. Binswanger, *Money and Magic: A Critique of the Modern Economy in the Light of Goethe's Faust* (Chicago: Chicago University Press, 1994).
- J.M. Bishop, *How to Win the Nobel Prize: An Unexpected Life in Science* (Cambridge: Harvard University Press, 2004).
- H.C. Black, *Black's Law Dictionary, 6th ed.* (St. Paul: West Publishing Co., 1990).
- W. Blackstone, *Blackstone's Commentaries on the Laws of England* (Oxford: Clarendon Press, 1765-1769).
- W. Blackstone, *Commentaries on the Laws of England: In Four Books, Volume 2, Parts 3-4* (Philadelphia: Childs & Peterson, 1860).
- W. Blackstone, *Commentaries on the Laws of England, Vol. 1* (Philadelphia: E. Duyckinck, G. Long, Collins & Hannay, Collins & Co., & O.A. Roorbach & J. Grigg, 1916).
- W. Blackstone, *Blackstone's Commentaries on the Laws of England – Vol. 2* (New York: W.E. Dean, 1832).
- N. Blake, "Habermas, Lyotard, and Higher Education" in *Lyotard: Just Education* (eds.) P.A. Dhillon & P. Standish (New York: Routledge, 2000).
- M. Blanding, *The Coke Machine: The Dirty Truth Behind the World's Favorite Soft Drink* (New York: Penguin Group, 2010).
- A.D. Bloom, *The Closing of the American Mind: How Higher Education has Failed Democracy and Impoverished the Souls of Today's Students* (New York: Simon & Schuster, 1988).
- J. Blum, *The End of the Old Order in Rural Europe* (Princeton: Princeton University Press, 1978).
- M. Blyth, *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century* (Cambridge: Cambridge University Press, 2002).

D.C. Bok, *Universities in the Marketplace: The Commercialization of Higher Education* (Princeton: Princeton University Press, 2003).

R.D. Boisvert, *John Dewey: Rethinking Our Time* (Albany: State University of New York Press, 1998).

D. Bollier, *Brand Name Bullies: The Quest to Own and Control Culture* (Hoboken: J. John Wiley & Son, 2005).

D. Bollier, "The Perils of Property Speak in Academia" in *Controlling Intellectual Property: The Academic Community and the Future of Knowledge* (Ottawa: Canadian Association of University Teachers, 2006).

J. Borrows, "Wampum at Niagara: The Royal Proclamation, Canadian Legal History, and Self-Government" in *Aboriginal and Treaty Rights in Canada* (ed.) M. Asch (Vancouver: UBC Press, 1997).

D. Bosshart, *Cheap?: The Real Cost of Living in a Low Price, Low Wage World* (London: Kogan Page, 2007).

P. Bourdieu, "Neo-liberalism, the Utopia (Becoming a Reality) of Unlimited Exploitation" in *Acts of Resistance: Against the Tyranny of the Market* (trans.) R. Nice (New York: The New Press, 1998).

P. Bourdieu, "Against the Destruction of a Civilization" in *Acts of Resistance: Against the Tyranny of the Market* (trans.) R. Nice (New York: New Press, 1998)

J. Bourq, *From Revolution to Ethics: May 1968 and Contemporary French Thought* (Montréal: McGill-Queen's University Press, 2007).

N. Bowman, "Questionable Beauty: The Dangers and Delights of the Cigarette in American Society, 1880-1930" in *Beauty and Business: Commerce, Gender, and Culture in Modern America* (ed.) P. Scranton (New York: Routledge, 2001).

J. Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* (Cambridge: Harvard University Press, 1996).

R. Bradford, *John Henry* (New York: Harper & Brothers, 1931).

J. Braithwaite, "Corporate Crime and Republican Criminological Praxis" in *Corporate Crime: Contemporary Debates* (eds.) F. Pearce & L. Snider (Toronto: University of Toronto Press, 1995).

R. Brautigan, "All Watched Over By Machines of Loving Grace" in *All Watched Over By Machines of Loving Grace* (San Francisco: Communication Publishing, 1967).

H. Braverman, *Labor and Monopoly Capital* (New York: Monthly Review Press, 1998).

Lord Braxfield, "Proceedings against Thomas Muir" in *A Complete Collection of State Trials and Proceedings for High Treason and Other Crimes and Misdemeanors* (London: T.C. Hansard, 1812).

J. Brecher, T. Costello & B. Smith, *Globalization from Below: The Power of Solidarity* (Cambridge: South End Press, 2000).

B. Brecht, *The Caucasian Chalk Circle* (London: Methuen, 1965).

B. Brecht, *The Life of Galileo* (trans.) H. Brenton (London: Eyre Methuen, 1980).

B. Brecht, "The Life of Galileo" in *Bertolt Brecht Collected Plays* (trans.) H. Brenton (London: Vintage Books, 1972).

B. Brecht, *The Threepenny Opera* (trans.) D. Vesey (New York: Grove Press, 1994).

B. Brecht, "The Solution" in *Bertolt Brecht: Poems 1913-1956* (New York: Routledge, 1987).

P.R. Breggin, *Medication Madness: A Psychiatrist Exposes the Dangers of Mood-Altering Medications* (New York: St. Martin's Press, 2008).

J. Brewer, *The Sinews of Power: War, Money and the English State 1688-1783* (London: Unwin Hyman Ltd., 1989).

T. Bridgman & H. Willmott, "Academics in the 'Knowledge Economy': From Expert to Intellectual?" in *Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy* (eds.) A. Harding, A. Scott, S. Laske & C. Burtscherat: (Burlington: Ashgate, 2007).

H. Brody, *Hooked: Ethics, the Medical Profession, and the Pharmaceutical Industry* (Lanham: Rowman & Littlefield, 2008).

T. Brokaw, *The Greatest Generation* (New York: Random House, 1998).

C. Brontë, *Jane Eyre* (London: Penguin Books, Limited, 2006).

R. Brown, *Society and Economy in Modern Britain, 1700-1850* (London: Routledge, 1991).

S.R. Brown, *Age of Scurvy: How a Surgeon, a Mariner, and a Gentlemen Solved the Greatest Medical Mystery of the Age of Sail* (London: St. Martin's Press, 2005).

T.S. Brown, *A History of the Grand Trunk Railway of Canada* (Québec City: Hunter, Rose, 1864).

J.M. Buchanan, *Public Finance in Democratic Process: Fiscal Institutions and Individual Choice* (Chapel Hill: University of North Carolina Press, 1987).

J.M. Buchanan, "Post-Reagan Political Economy" in *Reaganomics and After* (eds.) J.M. Buchanan, et. al. (London: Institute of Economic Affairs, 1989).

B.W. Bugbee, *Genesis of American Patent and Copyright* (Washington: Public Affairs Press, 1967).

J. Burns, *Goddess of the Market: Ayn Rand and the American Right* (Oxford: Oxford University Press, 2009).

S. Burns, *Home, Inc.: The Hidden Wealth and Power of the American Household* (Garden City: Doubleday & Company, Inc., 1975).

J. Burrell, *The Republican Treason: Republican Fascism Exposed* (New York: Algora Pub., 2008).

V. Bush, "Science: The Endless Frontier" in *A Report to the President by Vannevar Bush, Director of the Office of Scientific Research and Development, July 1945* (Washington: Government Printing Office: 1945).

R. Buxbaum, "Juridification and Legitimation Problems in American Enterprise Law" in *Juridification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporative, Antitrust and Social Welfare Law* (ed.) G. Teubner (Berlin: de Gruyter, 1987).

C.G. Caffentzis, *Clipped Coins, Abused Words, and Civil Government: John Locke's Philosophy of Money* (Brooklyn: Autonomedia, 1989).

A. Callinicos, *Against Postmodernism: A Marxist Critique* (New York: St. Martin's Press, 1990).

A. Callinicos, *The Revolutionary Ideas of Karl Marx* (London: Bookmarks Publications Ltd., 1996).

A. Callinicos & M. Simons, *The Great Strike: The Miners' Strike of 1984-5 and Its Lessons* (London: Socialist Worker, 1985).

F. Cameron, *Cottrell, Samaritan of Science* (Garden City: Doubleday, 1952).

C.A.U.T., "Universities and Colleges in the Public Interest" in *Research Report 1 & 2* (Ottawa: Canadian Association of University Teachers, 1999).

E. Canetti, *Crowds and Power* (trans.) C. Stewart (New York: Farrar, Straus and Giroux, 1962).

T. Carnwath & I. Smith, *Heroin Century* (London: Routledge, 2002).

N.G. Carr, *The Shallows: What the Internet Is Doing to Our Brains* (New York : W.W. Norton, 2010).

J. Carroll, *Constantine's Sword: The Church and the Jews, A History* (Boston: Houghton Mifflin, 2001).

G. Cary, *The Medieval Alexander* (London: Cambridge University Press, 1967)

N.E. Cantor, *In the Wake of the Plague: The Black Death and the World It Made* (New York: Perennial/Harpers Collins, 2002).

N.G. Carr, *The Shallows: What the Internet Is Doing to Our Brains* (New York: W.W. Norton, 2010).

J. Carswell, *The South Sea Bubble* (Stroud: Sutton, 2001).

S.D. Cashman, *America in the Gilded Age: From the Death of Lincoln to the Rise of Theodore Roosevelt* (New York: New York University Press, 1994).

J. Cassidy, *Dot.con: How America Lost Its Mind and Its Money in the Internet Era* (New York: Perennial, 2003).

J.R. Censer & L.A. Hunt, *Liberty, Equality, Fraternity: Exploring the French Revolution* (University Park: Pennsylvania State University Press, 2001).

M. de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 1984).

A. Césaire, *Discourse on Colonialism* (trans.) J. Pinkham (New York: Monthly Review Press, 2000).

A. Césaire, *A Season in the Congo* (trans.) G. Chakravotry Spivak (Greenford: Seagull, 2008).

H.-J. Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London: Anthem, 2002).

H.-J. Chang, "Technology and Industrial Development in an Era of Globalization" in *Rethinking Developmental Economics* (ed.) H.-J. Chang (London: Anthem Press, 2004).

H.-J. Chang, *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism* (New York: Bloomsbury Press, 2008).

H.-J. Chang, *23 Things They Don't Tell You About Capitalism* (London: Penguin Books, 2010).

A.R. Chapman, "Core Obligations Related to ICESCR Article 15(1) C" in *Core Obligations: Building a Framework for Economic, Social and Cultural Rights* (eds.) A.R. Chapman & S. Russell (Oxford: Hart Publishing, 2002).

A. Charles, *A Classical Dictionary: Containing An Account Of The Principal Proper Names Mentioned in Ancient Authors, And Intended To Elucidate All The Important Points Connected With The Geography, History, Biography, Mythology, And Fine Arts Of The Greeks And Romans Together With An Account Of Coins, Weights, And Measures, With Tabular Values Of The Same* (New York: Harper & Brothers, Publishers, 1841).

R. Chernow, *Titan: The Life of John D. Rockefeller, Sr.* (New York: Random House, 1997).

H. W. Chesbrough, *Open Innovation: The New Imperative for Creating and Profiting from Technology* (Boston: Harvard Business School Press, 2006).

D.S. Chisum, et. al. "Venetian Republic Patent Statute (1474)" in *Principles of Patent* (eds.) D.S. Chisum et al. (New York: Foundation Press, 2001).

R. Chodos, *The CPR: A Century of Corporate Welfare* (Toronto: J. Lewis & Samuel, 1973).

N. Chomsky, *Detering Democracy* (New York: Farrar, Straus & Giroux, 1991).

N. Chomsky, *Hegemony or Survival: America's Quest for Global Dominance* (New York: Metropolitan Books, 2003).

N. Chomsky, *Pirates and Emperors: International Terrorism in the Real World* (New York: Claremont Research and Publications, 1986).

N. Chomsky, "Interview" in *The Chomsky Reader* (ed.) J. Peck (New York: Pantheon Books, 1987).

N. Chomsky, "The Manufacture of Consent" in *The Chomsky Reader* (ed.) J. Peck (New York: Pantheon Books, 1987).

N. Chomsky, "Lecture 2: Containing Internal Aggression" in *On Power and Ideology* (Montréal: Black Rose Books, 1990).

- N. Chomsky, *501: The Conquest Continues* (Boston: South End Press, 1993).
- W. Churchill, "Speech in the House of Commons, August 20, 1940" cited in S. Lawlor, *Churchill and the Politics of War, 1940-1941* (Cambridge: Cambridge University Press, 1994).
- N. Chomsky, *World Orders Old and New* (New York: Columbia University Press, 1996).
- N. Chomsky, "Neoliberalism and Global Order" in N. Chomsky, *Profit Over People: Neoliberalism and Global Order* (New York: Seven Stories Press, 1999).
- N. Chomsky "Business School: An Interview with Noam Chomsky" in *Campus Inc.: Corporate Power in the Ivory Tower* (ed.) G.D. White (Amherst: Prometheus Books, 2000).
- N. Chomsky, "Understanding Power" in *Understanding Power: The Indispensable Chomsky* (eds.) P.R. Mitchell & J. Schoeffel (New York: New Press, 2002).
- N. Chomsky, *Government in the Future* (London: Turnaround Publisher Services Ltd., 2005).
- N. Chomsky, "Plutonomy and the Precariat" in *Occupy* (New York: Zuccotti Park Press, 2012).
- N. Chomsky, *Rogue States: The Rule of Force in World Affairs* (London: Pluto Press, 2000).
- M.T. Cicero, *The Republic and the Laws* (trans.) C.D. Young (Lawrence: Digireads.com Publishing, 2009).
- B.W. Clapp & H.E.S. Fisher, *Documents in English Economic History: England from 1000 to 1760* (London: G. Bell & Sons. 1977).
- C.M. Clark, *Iron Kingdom: The Rise and Downfall of Prussia, 1600-1947* (Cambridge: Harvard University Press, 2006).
- B.R. Clark, *Places of Enquiry: Research and Advanced Education in the Modern Universities* (Berkeley: University of California Press, 1995).
- W. Clement, *The Canadian Corporate Elite: An Analysis of Economic Power* (Toronto: McClelland and Stewart, 1975).
- W. Clement, "Political Economy?" in *Understanding Canada: Building on the New Canadian Political Economy* (ed.) W. Clement (Montréal: McGill-Queen's University Press, 1997).

- C. von Clausewitz, *On War* (trans.) M. Howard & P. Paret (Princeton: Princeton University Press, 1984).
- R. Coase, *The Firm, The Market, and the Law* (Chicago: University of Chicago Press, 1990).
- A. Cockburn & J. Saint Clair, *Whiteout: The CIA, Drugs and the Press* (London: Verso, 1998).
- C. Cockburn, “Mr. Capone, Philosopher” in *Cockburn Sums Up* (London: Quartet Books, 1981)
- L. Code, “Women, Science, and the Politics of Representation” in *Figuring It Out: Science, Gender, and Visual Culture* (eds.) A.B. Shteir & B.V. Lightman (Hanover: Dartmouth College Press, 2006).
- J. Coen & E. Coen, *Miller’s Crossing* (Hollywood: Script City, 1988).
- Congressional Budget Office, “How Preferential Trade Agreements Affect the U.S. Economy” (Washington: Congressional Budget Office, 2016).
- R. Cohen, *Alien Invasion: How the Harris Tories Mismanaged Ontario* (Toronto: Insomniac Press, 2001).
- E. Coke, *The Second Part of the Institutes of the Laws of England* (Bell-Yard: E.&L. Brooke, 1797).
- R.J. Coleman, *Eden’s garden: Rethinking Sin and Evil in an Era of Scientific Promise* (Lanham: Rowman & Littlefield Publishers, 2007)
- H. Collins, *Marxism and Law* (Oxford: Clarendon Press, 1982).
- M. Conlon, “Betrayal of the Public Trust: Corporate Governance of Canadian Universities” in *The Corporate Campus: Commercialization and the Dangers to Canada’s Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Company Ltd., Publishers, 2000).
- R. Coombe, *The Cultural Life of Intellectual Properties* (Durham: Duke University Press, 1998).
- S. Coontz, *The Way We Never Were: American Families and the Nostalgia Trap* (New York: Basic Books, 2003).
- R. Cooter & T. Ulen, *Law and Economics* (Addison: Wesley Longman, 2007).

F.C. Copleston, *The History of Philosophy Vol. 7* (New York: Bantam Doubleday Dell Publishing, 1963).

A. Renaud-Coulon, “Branding Your Corporate University” in *The Next Generation of Corporate Universities: Innovative Approaches for Developing People and Expanding Organizational Capabilities* (ed.) M. Allen, (San Francisco: Pfeiffer, 2007).

D. Cornell, “Freedom’s Conscience” in *Just Cause: Freedom, Identity, and Rights: Selected Essays* (Lanham: Rowman & Littlefield Publishers, 2000).

D.J.M. Cornwell (a.k.a. John le Carré) “Author’s Note” in *The Constant Gardener* (New York: Simon & Schuster, 2001).

J. Cornwell, *The Power to Harm: Mind, Murder, and Drugs on Trial* (Allen Lane and Penguin, 1996).

J. Cortright & H. Mayer, *Signs of Life: The Growth of Biotechnology Centers in the U.S.* (Washington: Brookings Institution, 2002).

L.A. Coser “Two Methods in Search of a Substance” in *A Handful of Thistles: Collected Papers in Moral Conviction* (New Brunswick: Transaction, 1988).

M. Coulter, *Property in Ideas: The Patent Question in Mid-Victorian Britain* (Kirkville: Thomas Jefferson Press, 1992).

R.S. Cowan, *A Social History of American Technology* (Oxford: Oxford University Press, 1997).

M. Cranston, *John Locke: A Biography* (New York: Macmillan, 1957).

M. Crochet “Governance in European Universities” in *Reinventing the Research University* (eds.) L. Weber & J.J. Duderstadt (London: Economica, 2004).

R. Crompton & G. Jones, *White-Collar Proletariat: Deskilling and Gender in Clerical Work* (London: Macmillan, 1984).

B. Curtis, *The Politics of Population: State Formation, Statistics, and the Census of Canada, 1840-1875* (Toronto: University of Toronto Press, 2002).

R. Dahl, *Willy Wonka and the Chocolate Factory* (Hollywood: Paramount Pictures, 1971).

R. Dallek, *Ronald Reagan: The Politics of Symbolism* (Cambridge: Harvard University Press, 1999).

H.E. Daly & J.B. Cobb, *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future* (Boston: Beacon Press, 1994).

M. Daly, *Gyn/ecology: The Metaethics of Radical Feminism* (Boston: Beacon Press, 1978).

C. Darwin, *The Origins of the Species by Means of Natural Selection: Or, The Preservation of Favoured Races in the Struggle for Life* (Edison: Castle Books, 2004).

A.Y. Davis, *Are Prisons Obsolete?* (New York: Seven Stories Press, 2003).

G.F. Davis, *The Vanishing American Corporation: Navigating the Hazards of a New Economy* (Oakland: Berrett-Koehler Publishers, Inc., 2016).

M. Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (New York: Verso, 2000).

R.T. Davies, *Documents Illustrating the History of Civilization in Medieval England, 1066-1500* (London: Methuen and Company Limited, 1926).

R. Dawkins & Y. Wong “The Conceit of *Ancestor’s Tale: A Pilgrimage to the Dawn of Evolution* (Boston: Houghton Mifflin, 2004).

R. Deazly, *Rethinking Copyright: History, Theory, Language* (Cheltenham: Edward Elgar, 2006).

D. Defoe, *A General History of the Pyrates* (ed.) M. Schonhorn (Mineola: Dover Publications, Inc., 1972).

J. Derrida, *Edmund Husserl’s Origin of Geometry: An Introduction* (Lincoln: University of Nebraska Press, 1978).

J. Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International* (New York: Routledge, 1994).

J. Derrida, *Margins of Philosophy* (Chicago: University of Chicago Press, 1982).

J. Derrida, *Writing and Difference* (trans.) A. Bass (London: Routledge & Kegan Paul, 1978).

J. Derrida, *Points: Interviews, 1974-1994* (Stanford: Stanford University Press, 1995).

J. Derrida, *Without Alibi* (trans.) P. Kamuf (Stanford: Stanford University Press, 2002).

R. Descartes, *Discourse on the Method* (New York: Cosimo, Inc., 2008).

R. Descartes, "Meditations on the First Philosophy" in *The Rationalists* (trans.) J. Veitch (New York: Anchor Books, 1974).

R. Descartes, *The Method, Meditations, and Selections from the Principles of Descartes* (trans.) J. Veitch (Edinburgh: William Blackwood and Sons, 1880).

J. Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Cosimo Classics, 2005).

T.M. Devine, *The Great Highland Famine: Hunger, Emigration and the Scottish Highlands in the 19th Century* (Edinburgh: Donald, 1988).

J. Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking, 2005).

C. Dickens, *Bleak House* (New York: Penguin Books, 1971).

C. Dickens, *Great Expectations* (New York: W. W. Norton, 1999).

A. Dinerstein & M. Neary, "From Here to Utopia" in *The Labour Debate: An Investigation into the Theory and Reality of Capitalist Work* (Aldershot: Ashgate, 2002).

M.H. Dobb, *Studies in the Development of Capitalism* (London: Routledge & Kegan, Paul Ltd., 1946).

G.B. Doern, *Fairer Play: Canadian Competition Policy Institutions In a Global Market* (Toronto: C.D. Howe Institute, 1995).

G.B. Doern & M. Sharaput, *Canadian Intellectual Property: The Politics of Innovating Institutions and Interests* (Toronto: University of Toronto Press, 2000).

C. Dommermuth-Costa, *Nikola Tesla: A Spark of Genius* (Minneapolis: Lerner Publications Co., 1994).

W.J.A. Donald, *The Canadian Iron and Steel Industry: A Study in the Economic History of a Protected Industry* (Boston: Houghton Mifflin Co., 1915).

G. Domagk, "Further Progress in Chemotherapy of Bacterial Infections" Nobel Lecture, December 12, 1947, in *Chemotherapy of Bacterial Infection* (Thieme: Stuttgart, 1947).

G. Domagk, "Further Progress in Chemotherapy of Bacterial Infections, December 12, 1947" *Nobel Lectures, Physiology or Medicine 1922-1961* (Amsterdam: Elsevier Publishing Company, 1965).

P.C. Dooley, *The Labour Theory of Value* (New York: Routledge, 2005).

D. Drache & M.S. Gertler, "Preface" in *The New Era of Global Competition: State Policy and Market Power* (eds.) D. Drache & M.S. Gertler (Montréal and Kingston: McGill-Queen's University Press, 1991).

H.S. Drago, *The Great Range Wars: Violence on the Grasslands* (Lincoln: University of Nebraska Press, 1970).

P. Drahos, *A Philosophy of Intellectual Property* (Aldershot: Dartmouth Publishing Company Limited).

P. Drahos & J. Braithwaite, *Information Feudalism: Who Owns the Knowledge Economy?* (London: Earthscan, 2002).

P.F. Drucker, *Innovation and Entrepreneurship: Practice and Principles* (Amsterdam: Butterworth-Heinemann, 2007).

P.F. Drucker, *Landmarks of Tomorrow: A Report on the "Post-Modern" World* (New York: Harper Colophon Books, 1959).

P.F. Drucker, *The Effective Executive* (Amsterdam: Butterworth-Heinemann, 2007).

W.J. Duiker & J.J. Spielvogel, *World History, Vol. One (5th ed.)* (Belmont: Thomson & Wadsworth, 2007).

R. W. Dyson, *St. Augustine of Hippo: The Christian Transformation of Political Philosophy* (New York: Continuum, 2005).

T. Eagleton, *The Significance of Theory* (Oxford: Basil Blackwell, 1990).

T. Eagleton, *The Illusions of Postmodernism* (Cambridge: Blackwell Publishers, 1996).

T. Eagleton, *Myths of Power: A Marxist Study of the Brontës* (Basingstoke: Macmillan, 1999).

D.W.L. Earl, *The Family Compact: Aristocracy or Oligarchy?* (Toronto: C. Clark Publishing Co., 1967).

Ecclesiastes, *The Holy Bible* (New York: Thomas Nelson and Son, 1952).

B. Edvardsson & B. Enquist, *Values-Based Service for Sustainable Business: Lessons From IKEA* (New York: Routledge, 2003).

M.A. El-Erain, *Navigating the New Normal in Industrial Countries* (Washington: International Monetary Fund, 2010).

N. Elias, *The Civilising Process: The History of Manners* (Oxford: Blackwell Publishing, 2000).

N. Elias, "Sociology and Psychiatry" in *Psychiatry in a Changing Society* (eds.) S.H. Foulkes & G.S. Prince (London: Tavistock, 1969).

T.S. Elliot, "The Waste Land" (London: Hogarth Press, 1923).

D.D. Eisenhower, *The Military-Industrial Complex* (Portland: Basementia Publications, 2006).

F. Engels, "The Corn Laws" in *Marx-Engels Collected Works Vol. 2* (Moscow: Progress Publishers, 1979).

F. Engels, "Socialism: Utopian and Scientific" in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton and Company, 1978).

F. Engels, "Letters on Historical Materialism 1890-94" in *Collected Works* (Moscow: Progress Publishers, 1980).

F. Engels, *The Condition of the Working Class in England in 1844* (Middlesex: The Echo Library, 2009).

T.J. English, *Paddy Whacked: The Untold Story of the Irish American Gangster* (New York: Harper, 2006).

M.J. Enright, "Regional Clusters: What We Know and What We Should Know" in *Innovation Clusters and Interregional Competition* (eds.) J. Bröcker, D. Dohse & R. Soltwedel (Berlin: Springer, 2003).

R.A. Epstein, *Overdose: How Excessive Government Regulation Stifles Pharmaceutical Innovation* (New Haven: Yale University Press, 2006).

D. Erasmus, *In Praise of Folly* (London: Reeves & Turner, 1876).

P.B. Evans, D. Rueschemeyer & T. Skocpol, "On the Road Toward a More Adequate Understanding of the State" in *Bringing the State Back In* (eds.) P.B. Evans, D. Rueschemeyer & T. Skocpol (Cambridge: Cambridge University Press, 1985).

A.S. Eve & C.H. Creasey, *Life and Work of John Tyndall* (London: Macmillan, 1945).

B. Fagan, *The Little Ice Age: How Climate Made History, 1300-1850* (New York: Basic Books, 2001).

B. Fagan, *The Great Warming: Climate Change and the Rise and Fall of Civilization* (London: Bloomsbury Press, 2008).

- J. Fagerberg, R.R. Nelson & D.C. Mowery, *The Oxford Handbook Of Innovation* (Oxford: Oxford University Press, 2005).
- F. Fanon, *The Wretched of the Earth* (Berkeley: Grove Press, 2004).
- P.J. Farmer (a.k.a. Kilgore Trout) *Venus on the Half-Shell* (New York: Dell Publishing, 1975).
- K.T.H. Farrer, *To Feed a Nation: A History of Australian Food Science and Technology* (Collingwood: CSIRO Pub., 2005).
- S. Farry, "The Morning After: An Alliance Perspective on the Agreement" in *Peace At Last?: The Impact of the Good Friday Agreement on Northern Ireland* (eds.) J. Neuheiser & S. Wolff (Oxford: Berghahn, 2004).
- S. Federici, *Caliban and the Witch: Women, the Body and Primitive Accumulation* (New York: Autonomedia, 2004).
- M. Feldman, "Post-Bayh-Dole University-Industry Relationships" in *Capitalizing on New Needs and New Opportunities: Government-Industry Partnerships in Biotechnology and Information Technologies* (ed.) C.W. Wessner (Washington: National Academy Press, 2001).
- L. Fell, *An Introduction to Financial Products and Markets* (New York: Continuum, 2000).
- P.J. Ferrara & M.D. Tanner, *A New Deal for Social Security* (Washington: Cato Institute, 1998).
- D. Ferriter & C. Tóibín, *The Irish Famine* (London: Profile Books Ltd., 2001).
- B.E. Field & K.J. Field, *Racecraft: The Soul of Inequality in American Life* (New York: Verso, 2012).
- R. Firm, *Nature's Chemicals: The Natural Products that Shaped Our World* (Oxford: Oxford University Press, 2009).
- M. Fishbein & W.L. Bierring, *A History of the American Medical Association, 1847 to 1947* (Ann Arbor: University of Michigan, 1947).
- W.W. Fisher, *The Growth of Intellectual Property: A History of Ownership of Ideas in the United States* (*The Growth of Intellectual Property: A History of Ownership of Ideas in the United States*) (Cambridge: Harvard University Press, 1999).
- S. Fitzpatrick, *The Russian Revolution* (Oxford: Oxford University Press, 2008).

- A. Fleming, “‘Penicillin’, Nobel Lecture, December 11, 1954” in *Nobel Lectures: Physiology or Medicine, 1942-1962* (Amsterdam: Elsevier Publishing Company, 1965).
- J.J. Flink, *America Adopts the Automobile, 1895-1910* (Cambridge: The MIT Press, 1970).
- J. Fogel, *Drugstore Cowboy* (New York: Dell Publishing, 1989).
- N.D. Fortin, *Food Regulation: Law, Science, Policy, and Practice* (Hoboken: John Wiley & Sons, 2009).
- M. Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason* (New York: Random House Inc., 1965).
- M. Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Pantheon Books, 1970).
- M. Foucault, “Truth and Power” in *Power/Knowledge: Selected Interviews and Other Writings 1972-1977* (ed.) C. Gordon (New York: Pantheon Books, 1980).
- M. Foucault, *Technologies of the Self: A Seminar with Michel Foucault* (Amherst: University of Massachusetts Press, 1988).
- M. Foucault, “Governmentality” in *The Foucault Effect: Studies in Governmentality* (Chicago: The University of Chicago Press, 1991).
- M. Foucault, “Introduction” in G. Deleuze & F. Guattari, *Anti-Œdipus: Capitalism and Schizophrenia Vol. 1.* (trans.) R. Hurley, M. Seem & H.R. Lane (London: Continuum, 1972).
- G. Fowler, *Mystic Healers and Medicine Shows: Blazing Trails to Wellness in the Old West and Beyond* (Santa Fe: Ancient City Press, 1997).
- M.W. Fox, *Bringing Life to Ethics: Global Bioethics for a Humane Society* (Albany: State University of New York Press, 2001).
- T. Frank, *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy* (New York: Anchor Books, 2000).
- B. Franklin, “A Modest Enquiry into the Nature and Necessity of a Paper Currency” in *The Works of Benjamin Franklin* (London: Benjamin Franklin Stevens, 1882)
- H.B. Franklin, *Vietnam and Other American Fantasies* (Amherst: University of Massachusetts Press, 2001).

U. Franklin, "What is at Stake? Universities in Context" in *The Corporate Campus: Commercialization and the Dangers to Canada's Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Co. Ltd., 2000).

N. Fraser, "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy" in *Habermas and the Public Sphere* (ed.) C. Calhoun (Cambridge: MIT Press, 1992).

J.-D. Fr chette, *Federal Spending on Postsecondary Education* (Ottawa: Office of the Parliamentary Budget Officer, 2016).

S. Fried, *Bitter Pills: Inside the Hazardous World of Legal Drugs* (New York: Bantam, 1998).

M. Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962).

M. Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1966).

M. Friedman, "Nobel Lecture: Inflation and Unemployment" in *Milton Friedman on Economics: Selected Papers* (Chicago: University of Chicago Press, 2007).

T.L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Farrar, Straus and Giroux, 1999).

P. Freire "Education and Power: Questions About Power and Social Change" in *Paulo Freire On Higher Education* (ed.) M. Escobar & P. Freire (Albany: State University of New York Press, 1994).

M. Frumkin, *The Early History of Patents for Invention* (Surrey: Surrey Fine Art Press, 1947).

J. Fudge & R. Owens, "Precarious Work, Women and the New Economy: The Challenge to Legal Norms" in *Precarious Work, Women and the New Economy: The Challenge to Legal Norms* (eds.) J. Fudge & R. Owens (Oxford: Onati International Series in Law and Society, 2006).

H.-G. Gadamer, "The Principle of Effective History, Rhetoric, Hermeneutics, and the Critique of Ideology" in *The Hermeneutics Reader: Texts of the German Tradition from the Enlightenment to the Present* (ed.) K. Mueller-Vollmer (New York: Continuum, 1989).

J. Gadrey, *New Economy, New Myth* (New York: Routledge, 2003).

Jas.K. Galbraith, *Created Unequal: The Crisis in American Pay* (Chicago: University of Chicago Press, 1998).

Jas.K. Galbraith, *The Predator State: How Conservatives Abandoned the Free Market and Why Liberals Should Too* (New York: Free Press, 2009).

J.K. Galbraith, *The Scotch* (Boston: Houghton Mifflin, 1964).

J.K. Galbraith, *The Culture of Contentment* (New York: Houghton Mifflin Company, 1993).

J.K. Galbraith, *A History of Economics: The Past as the Present* (London: H. Hamilton, 1987).

J.K. Galbraith, *The Great Crash, 1929* (Boston: Houghton Mifflin, 1997).

J.K. Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958).

J.K. Galbraith, *Economics in Perspective: A Critical History* (Boston: Houghton Mifflin, 1991).

J.K. Galbraith, *Money: Whence It Came, Where It Went* (Boston: Houghton Mifflin, 1975).

J.K. Galbraith, *The New Industrial State* (Princeton: Princeton University Press, 2007).

J.K. Galbraith, *Economics and the Public Purpose: How We Can Head Off the Mounting Economic Crisis* (New York: The New American Library, 1975).

J.K. Galbraith, *The Good Society: The Humane Agenda* (New York: Houghton Mifflin Company, 1996).

J.K. Galbraith, "The Massive Dissent of Karl Marx" in *The Essential Galbraith* (ed.) A.D. Williams (Boston: Houghton Mifflin Co., 2001).

E. Galeano, *Open Veins of Latin America: Five Centuries of the Pillage of a Continent* (trans.) C. Belfrage (New York: Monthly Review Press, 1998).

J.I. Gallin, *Principles and Practice of Clinical Research* (San Diego: Academic Press, 2002).

L. Gandhi, *Postcolonial Theory: A Critical Introduction* (New York: Columbia University Press, 1988).

P. Geddes, *Cities in Evolution: An Introduction to the Town Planning Movement and to the Study of Civics* (London: Williams & Norgate Ltd., 1915).

S. George, *How the Other Half Dies: The Real Reasons for World Hunger* (Harmondsworth: Penguin, 1986).

J.W. von Goethe, *Faust* (New York: Frederick A. Stokes, 1890).

Y. Ghai, "The Rule of Law, Legitimacy and Governance" in *The Political Economy of Law: A Third World Reader* (eds.) Y. Ghai, R. Luckham, & F. Snyder (New York: Oxford University Press, 1987).

D.M. Giangreco, *Dear Harry...: Truman's Mailroom, 1945 - 1953: The Truman Administration Through Correspondence with "Everyday Americans"* (Mechanicsburg: Stackpole Books, 1999).

A. Gibbs & B. DeMatteis, *Essentials of Patents* (Hoboken: John Wiley & Sons, 2003).

A. Giddens, *Sociology* (Cambridge: Polity Press, 2006).

C. Gilde, *Higher Education: Open for Business* (Lanham: Lexington Books, 2007).

J.M. Gilmour, "Creeping Privatization in Health Care: Implications for Women as the State Redraws Its Role" in *Privatization, Law, and the Challenge of Feminism* (eds.) B. Cossman and J. Fudge (Toronto: University of Toronto Press, 2002).

J. Gimbel, *Science, Technology, and Reparations: Exploitation and Plunder in Postwar Germany* (Stanford: Stanford University Press, 1990).

H.A. Giroux, *Impure Acts: The Practical Politics of Cultural Studies* (New York: Routledge, 2000).

H.A. Giroux, *Postmodernism, Feminism, and Cultural Politics: Redrawing Educational Boundaries* (Albany: State University of New York Press, 1991).

H.J. Glasbeek, *Wealth by Stealth: Corporate Crime, Corporate Law, and the Perversion of Democracy* (Toronto: Between the Lines, 2002).

H.J. Glasbeek, "Preliminary Observations on Strains of, and Strains in, Corporate Law Scholarship" in *Corporate Crime: Contemporary Debates* (eds.) F. Pearce & L. Snider (Toronto: University of Toronto Press, 1995).

W. Glausser *Locke and Blake: A Conversation Across the Eighteenth Century* (Gainesville: University Press of Florida, 1998).

M.A. Glendon, *Rights Talk: The Impoverishment of Political Discourse* (New York: Free Press, 1991).

Globe Newspaper Co., *Betrayal: The Crisis in the Catholic Church* (Boston: Little, Brown, 2003).

- Global Witness, *Cambodia's Family Tree* (London: Global Witness Publications, 2007).
- M. Goheen, "Land and the Household Economy: Women Farmers of the Grassfield Today" in *Agriculture, Women and Land: The African Experience* (ed.) J. Davison, (Boulder: Westview Press, 1988).
- R. Gold, *Body Parts: Property Rights and the Ownership of Human Biological Materials* (Washington: Georgetown University Press, 1996).
- B. Goldacre, *Bad Pharma: How Drug Companies Mislead Doctors and Harm Patients* (London: Faber & Faber, 2012).
- A. Goldagar, *Tulipmania: Money, Honor, and Knowledge in the Dutch Golden Age* (Chicago: University of Chicago Press, 2007).
- E. Goldman, *Anarchism and Other Essays* (New York: Dover, 1969).
- B. Goldstein, "Overview of Technology Development" in *Principles and Practice of Clinical Research* (ed.) J.I. Gallin & F.P. Ognibene (Boston: Elsevier/Academic Press, 2007).
- A.A. Gomme, *Patents of Invention: Origin and Growth of the Patent System in Britain* (London: Longmans Green and Co. 1946).
- M. Goozner, *The \$800 Million Pill: The Truth Behind the Cost of New Drugs* (Berkeley: University of California Press, 2005).
- E. Gould, *The University in a Corporate Culture* (New Haven: Yale University Press, 2003).
- M.J. Gordon & D.J. Fowler, *The Drug Industry: A Case Study in Foreign Control* (Toronto: J. Lorimer & The Canadian Institute for Economic Policy, 1981).
- R.J. Gordon, *Productivity Growth, Inflation, and Unemployment: The Collected Essays of Robert Gordon* (Cambridge: Cambridge University Press, 2004).
- R.S. Gottfried, *The Black Death: Natural and Human Disaster in Medieval Europe* (New York: The Free Press, 1983).
- D. Graeber, *Toward An Anthropological Theory of Value: The False Coin of Our Own Dreams* (New York: Palgrave, 2001).
- D. Graeber, *Debt: The First 5,000 Years* (Melville House: Brooklyn, 2011).
- A. Gramsci, *Selections from the Prison Notebooks* (eds.) Q. Hoare & G. Nowell-Smith (London: Lawrence and Wishart, 1971).

J. Grant, *Money of the Mind: Borrowing and Lending in America from the Civil War to Michael Milken* (New York: Farrar, Straus & Giroux, 1994).

T.H. Green, *Lectures on the Principles of Political Obligation* (London: Longmans, Green, & Co., 1895).

C. Greenberg, "The Crisis of the Easel Picture" in *Art and Culture Critical Essays* (Boston: Beacon Press, 1961).

D.S. Greenberg, *Science for Sale: The Perils, Rewards, and Delusions of Campus Capitalism* (Chicago: University of Chicago Press, 2007).

G. Greenberg, *Manufacturing Depression: The Secret History of a Modern Disease* (New York: Simon & Shuster, 2010).

S. Greenhouse, *The Big Squeeze: Tough Times for the American Worker* (New York: Anchor Books, 2009).

A. Greenspan, "Gold and Economic Freedom" in *Capitalism: The Unknown Ideal* (eds.) A. Rand, *et. al.* (New York: New American Library, 1967).

H. Grotius, *Commentary on the Law of Prize and Booty* (Indianapolis: Liberty Fund, 2006).

E. Grundmann, *Gerhard Domagk: The First Man to Triumph Over Infectious Diseases* (Münster: Lit, 2004).

J.D. Gwatney, R.L. Stroup, R.S. Sobel & D. MacPherson, *Macroeconomics: Private and Public Choice* (eds.) J.D. Gwatney, *et. al.* (Fort Worth: Dryden, 2000).

J. Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (trans.) T. Burger (Cambridge: The MIT Press, 1989).

J. Habermas, *The Theory of Communicative Action, Vol. 1: Reason and the Rationalization of Society* (trans.) T. McCarthy (Boston: Beacon Press, 1984).

J. Habermas, *Legitimation Crisis* (trans.) T. McCarthy (Boston: Beacon Press, 1975).

T. Hager, *The Demon Under the Microscope: From Battlefield Hospitals to Nazi Labs, One Doctor's Heroic Search for the World's First Miracle Drug* (New York: Harmony Books, 2007).

R. Hahnel, *Economic Justice and Democracy: From Competition to Cooperation* (New York: Routledge, 2005).

- W.E. Halal, *The New Capitalism* (New York: Wiley, 1986).
- S. Hall, *The Hard Road to Renewal: Thatcherism and the Crisis of the Left* (London: Verso, 1988).
- A. Davidson-Harden, et. al. "Neoliberalism and Education in Canada" in *The Rich World and the Impoverishment of Education: Diminishing Democracy, Equity and Workers' Rights* (ed.) D. Hill (New York: Routledge, 2008).
- G.J. Hardin, *The Ostrich Factor: Our Population Myopia* (Oxford: Oxford University Press, 1999).
- G.J. Hardin, *Living Within Limits: Ecology, Economics, and Population Taboos* (Oxford: Oxford University Press, 1993).
- G.J. Hardin, *Biology: Its Principles and Implications – 2nd Ed.* (San Francisco: W.H. Freeman & Co., 1966).
- G.J. Hardin, "Lifeboat Ethics – The Case Against Helping the Poor" in *World Hunger and Moral Obligation* (eds.) W. Aiken, and H. La Follette, (Englewood Cliffs: Prentice Hall, 1977).
- M. Hardt & A. Negri, *Empire* (Cambridge: Harvard University Press, 2000).
- T. Hardy, *The Life and Death of the Mayor of Casterbridge: The Story of a Man of Character* (New York: Signet Classic, 1999).
- T. Hardy, *Tess of the D'urbervilles: A Pure Woman* (London: MacMillan and Co., Limited, 1912).
- R. Harms, *Land Tenure and Agricultural Development in Zaire, 1885-1961* (Madison: University of Wisconsin, 1974).
- B. Harrison & B. Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America* (New York: Basic Books, 1988).
- D. Harvey, *Spaces of Neoliberalization: Towards a Theory of Uneven Geographical Development* (Stuttgart: Steiner, 2005).
- D. Harvey, "Neo-liberalism and the Restoration of Class Power" in *Spaces of Global Capitalism: A Theory of Uneven Capital Development* (London: Verso, 2006).
- D. Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2007).

- D. Harvey, *The Enigma of Capital: And the Crises of Capitalism* (Oxford: Oxford University Press, 2010).
- L. Harvey *Critical Social Research* (London: Unwin Hyman, 1990).
- L. Harvey, *Myths of the Chicago School of Sociology* (Aldershot: Gower, 1987).
- F. Hawthorne, *Inside the FDA: The Business and Politics Behind the Drugs We Take and the Food We Eat* (Hoboken: Wiley, 2005).
- C.P. Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton: Princeton University Press, 2003).
- F.A. von Hayek, *Prices and Production* (New York: Macmillan, 1932).
- F.A. von Hayek, *Law, Legislation and Liberty, Volume 2: The Mirage of Social Justice* (London: Routledge and Kegan Paul, 1976).
- F.A. von Hayek, *The Road to Serfdom* (New York: Routledge, 2002).
- S.F. Hayward, *The Age of Reagan: The Conservative Counterrevolution, 1980-1989* (New York: Crown Forum, 2009).
- Health Committee, “Influence of the Pharmaceutical Industry”, *Formal Minutes, Oral and Written Evidence, Report of Session, House of Commons, Health Committee, Vol. 2* (London: Stationary Office, 2005).
- D. Healy, *Let Them Eat Prozac: The Unhealthy Relationship Between The Pharmaceutical Industry and Depression* (Toronto: James Lorimer & Co. Ltd., 2003).
- D. Healy, *Mania: A Short History of Bipolar Disorder* (Baltimore: Johns Hopkins University Press, 2008).
- J. Healy, “Death of a Cow” in *Qualitative Inquiry and Social Justice: Toward a Politics of Hope* (eds.) N.K. Denzin & M.D. Giardina (Walnut Creek: Left Coast Press, 2009).
- C. Hedges, *The Death of the Liberal Class* (New York: Nation Books, 2010).
- G.W.F. Hegel, *Lectures on the Philosophy of World History* (eds.) D. Forbes, J. Hoffmeister & H.B. Nisbet (Cambridge: Cambridge University Press, 1980).
- G.W.F. Hegel, *The Philosophy of Right* (Cambridge: Cambridge University Press, 1967).
- G.W.F. Hegel, “Hegel to Niethammer – October 13, 1806” in *Hegel: The Letters* (trans.) C. Butler & C. Seiler (Bloomington: Indiana University Press, 1984).

G.W.F. Hegel, *Elements of the Philosophy of Right* (trans.) H.B. Nisbet (Cambridge: Cambridge University Press, 1991).

G.W.F. Hegel, *Encyclopaedia of the Philosophical Sciences*, (New York: Continuum, 1990); *Hegel's Logic* (trans.) W. Wallace (Oxford: Oxford University Press, 1982).

G.W.F. Hegel, *The Phenomenology of Spirit* (trans.) A.V. Miller (New York: Oxford University Press, 1977).

G.W.F. Hegel, *Hegel: The Essential Writings* (ed.) F. Weiss (New York: Harper and Row, Publishers, 1974).

G.W.F. Hegel, *The Philosophy of History* (trans.) J. Sibree (New York: Dover Publications, Inc., 1967).

G.W.F. Hegel, *Hegel: Selections* (ed.) (J. Loewenberg (New York: Charles Scribner's Sons, 1957).

M. Heidegger, "The Age of the World Picture" *The Question Concerning Technology and Other Essays* (trans.) W. Lovitt (New York: Harper Torchbooks, 1977).

R. Helms, "No Charges Filed: The Medical Manslaughter of Jesse Gelsinger" in *Guinea Pig Zero: An Anthology of the Journal for Human Research Subjects* (ed.) R. Helms (New Orleans: Garrett County Press, 2002)

W.O. Henderson, *The Rise of German Industrial Power, 1834-1914* (Berkeley: University of California Press, 1975).

D. Henwood, *Wall Street: How It Works and for Whom* (New York: Verso, 1997).

D. Henwood, *After the New Economy*, (New York: The New Press, 2003).

D. Henwood, *My Turn: Hillary Clinton Targets the Presidency* (New York: Seven Stories Press, 2016).

G. Herbert, *The Poetical Works of George Herbert: With Life, Critical Dissertation and Notes* (New York: D. Appleton & Co., 1854).

A. Herman, *To Rule the Waves: How the British Navy Shaped the Modern World* (New York: Harper Collins, 2004).

A. Herman, *The Scottish Enlightenment: The Scots' Invention of the Modern World* (London: Harper Perennial, 2006).

E.S. Herman, *Triumph of the Market: Essays on Economics, Politics, and the Media* (Boston: South End Press, 1995).

E.S. Herman & N. Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media*, (New York: Pantheon Books, 1988).

W.E. Herrell, *Penicillin and Other Antibiotic Agents* (Philadelphia: W. B. Saunders, 1945).

C. Hill, *Intellectual Origins of the English Revolution* (Oxford: Oxford University Press, 2001).

C. Hill, *The World Turned Upside Down: Radical Ideas During the English Revolution* (New York: Viking Press, 1972).

C. Hill, *A Nation of Change and Novelty: Radical Politics, Religion and Literature in Seventeenth Century England* (London: Routledge, 1990).

J. Hill, "Workers of the World Awaken!" in *Rebel Voices: An IWW Anthology* (ed.) J.L. Kornbluh (Oakland: PM Press, 2011).

B. Hilton, *The Age of Atonement: The Influence of Evangelicalism on Social and Economic Thought, 1785-1865* (Oxford: Clarendon Press, 1986).

P.J. Hilts, *Protecting America's Health: The FDA, Business, and One Hundred Years of Regulation* (Chapel Hill: University of North Carolina Press, 2004).

S.P. Hinshaw, *The Mark of Shame: Stigma of Mental Illness and an Agenda for Change* (Oxford: Oxford University Press, 2007)

Hippocrates, "The Hippocratic Oath" in L. Edelstein, *The Hippocratic Oath: Text Translation and Interpretation* (Baltimore: John Hopkins University Press, 1967).

W.E. Hoadley, *Looking Behind the Crystal Ball: Or, How to Use a Business Economist Successfully* (New York: Vantage, 1988).

T. Hobbes, *De Cive: Philosophical Rudiments Concerning Government and Society* (ed.) H. Warrender (Oxford: Clarendon Press, 1983).

T. Hobbes *De Cive* (Whitefish: Kessinger Publishing, 2004).

T. Hobbes, *Leviathan*, (ed.) R. Tuck (Cambridge: Cambridge University Press, 1991).

T. Hobbes, *Leviathan* (Fourche: NuVision Publications, 2007).

E.J. Hobsbawm, *Labouring Men: Studies in the History of Labour* (London: Weidenfeld & Nicolson, 1964).

- E.J. Hobsbawm, *The Age of Empire 1875-1914* (London: Abacus, 1989).
- E.J. Hobsbawm, *On History* (London: Abacus, 1997).
- E.J. Hobsbawm, "Introduction: Inventing Traditions" in *The Invention of Tradition* (eds.) E.J. Hobsbawm & T.O. Ranger (Cambridge: Cambridge University Press, 2009).
- E.J. Hobsbawm, "History from Below – Some Reflections" in *History From Below: Studies in Popular Protest and Ideology in Honour of George Rudé* (ed.) F. Kranz (Oxford: Oxford University Press, 1988).
- E. Hobsbawm & G. Rudé, *Captain Swing*, (New York: W.W. Norton, New York, 1968).
- A. Hodges, *Alan Turing: The Enigma* (New York: Simon & Schuster, 1983).
- D.M. Crowfoot Hodgkin, "The X-ray Analysis of Complicated Molecules, Nobel Lecture, December 11, 1964" in *Nobel Lectures Chemistry: Including Presentation Speeches and Laureates' Biographies* (Amsterdam: Elsevier Publishing Company, 1964-1972).
- H. Hofmann, *Search for the Real, and Other Essays* (Cambridge, M.I.T. Press, 1967).
- R. Hofstadter, *Academic Freedom in the Age of the College* (New York, Columbia University Press, 1955).
- R. Hofstadter & C. De Witt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1952).
- J.A. Hogeland, "An Application of Steindl's Theory of Concentration to the US Meat Packing Industry, 1865-1988" in *Rethinking Capitalist Development: Essays on the Economics of Josef Steindl* (eds.) T. Mott & N. Shapiro (New York: Routledge, 2005).
- J. Holland, *The Fifteen Biggest Lies About the Economy: And Everything Else the Right Doesn't Want You to Know About Taxes, Jobs, and Corporate America* (Hoboken: Wiley, 2010).
- J.R. Hollingdale, *Nietzsche* (Cambridge: Cambridge University Press, 1986).
- O.W. Holmes, Jr., *The Autocrat of the Breakfast-Table* (London: J.M. Dent & Sons Ltd., 1906).
- C. Holroyd, *Government, International Trade and Capitalism: Canada, Australia, and Relations with Japan* (Montréal: McGill-Queen's University Press, 2002).
- Homer, *The Odyssey* (ed.) I.C. Johnston (Arlington: Richer Resources Publications, 2006).

- M. Horkheimer, *Critical Theory* (New York: Seabury Press, 1982).
- M. Horn, *Academic Freedom in Canada: A History* (Toronto: University of Toronto Press, 1999).
- D. Horowitz, *The Abolition of Poverty* (New York: Praeger Publishers, 1969).
- L. Kapp Howe, *Pink Collar: Inside the World of Women's Work* (New York: Avon, 1977).
- J.D. Hughes, *Pan's Travail: Environmental Problems of the Ancient Greeks and Romans* (Baltimore: John Hopkins University Press, 1994).
- R.S.F. Hughes, *The Fatal Shore: The Epic of Australia's Founding* (New York: Vintage Book, 1986).
- R.S.F. Hughes, *The Culture of Complaint: The Fraying of America* (New York: Oxford University Press, 1993).
- D. Hume, *A Treatise of Human Nature: Book One* (ed.) D.G.C Macnabb (Glasgow: William Collins and Sons, 1962).
- D. Hume, *A Treatise of Human Nature* (ed.) L.A. Selby-Bigge (Oxford: Oxford University Press, 1978).
- D. Hume, *A Treatise of Human Nature* (Oxford: Oxford University Press, 2000).
- D. Hume, "Of Interest" in *Essays Moral and Political* (New York: Cosimo, Inc., 2007).
- J.P. Humphrey, "The Universal Declaration of Human Rights: Its History, Impact and Juridical Character" in *Human Rights: Thirty Years after the Universal Declaration* (ed.) B.G. Ramcharan (The Hague: Martinus Nijhoff, 1979).
- A. Hunt, "Law's Empire or Legal Imperialism?" in *Reading Dworkin Critically* (ed.) A. Hunt (Oxford: Berg Publishers, Inc., 1992).
- A. Hunt, *Reading Dworkin Critically* (ed.) A. Hunt (Oxford: Berg Publishers, Inc., 1992).
- A. Hunt, "The Politics of Law and the Law of Politics" in *Law and Power: Critical and Socio-Legal Essay* (eds.) K. Tuori, Z. Bankowski & J. Uusitalo (Liverpool: Deborah Charles Publications, 1997).
- A. Hunt & G. Wickham, *Foucault and Law: Toward a Sociology of Law as Governance* (London: Pluto Press, 1994).

- J. Hunter, *Glencoe and the Indians* (Edinburgh: Mainstream Publishing Company Ltd., 1996).
- J.D. Hunter, *Culture Wars: The Struggle to Define America* (New York: Basic Books, 1991).
- A. Hutchinson, *Waiting for Coraf: A Critique of Law and Rights* (Toronto: University of Toronto Press, 1995).
- U. Huws, "Reflections on Twenty Years Research on Women and Technology" in *Women Encounter Technology* (eds.) S. Mitter & S. Rowbotham (Routledge: London, 1995).
- A. Huxley, *Brave New World* (London: Harper Perennial Modern Classics, 2006).
- A. Huxley, *The Doors of Perception and Heaven and Hell* (London: Chatto and Windus, 1968).
- A. Huxley, "Proper Studies" in *Complete Essays – Vol. 2, 1926-1929* (Chicago: Ivan R. Dee, 2000).
- L. Hyde, *The Gift: Imagination and the Erotic Life of Property* (London: Vintage, 1999).
- J. Ibbitson, *Promised Land: Inside the Mike Harris Revolution* (Scarborough: Prentice Hall Canada, 1997).
- H. Ibsen, "Building Plans" in *The Master Builder* (trans.) E. Gosse & W. Archer (Fairford: Echo Library, 2007).
- R.P. Ingalls & D.K. Johnson, *The United States Since 1945: A Documentary Reader* (Oxford: Blackwell Publishing, 2009).
- M. Ignatieff, *Virtual War: Kosovo and Beyond* (Toronto: Penguin Books, 2001).
- M. Ignatieff, *The Lesser Evil: Political Ethics in an Age of Terror* (Princeton: Princeton University Press, 2005).
- M. Ignatieff, *Empire Lite: Nation-Building in Bosnia, Kosovo and Afghanistan* (London: Vintage, 2003).
- H.A. Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History* (Toronto: University of Toronto Press, 1977).
- H.A. Innis, *The Bias of Communication* (Toronto: University of Toronto Press, 1951).
- H.A. Innis, *Political Economy of the Modern State* (Toronto: Ryerson Press, 1946).

- H.A. Innis, "Significant Factors in Canadian Economic Development" in *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1956).
- J. Jacobs, *The Death and Life of Great American Cities* (New York : Vintage Books, 1992).
- K. Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservatism* (Berkeley: University of California Press, 2001).
- R. Jacoby, *The Last Intellectuals: American Culture in the Age of Academe* (New York: Noonday Press, 1987).
- R. Jacoby, *Social Amnesia: A Critique of Contemporary Psychology* (New Brunswick: Transaction Publishers, 1996).
- R. Jacoby, *Dogmatic Wisdom: How the Culture Wars Divert Education and Distract America* (New York: Doubleday, 1994).
- R. Jacoby, *The End of Utopia Politics and Culture in an Age of Apathy* (New York: Basic Books, 1999).
- R. Jacoby, *The End of Utopia* (New York: Basic Books, 2007)
- A.B. Jaffe & J. Lerner, *Innovation and Its Discontents: How Our Broken Patent System Is Endangering Innovation and Progress, and What To Do About It* (Princeton: Princeton University Press, 2004).
- P.C. Jain, *Buffett Beyond Value: Why Warren Buffett Looks to Growth and Management When Investing* (Hoboken: John Wiley & Sons, 2010).
- F. Jameson, "Modernism and Imperialism" in *Nationalism, Colonialism, and Literature* (ed.) S. Deane (Minneapolis: University of Minnesota Press, 1990).
- F. Jameson, *Postmodernism: The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991).
- T. Jefferson, *The Writings of Thomas Jefferson: Correspondence* (ed.) H.A. Washington (New York: Derby & Jackson, 1859).
- T. Jefferson, "Letter to Issac McPherson" in *Thomas Jefferson: A Chronology of His Thoughts* (Lanham: Rowman & Littlefield, 2002)
- W.S. Jevons, *The Theory of Political Economy* (London: Macmillan and Co., 1879).

J. Jewkes, D. Sawers & R. Stillerman, *The Sources of Invention* (London: MacMillan, 1969).

John of Salisbury, *The Metalogicon of John of Salisbury: A Twelfth-century Defense of the Verbal and Logical Arts of the Trivium* (trans.) DD. McGarry (Berkeley: University of California Press, 1955).

B. Johnson, P. Kavanagh & K. Mattson, "Introduction: Not Your Parents University or Labor Movement Anymore" in *Steal This University: The Rise of the Corporate University and the Academic Labor Movement* eds.) B. Johnson, P. Kavanagh & K. Mattson (New York: Routledge, 2003).

B. Johnson, "The Drain-O Higher Education: Causal Labor and University Teaching" in *Steal This University: The Rise of the Corporate University and the Academic Labor Movement* eds.) B. Johnson, P. Kavanagh & K. Mattson (New York: Routledge, 2003).

L.B. Johnson, "President Lyndon B. Johnson's Remarks at the University of Michigan – May 22, 1964" *Public Papers of the Presidents of the United States: Lyndon B. Johnson, 1963-64. Volume I* (Washington: Government Printing Office, 1965).

S. Johnson, *The Ghost Map: The Story of London's Most Terrifying Epidemic – and How it Changed Science, Cities and the Modern World* (New York: Riverhead Books, 2006).

S. Johnson, "A Journey to the Hebrides" in *The Works of Samuel Johnson Vol. IX* (London: Talbot and Wheeler; and W. Pickering, 1825).

D.C. Johnston, *Free Lunch: How the Wealthiest Americans Enrich Themselves at Government Expense (and Stick You With the Bill)* (New York: Portfolio, 2008).

W. Johnston, *The Colony of Unrequited Dreams* (New York: Anchor Books, 2000).

G.A. Jones, "A Brief Introduction to Higher Education in Canada" in *Higher Education in Canada: Different Systems, Different Perspectives* (ed.) G.A. Jones, (New York: Garland, 1997).

P. Jones, *Satan's Kingdom: Bristol and the Transatlantic Slave Trade* (Bristol: Past & Present Press, 2007).

S.E. Jones, *Against Technology: From the Luddites to Neo-Luddism* (New York: Routledge, 2006).

M. Josephson, *The Robber Barons: The Great American Capitalists, 1861-1901* (New York: Harcourt, Brace and Company, 1934).

F. Kafka, *The Trial* (New York: Vintage Books, 1956).

- S. Kahn and E.K. Minnich, *The Fox in the Henhouse: How Privatization Threatens Democracy* (San Francisco: Berrett-Koehler, 2005).
- F. Kalshoven, "Commentary – 1909 London Declaration" in *The Law of Naval Warfare: A Collection of Agreements and Documents with Commentaries* (ed). N. Ronzitti (Dordrecht: Kluwer Academic Publishers, 1988).
- A.M. Kamarck, *Economics as a Social Science: An Approach to Nonautistic Theory* (Ann Arbor: University of Michigan Press, 2002).
- I. Kant, *Critique of Pure Reason* (Mineola: Dover Publishing Ltd., 2003).
- I. Kant, *The Critique of Pure Reason* (trans.) N. Kemp Smith (New York: Macmillan, 1929).
- I. Kant, *Foundation of the Metaphysics of Morals* (trans.) L.W. Beck (Indianapolis: Bobbs-Merrill Company, Inc., 1981).
- R.F. Karolevitz, *Doctors of the Old West: A Pictorial History of Medicine on the Frontier* (Seattle: Superior Publishing Company, 1967).
- S.L. Kaplan, *Your Child Does Not Have Bipolar Disorder: How Bad Science and Good Public Relations Created the Diagnosis* (Santa Barbara: Praeger, 2011).
- J.P. Kassirer, *On the Take: How America's Complicity with Big Business Can Endanger Your Health* (New York: Oxford University Press, 2004).
- T. Kealey, *The Economic Laws of Scientific Research*, (New York: Martin's St Press, 1996).
- S. Keen. *Debunking Economics: The Naked Emperor Dethroned?* (London: Zed Books, 2001).
- S. Keen. *Debunking Economics - Revised and Expanded Edition: The Naked Emperor Dethroned?* (London: Zed Books, 2011).
- D. Kellner, *Television and the Crisis of Democracy* (Boulder: Westview Press, 1990).
- D. Kellner, *From 9/11 to Terror War: The Dangers of the Bush Legacy* (Lanham: Rowman & Littlefield, 2003).
- J. Kelly, "Did Women Have a Renaissance?" in *Becoming Visible* (eds.) R. Bridenthal, C. Koonz & S.M. Stuard (Hoston: Houghton Mifflin, 1977).
- M. Kelman, *A Guide to Critical Legal Studies*, (Cambridge: Harvard University Press, 1987).

D. Kennedy, *Legal Education and the Reproduction of Hierarchy: A Polemic Against the System: A Critical Edition* (New York: New York University Press, 2004).

P. Kennedy, *A Guide to Econometrics* (Cambridge: M.I.T. Press, 2003).

G. Kenney-Wallace, “Winning in A World Economy: University-Industry Interaction and Economic Renewal In Canada” in *Science Council of Canada: Report 39* (Ottawa: Minister of Supply and Services, 1988).

C. Kerr, *The Uses of the University* (Cambridge: Harvard University Press, 2001).

J.M. Keynes, *The General Theory of Employment, Interest and Money* (Cambridge: Cambridge University Press, 1936).

J.M. Keynes, *The General Theory of Employment, Interest and Money* (Sahibabad: Atlantic Publishing, 2006).

J.M. Keynes, *A Tract on Monetary Reform* (London: Macmillian & Co. Limited, 1923).

J.M. Keynes, *The Economic Consequences of the Peace* (New York: Penguin, 1988).

J.M. Keynes, *The Collected Writings of John Maynard Keynes, Vol. VI* (ed.) D. Moggridge (London: The Macmillan Press, 1973).

J.M. Keynes, *The Collected Writings of John Maynard Keynes, Vol. VII* (ed.) D. Moggridge (London: The Macmillan Press, 1973).

S. Kierkegaard, *Søren Kierkegaard's Journals and Papers, Vol. 1* (eds.) H. Hong & E. Hong (Bloomington: Indiana University Press, 1967).

C. Kindleberger, “Why Did the Golden Age Last So Long?” in *The Legacy of the Golden Age: The 1960s and Their Economic Consequences* (eds.) F. Cairncross & A. Cairncross (London: Routledge, 1992).

M.L. King, *The Renaissance in Europe* (London: Laurence King Publishing, 2003).

R. Kipling, “An Interview with Mark Twain” in *From Sea to Sea: Letters of Travel Vol. 2* (New York: MacMillian and Co., 1900).

J. Kirkpatrick, *Montessori, Dewey, and Capitalism: Educational Theory for a Free Market in Education* (Claremont: T.L.J. Books, 2008).

I. Kirsch, *The Emperor's New Drugs: Exploding the Antidepressant Myth* (New York: Basic Books, 2010).

- M. Klein, *The Genesis of Industrial America, 1870-1920* (Cambridge: Cambridge University Press, 2007).
- N. Klein, *No Logo: Taking Aim at Brand Bullies* (Toronto: Vintage Canada, 2000)
- W. Kleinknecht, *The Man Who Sold the World: Ronald Reagan and the Betrayal of Main Street America* (New York: Perseus Books Group, 2009).
- M. Klonsky & S. Klonsky, *Small Schools: Public School Reform Meets the Ownership Society* (New York: Routledge, 2008).
- A. Koestler, *The Act of Creation* (New York: Penguin Books, 1969).
- B. Kopple, *American Dream* (New York: Cabin Creek, 1990).
- D. Korten, "The Mythic Victory of Market Capitalism" in *The Case Against the Global Economy: And For a Turn Towards Localization* (eds.) E. Goldsmith & J. Mander (London: Earthscan, 2001).
- M. Koskenniemi, *The Gentle Civilizer of Nations: The Rise and Fall of International Law 1870-1960* (Cambridge: Cambridge University Press, 2005).
- D.M. Kotz, *The Rise and Fall of Neoliberal Capitalism* (Cambridge: Harvard University Press, 2015).
- D.M. Kotz & F. Weir, *Revolution from Above: The Demise of the Soviet System* (London: Routledge, 1997).
- J. Kovel, *Overcoming Zionism: Creating a Single Democratic State in Israel/Palestine* (London: Pluto Press, 2007).
- J. Kozol, *Savage Inequalities: Children in America's Schools* (New York: Harper Perennial, 1992).
- M.H. Kramer, *In Defense of Legal Positivism: Law Without Trimmings* (Oxford: Oxford University Press, 2003).
- E. Kremers, G. Sonnedecker & G. Urdang, *Kremers and Urdang's History of Pharmacy* (Madison: American Institute of the History of Pharmacy, 1976).
- S. Krimsky, *Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research?* (Lanham: Rowman and Littlefield, 2003).
- P. Kropotkin, *Mutual Aid: A Factor in Evolution* (London: William Heinemann, 1902).

P.R. Krugman, *The Great Unraveling: Losing Our Way in the New Century* (New York: W.W. Norton, 2004).

P.R. Krugman, *The Conscience of a Liberal* (New York: W. W. Norton & Company, 2009).

J. Kuanpoth, “TRIPS – Plus Policies and the Pharmaceutical Industry in Thailand” in *Intellectual Property and Sustainable Development: Development Agendas in a Changing World* (eds.) R. Meléndez-Ortiz & P. Roffe (Cheltenham: Edward Elgar, 2009).

A. Kugler, “Airplanes for the Führer: Adam Opel AG as Enemy Property, Model War Operations and General Motors Subsidiary, 1939-1945” in R. Billstein, K. Fings & A. Kugler, *Working for the Enemy: Ford, General Motors, and Forced Labor in Germany During the Second World War* (ed. & trans.) N. Levis (New York: Berghahn, 2000).

T.S. Kuhn, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (Cambridge: Harvard University Press, 1957).

T.S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1996).

H. Küng, *The Beginning of All Things: Science and Religion* (Grand Rapids: Eerdmans, 2007).

R. Kutterner, *Revolt of the Haves: Tax Rebellions and Hard Times* (New York: Simon and Schuster, 1980).

K. Lahey, *Are We Persons Yet?: Law and Sexuality in Canada* (Toronto: University of Toronto Press, 1999).

W.M. Landes & R.A. Posner, *The Economic Structure of Intellectual Property Law* (Cambridge: Harvard University Press, 2003).

R.D. Lang, *The Self and Others* (London: Tavistock Publications, 1961); *The Politics of Experience and the Bird of Paradise* (Harmondsworth: Penguin, 1967).

W.R. Lang, *James Harrison – Pioneering Genius* (Newtown: Neptune Press, 1982).

L.H. Lapham, *Hotel America: Scenes in the Lobby of the Fin de Siècle* (London: Verso, 1995).

L.H. Lapham, *The Agony of Mammon: The Imperial World Economy Explains Itself to the Membership Davos, Switzerland* (London: Verso, 1998).

S. Lash, *The Militant Worker: Class and Radicalism in France and America* (Rutherford: Fairleigh Dickinson University Press, 1984).

P. Laslett, *Locke: Two Treatises of Government* (Cambridge: Cambridge University Press, 2002).

P. Laszlo, *Citrus: A History* (Chicago: University of Chicago Press, 2008).

G. Laxer, "Cosmopolitan Elites Versus Nationality-focused Citizens – Cycles of Decommodification Struggles" in *Not for Sale: Decommodifying Public Life* (eds.) G. Laxer & D. Soron (Peterborough: Garamond Press, 2006).

M.N.N. Lee, "The Impacts of Globalization on Education in Malaysia" in *Globalization and Education: Integration and Contestation Across Cultures* (eds.) N.P. Stromquist & K. Monkman (Lanham: Rowman & Littlefield, 2000).

W.C. Lehmann, *John Millar of Glasgow* (Cambridge: Cambridge University Press, 1960).

G.H. Lenz, *Crisis of Modernity: Recent Critical Theories of Culture and Society in the United States and West Germany* (Frankfurt: Campus-Verl., 1986).

M. Leontiades, *Pruning the Ivy: The Overdue Reform of Higher Education* (Charlotte: Information Age Publishing, 2007).

A.N. Leontyev, *Problems of the Development of the Mind* (Moscow: Progress Publishers, 1981).

J.E. Lesch, *The First Miracle Drugs: How the Sulfa Drugs Transformed Medicine* (Oxford: Oxford University Press, 2007).

L. Lessing, *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (London: Bloomsbury Publishing PLC, 2008).

S.R. Letwin, *The Anatomy of Thatcherism* (New Brunswick: Transaction, 1993).

B.E. Levine, *Commonsense Rebellion: Taking Back Your Life from Drugs, Shrinks, Corporations and a World Gone Crazy* (New York: Continuum, 2003).

S.D. Levitt & S.J. Dubner, *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything* (New York: Harper Perennial, 2009).

M. Lewis, "Public Good or Private Value: A Critique of the Commodification of Knowledge in Higher Education – A Canadian Perspective" in *Structure and Agency in the Neoliberal University* (eds.) J.E. Canaan & W. Shumar (New York: Routledge, 2008).

W.A. Lewis, *Tropical Development, 1880-1913* (Evanston: Northwestern University Press, 1970).

A.J. Liebling, "The Press" (New York: Ballantine, 1964).

D. Light, *The Risk of Prescription Drugs* (New York: Columbia University Press)

A. Lincoln, "Letter to Colonel William F. Elkins" in *The Lincoln Encyclopedia: The Spoken and Written Words of A. Lincoln Arranged for Ready Reference* (ed.) A.H. Shaw (New York: Macmillan, 1980).

J. Lind, *A Treatise on the Scurvy in Three Parts: Containing an Inquiry into the Nature, Cause, and Cure, of that Disease* (London: Sands, 1753).

P. Linebaugh, *The Magna Carta Manifesto: Liberty and Commons for All* (Berkeley: University of California Press, 2008).

J. Lindsay, C.A. Perkins & M. Karanjikar, *Conquering Innovation Fatigue: Overcoming the Barriers to Personal and Corporate Success* (Hoboken: John Wiley & Sons Inc., 2009).

K. Link, *Understanding New, Resurgent, and Resistant Diseases: How Man and Globalization Create and Spread Illness* (Westport: Praeger Publishers, 2007).

G. Liodakis, "The Global Restructure of Capitalism: New Technologies and Intellectual Property" in *Innovation, Evolution and Economic Change: New Ideas in the Tradition of Galbraith* (eds.) B. Laperche, Jas.K. Galbraith & D. Uzunidis (Cheltenham: Edward Elgar, 2006).

W. Lippmann, *Public Opinion* (Charleston: BiblioBazaar, LLC, 2007).

O. Lippert, "One Trip to the Dentist is Enough-Reasons to Strengthen Intellectual Property Rights Through the Free Trade Area of the Americas Now" in *Competitive Strategies for the Protection of Intellectual Properties* (ed.) O. Lippert (Vancouver: The Fraser Institute, 1999).

E.A. Livingstone, *The Concise Oxford Dictionary of the Christian Church* (ed.) E.A. Livingstone (Oxford: Oxford University Press, 1977).

M. Livio, *Brilliant Blunders: From Darwin to Einstein – Colossal Mistakes by Great Scientists That Changed Our Understanding of Life and the Universe* (New York: Simon & Schuster, 2013).

K. Llewellyn, *The Bramble Bush: On Our Law and Its Study* (New York: Little Brown, 1960).

J. Locke, *The Works of John Locke Vol. II* (London: Arthur Bettesworth, John Pemberton & Edward Symon, 1727).

J. Locke, “Some Considerations of the Consequences of the Lowering of Interest, and the Raising the Value of Money” in *The Works of John Locke Vol. IV* (London: C. & J. Rivington, et. al., 1824).

J. Locke, *Second Treatise of Government* (ed.) C.B. Macpherson, (Indianapolis: Hackett, 1980).

J. Locke, *Second Treatise of Government* (ed.) C.B. Macpherson, (Indianapolis: Hackett, 1980).

J. Locke, *Two Treatises of Government* (London: Dent, 1989).

J. Locke, *An Essay Concerning Human Understanding* (New York: S. Marks, 1825).

J. Locke, *An Essay Concerning Human Understanding* (Glasgow: William Collins Sons and Co. Ltd., 1964).

R. Lonergan (a.k.a. Edward Keating), “Mr. Justice Brandeis, Great American” in *Mr. Justice Brandeis, Great American: Press Opinion and Public Appraisal* (ed.) I. Dillard (St. Louis, Modern View Press, 1941).

P.O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* (Baltimore: Johns Hopkins University Press, 2001).

K. Losse, *The Boy Kings: A Journey Into the Heart of the Social Network* (New York: Free Press, 2012).

H. R Luce, “The American Century” in *The Ambiguous Legacy: U.S. foreign Relations in the “American Century”* (ed.) M. J. Hogan (Cambridge: Cambridge University Press, 1999).

L. Luu, *Immigrants and the Industries of London, 1500-1700* (London: Ashgate Publishing, Ltd., 2005).

P.S. Lynch & J. Rothchild, *Learn to Earn: A Beginner’s Guide to the Basics of Investing and Business* (New York: Fireside, 1996).

J.-F. Lyotard, *The Postmodern Condition: A Report on Knowledge* (trans.) G. Bennington & B. Massumi (Minneapolis: University of Minnesota Press, 1984).

J.-F. Lyotard, *Libidinal Economy* (trans.) I.H. Grant (London: Continuum, 2004).

- J.-F. Lyotard, “ One of the Things at Stake in the Women’s Struggle” in *The Lyotard Reader* (ed.) A.E. Benjamin (Oxford: Basil Blackwell, 1989).
- G. Macfarlane, *Alexander Fleming: The Man and the Myth* (Oxford: Oxford University Press, 1985).
- G. Macfarlane, *Alexander Fleming: The Man and the Myth* (London: Chatto & Windus, 1984).
- A. MacIntyre, *After Virtue: A Study in Moral Theory* (London: Gerald Duckworth and Co. Ltd., 1981).
- E. Mackaay, “Schools: General” in *Encyclopedia of Law and Economics: The History and Methodology of Law and Economics, Vol. 1* (Cheltenham: Edward Elgar Publishing Ltd.).
- C. MacKay, *Memoirs of Extraordinary Popular Delusions: And the Madness of Crowds, Volumes 1-2* (Petersfield: Harriman House, 2003).
- C.B. Macpherson, *Democracy in Alberta: Social Credit and the Party System* (Toronto: University of Toronto Press, 1953).
- C.B. Macpherson, “The Meaning of Property” in *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1992).
- C.B. Macpherson, “Liberal-Democracy and Property” in *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1978).
- C.B. Macpherson, *Democratic Theory: Essays in Retrieval* (Oxford: Clarendon Press, 1973).
- C.B. Macpherson, *The Life and Times of Liberal Democracy* (Oxford: Oxford University Press, 1977).
- C.B. Macpherson, *Property: Mainstream and Critical Positions* (ed.) C.B. Macpherson (Toronto: University of Toronto Press, 1992).
- B. Maddox, *Rosalind Franklin: The Dark Lady of DNA* (New York: Perennial, 2003).
- J.G. Madrick, *Age of Greed: The Triumph of Finance and the Decline of America, 1970 to the Present* (New York: Alfred A. Knopf, 2011).
- M.R. Madsen, “France, the UK, and the Boomerang’ of the Internationalisation of Human Rights (1945-2000)” in *Human Rights Brought Home: Socio-legal Studies of Human Rights in the National Context* (eds.) S. Halliday & P.D. Schmidt (Oxford : Hart, 2004).

T.R. Malthus, *An Essay on the Principle of Population, Or, A View of Its Past and Present Effects on Human Happiness* (Cambridge: Cambridge University Press, 1992).

E. Mandel, *Late Capitalism* (New York: Knopf Publishing Group, 1978).

M. Mandel, "Rights, Freedoms, and Market Power: Canada's Charter of Rights and the New Era of Global Competition" in *The New Era of Global Competition: State Policy and Market Power* (eds.) D. Drache & M.S. Gertler (Montréal and Kingston: McGill-Queen's University Press, 1991).

J. Mander, *Four Arguments for the Elimination of Television* (New York: Morrow Quill Paperbacks, 1978).

A. di Tuccio Manetti, *The Life of Brunelleschi* (trans.) H. Saalman (University Park: Pennsylvania State University Press, 1970).

T.G. Manning, *The Chicago Strike of 1894* (New York: Holt, Rinehart & Winston, 1960).

G.M. Mara, *The Civic Conversations of Thucydides and Plato: Classical Political Philosophy and the Limits of Democracy* (Albany: SUNY Press, 2008).

G. Marcus, *Lipstick Traces: A Secret History of the Twentieth Century* (Cambridge: Harvard University Press, 1989).

H. Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston: Beacon Press, 1964).

H. Marcuse, *Eros and Civilization: A Philosophical Inquiry into Freud* (Boston: Beacon Press, 1974).

C. Marez, *Drug Wars: The Political Economy of Narcotics* (Minneapolis: University of Minnesota Press, 2004).

L. Marsa, *Prescription for Profits* (New York: Scribner, 1997).

I. Martin, *Rich People's Movements: Grassroots Campaigns to Untax the One Percent (Studies in Postwar American Political Development)* (New York: Oxford University Press, 2013).

K. Marx, *On Colonialism: Articles from the New York Tribune and Other Writings* (New York: International Publishers, 1972).

K. Marx, "Freedom of the Press – Proceedings of the Sixth Rhine Provincial Assembly" in *Marx-Engels Collected Works Vol. 1.*, (New York: International Publishers, 1975).

- K. Marx, "Letter to the Labour Parliament -1854" in *Collected Works, Vol. 3* (ed.) J. Cohen, et. al. (London: Lawrence and Wishart, 1975).
- K. Marx, *Grundrisse: Foundations of the Critique of Political Economy* (ed.) & (trans.) M. Nicolaus (New York: Penguin, 1973).
- K. Marx, *Capital Vol. I* (trans.) S. Moore & E. Aveling, (ed.) F. Engels (Moscow: Progress Publishers, 1986).
- K. Marx, *Capital: A Critique of Political Economy, Vol. III* (ed.) F. Engels (New York: Progress Publishers, 1959).
- K. Marx, "The Eighteenth Brumaire of Louis Bonaparte" in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton and Company, 1978).
- K. Marx, "Letter to Arnold Ruge" in *The Marx-Engels Reader* (New York: W.W. Norton & Company, Inc., 1978).
- K. Marx, "Letter to Ferdinand Lassalle" in *Collected Works, Vol. XLI* (Moscow: Progress Publishers, 1979).
- K. Marx & F. Engels, "The German Ideology" in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: W.W. Norton & Company, Inc., 1978).
- K. Marx & F. Engels, *The German Ideology: With Selections from Parts Two and Three, Together with Marx's "Introduction to a Critique of Political Economy"* (New York: International Publishers, 1970).
- K. Marx, "Preface" in *A Contribution to the Critique of Political Economy* (Moscow: Progress Publishers, 1977).
- K. Marx, *The Poverty of Philosophy* (New York: International Publishers Inc., 1963).
- K. Marx, "The Duchess of Sutherland and Slavery" *The People's Paper*, No. 45, March 12, 1853, *Collected Works Vol. 12* (Moscow: Progress Publishers, 1979).
- K. Marx & F. Engels, *Manifesto of the Communist Party: A Modern Edition* (London: Verso, 1998).
- K. Marx, *Economic and Philosophic Manuscripts of 1844* (London: Lawrence & Wishart, 1973).
- K. Marx, "A Contribution to the Critique of Hegel's Philosophy of Right" in *Karl Marx: Selected Writings* (Indianapolis: Hackett, 1994).

K. Marx & F. Engels, "The German Ideology" in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: Norton, 1978).

K. Marx & F. Engels, "The German Ideology" in *The Marx-Engels Reader* (ed.) R.C. Tucker (New York: Norton, 1972).

A.H. Maslow, *The Psychology of Science: A Reconnaissance* (Richmond: Maurice Bassett Publishing, 1966).

Matthew, *The Holy Bible* (Cleveland: The World Publishing Company, 1962).

M.A. Max-Neef, "Development and Human Needs" in *Real-life Economics: Understanding Wealth Creation* (eds. P. Ekins & M.A. Max-Neef (New York: Routledge, 1992).

M.A. Max-Neef, *Economics Unmasked: Creating a Value System for a Sustainable World* (eds.) P.B. Smith M.A. & Max-Neef (London: Green Books, 2010).

M. Mauss, *The Gift: The Form and Reason for Exchange in Archaic Societies* (trans.) W.D. Halls (New York: Norton, 1990).

M. Mauss, *The Gift: The Form and Reason for Exchange in Archaic Societies* (London: Routledge, 2002).

K.H. Mayer, *The AIDS Pandemic: Impact on Science and Society* (San Diego: Elsevier Academic Press, 2005).

M. Mayer, *The Greatest-Ever Bank Robbery: The Collapse of the Saving and Loan Industry* (New York: Charles Scribner's Sons, 1990).

R. Mayes, C. Bagwell & J.L. Erkulwater, *Medicating Children: ADHD and Pediatric Mental Health* (Cambridge: Harvard University Press, 2009).

M. Mazzucato, *The Entrepenuerial State* (London: Demos, 2011).

M. Mazzucato, *The Entrepenuerial State: Debunking Public vs. Private Sector Myths* (New York: Anthem Press, 2013).

M. McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962).

M. McLuhan, *Understanding Media: The Extensions of Man* (Toronto: The New American Library, 1966).

C.R. McConnell & S.L. Brue, *Microeconomics: Principles, Problems, and Policies* (Boston: McGraw-Hill/Irwin, 2005).

T. McDonough, *Was Ireland a Colony?: Economics, Politics, and Culture in Nineteenth-Century Ireland* (Dublin: Irish Academic Press, 2005).

B. McFarlane, *Radical Economics* (London: Croom Helm, 1982).

P. McLaren, *Che Guevara, Paulo Freire, and the Pedagogy of Revolution* (Lanham: Rowman & Littlefield Publishing, 2000).

P. McLaren & R. Farahmandpur, *Teaching Against Global Capitalism and the New Imperialism: A Critical Pedagogy* (Lanham: Rowman & Littlefield Publishers, Inc., 2005).

P. McLaren & R. Torres, "Racism and Multicultural Education: Rethinking 'Race' and 'Whiteness' in Late Capitalism" in *Critical Multiculturalism: Rethinking Multicultural and Antiracist Education* (ed.) S. May (London: Falmer Press, 1999).

B. McLean & P. Elkind, *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron* (New York: Portfolio, 2003).

T.O. McGarity & W.E. Wagner, *Bending Science: How Special Interests Corrupt Public Health Research* (Cambridge: Harvard University Press, 2008)

L. McQuaig & N. Brooks, *The Trouble With Billionaires* (Toronto: Viking Canada, 2010).

Medical Research Council of Canada, "1999-2000 General Information Guide" Medical Research Council of Canada (Ottawa: Medical Research Council of Canada, 1999).

V. Medina, *Social Contract Theories: Political Obligation or Anarchy* (Lanham: Rowman & Littlefield Publishing Inc., 1990).

U. Mehta, *Liberalism and Empire: A Study in Nineteenth-Century British Liberal Thought* (Chicago: University of Chicago Press, 1999).

Ö. Mehmet, *Westernizing the Third World: The Eurocentricity of Economic Development Theories* (London: Routledge, 1999).

R.P. Merges, *Patent Law and Policy: Cases and Materials* (Charlottesville: Michie, Co., 1992)

R.K. Merton, *On the Shoulders of Giants: A Shandean Postscript* (London: Collier-Macmillan, 1965).

H. Melville, *Bartebly, the Scrivener: A Story of Wall Street* (London: Hesperus, 2007).

I. Mgbeoji, *Global Biopiracy: Patents, Plants, and Indigenous Knowledge* (Vancouver: University of British Columbia Press, 2006).

J.S. Mill, "On the Definition of Political Economy, and on the Method of Investigation Proper to It" in *Essays on Some Unsettled Questions of Political Economy* (London: J.W. Parker, 1844).

J.S. Mill, *John Stuart Mill - The Principles of Political Economy: Chapters on Socialism* (ed.) J. Riley (Oxford: Oxford University Press, 1994).

J.S. Mill, "Principles of Political Economy" in *The Collected Works of John Stuart Mill – Vol. II* (ed) J.M. Robson (Toronto: University of Toronto Press, 1963-91).

D. Miller, *Anarchism* (London: J.M. Dent & Sons, 1984).

F.P. Miller, A.F. Vandome & J. McBrewster, *Letter of Marque: Warrant (law), Letters Patent, Government, Public International Law, Ship Transport, Declaration of War* (eds.) F.P. Miller, A.F. Vandome & J. McBrewster (Beau Bassin: Alphascript Publishing, 2010).

M.A.L. Miller, "Tragedy for the Commons: The Enclosure and Commodification of Knowledge" in *The International Political Economy of the Environment* (eds.) D. Stevis & V.J. Assetto (Boulder: Lynne Rienner Publishers, 2001).

N. Miller, *The Founding Finaglers* (New York: David McKay Company Inc., 1976).

W.R. Miller "Farmers and Third-Party Politics" in *The Gilded Age: Essays on the Origins of Modern America* (ed.) C.W. Calhoun (Lanham: Rowman & Littlefield Publishers, 2007).

S.G. Millin, *Rhodes* (London: Chatto & Windus, 1933).

C.W. Mills, *The Power Elite* (New York: Oxford University Press, 1956).

C.W. Mills, *The Sociological Imagination* (New York: Oxford University Press, 2000).

J. Milton, *Paradise Lost, Or, the Fall of Man* (London: M. Cooper, 1754).

J. Milton, *The Prose of John Milton* (London: J.R. & C. Childs, 1835).

Ministry of Training, Colleges and Universities, *Conditions and implementation provisions associated with tuition increases in 1998-99 and 1999-2000* (Toronto: Ministry of Training, Colleges and Universities, 1998).

M. Minow, *Not Only for Myself: Identity, Politics, and the Law* (New York: New Press, 1997).

L. Minsky, "Dead Souls: Aftermath of Bahy-Dole" in *Campus Inc.: Corporate Power in the Ivory Tower* (eds.) G.D. White & F.C. Hauck (Amherst: Prometheus Books, 2000).

H.A. Miskimin, *The Economy of Early Renaissance Europe, 1300-1460* (Cambridge: Cambridge University Press, 1975).

C. Mitcham & E. Schatzberg, "Defining Technology and the Engineering Sciences" in *Philosophy of Technology and Engineering Sciences* (eds.) D.M. Gabbay, *et. al.* (Amsterdam: Elsevier B.V., 2009).

S. Moalem, *Survival of the Sickest: A Medical Maverick Discovers Why We Need Disease* (New York: Harper Collins Publishers, 2007).

M. Moore, *Downsize This!: Random Threats from an Unarmed American* (New York: Crown Publishers, 1996).

T. More, *Utopia* (Hertfordshire: Wordsworth Editions Limited, 1997).

B. Moreton, *To Serve God and Wal-Mart: The Making of Christian Free Enterprise* (Cambridge: Harvard University Press, 2009).

V.B. Morris & K.M. Morris, *Standard & Poor's Dictionary of Financial Terms* (New York: Lightbulb Press, Inc., 2007).

A. Moseley, *John Locke* (New York: Bloomsbury, 2007)

C. Mouffe & E. Laclau, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (London: Verso, 1985).

G. Mousourakis, *The Historical and Institutional Context of Roman Law* (Burlington: Ashgate, 2003).

A. Mullard, *The New Penguin Dictionary of Modern Quotations* (eds.) R. Andrews & K. Hughes (London: Penguin Books, 2000).

A. Murali, "Whose Trees? Forest Practices and Local Communities in Andhra, 1600–1922," in *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia* (eds.) D. Arnold & R. Guha (Delhi: Oxford University Press, 1995).

J.P. Murmann & R. Landau, "On the Making of Competitive Advantage: The Development of the Chemical Industries of Britain and Germany Since 1850" in *Chemicals and Long-term Economic Growth: Insights from the Chemical Industry* (eds.) A. Arora, R. Landau & N. Rosenberg (New York: John Wiley & Sons, 1998).

D.W.G. Murray, *Medicine in the Making* (Toronto: Ryerson Press, 1960).

S. Nasar, *A Beautiful Mind: A Biography of John Forbes Nash, Jr., Winner of the Nobel Prize in Economics, 1994* (New York: Simon & Schuster, 1998).

N.S.E.R.C., *A Second Five-year Plan for the Programs of the Natural Sciences and Engineering Research Council: Completing the Bridge to the 90's: NSERC's Second Five-Year Plan* (Ottawa: Minister of Supply and Services, 1985).

D.K. Nelson, "Conflict of Interest: Recruitment Incentives" in *Institutional Review Board: Management and Function* (eds.) R.J. Amdur & E.A. Bankert (Boston: Jones & Bartlett Publishers, 2002).

T. Nesi, *Poison Pills: The Untold Story of the Vioxx Drug Scandal* (New York: Thomas Dunne Books, 2008).

P. Nevins, *The Politics of Selfishness: How John Locke's Legacy Is Paralyzing America* (Santa Barbara: Praeger, 2010).

J.A. Newton, "To Not Intend, Or to Intend Not... That Is the Question" in *The Corporate Campus: Commercialization and the Dangers to Canada's Colleges and Universities* (ed.) J.L. Turk, (Toronto: James Lorimer & Company Ltd., Publishers).

F. Nietzsche, *The Future of Our Educational Institutions and Homer and Classical Philology* (trans.) J.M. Kennedy (Edinburgh: T.N. Foulis, 1909).

F. Nietzsche, *Beyond Good and Evil* (trans.) H. Zimmern (New York: Plain Label Books, 1917).

F. Nietzsche, "Second Essay" in *On the Genealogy of Morals*, (trans.) W. Kaufmann & R.J. Hollingdale (New York: Vintage, 1967).

F. Nietzsche, *The Will to Power* (New York: Vintage Books, 1968).

M. Foley, *American Credo: A Field Guide to the Place of Ideas in US Politics* (Oxford: Oxford University Press, 2007).

D.S. Nordin, *A Swedish Dilemma: A Liberal European Nation's Struggle with Racism and Xenophobia, 1990-2000* (Lanham: University Press of America, 2005).

R. Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974).

K.P. Ober, "Mark Twain and Medicine: 'Any Mummery Will Cure'" (Columbia: University of Missouri Press, 2003).

P. O'Brian, *The Letter of Marque* (New York: W.W. Norton, 1990).

- D. Okrent, *Last Call: The Rise and Fall of Prohibition* (New York: Scribner, 2010).
- O.E.C.D., *Education at a Glance 2011: OECD Indicators* (Paris: O.E.C.D. Publishing, 2011).
- G. Orwell, *Nineteen Eighty-Four* (Harmondsworth: Penguin, 1949).
- G. Orwell, “Nineteen Eighty-four” in *The Complete Works of George Orwell* (Hastings: Delphi Classics, 2013).
- G. Orwell, *Nineteen Eighty-four* (London: Secker & Warburg, 1949).
- G. Orwell, *Nineteen Eighty-four* (Fairfield: 1st World Publishing, 2004).
- G. Orwell, “The Freedom of the Press, Appendix I,” in *Animal Farm* (Harmondsworth: Penguin, 2007).
- F.B. Orlans, et. al. *The Human Use of Animals: Case Studies in Ethical Choice* (New York: Oxford University Press, 1998).
- E.C. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).
- A. O’Sullivan, T.A. Sexton & S.M. Sheffrin, *Property Taxes and Tax Revolts: The Legacy of Proposition 13* (Cambridge: Cambridge University Press, 1995).
- J.C. Ott, *When Wall Street Met Main Street: The Quest for an Investors’ Democracy* (Cambridge: Harvard University Press, 2011).
- D. Owen, *Maritime Warfare and Merchant Shipping: A Summary of the Rights of Capture at Sea* (London: Stevens and Sons, 1898).
- R. Palan, *The Offshore World: Sovereign Markets, Virtual Places, and Nomad Millionaires* (Ithaca: Cornell University Press, 2006).
- R. Palan, R. Murphy & Christian Chavagneux, *Tax Havens: How Globalization Really Works* (Ithaca: Cornell University Press, 2010).
- M. Palo, “No Sustainable Forestry without Adequate Privatization” in *Skogforsk – 48* (eds.) T. Eid, H.F. Hoen & B. Solberg (Oslo: Norwegian Forest Institute, 1997).
- M. Parenti, *Against Empire* (San Francisco, City Lights Books, 1995).
- V.L. Parrington, *Main Currents in American Thought, Vol. III: The Beginnings of Critical Realism in America, 1860-1920* (New York, 1930).

- W.F. Patry, *Moral Panics and the Copyright Wars* (Oxford: Oxford University Press, 2009).
- L.R. Patterson, *Copyright in Historical Perspective* (Nashville: Vanderbilt University Press, 1968).
- I. Pavel, *The Priority of N.C. Paulescu in the Discovery of Insulin* (Bucharest: Academy of the Socialist Republic of Romania, 1976).
- F. Pearce, *The Radical Durkheim* (Toronto: Canadian Scholars' Press, 2001).
- J. Peck, *The Age of Oprah: Cultural Icon for the Neoliberal Era* (Boulder: Paradigm Publishers, 2008).
- D. Pels, *Unhastening Science: Autonomy and Reflexivity in the Social Theory of Knowledge* (Liverpool: Liverpool University Press, 2003).
- A. Pennycook, *English and the Discourses of Colonialism* (London: Routledge, 1998).
- M. Perelman, *Class Warfare in the Information Age* (New York: St. Martin's Press, 1999).
- M. Perelman, *The Invention of Capitalism: Classical Political Economy and the Secret History of Accumulation* (Durham: Duke University Press, 2000).
- M. Perelman, *Transcending the Economy: On the Potential of Passionate Labor and the Wastes of the Market* (New York: St. Martin's Press, 2000).
- M. Perelman, *Steal This Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity* (New York: Palgrave, 2002).
- M. Perelman, *Railroading Economics: The Creation of the Free Market Mythology* (New York: Monthly Review Press, 2006).
- H. Perkin, "History of Universities" in *International Handbook of Higher Education Vol. 1* (eds.) J.J.F. Forest & P.G. Altbach (Dordrecht: Springer, 2006).
- R. Perrucci & E. Wysong, *New Class Society: Goodbye American Dream?* (Lanham: Rowman & Littlefield, 2008).
- E.G. Peterson & L.S. Weber, *The Stock Market Flash Crash of 2010* (Hauppauge: Nova Science Publishers, Incorporated, 2011).
- P. Phillips, et. al. *Censored 2001: 25 Years of Censored News and the Top Censored Stories of the Year* (New York: Seven Stories Press, 2001).

- P. Pierson, *Dismantling the Welfare State?: Reagan, Thatcher, and the Politics of Retrenchment* (Cambridge: Cambridge University Press, 1994).
- J.N. Pieterse, *Globalization or Empire?* (New York: Routledge, 2004).
- T. Piketty, *Capital in the 21st Century* (trans.) A. Goldhammer (Cambridge: Harvard University Press, 2014).
- M.J. Piore & C.F. Sabel, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).
- S.L. Piott, *American Reformers, 1870-1920: Progressives in Word and Deed* (Lanham: Rowman & Littlefield, 2006).
- Plato, *The Republic of Plato* (ed. & trans.) A.D. Bloom (New York: Basic Books, 1991).
- Plato, "The Apology" in *The Trials of Socrates: Six Classic Texts* (ed.) C.D.C Reeve (Indianapolis: Hackett Publishing Co., 2002).
- D.E. Pease, "Exceptionalism" in *Keywords for American Cultural Studies* (eds.) B. Burgett & G. Hendler (New York: New York University Press, 2007).
- D.E. Pease, *The New American Exceptionalism* (Minneapolis: University of Minnesota Press, 2009).
- Plutarch, *Life of Alexander* (ed.) A.H. Clough (New York: The Modern Library, 2004).
- T. Pocklington, "The Marketing of the University" in *Contested Classrooms: Education, Globalization, and Democracy in Alberta* (eds.) T.W. Harrison & J.L. Kachur, (Edmonton: University of Alberta Press, 1999).
- K. Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1944).
- L.I. Ponomarev, *The Quantum Dice* (Bristol: Institute of Physics Publishing, 1993).
- R.A. Posner, *Economic Analysis of Law* (Boston: Little Brown, 1973).
- R.A. Posner, *The Economics of Justice* (Cambridge: Harvard University Press, 1983).
- R.A. Posner, *The Problems of Jurisprudence* (Cambridge: Harvard University Press, 1990).
- R.A. Posner, *A Failure of Capitalism: The Crisis of '08 and the Descent into Depression* (Cambridge: Harvard University Press, 2009).

N. Postman, *Amusing Ourselves to Death: Public Discourse in the Age of Show Business* (New York: Penguin Books, 2006).

E.E. Pottier, *The Internationale* (Ann Arbor: The University of Michigan Press, 1980).

N. Poulantzas, *Political Power and Social Classes* (London: New Left Books, 1973).

J.B. Powers, "Technology Transfer, Commercialization, and Proprietary Science" in *The Business of Higher Education, Vol. 2: Management and Fiscal Strategies* (eds.) J.C. Knapp & D.J. Siegel (Santa Barbara: Praeger, 2009).

A.C. Pratt, "The New Economy, or the Emperor's New Clothes" in *Geographies of the New Economy: Critical Reflections* (eds.) P. Daniels, et. al. (New York: Routledge, 2007).

F.D. Prager & G. Scaglia, *Brunelleschi: Studies of His Technology and Inventions* (Mineola: Dover Publications, 1978).

F.D. Prager & G. Scaglia, *Brunelleschi: Studies of His Technologies and Inventions* (Mineola: Courier Dover Publications, 2004).

F.J. Pratson, *Perspectives on Galbraith: Conversations and Opinions* (Boston: CBI Publishing Company, Inc. 1978).

W.S. Pray, *A History of Nonprescription Product Regulation* (Binghamton: The Haworth Press, Inc., 2003).

W.S. Pray, *A History of Nonprescription Product Regulation* (Binghamton: The Haworth Press, Inc., 2003).

J. Prebble, *The Highland Clearances* (London: Penguin, 1963).

E. Press & J. Washburn, "The Kept University" in *AAAS Science and Technology Policy Yearbook, 2001* (eds.) A.H. Teich (Washington: American Association for the Advancement of Science, 2001).

W.H. Price, *The English Patents of Monopoly* (Clark: Lawbook Exchange, 2006).

P.-J. Proudhon, "The System of Economic Contradictions" in *No Gods, No Masters: An Anthology of Anarchism* (ed.) D. Guérin (trans.) P. Sharkey (Edinburgh: Scotland, 2005).

P.-J. Proudhon, *What is Property?: An Inquiry into the Principle of Right and of Government* (trans.) B.R. Tucker (Princeton: Benj. R. Tucker, 1876).

P. Rachleff, *Hard-Pressed in the Heartland: The Hormel Strike and the Future of the Labor Movement* (Boston: South End Press, 1999).

- A. Rand, *The Virtue of Selfishness* (New York: Penguin, 1964).
- J. Rawls, *The Law of Peoples: With "The Idea of Public Reason Revisited"* (Cambridge: Harvard University Press, 2000).
- J. Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971).
- J. Rawls, *Political Liberalism* (New York: Columbia University Press, 1996).
- R. Reich, *The Work of Nations: Preparing Ourselves for 21st Century Capitalism* (New York: Simon & Schuster, 1993).
- W.N. Renke, "Commercialization and Resistance" in *The Corporate Campus: Commercialization and the Dangers to Canada's Colleges and Universities* (ed.) J.L. Turk (Toronto: James Lorimer & Company Ltd., Publishers, 2000).
- Admiral Hyman Rickover, "The University And Small Business Patent Procedures Act" Hearings Before the Senate Committee on Judiciary, 96th Cong., 1st Sess. (Washington: Government Printing Office, 1979).
- S.H. Rifkind, "US President's Commission on the Patent System: 'To Promote the Progress of... Useful Arts' In the Age of Exploding Technology, Report to the Senate Judiciary Committee", S. Doc. No. 5, 90th Cong., 1st Sess. (Washington: Government Printing Office, 1967).
- J.S. Rigden & R.H. Stuewer, *The Physical Tourist: A Science Guide for the Traveler* (Basel & Boston: Birkhäuser, 2009).
- G. Rhoades, *Managed Professionals: Unionized Faculty and Restructuring Academic Labor* (Albany: State University of New York Press, 1998).
- W. Rogers, "An Here's How It All Happened" in *Will Rogers' Weekly Articles: The Hoover Years 1931-1933 Vol. 5* (ed.) S.K. Gragert (Stillwater: Oklahoma State University Press, 1982).
- K. Robins & F. Webster, *Times of the Technoculture: From the Information Society to the Virtual Life* (London: Routledge, 1999).
- J. Robinson, "Marx, Marshall and Keynes" in *Collected Economic Papers Vol. 2* (Cambridge: MIT Press, 1980).
- M.B. Robinson & R.G. Scherlen, *Lies, Damned Lies, and Drug War Statistics: A Critical Analysis of Claims Made By the Office of National Drug Control Policy* (Albany: State University of New York Press, 2007)

J.E. Roemer, *Free to Lose: An Introduction to Marxist Economic Philosophy* (Cambridge: Harvard University Press, 1988).

N.G. Röling, “An Idea Called Knowledge System” in *Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in Times of Environmental Uncertainty*, (eds.) N.G. Röling & A.E. Wagemakers (Cambridge: Cambridge University Press, 1998).

C.M. Rose, “‘Takings’ and the Practices of Property” in *Property and Persuasion: Essays on the History, Theory and Rhetoric of Ownership* (Boulder: Westview Press, 1994).

M. Rose, “The Author as Proprietor: Donaldson v. Becket and the Genealogy of Modern Authorship” in *Of Authors and Origins: Essays on Copyright Law* (eds.) B. Sherman & A. Strowel (Oxford: Clarendon Press 1994).

J.F. Ross, *The Lost Pyramids of Caral* (Smithsonian: Washington, 2002).

J. Rorty, *Our Master's Voice: Advertising* (New York: John Day Company Inc., 1934).

R.J. Roth, *British Empiricism and American Pragmatism: New Directions and Neglected Arguments* (New York: Fordham University Press, 1993).

J.-J. Rousseau, *Emile, ou De l'Education, 1762*, (Paris: Gallimard, 1959).

J.-J. Rousseau, *The First and Second Discourses* (ed.) R.D. Masters (trans.) R.D. Masters & J.R. Masters (New York: St. Martin's Press, 1964).

J.-J. Rousseau, “The Social Contract” in *Collected Writings of Rousseau Vol. IV* (trans.) J.R. Bush, R.D. Masters & C. Kelly, (Hanover: University Press of New England, 1994).

R.H. Ruby & J.A. Brown, *Indians of the Pacific Northwest* (Norman: University of Oklahoma Press, 1988).

F. Ryan, *The Forgotten Plague: How the Battle Against Tuberculosis Was Won – and Lost* (Boston : Little, Brown, 1993).

F. Ryan, *Tuberculosis: The Greatest Story Never Told – The Human Story of the Search for the Cure for Tuberculosis and the New Global Threat* (Bromsgrove: Swift Publishers, 1992).

M.P. Ryan, *Womanhood in America: From Colonial Times to the Present* (New York: Franklin Watts, 1983).

W. Safire, *Safire's Political Dictionary* (Oxford: Oxford University Press, 2008).

- E.W. Saïd , *Orientalism* (New York: Vintage Books, 1978).
- E.W. Saïd, “Traveling Theory” in *The World, the Text, and the Critic* (Cambridge: Harvard University Press, 1983).
- E. Saïd, “Movements and Migrations” in *Culture and Imperialism* (New York: Vintage Books, 1993).
- E.W. Saïd, “Zionism from the Standpoint of Its Victims” in *The Edward Saïd Reader* (eds.) M. Bayoumi & A. Rubin (New York: Vintage Books, 2000).
- P.A. Samuelson, “Summing Up On Business Cycles: Opening Address” in *Beyond Shocks: What Causes Business Cycles* (eds.) J.C. Fuhrer & S. Schuh (Boston: Federal Reserve Bank of Boston, 1998).
- S. Sandberg, *Lean In: Women, Work, and the Will to Lead* (New York: Random House, Inc., 2013).
- S.K. Sandeen, “The Value of Irrationality in the IP Equation” in *Intellectual Property Law: Economic and Social Justice Perspectives* (eds.) A. Flanagan & M.L. Montagnani, (Cheltenham: Edward Elgar Publishing, 2010).
- L.T. Sargent, *Contemporary Political Ideologies: A Comparative Analysis* (Belmont: Wadsworth Publishing Co., 1993).
- J.-P. Sartre, *Search for a Method* (New York: Vintage Books, 1963).
- J.-P. Sartre, *Being and Nothingness: An Essay in Phenomenological Ontology* (trans.) H.E. Barnes (London: Methun & Co. Ltd., 1957).
- T.M. Schaefer & T.A. Birkland, *Encyclopedia of Media and Politics* (Washington: CQ Press, 2006).
- S. Schama, *Rough Crossings: Britain, the Slaves, and the American Revolution* (New York: Penguin, 2008).
- M. Schabas, “What’s So Wrong with Physics Envy?” in *Non-Natural Social Science: Reflecting on the Enterprise of More Heat than Light* (ed.) N. de Marchi, (Duke University Press, 1993).
- H.I. Schiller & R.A. Schiller, “Libraries, Public Access to Information and Commerce” in *The Political Economy of Information* (eds.) V. Mosco & J. Wasko (Madison: University of Wisconsin Press, 1988).
- S. Schneider, *Iced: The Story of Organized Crime in Canada* (Mississauga: Wiley, 2009).

G. Schuster, *Christianity and Human Relations in Industry* (London: Epworth Press, 1951).

Science Council of Canada, *University Spin-off Firms: Helping the Ivory Tower Get to Market* (Ottawa: Minister of Supply and Services, 1986).

F.R. Scott, "The Privy Council and Mr. Bennett's 'New Deal' Legislation" in *Essays on the Constitution: Aspects of Canadian Law and Politics* (Toronto: University of Toronto Press, 1977).

R.E. Sevoy, *Origins and Growth of the Global Economy: From the Fifteenth Century Onward* (Westport: Praeger, 2003).

A.J. Sellen & R.H. Harper, *The Myth of the Paperless Office* (Cambridge: M.I.T. Press, 2003).

I.P. Semmelweiss, *The Etiology, Concept, and Prophylaxis of Childbed Fever* (Madison: University of Wisconsin Press, 1983).

Senate Judiciary Committee, *Paying Off Generics to Prevent Competition with Brand Name Drugs: Should It be Prohibited, January 17, 2007, Vol. 4* (Washington: U.S. Government Printing Office, 2007).

R. Serjeantson, "Natural Knowledge in the *New Atlantis*" in *Francis Bacon's New Atlantis: New Interdisciplinary Essays* (ed.) B. Price (Manchester: Manchester University Press, 2002).

R.W. Service, "The Cremation of Sam McGee" in *The Best of Robert Service* (New York: Penguin Putnam Inc., 1940).

W. Shakespeare, *Hamlet* (London: Sampson Low, Son, & Co., 1860).

W. Shakespeare, *Hamlet, Prince of Denmark* (Oxford: Clarendon Press, 1878).

W. Shakespeare, *Julius Caesar* (Hauppauge: Barron's Educational Series Inc., 2002)

W. Shakespeare, *Macbeth* (eds.) W.G. Clark & W.A. Wright (Oxford: Clarendon Press, 1869).

W. Shakespeare, *The Merchant of Venice* (London: Henry G. Bohn, 1853).

W. Shakespeare, *The Merchant of Venice* (Boston: St. Martin's Press, 2002).

W. Shakespeare, *Othello* (Cambridge: Cambridge University Press, 2005).

W. Shakespeare, *Othello* (Victoria: Insight Publications, Ltd., 2011).

- W. Shakespeare, *The Tempest* (Boston: Ginn & Co., 1888).
- W. Shakespeare, *The Tempest* (London: MacMillian Education, 1982).
- W. Shakespeare, *The Tempest* (New York: Double Day, Page & Company, 1903).
- S.A. Shane, *Academic Entrepreneurship: University Spinoffs and Wealth Creation* (Cheltenham: Elgar, 2005).
- N. Shaxson, *Treasure Islands: Uncovering the Damage of Offshore Banking and Tax Havens* (New York: Palgrave MacMillan, 2011).
- J. Sherman, *Trusts: Speech of Hon. John Sherman, of Ohio, delivered in the Senate of the United States, Friday, March 21, 1890* (Washington: US Government Printing Office, 1890).
- R.G. Shelden, *Controlling the Dangerous Classes: A Critical Introduction to the History of Justice* (Boston: Allyn and Bacon, 2001).
- R.J. Shiller, *Irrational Exuberance* (Princeton: Princeton University Press, 2005).
- V. Shiva, *Biopiracy: The Plunder of Nature and Knowledge* (Boston: South End Press, 1997).
- M. Shuchman, *The Drug Trial: Nancy Olivieri and the Science Scandal that Rocked the Hospital for Sick Children* (Toronto: Random House: 2005).
- S. Shulman, *Owning the Future* (Boston: Houghton Mifflin, 1999).
- A. Sillitoe, *The Loneliness of the Long Distance Runner* (New York: Knopf, 1960).
- M. Silverman & P.R. Lee, *Pills, Profits, and Politics*, (Berkeley: University of California Press, 1974)
- U.B. Sinclair, *The Profits of Religion: An Essay In Economic Interpretation* (New York: Vanguard Press, 1927).
- U.B. Sinclair, *The Jungle* (New York: Random House, 1981).
- S. Slaughter & L.L. Leslie, *Academic Capitalism: Politics, Policies and the Entrepreneurial University* (Baltimore: Johns Hopkins University Press, 1997).
- S. Slaughter & G. Rhoades, *Academic Capitalism and the New Economy: Markets, State, and Higher Education* (Baltimore: John Hopkins University Press, 2004).

- P.C. Sluby, *The Inventive Spirit of African Americans: Patented Ingenuity* (London: Praeger, 2004).
- M. Smallberg, *Revolving Regulators: SEC Faces Ethics Challenges with Revolving Door* (Washington: Project On Government Oversight, 2011).
- D. Smee & S. Sreenivasan, *Totally American: Harnessing the Dynamic Duo of Optimism and Resilience to Achieve Success* (Los Angeles: Holy Moly Press, 2009).
- A. Smith, *The Theory of Moral Sentiments, Vol. I* (eds.) D.D. Raphael & A.L. Macfie (Indianapolis: Liberty Fund, 1982).
- A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations Vol. II*. (London: W. Strahan & T. Cadell, 1776).
- A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (London: Alex. Murray & Co. 1872).
- J. Durden-Smith, *Mafia: The Complete History of a Criminal World* (London: Arcturus, 2004).
- J.S. Smith, *Patenting the Sun: Polio and the Salk Vaccine* (New York: William Morrow and Company, 1990).
- M.C. Smith, *Principles of Pharmaceutical Marketing, 3rd* (ed.) (Philadelphia: Lea & Febiger, 1983).
- N. Smith, *Uneven Development: Nature, Capital and the Production of Space* (Oxford, Basil Blackwell, 1984).
- J.E. Smyth, D.A. Soberman, & A.J. Easson, *The Law and Business Administration in Canada* (8th ed.) (Toronto: Prentice-Hall Canada Inc., 1998).
- J. Snow, *On the Mode of Communication of Cholera* (London: J. Churchill, 1855).
- L.C. Soley, *Leasing the Ivory Tower: The Corporate Takeover of Academia* (Boston: South End Press, 1995).
- G. Spivak "Can the Subaltern Speak?" in *Marxism and the Interpretation of Culture* (eds.) C. Nelson & L. Grossberg, (Urbana: University of Illinois Press, 1988).
- D. Sobel, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time* (New York: Walker Publishing Ltd., 1995).
- E. Staley, *The Guilds of Florence* (Chicago: Ayer Publishing, 1906).

- P. Stallybrass, "Shakespeare, the Individual, and the Text" *Cultural Studies* (ed.) L. Grossberg, et. al. (New York: Routledge, 1992).
- T. Standage, *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century's On-line Pioneers* (New York: Walker and Co., 1998).
- J. Stanford, *Paper Boom: Why Real Prosperity Requires a New Approach to Canada's Economy* (Toronto: J. Lorimer, 1999)
- D.J. Starkey, *British Privateering Enterprise in the Eighteenth Century* (Exeter: University of Exeter Press, 1990).
- J. Stevenson, *Popular Disturbances in England, 1700-1870* (London: Longman 1979)
- R.L. Stevenson, *The Strange Case of Dr. Jekyll and Mr. Hyde* (New York: John W. Lovell Company, 1886).
- J.E. Stiglitz, *Globalization and Its Discontents* (London: Penguin, 2002).
- J.E. Stiglitz, *The Roaring Nineties: Why We're Paying the Price for the Greediest Decade in History* (London: Penguin, 2004).
- F.J. Stilwell & G. Argyrous, "Introduction" in *Economics As A Social Science: Readings in Political Economy* (Sydney: Pluto Press, 2002).
- I.F. Stone, *The Trials of Socrates* (New York: Anchor Books, 1989).
- L. Stone, *Road to Divorce: England 1530-1987* (Oxford: Oxford University Press, 1990).
- R. Stoughton, *Patent of Richard Stoughton: Restorative Cordial and Medicine* (London: Great Seal Patent Office, 1857).
- L.A. Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (San Francisco: Berrett-Koehler, 2012).
- S. Strasser, *Never Done: A History of American Housework* (New York: Pantheon, 1982).
- L. Strauss, *What Is Political Philosophy? and Other Studies* (Glencoe: The Free Press, 1959).
- P. Street, *Segregated Schools: Educational Apartheid in the Post-Civil Rights Era* (New York: Routledge, 2005).

- J. Sumner, *Sustainability and the Civil Commons: Rural Communities in the Age of Globalization* (Toronto: University of Toronto Press, 2005).
- B. Swimme & T. Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era, A Celebration of the Unfolding of the Cosmos* (New York: Harper One, 1992).
- T.S. Szasz, *Insanity: The Idea and Its Consequence* (Syracuse: Syracuse University Press, 1997).
- T.S. Szasz, *The Manufacture of Madness: A Comparative Study of the Inquisition and the Mental Health Movement* (Syracuse: Syracuse University Press, 1997).
- M. Taibbi, *Griftopia: Bubble Machines, Vampire Squids, and the Long Con That Is Breaking America* (New York: Spiegel & Grau, 2010).
- T. Takenaka, *Patent Law and Theory: A Handbook of Contemporary Research* (Cheltenham: Edward Elgar Publishing, 2008).
- J.J. Tarrant, *Drucker, The Man Who Invented the Corporate Society* (Boston: Cahners Books, 1976).
- J. Taub, *Other People's Houses: How Decades of Bailouts, Captive Regulators, and Toxic Bankers Made Home Mortgages a Thrilling Business* (New Haven, Yale University Press, 2012).
- A. Taylor, *The People's Platform: Taking Back Power and Culture in the Digital Age* (Toronto: Random House, 2014).
- F.S. Taylor, *Galileo and the Freedom of Thought* (Madison: University of Wisconsin, 1938).
- W.L Taylor, *Francis Hutcheson and David Hume as Predecessors of Adam Smith* (Durham: Duke University Press, 1965).
- G. Teubner, "Introduction" in *Autopoietic Law: A New Approach to Law and Society* (ed.) G. Teubner (Berlin: Walter de Gruyter & Co., 1987).
- J. Thirsk, *Tudor Enclosures* (Leicester: University of Leicester, 1958).
- M.P. Tilley, *A Dictionary of the Proverbs in England in the Sixteenth and Seventeenth Centuries* (Ann Arbor: University of Michigan Press, 1950).
- A. de Tocqueville, *Democracy in America* (trans.) A. Goldhammer (New York: Library of America, 2004).

A. de Tocqueville, *Democracy in America Vol. II* (trans.) H. Reeve (Cambridge: Sever & Francis, 1863).

D.A. Lloyd-Thomas, *Locke on Government* (London: Routledge, 1995).

D. Thompson, *Pessimism of the Intellect? A History of the New Left Review* (London: Merlin, 2007).

E.P. Thompson, *The Making of the English Working Class* (New York: Vintage Books, 1962).

E.P. Thompson, *Whigs and Hunters: The Origin of the Black Act* (New York: Pantheon Books, 1975).

E.P. Thompson, "The Peculiarities of the English" in *The Socialist Register Vol. 2* (eds.) R. Miliband & J. Saville (London: Merlin, 1965).

E.P. Thompson, "The Poverty of Theory: Or an Orrery of Errors" in *The Poverty of Theory and Other Essays* (New York: Monthly Review Press, 1978).

E.P. Thompson, "The Politics of Theory" in *People's History and Socialist Theory* (ed.) R. Samuel (London: Routledge, 1981).

E.P. Thompson, "The Sale of Wives" in *Customs in Common*, (London: Penguin, 1991)

E.P. Thompson, "The Grid of Inheritance" in *The Essential E.P. Thompson* (New York: The New Press, 2001).

J. Thompson, P. Baird & J. Downie, *The Olivieri Report* (Toronto: James Lorimer & Co. Ltd., 2001).

M. S. Thompson, *The "Spider's Web": Congress and Lobbying in the Age of Grant* (Ithaca, NY: Cornell University Press, 1985).

H.B. Thorelli, *The Federal Antitrust Policy: Origination of an American Tradition* (Baltimore: Johns Hopkins Press, 1955)

H. Thorp & B. Goldstein, *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century* (Chapel Hill: University of North Carolina Press, 2010).

R. Tomlinson, "Forests and Woodlands" in *Atlas of the Irish Rural Landscape* (eds.) F.H.A. Aalen, K. Whelan & M. Stout (Cork: Cork University Press, 1997).

M.-R. Trouillot, *Global Transformations: Anthropology and the Modern World* (New York: Palgrave Macmillan, 2003).

- L. Trotsky, *Notebooks, 1933-1935: Writings on Lenin, Dialectics, and Evolutionism* (trans.) P. Pomper (New York: Columbia University Press, 1986).
- L. Trotsky, *The Revolution Betrayed: What is the Soviet Union and Where is it Going?* (Detroit: Labor Publications, Inc., 1937).
- G. Trumbull, *Consumer Capitalism: Politics, Product Markets, and Firm Strategy in France and Germany* (Ithaca: Cornell Univ. Press, 2006).
- N. Tudiver, *Universities For Sale: Resisting Corporate Over Canadian Higher Education* (Toronto: J. Lorimer, 1999).
- B.W. Tuchman, *The Guns of August* (New York: Macmillan, 1962).
- S. Turkel, *The Good War: An Oral History of World War Two* (New York: Pantheon Books, 1984).
- F.J. Turner, *The Significance of the Frontier in American History* (New York: Penguin, 2008).
- R. Turner, *Study on Transfer Pricing* (Ottawa: The Technical Committee on Business Taxation Committee, 1996).
- M. Twain, "A Double-Barreled Detective Story" in *The Man that Corrupted Hadleyburg and Other Essays and Stories* (Holicong: Wildside Press, 2003).
- M. Twain, "The Facts Concerning the Recent Resignation" in *Sketches Old and New* (Hartford: The American Publishing Company, 1875).
- M. Twain, "Osteopathy" in *Mark Twain's Speeches* (New York: Harper & Brothers, 1910).
- M. Twain, *Mark Twain's Autobiography, Vol. I.* (ed.) A.B. Paine (New York: Harper & Brothers, 1924).
- M. Twain, *Autobiography of Mark Twain: The Complete and Authoritative Edition, Vol. I* (Berkeley: University of California Press, 2010).
- M. Twain, "How I Edited an Agricultural Paper Once" in *The Best Short Stories of Mark Twain* (New York: Modern Library, 2004)
- M. Twain, *English as She Is Taught* (Cambridge: Da Capo Press, 2000).
- M. Twain, *The Prince and the Pauper: A Tale for Young People of All Ages* (Boston: James R. Osgood & Co., 1882).

M. Twain, "Pudd'nhead Wilson's New Calendar" in *Following the Equator: A Journey Around the World, Vol. 2* (Hollcong: Wildside Press, 1897)

M. Twain, *Tom Sawyer Abroad* (Whitefish: Kessinger Publishing, 2004).

M. Twain, "More Maxims of Mark" in *Mark Twain: Collected Tales, Sketches, Speeches, and Essays, 1891-1910* (New York: Library of America, 1992).

M. Twain, *Eruption: Hitherto Unpublished Pages About Men and Events* (ed.) B. De Voto (New York: Grosset & Dunlap, 1940)

M. Twain, *Mark Twain's Book for Bad Boys and Girls* (ed.) R.K. Rasmussen (New York: M.J.F. Books, 1995)

M. Twain, "What is Man?" in *The Complete Essays of Mark Twain* (ed.) C. Neider (Cambridge: Da Capo Press, 2000).

M. Twain, "The Adventures of Tom Sawyer" in *Mark Twain* (London: Chancellor Press, 2001).

M. Twain & C.D. Warner, *The Gilded Age: A Tale of Today* (New York: New American Library, 1969).

R.M. Unger, *Democracy Realized: The Progressive Alternative* (London: Verso, 1998).

S.W. Usselman, *Regulating Railroad Innovation: Business, Technology, and Politics in America, 1840-1920* (New York: Cambridge University Press, 2002).

J. Valenti, "Hearings before the Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee of the Judiciary, House of Representatives, Ninety-seventh Congress, Second Session on H.R. 4783, H.R. 4794 H.R. 4808, H.R. 5250, H.R. 5488, and H.R. 5705, Serial No 97, Part I, Home Recording of Copyrighted Works, April 12, 1982" (Washington: US Government Printing Office, 1982).

G. Vaggi & P.D. Groenewegen, *A Concise History of Economic Thought: From Mercantilism to Monetarism* (New York: Macmillan, 2003).

Various, *The Makers of Canada: Index and Dictionary of Canadian History* (eds.) L.J. Burpee & A.G. Doughty (Toronto: Morang & Co., Limited, 1912).

Y. Varoufakis, *And the Weak Must Suffer What They Must? Europe's Crisis and America's Economic Future* (New York: Nation Books, 2016).

Y. Varoufakis *The Global Minotaur: America, the True Origins of the Financial Crisis and the Future of the World Economy* (London: Zed Books, 2011).

B. Vasigh, T. Tacker & K. Fleming, *Introduction to Air Transport Economics* (Surrey: Ashgate Publishing Ltd., 2008)

D. Vaver, *Intellectual Property: Critical Concepts in Law Vol. 1*, (London: Routledge, 1996).

D. Vaver, *Intellectual Property Rights: Critical Concepts in Law, Vol. 1* (New York: Routledge, 2004).

D. Vaver, *Intellectual Property Rights: Critical Concepts in Law* (New York: (Routledge, 2006).

D. Vaver, *Intellectual Property Rights: Critical Concepts in Law* (New York: (Routledge, 2006)

D. Vaver, *Copyright Law* (Toronto: Irwin Law Inc., 2000).

D. Vaver, *Intellectual Property Rights* (New York: Routledge, 2006).

D. Vaver, *Intellectual Property: Critical Concepts in Law Vol. 1*, (London: Routledge, 1996).

D. Vaver, *Intellectual Property Rights Critical Concepts in Law* (Routledge, 2006).

D. Vaver, *Intellectual Property Rights* (New York: Routledge, 2006).

D. Vaver, "Glossary" in *Intellectual Property Law* (Concord: Irwin Law 1997).

T.B. Veblen, *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions* (London: Macmillan, 1899).

T.B. Veblen, *The Theory of the Leisure Class: An Economic Study of Institutions* (New York: The Macmillan Company, 1899).

T.B. Veblen, *Higher Learning in America: A Memorandum on the Conduct of Universities by Businessmen* (New York: Transaction Publishers, 1918).

T.B. Veblen, *Higher Learning in America: A Memorandum on the Conduct of Universities by Businessmen* (New York: B.W. Huebsch, 1918).

T.B. Veblen, *The Engineers and the Price System* (Whitefish: Kessinger Publishing, 1921).

T.B. Veblen, *Imperial Germany and the Industrial Revolution* (New York: Cosimo Classics, 2006).

- C.L. Ver Steeg, *The Formative Years: 1607-1763* (New York, Hill and Wang, 1964).
- L. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965).
- D. Vogel, “The ‘New’ Social Regulation in Historical and Comparative Perspective” in *American Law and the Constitutional Order: Historical Perspectives* (eds.) L.M. Friedman & H.N. Scheiber (Cambridge: Harvard University Press, 1988)
- R.J. Vogel, *Pharmaceutical Economics and Public Policy* (Binghamton: The Haworth Press, Inc., 2007).
- Voltaire, *The Philosophical Dictionary* (New York: George H. Evans, 1830).
- Voltaire, *Candide and Related Texts* (Indianapolis: Hackett Publishing Co., 2000).
- K. Vonnegut, *Slaughter-House Five, Or The Children’s Crusade: A Duty-dance with Death* (Thorndike: G.K. Hall, 1998).
- K. Vonnegut, *The Piano Player* (New York: Dell Publishing, 1980).
- K. Vonnegut, *Breakfast of Champions* (New York: Rosetta Books, 2000).
- S.A. Waksman, *My Life With Microbes* (New York: Simon and Shuster, 1954).
- J.F. Wall, *Andrew Carnegie* (Oxford: Oxford University Press, 1970).
- I. Wallerstein, *The Modern World System, 3 Vols.* (New York: Academic Press, 1989).
- J. Wanniski, *The Way the World Works* (Washington: Lanham, 1998).
- M. Waring, *If Women Counted* (London: Macmillan, 1988).
- F. Warshofsky, *The Patent Wars: The Battle to Own the World’s Technology* (New York: Wiley, 1994).
- J. Washburn, *University Inc.: The Corporate Corruption of Higher Education* (Cambridge: Basic Books, 2006).
- J.D. Watson, “‘Address to the American Neurological Society’ Marriott Copley Place, October 17, 2000” cited in V.K. McElheny, *Watson and DNA: Making a Scientific Revolution* (Cambridge: Basic Books, 2004).
- T.J. Watson, *Sociology, Work and Industry* (New York: Routledge, 1996).
- A. Waugh, *God* (New York: St. Martin’s Press, 2002).

- M. Weber, *The Protestant Ethic and the Spirit of Capitalism* (Mineola: Dover Publications, 2003).
- M. Weber, "Politics as a Vocation" in *From Max Weber: Essays in Sociology* (eds.) H.H. Gerth & C.W. Mills (Abingdon: Routledge, 1948).
- S. Weber & B.W. Jentleson, *The End of Arrogance: America in the Global Competition of Ideas* (Cambridge: Harvard University Press, 2010).
- K. Weeks, *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries* (Durham: Duke University Press, 2011).
- I. Welsh, *Trainspotting* (New York: W.W. Norton & Company Ltd., 2002).
- M. West, *My Little Chickadee* (Hollywood: Universal Studios, 1940).
- G. Weulersse, *La Physiocratie à la fin du règne de Louis XV (1770-1774)* (Paris: Presses Universitaires de France, 1959).
- G.D. White, *Campus, Inc.: Corporate Power in the Ivory Tower* (eds.) G.D. White & F.C. Hauck (Prometheus Books, 2000).
- J.B. Whyte, *Legal Imagination* (Chicago: University of Chicago Press, 1985).
- O.O.W. Wilde, *The Picture of Dorian Gray* (New York: Barnes and Noble Classics, 2003).
- C.S. Wilder, *Ebony and Ivy: Race Slavery, and the Troubled History of America's Universities* (New York: Bloomsbury Publishing, 2013).
- J. Williams, "The Rhetoric of Property" (1998) 83 Iowa L. Rev.
- R. Williams, *Culture and Society* (London: Pelican, 1961).
- R. Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977).
- R. Williams, *Culture* (London: Fontana Press, 1981).
- R. Williams, "Communications Technologies and Social Institutions" in *Contact: Human Communication and Its History* (ed.) R. Williams (London: Thames & Hudson, 1981).
- R. Williams, *Keywords: A Vocabulary of Culture and Society* (London: Fontana Press, 1988).
- R. Williams, *Drama from Ibsen to Brecht* (London: Hogarth, 1993).

- T. Williams, *A Street Car Named Desire* (Oxford: Heinemann, 1997).
- J. Williamson, "What Washington Means by Policy Reform" in *The Progress of Policy Reform in Latin America* (ed.) J. Williamson (Washington: Institute for International Economics, 1990).
- J. Wilson, "The Individual, the State and the Corporation" in *The Cambridge Companion to Chomsky* (ed.) J.A. McGilvray (Cambridge: Cambridge University Press, 2005).
- S. Winchester, *Krakatoa: The Day the World Exploded: August 27, 1883* (New York: Harper Perennial, 2004).
- H. Winter, *Trade-offs: An Introduction to Economic Reasoning and Social Issues* (Chicago: University of Chicago Press, 2005).
- J. Winter, *Democracy's Oxygen: How the News Media Smother the Facts* (Montréal: Black Rose Books, 1997).
- N. Wiseman, *In Search of Canadian Political Culture* (Vancouver: University of British Columbia Press, 2007).
- S. Wohl, *The Medical Industrial Complex* (New York: Harmony Books, 1984).
- R.D. Wolff, "Capitalist Crisis and the Return to Marx" in *Capitalism's Crisis Deepens: Essays on the Global Economic Meltdown* (Chicago: Haymarket Books, 2016).
- R.D. Wolff, *Capitalism Hits the Fan: The Global Economic Meltdown and What to Do About It* (Northhampton: Interlink Books, 2009).
- R.D. Wolff & S.A. Resnick, *Contending Economic Theories: Neoclassical, Keynesian, and Marxian* (Cambridge: The MIT Press, 2012).
- R.D. Wolff & S.A. Resnick. *Economics: Marxian Versus Neoclassical* (Baltimore: The Johns Hopkins University Press, 1987).
- S.S. Wolin, *Democracy Incorporated: Managed Democracy and the Specter of Inverted Totalitarianism* (Woodstock: Princeton University Press, 2008).
- M. Woodiwiss, *Organized Crime and American Power: A History* (Toronto: University of Toronto Press, 2001).
- M. Wright, "University-Industry Links: Regional Policies and Initiatives in the United Kingdom" in *How Universities Promote Economic Growth* (eds.) S. Yusuf & K. Nabeshima (Washington: The International Bank for Reconstruction and Development/The World Bank, 2007).

- T. Wu, *The Attention Merchants: The Epic Scramble to Get Inside Our Heads* (New York: Alfred A. Knopf, 2016).
- S. Yalkowsky, *The Murder of the Rosenbergs* (New York: Crucible Publications, 1990).
- R. Young, *Postcolonialism: An Historical Introduction* (Oxford: Blackwell, 2001).
- D. Zamora, *Critiquer Foucault: Les années 1980 et la tentation néolibérale* (Bruxelles: Grande Bibliotheque, 2014).
- H. Zeiger, *Reagan's Children: Taking Back the City on the Hill* (Nashville: Broadman & Holman, 2006).
- H. Zinn, *A People's History of the United States* (New York: Harper Perennial, 1980).
- S. Žižek, "Conversation 5 – Miracles Do Happen: Globalisation(s) and Politics" in *Conversations With Žižek* (Cambridge: Polity, 2004).
- S. Žižek, *Organs Without Bodies: Deleuze and Consequences* (New York: Routledge, 2004).
- S. Žižek, *First as Tragedy, Then as Farce* (New York: Verso, 2009).
- S. Žižek, *Living in the End Times* (New York: Verso, 2011).
- G. Zucman, *The Hidden Wealth of Nations: The Scourage of Tax Havens* (trans.) T.L. Fagan (Chicago: The University of Chicago Press, 2015).

ARTICLES

- C. Adams & G. Harris, "When NIH Helps Discover Drugs, Should Taxpayers Share the Wealth" *Wall Street Journal* June 5, 2000.
- R. Adler, "Entering a dark age of innovation" *New Scientist*, July 2, 2005, at: <http://www.newscientist.com/article/dn7616-entering-a-dark-age-of-innovation.html#.U1gW7sc5mUI> (last visited March 4, 2014).
- A. Ali, "Campus censorship 'an epidemic' at UK universities as Aberystwyth, Edinburgh and Leeds named among 'most ban-happy'" *The Independent*, January 18, 2016 at: <http://www.independent.co.uk/student/news/campus-censorship-an-epidemic-at-uk-universities-as-aberystwyth-edinburgh-and-leeds-named-among-most-a6818896.html> (last visited September 19, 2016).
- A. Ali, "Jesus Christ would be prevented from speaking at Britain's universities, says Oxford academic" *The Independent*, May 31, 2016, at: <http://www.independent.co.uk/student/news/jesus-christ-would-be-prevented-from->

[speaking-at-britain-s-universities-says-oxford-academic-a7058056.html](http://www.guardian.co.uk/commentisfree/2011/mar/29/libya-west-tripoli-arab-world-gaddafi) (last visited September 19, 2016).

T. Ali, “Libya is another case of selective vigilantism by the west” *The Guardian*, March 29, 2011, at: <http://www.guardian.co.uk/commentisfree/2011/mar/29/libya-west-tripoli-arab-world-gaddafi> (last visited April 12, 2011).

S. Almashat, *et. al.* “Rapidly Increasing Criminal and Civil Monetary Penalties Against the Pharmaceutical Industry: 1991 to 2010” (Washington: Public Citizen, December 16, 2010) at: <http://www.citizen.org/hrg1924> (last visited January 10, 2011).

American Intellectual Property Law Association, “Report of the Economic Survey – 2011” (Rockville: A.I.P.L.A., 2011) at: <http://www.aipla.org/members/Documents/AIPLA%202011%20Report-%20Summary%20102411.pdf> (last visited June 30, 2012).

L. Anderson, “Beautiful Red Dress” in *Strange Angels* (Burbank: Warner Bros, 1989)

M. Angell, “Is Academic Medicine for Sale?” (2000) 342 N.E.J.M.

M. Angell, “Big Pharma, Bad Medicine: How corporate dollars corrupt research and education” *Boston Review* (May/June 2010) at: <http://bostonreview.net/BR35.3/angell.php> (September 10, 2010).

D. Armstrong & A. Katz, Billionaire Found in the Middle of Bribery Case Avoids U.S. Probe” *Bloomberg*, August 14, 2014, at: <http://www.bloomberg.com/news/articles/2014-08-14/billionaire-found-in-middle-of-bribery-case-avoids-u-s-probe> (last visited October 31, 2016).

M. Arndt, “MIT, Caltech And the Gators?: How the University of Florida Moved to the Major League of Technology Startups” *Business Week*, May 21, 2007.

C. Arnst, *et. al.*, “The Waning Of The Blockbuster Drug” *Business Week*, October 18, 2004, at: http://www.businessweek.com/magazine/content/04_42/b3904034_mz011.htm (last visited September 21, 2011).

S. Aronowitz, “Higher Education and Everyday Life” at: http://stanleyaronowitz.org/articles/article_e_el.pdf (last visited July 10, 2008).

H.W. Arthurs, “Legal Institutions in the New Economy” (1996) 34 O.H.L.J.

H.W. Arthurs, “Law and Learning in an Era of Globalization” (2009) 10 *Ger.L.J.* 629 available at: <http://www.germanlawjournal.com/article.php?id=1111> (last visited April 1, 2014).

J. Alter, “A Case of Senioritis: [Bill] Gates tackles education’s two-headed monster” *Newsweek* November 28, 2010 at: <http://www.newsweek.com/2010/11/28/alter-education-is-top-priority-for-gates.html#> (last visited November 29, 2010).

L.K. Altman, “Drug Firm, Relenting, Allows Unflattering Study to Appear” *The New York Times*, April 16, 1997.

American Association of University Professors, “Report: Academic freedom in the medical school” AAUP Policy Documents and Reports (Ann Arbor: University of Michigan Press, 1999 at: http://findarticles.com/p/articles/mi_qa3860/is_199907/ai_n8868497/ (last visited October 10, 2010).

E. Andrew-Gee, “Toronto-area doctor, pharmacist charged with fentanyl trafficking” *The Globe and Mail*, April 6, 2016, at: <http://www.theglobeandmail.com/news/national/toronto-area-doctor-pharmacist-charged-with-fentanyl-trafficking/article29548265/> (last visited April, 7, 2016).

M. Angell, “The Pharmaceutical Industry – To Whom is It Accountable?” (2000) 342 *N.E.J.M.*

N. Angier, “The Search for the Female Equivalent of Viagra” *The New York Times*, April 10, 2007, at: <http://www.nytimes.com/2007/04/10/science/10wome.html> (last visited April 18, 2008).

R. Aviv, “A Valuable Reputation: After Tyrone Hayes said that a chemical was harmful, its maker pursued him” *The New Yorker*, February 10, 2014, at: http://www.newyorker.com/reporting/2014/02/10/140210fa_fact_aviv?currentPage=all (last visited April 2, 2014).

J.N. Axelrod, “Universities Learn of Start-ups’ Pitfalls” *Wall Street Journal*, August 27, 1996.

M. Bai, “One Liberal Voice Dares to Say, Cut the Budget” *The New York Times*, August 25, 2010, at: http://www.nytimes.com/2010/08/26/us/politics/26bai.html?_r=2 (last visited August 29, 2010).

D. Baker, “The Soft Bigotry of Incredibly Low Expectations: The Case of Economists” *The Guardian Unlimited* Wednesday, September 13, 2010 at: <http://www.guardian.co.uk/commentisfree/cifamerica/2010/sep/13/unemployment-economy-structural-cyclical> (last visited Sept. 15, 2010).

D.E. Baker, Letter to James M. Wilson, “DHHS-FDA Notice of Opportunity for Hearing; James M. Wilson, M.D., Ph.D.” – February 8, 2002, F.D.A. – Regulatory Information at: <http://www.fda.gov/RegulatoryInformation/FOI/ElectronicReadingRoom/ucm144564.htm> (last visited March 1, 2010).

K. Bakx & P. Haavardsrud, "How the University of Calgary's Enbridge relationship became controversial: 'Most damningly it smacks of us being apologists for the fossil fuel industry,' one academic warned" CBC News, November 2, 2015, at: <http://www.cbc.ca/news/canada/calgary/university-calgary-enbridge-sponsorship-1.3286369> (last visited November 13, 2015).

C. Ballentine, "Taste of Raspberries, Taste of Death: The 1937 Elixir Sulfanilamide Incident" Federal Drug Administration Consumer Magazine, June 1981, at: <http://www.fda.gov/oc/history/elixir.html> (last visited June 21, 2008).

J.H. Barton, "Patenting Life" (1991) 40 Scientific Amer.

M. Bati, "How Much Has Citizens United Changed the Political Game?" The New York Times – Magazine, July 12, 2012, at: http://www.nytimes.com/2012/07/22/magazine/how-much-has-citizens-united-changed-the-political-game.html?pagewanted=all&_r=0 (last visited September 5, 2013).

C.M. Beasley, *et al.*, "Fluoxetine and suicide: a meta-analysis of controlled trials of treatment of depression" (1991) 3(3) B.M.J.

P. Beatty, "Protecting ideas, innovations vital to our economic growth" Toronto Star, June 1, 2008.

A. Becker, *et al.*, "The association between a journal's source of revenue and the drug recommendations made in the articles it publishes" (2011) 185(5) C.A.M.J.

M.C. Behrent, "Liberalism Without Humanism: Michel Foucault and the Free-Market Creed, 1976-1979" (2009) 6(3) Mod. Intellectual Hist.

Bejerot, "The Six Day War in Stockholm" (1974) 61 New Scientist.

J. Bell, "Gentle Men of Steel" (1984) 1435/1436 New Scientist.

G. Bellafante, "Gunning for Wall Street, With Faulty Aim" The New York Times, September 23, 2011, at: http://www.nytimes.com/2011/09/25/nyregion/protesters-are-gunning-for-wall-street-with-faulty-aim.html?_r=1&scp=4&sq=occupy%20wall%20street&st=cse (last visited October 5, 2011).

J. Belluz, "Doctors, conflict of interest and evidence med schools are ignoring the problem" MacLeans, July 5, 2013, at: <http://www2.macleans.ca/2013/07/05/doctors-conflict-of-interest-and-new-evidence-med-schools-are-ignoring-the-problem/> (last visited July 10, 2013).

O.J. Benedictow, "The Black Death: The Greatest Catastrophe Ever" (2005) 55(3) Hist. Today.

J. Benson, "Drug companies panic as thirteen 'blockbuster' drugs about to lose patent protection" February 07, 2011, at: http://www.naturalnews.com/031234_drug_patents.html (last visited March 15, 2011).

A.J. Fugh-Berman, "The Haunting of Medical Journals: How Ghostwriting Sold 'HRT'" "PLoS" September 7, 2010, at: <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000335> (last visited October 21, 2010).

J.M. Bernstein, "The Very Angry Tea Party" The New York Times, June 13, 2010, at: <http://opinionator.blogs.nytimes.com/2010/06/13/the-very-angry-tea-party/?scp=15&sq=tea%20party&st=cse> (last visited June 16, 2010).

S. Bernstein, "Does Going Public Affect Innovation?" [2012] Stanford Pap. S. at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2061441 (last visited January 14, 2013).

J. Bessen & M. Meurer, "The Private Cost of Patent Litigation" B.U.S.L. Working Paper Series, at: <http://www.bu.edu/law/faculty/scholarship/workingpapers/2007.html> (last visited December 10, 2010).

J. Bessen & M. Meurer, "Do Patents Perform Like Property?" (2008) 22(3) Acad. Man. Perspec.

G. Bigelow, "Let There Be Markets: The Evangelical Roots of Economics" Harper's Magazine, May 1, 2005, at: <http://www.harpers.org/archive/2005/05/0080538>.

K. Birchard, "University of Toronto Settles Dispute Over Academic Freedom and Company-sponsored Research" (2002) Chron. H. Ed. (November 1).

J. Bland, R. Higgitt & J. Kingsland, "Longitude Prize 2014: six great challenges of our time – as it happened" The Guardian, May 19, 2014, at: <http://www.theguardian.com/science/political-science/2014/may/19/longitude-prize-2014-six-challenges-live-blog> (last visited December 15, 2014).

G. Blumenstyk, "Researchers Tell of Battling for the Right to Publish Negative Findings" (1999) 54(31) Chron. H. Ed.

D. Blumenthal, "Academic-Industry Relationships in the Life Sciences: Consequences, and Management" (1992) 268(23) *J.A.M.A.* 3344.

M. Blyth, "Global Trumpism: Why Trump's Victory Was 30 Years in the Making and Why It Won't Stop Here" Foreign Affairs, November 15, 2016, at:

<https://www.foreignaffairs.com/articles/2016-11-15/global-trumpism> (last visited January 5, 2017).

I. Boekoff, “Western faces backlash to Chakma’s salary payout” *The Gazette*, March 30, 2015, at: http://www.westerngazette.ca/news/western-faces-backlash-to-chakma-s-salary-payout/article_41406092-a74c-5406-bc07-2e01ae5cff68.html (last visited January 25, 2016).

D. Bollier, “Reclaiming the Commons” (2002) *Boston Rev.* at: <http://www.bostonreview.net/BR27.3/bollier.html>, (last visited August 25, 2005).

T. Booth & J.L. Turk, Letter to R. Birgeneau, President, University of Toronto, August 20, 2001 at: www.pharmapolitics.com/birgeneau.html (last visited September 15, 2014).

S. Boseley, “Bitter Pill” *The Guardian*, May 7, 2001, at: <http://www.guardian.co.uk/education/2001/may/07/medicalseience.highereducation> (last visited September 30, 2010).

C. Bowe, A. Michaels & N. Tait, “Bankers See Quick Gains In Tough Times From Drug Disposals” *Financial Times*, May 8, 2001.

J. Boyle, “Forward: The Opposite of Property?” (2003) 66(1-2) *L. & Contemp. Probs.*

J. Boyle, “Fencing Off Ideas”(2002) *Daedalus*.

J. Boyle, “The Second Enclosure Movement and the Construction of the Public Domain” (2003) 66(33) *Law & Contemp. Probs.*

J. Boyle, “Thomas Hobbes and the Invented Tradition of Positivism: Reflections on Language, Power, and Essentialism” (1986-1987) 135 *U. Pa. L. Rev.*

T. Booth & J.L. Turk, Letter to R. Birgeneau, President, University of Toronto 2001 at: www.pharmapolitics.com/birgeneau.html (last visited September 15, 2005).

S. Botticelli, *The Birth of Venus (1482-1485)*, Florence, Uffizi Gallery at: <http://www.haltadefinizione.com/magnifier.jsp?idopera=10&lingua=en> (last visited June 30, 2009).

A. Boutilier, “Keep ‘unmuzzled’ scientists on tight leash, senior civil servants warn Liberals” *The Toronto Star*, March 19, 2016, at: <http://www.thestar.com/news/canada/2016/03/19/keep-unmuzzled-scientists-on-tight-leash-senior-civil-servants-warn-liberals.html> (last visited March 20, 2016).

D. Braben, “BP Backs Revolutionary Research” (1983) 98 (1354) *New Scientist*.

J. Bradshaw, "Cross-country copyright reform hearings under way" The Globe and Mail Tuesday July 21, 2009 at: <http://www.theglobeandmail.com/news/arts/cross-country-copyright-reform-hearings-under-way/article1225359/> (last visited July 25, 2009).

B. Bragg, "I Don't Need This Pressure Ron" in *Reaching To The Converted* (Los Angeles: Rhino Records, 1999).

H. Branswell, "How a Winnipeg lab became an Ebola research powerhouse: National Microbiology Laboratory in Winnipeg behind innovative, experimental ZMapp Ebola drug" The Canadian Press, September 21, 2014, at: <http://www.cbc.ca/news/canada/manitoba/how-a-winnipeg-lab-became-an-ebola-research-powerhouse-1.2773397> (last visited September 30, 2014).

P.R. Breggin, "Suicidality, Violence and Mania Caused by Selective Serotonin Reuptake Inhibitors (SSRIs): A Review and Analysis" (2003/2004) 16 Int'l J. Risk & Saft. Med.

L. Bren, "Frances Oldham Kelsey: FDA Medical Reviewer Leaves Her Mark on History" (Washington: FDA Consumer Magazine, March-April 2001) at: http://permanent.access.gpo.gov/lps1609/www.fda.gov/fdac/features/2001/201_kelsey.html (last visited November 1, 2010).

M. Brezis, "Big pharma and health care: unsolvable conflict of interests between private enterprise and public health" (2008) 45(2) Isr. J. Psychiatry Relat. Sci.
E. Browder & J. Zack, The Daily Worker, January 29, 1929.

P. Brickley, "Nortel \$4.5-Billion Patent Sale to Apple, Microsoft, Others Approved" The Wall Street Journal, July 11, 2011, at: <http://www.wsj.com/articles/SB10001424052702303812104576440161959082234> (last visited September 27, 2014).

H. Bronstein & G. Slattery, "Exclusive: Stiglitz quits Panama Papers probe, cites lack of transparency" Reuters, August 5, 2016, at: <http://www.reuters.com/article/us-panama-tax-idUSKCN10G24Z> (last visited August 13, 2016).

J.R. Brown, "Privatizing the University: The New Tragedy of the Commons" (2000) 290 Science.

L. Brown, "Corporate deals seen as dangerous for Canadian universities" The Toronto Star, November 20, 2013, at: http://www.thestar.com/yourtoronto/education/2013/11/20/corporate_deals_seen_as_dangerous_for_canadian_universities.html (last visited January 25, 2014).

R. Browning, "Andrea del Sarto" in *Select Poems of Robert Browning* (New York: Maynard, Merrill, & Co., Publishing, 1892).

S. Brozak, "Retrophin, Gilead, And Our Healthcare Values" Forbes, September 12, 2014, at: <http://www.forbes.com/sites/stephenbrozak/2014/09/12/retrophin-gilead-and-our-healthcare-values/> (last visited January 15, 2015).

R. Brydon, N. Chesterley, B. Dachis & A. Jacobs, Measuring Innovation in Canada: The Tale Told by Patent Applications (Toronto: C.D. Howe Institute, 2014).

E. Brynjolfsson cited by C. Freeland, "Fear of falling out of middle class stalks U.S." The Globe and Mail, April 26, 2013.

S.J. Buck Cox, "No tragedy on the Commons" (1985) 7 J. Environmental Ethics.

R. Bud, "Many Happy Recoveries" (2004) 150 The New Scientist.

W. Buffet, cited in "Interview - David Cay Johnston: Class War Is Being Waged by the Rich Against the Poor" Democracy Now, January 21, 2015, at: http://www.democracynow.org/2015/1/21/david_cay_johnston_class_war_is (last visited January 22, 2015).

A. Buncombe, "Standing Rock Protest: Indigenous campaigners celebrate 'historic decision' to deny permission to pipeline" The Independent, December 5, 2016, at: <http://www.independent.co.uk/news/world/americas/north-dakota-access-pipeline-army-corps-of-engineers-deny-permission-celebrate-latest-a7455731.html> (last visited December 5, 2016).

L. Burnham, "Lean In and One Percent Feminism" Portside, March 26, 2013, at: <http://portside.org/2013-03-26/lean-and-one-percent-feminism> (last visited December 14, 2014).

G.H.W. Bush, "George H. W. Bush: Address Before a Joint Session of the Congress on the Persian Gulf Crisis and the Federal Budget Deficit" September 11, 1990 at: http://bushlibrary.tamu.edu/research/public_papers.php?id=2217&year=1990&month=9 (last visited August 4, 2009).

G.H.W. Bush, "Address Before a Joint Session of Congress on the End of the Gulf War" March 6, 1991, at: <http://millercenter.org/scripps/archive/speeches/detail/3430> (last visited November 4, 2008).

G. Caffentzis, "John Locke, The Philosopher of Primitive Accumulation" (2008) 5 Bristol Rad. Pamphleteer.

G. Caffentzis, "A Critique of Commodified Education and Knowledge (From Africa to Maine)" A Russell Scholar Lecture, University of Southern Maine, February 12, 2008, at: http://www.commoner.org.uk/wp-content/uploads/2008/04/caffentzis_critiqueeducation.pdf (last visited April 4, 2016).

- D. Camp, "Blame for Wakerton at Tories' Door" The Toronto Star, May 28, 2000.
- P.S. Campbell, Democracy v. Concentrated Wealth: In Search of a Louis D. Brandeis Quote (2003) 16 Green Bag 2D.
- B. Champion-Smith, R. Doolittle & J. Smith, "Listeria outbreak spurs food safety overhaul" Toronto Star, August 28, 2008 at: <http://healthzone.ca/health/article/486857> (last visited August 28, 2008).
- E. Cameron, "The Deafening Silence of AIDS – First Jonathan Mann Memorial Lecture" XIIIth International AIDS Conference – Durban, 9th – 14th July 2000, at: <http://www.tac.org.za/Documents/Speeches/ec10july.txt> (last visited January 20, 2011).
- C.A.U.T., "Intellectual Property & Academic Staff" (2004) 4(3) CAUT Legal Rev.
- The Canadian Press, "U of A dean who copied part of speech resigns" Toronto Star, June 17, 2011 at: <http://www.thestar.com/news/canada/article/1010679--u-of-a-dean-who-copied-part-of-speech-resigns> (last visited June 18, 2011).
- C.A.U.T. "Settlement in Healy Dispute a 'Vindication'" Issues and Campaigns - C.A.U.T., April 29, 2002 at: <http://www.caut.ca/pages.asp?page=378&lang=1> (last visited October 10, 2010).
- C.A.U.T., "Apotex Inc. v. Olivieri: An Attack on Academic Freedom" Issues & Campaigns (Ottawa: C.A.U.T., December 1, 2008) <http://www.caut.ca/pages.asp?page=760>.
- C.A.U.T. "Law Suit Launched Against U of T and CAMH in Dr. David Healy Controversy" in Issues and Campaigns (Ottawa: C.A.U.T., 2001) at: <http://www.caut.ca/pages.asp?page=380&lang=1> (last visited December 10, 2010).
- C.A.U.T. "David Healy" in Issues and Campaigns (Ottawa: C.A.U.T., 2002) at: <http://www.caut.ca/pages.asp?page=201> (November 10, 2010).
- C.A.U.T. "Overview and CAUT Profile" at: <http://www.caut.ca/pages.asp?page=6> (last visited October 10, 2010).
- C.A.U.T., "Academic Freedom in Jeopardy at Toronto" (2001) 48(5) C.A.U.T. Bulletin" at: <http://www.cautbulletin.ca/default.asp?SectionID=0&SectionName=&VolID=176&VolumeName=No%205&VolumeStartDate=May%202001,%202001&EditionID=20&EditionName=Vol%2048&EditionStartDate=January%202001,%202001&ArticleID=0> (last visited May 1, 2010).

C.A.U.T., “Policy Statement on Academic Freedom” – General CAUT Policy (Ottawa: C.A.U.T.) at: <http://www.caut.ca/pages.asp?page=247&lang=1> (last visited October 10, 2010). Cite?

C.A.U.T. “Federal Funding of Basic Research” (2013) 13(1) CAUT – Education Review at: <http://www.caut.ca/docs/default-source/education-review/educationreview13-1-en.pdf?sfvrsn=2> (last visited April 2, 2014).

Canadian Press, Staff, “U of A dean who copied part of speech resigns” Toronto Star, June 17, 2011 at: <http://www.thestar.com/news/canada/article/1010679--u-of-a-dean-who-copied-part-of-speech-resigns> (last visited June 18, 2011).

Canadian Press, Staff, “University of Saskatchewan terminates president after fired professor controversy” The Globe and Mail, May 22, 2014, at: <http://www.theglobeandmail.com/news/national/university-of-saskatchewan-president-fired/article18790498/> (last visited May 22, 2014).

T. Carlyle, “Occasional Discourse on the Negro Question” *The Commercial Review of the South and West, 1850* (New Orleans: J.D. de Bow Review, 1950).

K. Carmichael, R. Blackwell & G. Keenan, “Free up ‘dead money,’ Carney exhorts corporate Canada” The Globe and Mail, August 22, 2012, at: http://www.theglobeandmail.com/report-on-business/economy/free-up-dead-money-carney-exhorts-corporate-canada/article4493091/?utm_source=Shared+Article+Sent+to+User&utm_medium=E-mail:+Newsletters+/-+E-Blasts+/-+etc.&utm_campaign=Shared+Web+Article+Links (last visited January 13, 2014).

W.K. Carroll & J.B. Beaton, “Globalization, Corporatization and University Governance in Canada, 1976-1996: A Structural Analysis” Paper presented at the XIV World Congress of Sociology, Montréal, July 1998.

Center for Disease Control, C.D.C., “Suicide Trends Among Youths and Young Adults Aged 10-24 Years – United States, 1990-2004” (2007) 56(35) *Morbidity and Morbidity Weekly Report*.

H.-J. Chang, “Kicking Away the Ladder: How the Economic and Intellectual Histories of Capitalism Have Been Re-Written to Justify Neoliberal Capitalism” (2002) 15 *Post-Autistic Econ. Rev.* at: http://www.btinternet.com/~pae_news/review/issue15.htm.

S. Chase & I. Peritz, “A terrible series of events” The Globe and Mail, November 27, 2014.

B. Cheadle, “Carleton rewrites controversial deal: School modifies \$15-million donor agreement with Calgary businessman, removing patron’s power to approve curriculum, faculty” The Globe and Mail Wednesday August 29, 2012.

M. Cheng, “Most antidepressants don’t work for young patients, study says” The Toronto Star, June 8, 2016, at: <https://www.thestar.com/news/world/2016/06/08/study-most-antidepressants-dont-work-for-young-patients.html> (last visited June 9, 2016).

M.K. Cho, R. Shohara, A. Schissel & D. Rennie, “Policies on Faculty Conflicts of Interest at US Universities” (2000) 284 J.A.M.A.

N. Chomsky, “Academic Freedom and the Corporatization of Universities” University of Toronto (Scarborough), April 6, 2011, at: <http://www.youtube.com/user/uoftscarborough#p/c/0/Q97tFyqHVLs> (last visited May 1, 2014).

N. Chomsky, “America in Decline” In These Times, August 5, 2011 at: http://inthesetimes.com/article/11806/america_in_decline/ (last visited Oct 2, 2014).

N. Chomsky, “Blinded by the Truth” Al-Ahram Weekly, November 2-8, 2000, at: <http://www.chomsky.info/articles/20001102.htm> (last visited December 10, 2011).
Citigroup, “Leaked Citibank Memo: The Plutonomy Symposium Rising Tides Lifting” September 29, 2006, at: <https://app.box.com/shared/9if6v2hr9h> (last visited December 20, 2014).

N. Chomsky, “Yanis Varoufakis and Noam Chomsky” New York Public Library, April 26, 2016, at: <https://www.youtube.com/watch?v=szIGZVrSAyc> (last visited May 14, 2016).

A. Cipriani, *et. al.*, “Comparative efficacy and tolerability of antidepressants for major depressive disorder in children and adolescents: a network meta-analysis” (2016) The Lancet On-Line at: [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)30385-3.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)30385-3.pdf) (last visited June 10, 2016).

Citizens for Tax Justice – Staff, “Apple, Microsoft and Eight Other Corporations Each Increased Their Offshore Profit Holdings by \$5 Billion or More in 2012: 92 Fortune 500 Corporations Boosted Their Offshore Stash by Over \$500 Million Each” Citizens for Tax Justice, March 11, 2013, at: http://ctj.org/ctjreports/2013/03/apple_microsoft_and_eight_other_corporations_each_increased_their_offshore_profit_holdings_by_5_bill.php#.UW1vahlAvh1 (last visited April 6, 2013).

C. Clark, “Top scientists allege U of T academic chill” The Globe and Mail, September 06, 2001, at: <http://www.theglobeandmail.com/news/national/top-scientists-allege-u-of-t-academic-chill/article4152673/#dashboard/follows/> (last visited May 1, 2014).

J.M. Clark, “The Basis of War-Time Collectivism” (1917) 7(4) Amer. Econ. Rev.

R. Clift, “Background Paper on the General Agreement on Trade in Services (GATS) and Post-Secondary Education in Canada” Confederation of University Faculty Associations of British Columbia (CUFA/BC) November 29, 1999, at: <http://www.cufa.bc.ca/briefs/GATS.html>.

H. Cockburn, “Apple tax: EU orders firm to pay Ireland record £11bn penalty over 'sweetheart' deal” The Independent, August 30, 2016, at: <http://www.independent.co.uk/news/business/news/apple-tax-ireland-eu-11bn-european-commission-sweetheart-deal-europe-latest-a7216126.html> (last visited August 31, 2016).

P. Cockburn, “How the corruption revealed in the Panama Papers opened the door to Isis and al Qaeda” The Independent, April 8, 2016, at: <http://www.independent.co.uk/voices/how-the-corruption-revealed-in-the-panama-papers-opened-the-door-to-isis-and-al-qaeda-a6975476.html> (last visited June 25, 2016).

P. Collier, “Helping Africa to become Canada” The Globe and Mail, April 20, 2013.

C.B.S., “Ghostwriting Articles for Medical Journals” C.B.S. News, February 11, 2009, at: <http://www.cbsnews.com/stories/2002/01/31/health/main327012.shtml> (last visited March 13, 2010).

Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States* (Washington: The Financial Crisis Commission, 2011) at: <http://fcic.law.stanford.edu/>.

Complaints Committee, “Complaints Committee Reason and Decisions” – C.P.S.O., November 2001, 1-18 (copy on file with author).

B. Condon & N. Vardi, “Harvard: The Inside Story of Its Finance Meltdown” Forbes Magazine, March 16, 2009, at: http://www.forbes.com/forbes/2009/0316/080_harvard_finance_meltdown.html.

S. Conor, “What exactly does ‘one’ mean? Court of Appeal passes judgement on thorny mathematical issue” The Independent, June 28, 2015, at: <http://www.independent.co.uk/news/science/what-exactly-does-one-mean-court-of-appeal-passes-judgement-on-thorny-mathematical-issue-10350568.html> (last visited July 2, 2015).

R. Cooder, “No Banker Left Behind” in *Pull Up Some Dust* (Los Angeles: Nonesuch Records, 2011).

S. Coontz, “How Can We Help Men? By Helping Women” The New York Times, January 14, 2014, at: http://www.nytimes.com/2014/01/12/opinion/sunday/how-can-we-help-men-by-helping-women.html?_r=0 (last visited January 16, 2014).

J.A. Corry, “Administrative Law and the Interpretation of Statutes” (1935) 1 U.T.L.J.

F. Cottrell, “Patent Experience of the Research Corporation” (1912) J. Ind. & Eng. Chem.

S. Cousineau, “Sanofi head sees potential cures for what ails Canada’s pharma sector” The Globe and Mail, June 17, 2013.

S. Cousineau & J. Giovannetti, “Five confirmed dead, more than 40 missing after Quebec explosions” The Globe and Mail, July 7, 2013, at: <http://www.theglobeandmail.com/news/national/fire-continues-to-burn-after-deadly-explosions-in-lac-megantic/article13052357/> (last visited July 16, 2013).

P. Cowley, S. Easton & M. Thomas “Report Card on Ontario’s Secondary Schools” in Studies in Education Policy – Fraser Institute May 2010 at: <http://ontario.compareschoolrankings.org/pdfs/Ontario-Secondary-Schools-2010.pdf> (last visited June 30, 2010).

R. Cox, “Amgen CEO shows M&A savvy” The Globe and Mail, September 5, 2013.

J. Creswell & L. Story, “Thain Resigns Amid Losses at Bank of America” The New York Times, January 22, 2009, at: <http://www.nytimes.com/2009/01/23/business/23thain.html> (last visited January 28, 2009).

R. Cribb & M.C. Oved, “How offshore banking is costing Canada billions of dollars a year” The Toronto Star, April 4, 2016, at: <http://www.thestar.com/news/world/2016/04/04/how-offshore-tax-havens-are-costing-canada-billions-of-dollars-a-year.html> (last visited April 4, 2016).

R. Cribb, “Panama Papers: British-Canadian billionaire mysterious middleman in ‘corruption scheme’” The Toronto Star, May 25, 2016, at: <https://www.thestar.com/news/world/2016/05/25/panama-papers-british-canadian-billionaire-mysterious-middleman-in-corruption-scheme.html> (last visited May 27, 2016).

T. Cruz, cited by J. Mayer, “Is Senator Ted Cruz Our New McCarthy?” The New Yorker, February 22, 2013, at: <http://www.newyorker.com/news/daily-comment/is-senator-ted-cruz-our-new-mccarthy> (last visited November 1, 2014).

Curry & S. Chase, “XL Foods too slow to alert food inspectors to contaminated meat, agency says” The Globe and Mail, Thursday October 4, 2012 at: <http://www.theglobeandmail.com/news/politics/xl-foods-too-slow-to-alert-food-inspectors-to-contaminated-meat-agency-says/article4589308/> (last visited October 10, 2013).

B. Curry, “Service sector sees spike in temporary foreign workers” The Globe and Mail, April 22, 2014, at: <http://www.theglobeandmail.com/news/politics/service-sector-sees-spike-in-temporary-foreign-workers/article18119462/> (last visited April 23, 2014).

A. Curtis, *The Trap: What Happened to Our Dream of Freedom – “Fuck You Buddy”* (London: British Broadcasting Corporation, 2007) at: <http://video.google.com/videoplay?docid=6075374506314368402#> (last visited March 9, 2009).

B. Curtis, “Knowledge and State Formation: Recent Scholarship by Edward Higgs” (2005) 38(76) Soc. Hist.

V. Curtis & A. Biran, “Dirt, Disgust, and Disease: Is Hygiene in Our Genes?” (2001) 44 (1) Perspectives in Bio. & Med.

A. Czuczka, “Tsipras Says ‘Fiscal Waterboarding’ Holding Greece Back” Bloomberg Business, January 13, 2015, at: <http://www.bloomberg.com/news/articles/2015-01-13/tsipras-says-fiscal-waterboarding-holding-greece-back> (last visited January 20, 2015).

R. Dalton, “Review of tenure refusal uncovers conflicts of interest” (2004) 430 Nature.

A. Damon, “Poverty, Unemployment, Enriching the Few: The 2008 Economic Crisis and the Restructuring of Class Relations in America” Global Research, June 4, 2013, at: <http://www.globalresearch.ca/poverty-unemployment-enriching-the-few-the-2008-economic-crisis-and-the-restructuring-of-class-relations-in-america/5337520> (last visited July 1, 2016).

S. Das, “For growth to be sustainable, we must accept lower living standards” The Independent, May 7, 2013, at: <http://www.independent.co.uk/news/business/comment/satyajit-das-for-growth-to-be-sustainable-we-must-accept-lower-living-standards-8606901.html?origin=internalSearch> (last visited May 10, 2013).

A.J. Davis, *Arbitrary Justice: The Power of the American Prosecutor* (New York: Oxford University Press, 2007)

G.F. Davis, What Might Replace the Modern Corporation? Uberization and the Web Page Enterprise (2016) 39 Seattle U. L. Rev.

M. Davis, “Planet of Slums” (2004) 26 N. Left Rev.

J.P. Day, “Locke on Property” (1966) 16 Phil. Quart. 207.

L. Dearden, “Martin Shkreli: Pharmaceuticals CEO who raised HIV drug price by 5,000% ‘also hiked cost of pill taken by children with incurable kidney disease’” The Independent, September 23, 2015, at: <http://www.independent.co.uk/news/people/martin-shkreli-pharmaceuticals-ceo-who-raised-hiv-drug-price-by-5000-also-hiked-cost-of-pill-taken-10513645.html> (last visited September 25, 2015).

J. Dehaas, "York turns down \$30 million" MacLeans Magazine, April 4, 2012, at: <http://oncampus.macleans.ca/education/2012/04/04/york-turns-down-30-million/> (last visited January 29, 2014).

J. DeQuine, "Volatile Mix of Corporate Cash and Academic Ideals" The Christian Science Monitor, July 11, 1996, at: <http://www.cptech.org/ip/csm.html> (last visited August 10, 2010).

W. Deresiewicz, "The Disadvantages of an Elite Education" The American Scholar, June 1, 2008, at: <https://theamericanscholar.org/the-disadvantages-of-an-elite-education/#.VMpKUXY8pqw> (last visited December 13, 2014).

P. Desruisseaux, "Universities Venture Into Venture Capitalism" (2000) Chron. H. Ed.

Deutsche Welle – Staff, "Thalidomide Victims Demand More Compensation, Inquest" *Deutsche Welle*, January 7, 2008, at: <http://www.dw-world.de/dw/article/0,,3042708,00.html> (last visited October 5, 2010).

J. Dewey, "Logical Method and the Law" (1924) 10 Cornell L.Q. 17.

J. Dewey, "The AAUP's 1915 Declaration of Principles" The American Association of University Professors, December 31, 1915, at: <http://72.14.205.104/search?q=cache:AY7sYRSbiNcJ:www.akronaaup.org/documents/AUP1915.pdf+John+Dewey+aaup&hl=en&ct=clnk&cd=2&gl=ca&client=firefox-a>

J. Dewey, "Logical Method and the Law" (1924) 10 Cornell L.Q. 17.

Digital Research "CP/M: The First PC Operating System" at: <http://www.digitalresearch.biz/CPM.HTM> (last visited December 3, 2010).

B. Djulbegovic, *et. al.* "The uncertainty principle and industry-sponsored research" (2000) 356 Lancet.

M. Dobbs, "Ford and GM Scrutinized for Alleged Nazi Collaboration" The Washington Post, November 30, 1998.

D. Dodge, cite by S. Chiose, "Business, government, education need to go back to school on STEM skills: report" The Globe and Mail, April 30, 2015, at: <http://www.theglobeandmail.com/news/national/back-to-school-on-stem-skills/article24175710/> (last visited May 1, 2015).

B. Doherty, "Why Ayn Rand is Hot Again" The Washington Times, October 5, 2009, at: <http://www.washingtontimes.com/news/2009/oct/05/why-ayn-rand-is-hot-again/> (last visited October 10, 2009).

B. J. Dong, “Bioequivalence of generic and brand-name levothyroxine products in the treatment of hypothyroidism“ (1997) 277 J.A.M.A.

A.J.C. Drainville, “Monetarism in Canada and the World Economy” 46 (1995) Stud. in Poli. Econ.: A Socialist Rev.

P. Drahos “Biotechnology Patents, Markets and Morality” (1999) 21 E.I.P.R.

Z. Dubinsky, “Panama Papers billionaire honoured at York U despite bribery case” CBC News, June 20, 2016, at: <http://www.cbc.ca/news/canada/toronto/panama-papers-victor-dahdaleh-york-university-honorary-degree-1.3644284> (last visited June 20, 2016).

S. Duckett, “Ernest Duchesne and the Concept of Fungal Antibiotic Therapy” (1999) 354 The Lancet.

L. Dueck, “Trinity Western affair a trial of Canadian civility and tolerance” The Globe and Mail, Dec. 11 2014, at: <http://www.theglobeandmail.com/globe-debate/trinity-western-affair-a-trial-of-canadian-civility-and-tolerance/article22041303/> (last visited November 29, 2014).

J. Duffin, “What Goes Around, Comes Around: A History of Medical Tuition” 164 (1) Can. Med. Assoc. J.

B. Dylan & S. Shepard, “Brownsville Girl” on *Knocked Out Loaded* (New York: Columbia, 1986).

O. Dyer, “Doctor sues university for breach of academic freedom” (2001) 323 B.M.J.

O. Dyer, “Journal rejects article after objections from marketing department” (2004) 328 B.J.M.

The Economist – Staff, “Has the ideas machine broken down? The Economist, January 12, 2013, at: <http://www.economist.com/news/briefing/21569381-idea-innovation-and-new-technology-have-stopped-driving-growth-getting-increasing> (last visited February 2, 2013).

The Economist – Staff, “Natural Justice: America’s Supreme Court is to rule on the patenting of genes” The Economist, April 20, 2013, at: <http://www.economist.com/news/science-and-technology/21576377-americas-supreme-court-rule-patenting-genes-natural-justice> (last visited April 21, 2013).

The Economist – Staff, “The great innovation debate: Fears that innovation is slowing are exaggerated, but governments need to help it along” The Economist, January 12, 2013, at: <http://www.economist.com/news/leaders/21569393-fears-innovation-slowng-are-exaggerated-governments-need-help-it-along-great> (last visited February 2, 2013).

The Economist – Staff, “One Big, Bad Trade: What Caused the Flash Crash?” The Economist, October 1, 2010, at: http://www.economist.com/blogs/newsbook/2010/10/what_caused_flash_crash (last November 15, 2012).

Editorial, “Frozen out: Canada’s government should free its scientists to speak to the press, as its US counterpart has” (2012) 483 Nature.

Editorial, “Depressing Research” (2004) 363 The Lancet.

Editorials/OpEd, “Stands Strongly Against Theft on the Internet...” The New York Times, June 28, 2005, at: <http://www.nytimes.com/2005/06/28/opinion/28tue2.html> (last visited December 15, 2008).

Editorial, “Copyright bill: Go ahead, with changes” Toronto Star, November 14, 2010, at: <http://www.thestar.com/opinion/editorials/article/890170--copyright-bill-go-ahead-with-changes> (last visited November 15, 2010).

Editorial, “On snow, science and federal cuts to research funding” The Globe and Mail, January 18, 2015, at: <http://www.theglobeandmail.com/globe-debate/editorials/on-snow-science-and-federal-cuts-to-research-funding/article22493768/> (last visited January 20, 2015).

M.B. Eisen, “Arts and Crafts: The Patentability of Business Methods in Canada” (2001) 17 C.I.P. Rev. 279.

R.S. Eisenberg, “Re-Examining the Role of Patents in Appropriating the Value of DNA Sequences” (2000) 49 Emory L.J.

D.P. Ellerman, “On the Labor Theory of Property” (1985) 16 Philosophical Forum 293.

End Software Patents, “ESP Launches” at: <http://endsoftpatents.org/28-february-2008:esp-launches> (last visited June 27, 2008).

F. Engels, “Letter to Conrad Schmidt” in *Marx-Engels Collected Works* at: http://www.marxists.org/archive/marx/works/1890/letters/90_08_05.htm (last visited October 4, 2008).

D. Enrich, “U.K. to file fraud charges in Libor probe” The Globe and Mail, June 18, 2013.

D. Enrich, “Regulators step up Libor probes” The Globe and Mail, June 21, 2013.

Euractiv – Staff, “Pharma industry prepares for end of ‘blockbuster medicines’” Euractiv, December 3, 2009, at: <http://www.euractiv.com/en/health/pharma-industry-prepares-blockbuster-medicines/article-187965> (last visited September 10, 2010).

P. Evans, “The New Commons vs. The Second Enclosure Movement: Comments on an Emerging Agenda for Development Research” (2005) 40(2) Stud. Comparative Int’l Development.

S. Faludi, “Facebook Feminism, Like It or Not” (2013) 23 The Baffler, at: <http://www.thebaffler.com/issues/no-23> (last visited December 14, 2014).

R.E. Falvey, F. Martinez & G.V. Reed, “Trade and the Globalisation of Patent Rights” (2002) Internationalisation of Economic Policy at: http://www.nottingham.ac.uk/economics/leverhulme/research_papers/02_21.pdf.

J. Farrell, “Little taste for bacon jobs; Fletcher’s holds no appeal for embittered workers” The Edmonton Journal, December 3, 1998.

R. Fausset, “University of North Carolina Board Closes 3 Centers” The New York Times, February 27, 2015, at: http://www.nytimes.com/2015/02/28/us/university-of-north-carolina-board-closes-3-academic-centers.html?_r=1 (last visited March 5, 2015).

E. Favilli, “Silicon valley is more Flintstones than Jetsons when it comes to women” The Guardian, February 28, 2015, at: <http://www.theguardian.com/commentisfree/2015/feb/28/silicon-valley-is-more-flintstones-than-jetsons> (last visited March 1, 2015).

P.J. Federico, “Origin and Early History of Patents” (1929) J. Pat. Off. Soc. 292.

Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States* (Washington: The Financial Crisis Commission, 2011) at: <http://fcic.law.stanford.edu/>.

R. Fels, “The Long-Wave Depression, 1873-97” (1949) 31 (1) Rev. of Econ. & Stats.

A. Fleming, “On the Antibacterial Action of Cultures of a Penicillium, with Special Reference to their Use in the Isolation of B. Influenzae” (1929) 10 Brit. J. Exp. Path.

A. Fleming, “On the Antibacterial Action of Cultures of a Penicillium, with Special Reference to their Use in the Isolation of B. Influenzae” (1929) 10 Brit. J. Exp. Path.

R. Fife & S. Chase, “Drug firm executive helps organize cash-for-access fundraiser featuring Bill Morneau” The Globe and Mail, October 25, 2016, at: <http://www.theglobeandmail.com/news/politics/drug-firm-executive-helps-organize-cash-for-access-fundraiser-featuring-bill-morneau/article32509138/> (last visited October 25, 2016).

R. Fife & S. Chase, "Trudeau defends cash-for-access fundraising" The Globe and Mail, October 25, 2016, at: <http://www.theglobeandmail.com/news/politics/trudeau-defends-cash-for-access-fundraising/article32523956/> (last visited October 25, 2016).

S. Foley, "From California to New York, the tide of protest keeps rising" The Independent, October 5, 2011, at: <http://www.independent.co.uk/news/world/americas/from-california-to-new-york-the-tide-of-protest-keeps-rising-2365583.html> (last visited October 10, 2011).

Fortune Magazine, "Fortune 500: How the Industries Stack Up" (2004) 149 (7) Fortune.

W. Fotheringham, "Timeline: Lance Armstrong's journey from deity to disgrace" The Guardian, March 19, 2015, at: <https://www.theguardian.com/sport/2015/mar/09/lance-armstrong-cycling-doping-scandal> (last visited February 27, 2017).

J.C. Fournier, *et. al.*, "Antidepressant Drug Effects and Depression Severity: A Patient-Level Meta-analysis" (2010) 303(1) J.A.M.A.

S. Frantz, "The genomics evolution" (2004) 3 Nat. Rev. Drug Discovery.

Fraser Institute, Profile of Owen Lippert, Fraser Institute, at: http://oldfraser.lexi.net/about_us/people/owen_lippert.html (last visited Oct. 15, 2008).

L.S. Friedman & E.D. Richter, "Relationship between conflicts of interest and research results" (2004) 19 J. Gen. Intern. Med.

M. Friedman, "The Social Responsibility of Business is to Increase Its Profits" The New York Times Magazine, September 13, 1970 at: <http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html> (last visited September 5, 2009).

D. Fields, "Pick Yourself Up" in *Swing Time* (New York: RKO Radio Pictures, 1936).

L. Findlay, *Report: Investigation into the Termination of Dr. Ramesh Thakur as Director of the Balsillie School of International Affairs, affiliated with the University of Waterloo, Wilfrid Laurier University, and the Waterloo-based Centre for International Governance Innovation* (Ottawa: Canadian Association of University Teachers, 2010).

M. Fishbein, "A History of the American Medical Association" (1947) 133(1) J.A.M.A.

R. Fisk, "Assad will only go if his own tanks turn against him" The Independent, November 16, 2011, at: <http://www.independent.co.uk/opinion/commentators/fisk/robert-fisk-assad-will-only-go-if-his-own-tanks-turn-against-him-6262679.html?origin=internalSearch> (last visited November 18, 2011).

K. Flegel, "The house of the rising sun medical school" (2014) 186(3) C.M.A.J.

H. Ford, "The International Jew: The World's Problem" The Dearborn Independent, May 22, 1920.

V.C. Fowke & B. Laskin, "Report of the Investigation by the Committee of the Canadian Association of University Teachers into the Dismissal of Professor H.S. Crowe by United College, Winnipeg, Manitoba (1959) 7(3) C.A.U.T. Bulletin at: <http://www.caut.ca/docs/default-source/af-ad-hoc-investigatory-committees/report-of-the-investigation-into-the-dismissal-of-professor-h-s-crowe-by-united-college-%281958%29.pdf?sfvrsn=4> (last visited May 1, 2014).

N. Fraser, "How feminism became capitalism's handmaiden – and how to reclaim it" The Guardian, October 14, 2013, at: <http://www.theguardian.com/commentisfree/2013/oct/14/feminism-capitalist-handmaiden-neoliberal> (last visited October 16, 2013).

M. Friedman, "The Social Responsibility of Business is to Increase Its Profits" The New York Times Magazine, September 13, 1970 at: <http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html> (last visited September 5, 2014).

M. Frumkin, "The Origin of Patents" (1945) 27(3) J.P.O. Soc.

F. Fukuyama, "The End of History" (1989) 16 The Nat'l. Int.

H. Furness, "Jesus Christ would be banned from UK universities today, says Oxford professor" The Telegraph, May 30, 2016, at: <http://www.telegraph.co.uk/news/2016/05/30/jesus-christ-would-be-banned-from-uk-universities-today-oxford-p/> (last visited September 19, 2016).

S. Gaidos, "Ghostwriters in the Medical Literature" Science, November 12, 2010, at: http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2010_11_12/caredit.a1000110 (last visited November 17, 2010).

J.K. Galbraith, "Recession Economics" 29(1) New York Review of Books, February 4, 1982.

J.K. Galbraith interview with H. Kreisler, "Intellectual Journey: Challenging the Conventional Wisdom" (Berkeley: Institute of International Studies, 1996) at: <http://globetrotter.berkeley.edu/conversations/Galbraith/galbraith1.html> (last visited June 30, 2012).

J.K. Galbraith, "Free Market Fraud" The Progressive Magazine January 1999 at: http://www.progressive.org/mag_galbraith0199 (last visited September 25, 2005).

Jas.K. Galbraith, “The crisis in the eurozone” Salon, November 10, 2011, at: http://www.salon.com/2011/11/10/the_crisis_in_the_eurozone/singleton/ (last visited November 17, 2011).

Jas.K. Galbraith, “Unpacking the First Fundamental Law” (2014) 69 World Econ. Rev.

Jas. K. Galbraith & T. Hale, “Income Distribution and the Information Technology Bubble” U. of Tex. Inequality Project Working Paper (Austin: University of Texas, 2004) at: utip.gov.utexas.edu/papers/utip_27.pdf.

Jas.K. Galbraith & Y. Varoufakis, “Whither Europe? The Modest Camp versus the Federal Austerians” Open Democracy, June 11, 2014, at: <https://opendemocracy.net/can-europe-make-it/james-galbraith-yanis-varoufakis/whither-europe-modest-camp-vs-federalist-austeri> (last visited October, 3, 2014).

G. Galloway, “US senators urge Canada to stop ‘hillbilly heroin’” The Globe and Mail, April 3, 2014.

V. Galt, “Student and teacher groups decry private universities” The Globe and Mail, April 3, 2000.

T. Gara, “The Numbers Behind BlackBerry’s Patent Goldmine” The Wall Street Journal, August 26, 2013, at: <http://blogs.wsj.com/corporate-intelligence/2013/08/26/the-numbers-behind-blackberrys-patent-goldmine/> (last visited September 27, 2014).

R. Garner, “Fury at £105,000 pay rise for Sheffield University boss Sir Keith Burnett after he refused to raise employees' salaries to the living wage” The Independent, January 25, 2014, at: <http://www.independent.co.uk/student/news/fury-at-105000-pay-rise-for-sheffield-university-boss-sir-keith-burnett-after-he-refused-to-raise-employees-salaries-to-the-living-wage-9084027.html> (last visited January 26, 2014).

B. & M. Gates, “United States Education” in Education Strategy – Bill and Melinda Gates Foundation at: <http://www.gatesfoundation.org/united-states/Pages/education-strategy.aspx> (last visited October 20, 2010).

B. Gaylor, *RiP!: A Remix Manifesto* (Montréal: National Film Board of Canada, 2008) at: http://www.nfb.ca/film/rip_a_remix_manifesto/ (last visited July 20, 2009).

M. Geist, “Bill C-32: My Perspective on Key Issues” Blog September 12, 2010, at: <http://www.michaelgeist.ca/content/view/5316/125/> (last visited September 15, 2010).

G.E.N. Legal Affairs, “Patent Litigation: Is it Worth the Expense?” (2006) 26(7) G.E.N. at: <http://www.genengnews.com/gen-articles/patent-litigation-is-it-worth-the-expense/1454/> (last visited June 10, 2011).

H.J. Glasbeek, “The *Social* Responsibility Movement: The Latest in Maginot Lines to Save Capitalism” (1988) 11 Dal. L.J.

S. Glucksberg, “The Influence of Strength of Drive on Functional Fixedness and Perceptual Recognition” (1963) 63 J. Exper. Psych.

S. Glucksberg, “Problem Solving: Response Competition Under the Influence of Drive” (1964) 15 Psych. Rep.

M. Rubio-Godoy, R. Aunger & V. Curtis, “Serotonin – A Link Between Disgust and Immunity?” (2006) 68 (1) Med. Hypothesis.

E. Goldwasser, “Erythropoietin: A Somewhat Personal History” (1996) 40(1) Perspec. Bio & Med.

M. Goozner, “Fond Farewell to the Biotech Industry’s Founding Father” Med City News, December 20, 2010, at: <http://www.medcitynews.com/2010/12/a-tribute-to-the-grandfather-of-the-biotech-industry/> (last visited January 5, 2011).

M. Goozner, “Revolving Door – Former U.S. Attorney Now Advising Big PhRMA on How to Avoid Meeting His Successors” GoozNews, September 13, 2010, at: <http://gooznews.com/?p=191> (last visited September 24, 2010).

M. Goozner “The Price Isn’t Right” The American Prospect, November 30, 2002 at: http://www.prospect.org/cs/articles?article=the_price_isnt_right (last visited June 20, 2008).

M. Goozner, “Eugene Goldwasser, Discoverer of EPO” Gooznews, December 18, 2010, at: <http://gooznews.com/?p=2255> (last visited June 12, 2014).

R.J. Gordon, “Does the ‘New Economy’ Measure Up to the Great Inventions of the Past?” (2000) 14(4) J. Econ. Perspec.

R.J. Gordon, “Foundations of the Goldilocks Economy: Supply Shocks and the Time-Varying NAIRU” (1998) 29(2) Brookings Papers on Econ.

R.J. Gordon, “Is US Economic Growth Over? Faltering Innovation Confronts the Six Headwinds” (2012) 63 C.E.P.R.

S. Gordon, “Canadian cyclist Ryder Hesjedal says he ‘chose to wrong path’” The Globe and Mail, October 31, 2013, at: http://www.theglobeandmail.com/sports/more-sports/danish-cyclist-claims-he-taught-ryder-hesjedal-how-to-use-epo/article15159312/?utm_source=Shared+Article+Sent+to+User&utm_medium=E-mail:+Newsletters+/-+E-Blasts+/-+etc.&utm_campaign=Shared+Web+Article+Links (last visited November 2, 2013).

C.M. Golde, "Should I Stay or Should I Go? Student Descriptions of the Doctoral Attrition Process" (2000) 23(2) Rev. Higher Ed.

D. Graham, "Dr. Graham's Testimony to Senate Committee on Vioxx, FDA Failures" November 18, 2004 at: <http://www.finance.senate.gov/imo/media/doc/111804dgttest.pdf> (last visited October 2, 2014).

A. Greenspan, "Goods Shrink and Trade Grows," The Wall Street Journal, October 24, 2014.

A. Greenspan, "Remarks: Market Economies and Rule of Law" 2003 Financial Markets Conference of the Federal Reserve Bank of Atlanta, April 4, 2003, at: <http://www.federalreserve.gov/BoardDocs/speeches/2003/20030404/default.htm>.

K. Grogan, "2012, real 'annus horribilis' for patent expiries – EvaluatePharma" Pharma Times, February 3, 2011, at: http://www.pharmatimes.com/article/11-02-03/2012_real_annus_horribilis_for_patent_expiries_-_EvaluatePharma.aspx (last visited February 20, 2011).

D. Gunnell & D. Ashby, "Antidepressants and Suicide: What is the Balance of Benefit and Harm" (2004) 329 *B.M.J.*

W. Guthrie, "The Ballad of Pretty Boy Floyd" in *Dust Bowl Ballads* (New York: Buddah, 2000).

D. Gutierrez, "Busted: Wyeth Used *Ghostwriters* To Place Over 40 'Scientific' Articles In Medical Journals" July 08, 2010, Natural News at: http://www.naturalnews.com/029160_medical_journals_ghostwriters.html (last visited September 10, 2010).

D. Hakim, "Scientists Loved and Loathed by an Agrochemical Giant" The New York Times, December 31, 2016, at: <http://www.nytimes.com/2016/12/31/business/scientists-loved-and-loathed-by-syngenta-an-agrochemical-giant.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=first-column-region®ion=top-news&WT.nav=top-news> (last visited January 4, 2017).

J. Hall, "Drug companies promoting bad health" Toronto Star, October 20, 2010.

J. Hall, "A Toronto scientist's radical move: sharing lab notes" The Toronto Star, March 6, 2016, at: <http://www.thestar.com/news/insight/2016/03/06/a-toronto-scientists-radical-move-sharing-lab-notes.html> (last visited March 16, 2016).

S. Hall, "Life and Times of the First New Left" (2010) 61 *New Left Rev.*

S.S. Hall, "The Claritin Effect: Prescription for Profit" The New York Times Magazine, March, 11, 2001 at: <http://www.nytimes.com/2001/03/11/magazine/the-claritin-effect-prescription-for-profit.html> (last visited March 4, 2010).

O. Hanninen, M. Farago & E. Monos, "Ignaz Philipp Semmelweis, The Prophet of Bacteriology" (1983) 4 (5) Infection Control.

G.J. Hardin, "The Tragedy of the Commons" (1968) 162 Sci.

G.J. Hardin, "The Survival of Nations and Civilization" (1971) 172 Sci.

G.J. Hardin, "The Tragedy of the Unmanaged Commons" (1994) 9(5) Trends in Eco. & Evol.

R. Harding, "Reinhart and Rogoff publish formal correction" The Financial Times, May 8, 2013, at: <http://www.ft.com/cms/s/0/433778c4-b7e8-11e2-9f1a-00144feabdc0.html> (last visited June 20, 2014).

J.B. Harms & T. Knapp, "The New Economy: What's New, What's Not" (2003) 35(4) Rev. Radical Pol. Econ.

"Harpers Index" in Harper's Magazine, August, 2007.

G. Harris, "How Merck Survived While Others Merged – Drug Maker Relied on Inspired Research" Wall Street Journal, January 10, 2000.

G. Harris, "India's Efforts to Aid Poor Worry Drug Makers" The New York Times, December 29, 2013, at: http://www.nytimes.com/2013/12/30/health/indias-efforts-to-aid-poor-worry-drugmakers.html?src=recg&_r=1& (last visited January 2, 2014).

H. Harris, "Howard Florey and the Development of Penicillin" Florey Centenary Lecture, (Oxford: September 29, 1998), audio available at: <http://kittycat.nla.gov.au/Record/1610017> (last visited October 21, 2010).

T. Harrison, "Analysis of the FY 2010 Defense Budget Request" (Washington: Center for Strategic and Budgetary Assessments, 2009) at: <http://docs.google.com/viewer?a=v&q=cache:FFUItWTJbUoJ:www.csbaonline.org/wp-content/uploads/2011/02/2009.08.12-FY2010-Defense-Budget-Analysis.pdf+the+president%27s+fy+2010+defence+668&hl=en&gl=ca&pid=bl&srcid=ADGEESjmMgs8uYMzrSbGDIGaODsEpWOeCVhPHcDrwgpXgRsi5Ng8DWO8vk6ISMUVWUvFJB8xivtyPBaHtQaQ-ZTfC6EN9brps0TaT161WjZ6nJFbHVny7BnqkXlAYb3ALnD1ojxqvT3V&sig=AHIEtbQ2ZWxydly7BqKPNGqdu0k9RUxA> (last visited January 14, 2011).

J. Hart, "Sir Charles Trevelyan at the Treasury" (1960) 75 Eng. Hist. Rev.

M. Hartley, "Grain Farmer Claims Moral Victory in Seed Battle Against Monsanto" The Globe and Mail, March 20, 2008, at:
<http://www.commondreams.org/archive/2008/03/20/7784> (last visited March 28, 2008).

Features, "Toxic Memo" Harvard Magazine (May-June 2001) at:
<http://harvardmagazine.com/2001/05/toxic-memo.html> (last visited February 10, 2010).

D. Harvey, "University Inc." in (1998) 10 The Atlantic at:
<http://www.theatlantic.com/past/docs/issues/98oct/ruins.htm>.

M. Harvey, "Digital Pirate Jammie Thomas-Rasset Must Pay \$80,000 Per Song" The Times, June 19, 2009, at:
http://technology.timesonline.co.uk/tol/news/tech_and_web/article6534542.ece (last visited January 10, 2011).

D. Harvey, interview with Laura Flanders, "David Harvey: Looking Toward a Moneyless Economy and Sleeping Well at Night" Truthout, February 3, 2015, at: <http://www.truthout.org/news/item/28879-looking-toward-a-moneyless-economy-and-sleeping-well-at-night> (last visited February 5, 2015).

F.A. Hayek, "The Trend of Economic Thinking" (1933) 40 *Economica*.

T. Hayes, "Silencing the Scientist: Tyrone Hayes on Being Targeted by Herbicide Firm Syngenta – Interview with Juan González," Democracy Now, February 21, 2014, at:
http://www.democracynow.org/2014/2/21/silencing_the_scientist_tyrone_hayes_on# (last visited April 2, 2014).

D. Healy & M.E. Thase, "Is Academic Psychiatry For Sale?" (2003) *Brit. J. Psych.*

D. Healy, "The Drug Trial: Review" (2005) 24(4) *Monash Bioethics Rev.*

D. Healy, Homepage, Professor David Healy, School of Medicine, Cardiff University, at:
<http://medicine.cf.ac.uk/person/prof-david-thomas-healy/> (last visited December 1, 2010).

D. Healy, "Letter to Herb Solway, February 15, 2001, at:
<http://www.pharmapolitics.com/garfinkel.html> (last visited December 10, 2010).

D. Healy, "Pharmacology and the Government of the Self" (Farmington Hills: Academy for the Study of the Psychoanalytic Arts, 200 at:
<http://www.academyanalyticarts.org/healy.htm> (last visited November 10, 2010).

D. Healy, "Good Science or Good Business?" (2000) 30(2) *The Hastings Rep.*

D. Healy, "Lines of evidence on the risks of suicide with selective serotonin reuptake inhibitors" (2003) 72 *Psychother. Psychosom.*

C. Hedges “How the Corporations Broke Ralph Nader and America, Too” Truthdig, April 5, 2010, at:
http://www.truthdig.com/report/item/how_the_corporations_broke_ralph_nader_and_america_too_20100405 (last visited May 1, 2010).

C. Hedges, “The Best and the Brightest Led America Off a Cliff” Truthdig, December 8, 2008, at: http://www.truthdig.com/report/page3/20081208_hedges_best_brightest (last visited September 25, 2016).

D. Heitner, “The Livestrong Foundation Will Live On Despite Lance Armstrong's Demise” Forbes Magazine, November 14, 2012, at:
<http://www.forbes.com/sites/darrenheitner/2012/11/14/the-livestrong-foundation-will-live-on-despite-lance-armstrongs-demise/>.

A. Heller, “Anianus Jedlik” 53 (April 1896) Nature.

M. Helprin, “A Great Idea Lives Forever. Shouldn't Its Copyright?” The New York Times, May 20, 2007, at:
<http://www.nytimes.com/2007/05/20/opinion/20helprin.html?ex=1337313600&en=3571064d77055f41&ei=5124&partner=permalink&expd=permalink> (last visited June 10, 2008).

S. Hensley, “As Drug-Sales Teams Multiply, Doctors Start to Tune Them Out” Wall Street Journal, Jun. 13, 2003.

S. Hensley, “Targeted Genetics’ Genova Deal Leads to Windfall for Researcher” Wall Street Journal, August, 9, 2000.

D. Henwood, “Marxing Up the Millennium – On Pain Of Extinction: Marx at the Millennium Conference” University of Florida, March 19, 1999, at:
www.leftbusinessobserver.com/MillMarx.doc (last visited October 2, 2014).

D. Henwood, “Wall Street: Class Racket” Left Business Observer, June 25, 1997, at:
http://www.leftbusinessobserver.com/WS_Brecht.html (last visited January 29, 2011).

D. Henwood, “Pension fund socialism: the illusion that just won't die” Pension Fund Capitalism and the Crisis of Old-Age Security in the United States Conference, New School University, September 11, 2004, at:
<http://www.leftbusinessobserver.com/NSPensions.html> (last visited October 9, 2011).

D. Henwood, “Wall Street Ascendant” (2005) 26(1) Multinational Monitor at:
<http://multinationalmonitor.org/mm2005/012005/henwood.html> (last visited May 2, 2011).

D. Henwood, "Bill Gates, business genius?" Left Business Observer News December 2, 2010 at: <http://lbo-news.com/2010/12/02/bill-gates-business-genius/> (last visited December 3, 2010).

D. Henwood, interview with B. Sunkara, "Doug Henwood: Capitalism thrives on class exploitation" Salon, May 19, 2013, at: http://www.salon.com/2013/05/19/doug_henwood_on_the_decline_of_the_left_partner/ (last visited December 15, 2014).

T. Herndon, M. Ash & R. Pollin, "Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff" (2013) 322 Working Papers Series – Pol. Econ. Res. Inst. at: http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_301-350/WP322.pdf (last visited June 20, 2014).

C. Hill, "Republicanism After the Restoration" (19) 3 N.L.R.

D. Hipwell, "Big pharma kisses its blockbuster years goodbye" The Independent, August 29, 2010, at: <http://www.independent.co.uk/news/business/analysis-and-features/big-pharma-kisses-its-blockbuster-years-goodbye-2064636.html> (last visited January 10, 2011).

O.W. Holmes, Jr., *The Autocrat of the Breakfast-Table* (London: J.M. Dent & Sons Ltd., 1906).

R. Holmes, "Voltaire's Grin" 42(19) The New York Times Rev. of Books, November 30, 1995.

R. Horton, "The Dawn of McScience" New York Review of Books, March 11, 2004,

R. Horton, "African AIDS Beyond Mbeki: Tripping into Anarchy" (2000) 356(9241) The Lancet.

C. Howard, "Special Report: Syngenta's campaign to protect atrazine, discredit critics" *100Reporters and Environmental Health News*, June 17, 2013, at: <http://www.environmentalhealthnews.org/ehs/news/2013/atrazine> (last visited April 2, 2014).

K. Howlett, "Hospital visits for opioid overdose in Ontario spike by 72 per cent over past decade" The Globe and Mail, April 13, 2016, at: <http://www.theglobeandmail.com/news/investigations/hospital-visits-for-opioid-overdose-in-ontario-spike-by-72-per-cent-in-decade/article29627974/> (last visited April, 16, 2016).

S. Hudes, "Philanthropist 'questioned the credibility' of CAMH before rescinding donation" The Toronto Star, October 1, 2016, at:

<https://www.thestar.com/news/gta/2016/10/01/philanthropist-questioned-the-credibility-of-camh-before-rescinding-donation.html> (last visited October 2, 2016).

M. Hudson “The Road to Debt Deflation, Debt Peonage, and Neofeudalism” (2012) Levy Econ. Inst. of Bard College, Working Paper No. 708.

J. Huebner, “A Possible Declining Trend for Worldwide Innovation” (2005) 72(8) Technological Forecasting and Social Change.

A. Hutchinson, “Legal aid or lawyers’ aid” The Globe and Mail, August 13, 2002, at: <http://www.theglobeandmail.com/opinion/legal-aid-or-lawyers-aid/article756097/> (last visited September 9, 2011).

M. Ignatieff, The Year of Living Dangerously New York Time Magazine March 14, 2004, at: <http://www.nytimes.com/2004/03/14/magazine/14WWLN.html> (last visited March 30, 2008).

M. Ignatieff, “Getting Iraq Wrong” New York Time Magazine August 5, 2007, at: <http://www.nytimes.com/2007/08/05/magazine/05iraq-t.html> (last visited March 30, 2008).

D. Ingram & R. Krasny, “Johnson & Johnson to pay \$2.2 billion to end U.S. drug probes” Reuters, November 4, 2013, at: <http://www.reuters.com/article/2013/11/04/us-inj-settlement-idUSBRE9A30MM20131104> (last visited December 1, 2013).

P. Inman, “Economics students aim to tear up free-market syllabus: Undergraduates at Manchester University propose overhaul of orthodox teachings to embrace alternative theories” The Guardian, October 24, 2013, at: <http://www.theguardian.com/business/2013/oct/24/students-post-crash-economics> (last visited November 2, 2013).

Investment Canada, “Invest in Canada – Biopharmaceutical” (Ottawa: Government of Canada) at: <http://investincanada.gc.ca/eng/publications/biopharm.aspx#ft1b> (last visited January 20, 2011).

R. Iosue, “Colleges And Universities Should Operate More Like Businesses” Forbes Magazine, August 16, 2011, at: <http://www.forbes.com/sites/realspin/2011/08/16/colleges-and-universities-should-operate-more-like-businesses/> (last visited September 26, 2014).

M. Isserman, *If I Had a Hammer: The Death of the Old Left and the Birth of the New Left* (New York: Basic Books Inc Publishers, 1987).

D. Itzkoff, “Swedish Court Contests Bias Claim in Pirate Bay Case” The New York Times, June 12, 2009 at: http://global.nytimes.com/?WT.mc_id=GE-D-I-NYTG-AD-FP-GEL-ROS-0309-NA&WT.mc_ev=click (last visited June 14, 2009).

N. Ives, “The maker of OxyContin, a painkiller that is addictive, sponsors a campaign in drug abuse” The New York Times, September 4, 2003.

S. Jaffe, “Trickle-Down Feminism” (2013 – winter) Dissent: A Quarterly of Politics and Culture at: <http://www.dissentmagazine.org/article/trickle-down-feminism>.

M. Jagger & K. Richards, “Mother’s Little Helper” in *Aftermath* (London: Decca, 1966).

M.C. Jensen & W.H. Meckling, “Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure” (1976) 3(4) J. Financial Econ.

T. Jeory & J. Stone, “Theresa May’s husband is a senior executive at a \$1.4tn investment fund that profits from tax avoiding companies” The Independent, July 12, 2016, at: <http://www.independent.co.uk/news/uk/politics/theresa-may-philip-may-amazon-starbucks-google-capital-group-philip-morris-a7133231.html> (last visited July 13, 2016).

C.Y. Johnson, “Why treating diabetes keeps getting more expensive” The Washington Post, October 31, 2016, at: <https://www.washingtonpost.com/news/wonk/wp/2016/10/31/why-insulin-prices-have-kept-rising-for-95-years/> (last visited November 2, 2016).

E. Johnson, “Cancer Society spends more on fundraising than research” CBC News, July 6, 2011, at: <http://www.cbc.ca/news/canada/story/2011/07/04/cancer-society-funding.html> (last visited July 7, 2011).

L.A. Johnson, “Notorious ‘pharma bro’ Martin Shkreli quits Turing Pharmaceuticals” The Toronto Star, December 18, 2015, at: <https://www.thestar.com/news/world/2015/12/18/hated-pharma-boss-martin-shkreli-used-web-of-lies-to-defraud-investors.html> (last visited January 9, 2017).

L.B. Johnson, “President Lyndon B. Johnson’s Remarks at the University of Michigan, May 22, 1964” at: <http://www.lbjlib.utexas.edu/johnson/archives.hom/speeches.hom/640522.asp> (last visited May 1, 2008).

I. Johnston, “Post-Brexit funding gap ‘will threaten impartiality of university research’” The Independent, August 28, 2016, at: <http://www.independent.co.uk/news/science/science-research-brexit-bee-pesticides-bayer-syngenta-universities-a7213936.html> (last visited September 16, 2016).

T.M. Jones, “Cheap at Half the Price?” (2004) 364 (9431) The Lancet.

P. Jordan & Staff, “The Struggles of Mr. Sprott” The Globe and Mail, April 22, 2013.

P. Jordan, "Peter Munk confronts Barrick's perfect storm" The Globe and Mail, April 25, 2013.

J.N. Jureidini, C.J. Joecke, P.R. Mansfield, *et. al.* "Efficacy and Safety of Antidepressants for Children and Adolescents" (2004) 328 B.M.J.

W. Kaempffert, "New Control For Infections: The Chemical Given to F.D. Roosevelt Jr. for Streptococcus Hailed as Important Discovery – Key Ape to Be Studied" The New York Times, December 20, 1936.

M. Kalliomaki, *et. al.* "Probiotics in primary prevention of atopic disease: a randomised placebo-controlled trial" (2001) 357 The Lancet.

E. Kamenka, "A Marxist Theory of Law?" (1983) 1 Law in Context.

L. Kane, "Liberals face flood of outrage in B.C. after approval of Trans Mountain pipeline" The Toronto Star, November 30, 2016, at: <https://www.thestar.com/news/canada/2016/11/30/liberals-face-flood-of-outrage-in-bc-after-approval-of-trans-mountain-pipeline.html> (last visited December 5, 2016).

J. Kasperkevic & A. Holpuch, "EpiPen CEO hiked prices on two dozen products and got a 671% pay raise" August 24, 2016, at: <https://www.theguardian.com/business/2016/aug/24/epipen-ceo-hiked-prices-heather-bresch-mylan> (last visited August 29, 2016).

J.P. Kassirer & M. Angell, "Financial Conflicts of Interest in Biomedical Research" (1993) 329 N.E.J.M. at: <http://www.nejm.org/doi/full/10.1056/NEJM199308193290810> (last visited November 4, 2010).

L. Katterman, "University Technology Offices Focus Effort on Overcoming Academic Cultural Barriers" The Scientist, June 12, 1995.

D. Keay, "Aids, education and the year 2000!" Woman's Own, October 31, 1987, at: <http://www.margareththatcher.org/document/106689>.

S. Keen, interview with Doug Henwood, "Behind the News" September 24, 2011, at: <http://www.kpfa.org/archive/id/73635> (last visited September 27, 2011).

S. Keen, "A Bubble So Big We Can't Even See It" (2013) 64 Real-World Econ. Rev.

K. Kelland, "Young people taking antidepressants more prone to violence: study" The Globe and Mail, September 16, 2015, at: <http://www.theglobeandmail.com/life/health-and-fitness/health/study-finds-young-people-on-antidepressants-more-prone-to-violence/article26382929/> (last visited September 17, 2015).

N. Keung, "MS settles lawsuit with U of T over job" Toronto Star, May 1, 2002.

F. Khatib, *et. al.* “Crystal structure of a monomeric retroviral protease solved by protein folding game players” (2011) 18(10) Nat. Struct. & Mol. 1175.

J. King, *The Dissolving Fortress* (2005) Eur. J. Higher Ed. at: www.elia-artschools.org/downloads/publications/EJHAE/King.doc (last visited July 14, 2009).

J.E. King, “A Case for Pluralism in Economics” (2013) 24 Econ. & Lab. Rel. Rev.

R. T. King, Jr., “Bitter Pill: How a Drug Firm Paid for University Study, Then Undermined It,” *The Wall Street Journal*, April 12, 1996.

A. Kingston, “Vanishing Canada: Why we’re all losers in Ottawa’s war on data” *Maclean’s Magazine*, September 18, 2015, at: <http://www.macleans.ca/news/canada/vanishing-canada-why-were-all-losers-in-ottawas-war-on-data/> (last visited September 25, 2015).

S. Kirkey, “Threefold increase in children taking Prozac” *The National Post*, February 19, 2014.

I. Kirsch, *et. al.* “Initial Severity and Antidepressant Benefits: A Meta-analysis of Data Submitted to the Food and Drug Administration” (2008) 5 PLoS Med.

M. Klett, “The Legacy of Ansel Adams” (1990) 120 *Aperture*.

J. Kollewe, “Drug companies: Big Pharma besieged from all sides” *The Guardian*, August 30, 2008, at: <http://www.guardian.co.uk/business/2008/aug/30/pharmaceuticals.medicalresearch> (last visited August 9, 2010).

D.M. Kotz, “Neoliberalism and the U.S. Economic Expansion of the ‘90s” (2003) 54 (11) *Monthly. Rev.*

P. Krugman, “The Great Recession versus the Great Depression” *The New York Times*, March 20, 2009, at: <http://krugman.blogs.nytimes.com/2009/03/20/the-great-recession-versus-the-great-depression/> (last visited December 14, 2008).

P. Krugman, “A Serious Drug Problem” *The New York Times*, May 6, 2005, at: <http://www.nytimes.com/2005/05/06/opinion/06krugman.html?hp=&pagewanted=print> (last visited October 12, 2007).

P. Krugman, “Where Are The Austerian Economists?” *The New York Times*, September 23, 2013, at: http://krugman.blogs.nytimes.com/2013/09/23/where-are-the-austerian-economists/?_php=true&_type=blogs&_r=0 (last visited April 10, 2014).

C. Kung & T. Lappin, “A Tribute to Gene Goldwasser for Experimental Hematology” (2011) 39 *Exper. Hematology*.

E. Laan & L. Tiefer, “The sham drug idea of the year: ‘pink Viagra’” *The Los Angeles Times*, November 13, 2014, at: <http://www.latimes.com/opinion/op-ed/la-oe-laan-tiefer-pink-viagra-20141114-story.html> (last visited November 20, 2014).

A.L. Landers, “Patent Valuation Theory and the Economics of Improvement” (2010) 88 *Tex. L. Rev.*

W.M. Landes & R.A. Posner, “Indefinitely Renewable Copyright” (2002) 3 (Univ. of Chicago, John M. Olin L. & Econ. Working Paper No. 154 (2d Series)).

K. Lang & D. Kropp, “Human Capital vs. Sorting: The Effect of Compulsory Attendance Laws” (1986) 101 (3) *Quart. J. Econ.*

L.H. Lapham, “On Message” *Harper’s Magazine*, October, 2005.

L.H. Lapham, “Ignorance of Things Past: Who Wins and Who Loses When We Forget American History” *Harper’s Magazine*, May 2012.

P. Lattman, “McDonald’s Wants to Patent How It Makes a Sandwich” *Wall Street Journal*, November 28, 2006 at: <http://blogs.wsj.com/law/2006/11/28/mcdonalds-wants-to-patent-how-it-makes-a-sandwich/> (last visited September 12, 2011).

J. Laurance, “Female sexual dysfunction ‘was invented by drugs industry’” *The Independent*, October 1, 2010, at: <http://www.independent.co.uk/life-style/health-and-families/health-news/female-sexual-dysfunction-was-invented-by-drugs-industry-2094578.html> (last visited November 15, 2010).

W. Lazonick & M. Mazzucato, “The Risk-Reward Nexus: Innovation, Finance and Inclusive Growth” (November 2012) *Policy Network*, at: www.policy-network.net (last visited August 20, 2013).

W. Lazonick & M. Sullivan, “Maximizing Shareholder Value: A New Ideology for Corporate Governance” (2000) 29 (1) *Econ. & Soc’y*.

S. Leacock, “Oxford As I See It” *Harper’s Magazine*, May 1922.

M. Lechanteur, “A Message from our President” *Lilly, Canada*, at: <http://www.lilly.ca/servlets/sfs;jsessionid=FA30E28B3C7857B60DD0213C21A59A0A?s=Kmm1XSHOTOSBKkj6ZRW&t=/contentManager/selectCatalog&i=1233164768976&b=1233164768976&l=0&e=UTF-8&ParentID=1245343525612&intro=1&startRow=0&active=no> (last visited October 2, 2010).

D. N. Lehmer, "A Theorem in the Theory of Numbers" (1907) 13(10) Bull. Amer. Math. Soc. 501.

T. Lemieux & D. Card, "Education, Earnings, and the 'Canadian G.I. Bill'" (2001) 34(2) Can. J. Econ.

J. Le Noury, *et. al.* "Restoring Study 329: efficacy and harms of paroxetine and imipramine in treatment of major depression in adolescence" (2015) 351 B.M.J.

J. Lenzer, "Drug secrets: What the FDA isn't telling" Slate, September 27, 2005 at: <http://www.slate.com/id/2126918/> (last visited February 10, 2010).

P. Lester, "They're Called Deely Bobbers and They Mean \$\$ for Gizmo King Stephen Askin" People Magazine, July 26, 1982, at: <http://www.people.com/people/archive/article/0,,20082738,00.html>.

A.E. Levett, "Results of the Black Death" (1916) 5 Oxford Stud. Soc. & L. Hist.

J. Levitz & T.W. Martin, "Maine opens door to Canadian drugs: However, manufacturer and pharmacy groups mount legal challenge" The Globe and Mail, October 10, 2013.

T. Lewin, "Public Universities Relying More on Tuition Than State Money" The New York Times, January 24, 2011, at: http://www.nytimes.com/2011/01/24/education/24tuition.html?pagewanted=all&_r=4& (last visited March 1103, 2014).

J. Lexchin, *et. al.*, "Pharmaceutical industry sponsorship and research outcome and quality: systemic review" (2003) 326 B.M.J.

G.D. Libecap, "The Rise of the Chicago Packers and the Origins of Meat Inspection and Antitrust" (1992) 30 Econ. Inq.

D.W. Light & R. Warburton, "Demythologizing the high costs of pharmaceutical research" (2011) 6 BioSocieties.

D.W. Light & R. Warburton, "Drug R&D Costs Questioned" (2011) 31(13) G.E.N. at: <http://www.genengnews.com/gen-articles/drug-r-d-costs-questioned/3707> (last visited July 10, 2011).

Lilly Canada, "Our Brand Promise and Core Values" at: <http://www.lilly.ca/en?t=/contentManager/selectCatalog&i=1306943185696&l=0&e=UTF-8&ParentID=1245711063268&intro=1&startRow=0&active=no> (last visited April 1, 2011).

- P. Lima, "Scalpel... clamp... patience" The Globe and Mail, November 8, 2005, at: <http://www.theglobeandmail.com/report-on-business/article918569.ece> (last visited November 29, 2007).
- A. Lipietz, "Reflections on a Tale: The Marxist Foundation of Concepts of Regulation and Accumulation" (1988) 26 Stud. Pol. Econ.
- O. Lippert, "Profile of Owen Lippert" Fraser Institute, at: http://oldfraser.lexi.net/about_us/people/owen_lippert.html (last visited Oct. 15, 2008).
- J. Litke, "Lance Armstrong admits doping to Oprah Winfrey" The Toronto Star January 17, 2013, at: http://www.thestar.com/sports/2013/01/17/lance_armstrong_admits_doping_to_oprah_winfrey.html (last visited January 18, 2013).
- J. Locke, Article 110, *The Fundamental Constitutions of the Carolinas* at: <http://www.yale.edu/lawweb/avalon/states/nc05.htm>. (last visited October 3, 2005).
- S. Lohr, "No More McJobs for Mr. X" The New York Times, May 29, 1994.
- J. Lorinc, "Dead money: There are good reasons for hoarding cash" Canadian Business, February 12, 2013, at: <http://www.canadianbusiness.com/economy/dead-money/> (last visited September 1, 2015).
- K. Losse, "Feminism's Tipping Point: Who Wins from Leaning in?" Dissent Magazine, March 26, 2013, at: http://www.dissentmagazine.org/online_articles/feminisms-tipping-point-who-wins-from-leaning-in (last visited December 14, 2014).
- M. Loudon, "The FDA Exposed: An Interview with Dr. David Graham, the Vioxx Whistleblower" Natural News, August 30, 2005 at: http://www.naturalnews.com/011401_Dr_David_Graham_the_FDA.html (last visited February 15, 2011).
- P.L. Loughlan, "'You Wouldn't Steal a Car': Intellectual Property and the Language of Theft" (2007) 29 (10) Euro. Intel. Prop. Rev.
- J.A. Lozano, "Enron boss agrees to stop appeals: gets sentence cut" The Financial Post, June 22, 2013.
- R. Lynn, "Garrett Hardin, Ph.D. – A Retrospective of His Life and Work" The Garrett Hardin Society, December, 11, 2003, at: http://www.garretthardinsociety.org/tributes/tr_lynn_2001.html.
- J. MacGillivray, "The Round River Drive" Detroit News, July 24, 1910.

F. Machlup & E. Penrose, "The Patent Controversy in the Nineteenth Century" (1950) 10(1) J. Econ. Hist.

B. MacInnes, "What if Samsung's Kubrick Defence had succeeded?" Computer Weekly, September 19, 2011, at: <http://www.computerweekly.com/microscope/opinion/What-if-Samsungs-Kubrick-Defence-had-succeeded> (last visited February 28, 2017).

D. MacKenzie, "Europe Plans Its Information Autobahn" New Scientist, Febua 26. 1994, at: <http://www.newscientist.com/article/mg14119140.300-europe-plans-its-information-autobahn--.html> (last visited July 19, 2007).

I. Macleod, "Quoodle" The Spectator, December 3, 1965.

I. Macleod, British House of Commons Hansard, November 17, 1965).

C.B. Macpherson, "Humanist Democracy and Elusive Marxism: A Response to Minogue and Svacek" (1976) 9 Can. J. Pol. Sci.

C.B. Macpherson, "Do We Need a Theory of the State?" (1977) 18 Euro. J. Soc.

J. Macur, "Armstrong Teammate Describes Doping System" The New York Times, May 22, 2011, at: <http://www.nytimes.com/2011/05/23/sports/cycling/tyler-hamilton-lance-armstrongs-teammate-describes-doping-system.html> (last visited June 10, 2011).

J. Macur, "Armstrong Refuses to Meet With U.S. Anti-Doping Agency" The New York Times, February 20, 2013, at: http://www.nytimes.com/2013/02/21/sports/cycling/lance-armstrong-again-refuses-to-meet-with-usada.html?_r=0 (last visited February 23, 2013).

J. Macur, "Government Joins Suit Against Armstrong" The New York Times, February 22, 2013 at: <http://www.nytimes.com/2013/02/23/sports/cycling/justice-department-will-join-lawsuit-against-armstrong.html?pagewanted=all> (last visited February 23, 2013).

J.R. Maddicott, "Magna Carta and the Local Community" (1984) 102 Past & Present.

G. Ciccariello-Maher, "The Internal Limits of the European Gaze: Césaire and Fanon Beyond Sartre and Foucault" (2006) 9(2) Rad. Phi. Rev.

A. Maki, "Tenured Saskatchewan professor fired for opposing restructuring plans" The Globe and Mail, May 14, 2014, at: <http://www.theglobeandmail.com/news/national/education/tenured-saskatchewan-professor-fired-for-opposing-university-restructuring-plans/article18665598/> (last visited May 20, 2014).

G. Mandich, "Venetian Patents, 1450-1550" 30 (1948) J. Pat. Off. Soc'y.

S. Manning, “NHS hit for millions by overcharging ‘scam’: Drug companies exploit loophole in the law to hike prices by as much as 2,000 per cent” *The Independent*, July 15, 2013, at: <http://www.independent.co.uk/news/uk/politics/nhs-hit-for-millions-by-overcharging-scam-8708292.html> (last visited July 18, 2013).

H. Maurer, *et. al.*, “Report on Dangers and Opportunities Posed by Large Search Engines, Particularly Google” (Graz: Graz University of Technology, 2007) at: http://www.iicm.tugraz.at/iicm_papers/dangers_google.pdf (last visited December 20, 2014).

K. Mara, “Confidential Documents From WHO R&D Finance Group, Industry, Raise Concern” *Intellectual Property Watch*, December 9, 2009, at: <http://www.ip-watch.org/weblog/2009/12/09/confidential-documents-released-from-who-rd-finance-group-pharmaceutical-industry/> (last visited January 8, 2010).

R.N. Marley, “Redemption Song” in *Uprising* (New York: Island Records, 1980).

R.N. Marley & N.G. Williams, “Buffalo Soldier” in *Confrontation* (Kingston: Tuff Gong Studio, 1983).

K. Marx, “On Freedom of the Press – [Freedom in General] – Proceedings of the Sixth Rhine Provincial Assembly” *Marx-Engels Collected Works* at: <http://www.marxists.org/archive/marx/works/1842/free-press/ch06.htm> (last visited March 9, 2011).

D. Martin, “Jude Wanniski, 69, Journalist Who Coined the Term ‘Supply-Side Economics,’ Dies” *The New York Times*, August 31, 2005 at: <http://www.nytimes.com/2005/08/31/business/31wanniski.html> (last visited November 3, 2009).

R. Martin, “The Age of Customer Capitalism” (2010) 65 *Harv. Bus. Rev.*

K. May, “‘Misguided’ policies driving out scientists” *The Ottawa Citizen* November 21, 1999.

C. Mayer, “The City and Corporate Performance” (1997) *Cam. J. Econ.*

M. Mazzucato and W. Lazonick, “Innovation: let the good risk-takers get their reward” *The Guardian*, November 29, 2012, at: <http://www.theguardian.com/commentisfree/2012/nov/29/innovation-good-risk-takers-reward> (last visited December 10, 2013).

W.L. McBride, “The Concept of Justice in Marx, Engels, and Others” (1975) 85 *Ethics*.

R.W. McChesney, “Noam Chomsky and the the Struggle Against Neoliberalism” (April 1999) 50 *Monthly Rev. Press*.

T. McCoy, "How Joseph Stalin Invented 'American Exceptionalism'" The Atlantic, March 15, 2012, at: <http://www.theatlantic.com/politics/archive/2012/03/how-joseph-stalin-invented-american-exceptionalism/254534/> (last visited September 12, 2014).

J. McFarland, "Canadian charged in high-frequency trading scheme" The Globe and Mail, January 13, 2015.

S. McGraw, "The most dangerous drug to hit small-town America since cocaine?" (2001) 17(1) SPIN.

A. McIlroy, "Prozac critic sees U of T job revoked" The Globe and Mail, April 14, 2001, at: <http://www.antidepressantsfacts.com/prozaccriticU-T.htm> (last visited March 4, 2009).

B. McKenna, "Canadian patents applications in steady decline: study" The Globe and Mail, November 28, 2014, at: <http://www.theglobeandmail.com/globe-investor/patent-applications-declining-study/article21820380/> (last visited December 14, 2014).

B. McKenna & I. Semeniuk, "Science council rewired to work with industry" The Globe and Mail, May 8, 2013.

P. McLaren, Critical Pedagogy and Class Struggle in the Age of Neoliberal Globalization: Notes from History's Underside (2005) 2(1) Int'l J. Inclusive Dem. at: http://www.inclusivedemocracy.org/journal/vol2/vol2_no1_mcclaren.htm.

J. Meacham & E. Thomas, "We Are All Socialists Now" Newsweek Feb. 16, 2009, at: <http://www.newsweek.com/id/183663?from=rss>.

C. Medawar, *et. al.* "Paroxetine, Panorama and user reporting of ADRs: Consumer intelligence matters in clinical practice and post-marketing drug surveillance" (2002) 15 Int. J. Risk Saf. Med.

H. Melander, *et. al.* "Evidence b(i)ased medicine – selective reporting from studies sponsored by pharmaceutical industry: Review of studies in new drug applications" (2003) 326 B.M.J.

G. Melloan, "We're All Keynesians Again: Nobody Can Accuse the Government and the Fed of Inaction" The Wall Street Journal, January 13, 2009, at: <http://online.wsj.com/article/SB123180502788675359.html> (last visited June 14, 2014.)

R. Mendleson, "U of T lectures coloured by Big Pharma: study" The Toronto Star, June 12, 2013, at: http://www.thestar.com/news/gta/2013/06/12/u_of_toronto_lectures_coloured_by_big_pharma_study.html (last visited June 15, 2013).

I. Mgbeoji & B. Allen, "Patent First, Litigate Later! The Scramble for Speculative and Overly Broad Genetic Patents: Implications for Access to Health Care and Biomedical Research" *Can. J.L.T.*

R. Miliband, "C. Wright Mills" (1962) *I/15 N.L.R.*

W.R. Miller "The Lost World of Gilded Age Politics" (2002) *1 J. Gilded Age & Progressive Era.*

C.W. Mills, "Letter to the New Left" (1960) *5 New Left Rev.*

C.W. Mills, "Letter to the New Left" (1960) *5 New Left Rev.*, at:
<http://www.marxists.org/subject/humanism/mills-c-wright/letter-new-left.htm>.

C. Milmo, "Panama Papers: British banks ordered to divulge details of their dealings with Mossack Fonseca law firm" *The Independent*, April 7, 2016, at:
<http://www.independent.co.uk/news/uk/crime/panama-papers-british-banks-ordered-to-divulge-details-of-their-dealings-with-mossack-fonseca-law-a6973906.html> (last visited June 25, 2016).

A. Milstein, "Bioethical Lessons From the Gelsinger Case: Three Myths of Human Experimentation" (Moorestown: Sherman, Silverstein, Kohl, Rose, Podolsky, 2001) at:
<http://www.sskrplaw.com/lawyer-attorney-1482386.html> (last visited March 10, 2010).

H. Mintzberg, "Patent nonsense: Evidence tells of an industry out of social control" (2006) *175(4) Can. Assn. Med. J.*

T. Miyake, C.K. Kung & E. Goldwasser, "Purification of Human Erythropoietin" (1977) *252(15) J. Bio. Chem.*

Y. Molero, *et. al.*, "Selective Serotonin Reuptake Inhibitors and Violent Crime: A Cohort Study" (2015) *PLOS* at:
<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001875> (last visited September 17, 2015).

C. Mollins, "The Excessive 80s" *Canadian Business Online*, September 15, 2003, at:
http://www.canadianbusiness.com/managing/strategy/article.jsp?content=20030915_55505_55505&page=1 (last visited August 12, 2006).

G. Monbiot, "Neoliberalism – The 'Zombie Doctrine' at the Root of All Our Problems" *Common Dreams*, April 15, 2016, at:
<http://www.commondreams.org/views/2016/04/15/neoliberalism-zombie-doctrine-root-all-our-problems> (last visited April 17, 2016).

M. Moran, "Misunderstanding the Regulatory State" (2002) *35(1) Brit. J. Poli-Sci.*

M. Moran, “Not Steering but Drowning: Policy Catastrophes and the Regulatory State” (2001) 72 Pol. Quart.

E. Morozov, “Where Uber and Amazon rule: welcome to the world of the platform” The Guardian, June 7, 2015, at: <https://www.theguardian.com/technology/2015/jun/07/facebook-uber-amazon-platform-economy> (last visited October 28, 2016).

N. Morris & O. Wright “Lords sound alarm over university ‘privatisation’ – but fees plan survives” The Independent, December 15, 2010, at: <http://www.independent.co.uk/news/education/education-news/lords-sound-alarm-over-university-privatisation-ndash-but-fees-plan-survives-2160615.html>.

A. Morrow, “Private-partnerships cost Ontario taxpayers \$8 billion: Auditor General” The Globe and Mail, December 9, 2014, at: <http://m.theglobeandmail.com/news/politics/private-partnerships-cost-ontario-taxpayers-8-billion-auditor-general/article22012009/?service=mobile> (last visited December 9, 2014).

A. Morrow, J. Nelson & S. Silcoff, “The long road to privatization of Hydro One” The Globe and Mail, March 13, 2015), at: <http://m.theglobeandmail.com/report-on-business/wynnes-quest-for-full-value-the-long-road-to-privatization/article23461789/?service=mobile> (last visited March 14, 2015).

C. Mortished, “Don’t blame the multinationals for hiding the big tax money” The Globe and Mail, April 20, 2015, at: <http://www.theglobeandmail.com/report-on-business/rob-commentary/rob-insight/dont-blame-the-multinationals-for-hiding-the-big-tax-money/article24027560/> (last visited April 21, 2015).

A.D. Mosholder, “Suicidality in pediatric clinical trials with paroxetine and other antidepressant drugs: follow-up to 9-4-03 consult” (2004) Alliance for Human Research Protection at: <http://www.ahrp.org/risks/SSRImosholder/index.html> (last visited October 15, 2005).

R. Moynihan “The Marketing of a Disease: Female Sexual Dysfunction” (2005) 330 (7484) B.M.J.

I. Murray, “Paulescu and the Isolation of Insulin” (1971) 26 (2) J. Hist. of Med. & Allied Sci.

A.E. Musson, “The Great Depression in Britain, 1873-1896: A Reappraisal” (1959) 19(2) J. Econ. Hist.

C.A. Nard & A.P. Morriss, “Constitutionalizing Patents: From Venice to Philadelphia” (Case Western Reserve University: 2004) at: <http://ssrn.com/abstract+585661>.

T. Nash, *Who's Counting: Marilyn Waring on Sex, Lies and Global Economics* (Montreal: National Film Board of Canada, 1995).

D.G. Nathan & D. Weatherall, "Academic Freedom in Clinical Research" (2002) 347 (17) N.E.J.M.

National Institute of Health, "Understanding Clinical Trials" N.I.H. – Clinical Trials at: <http://clinicaltrials.gov/ct2/info/understand#Q01> (last visited November 10, 2010).

V.P. Neimanis, *The Canadian Encyclopedia*, (Ottawa: Historica Foundation of Canada, 2008) at: <http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0002049> (last visited March 12, 2008).

Nesta, *The Longitude Prize, 2014* (London: Nesta, 2014) at: <https://longitudeprize.org/> (last visited December 15, 2014).

P. Newcomb, "The Richest People in America" (1999) 164 Forbes.

A. Newitz, "The Marxist Wall Street Couldn't Ignore" Salon, December 21, 1998 at: <http://www.salon.com/it/feature/1998/12/21feature3.html>.

New Scientist – Staff, "US drugs agency accused of hindering Vioxx report" New Scientist, December 4, 2004 at: <http://www.newscientist.com/article.ns?id=mg18424760.700> (last visited July 4, 2008).

The New York Times, Editorials/OpEd, "Stands Strongly Against Theft on the Internet..." The New York Times, June 28, 2005, at: <http://www.nytimes.com/2005/06/28/opinion/28tue2.html> (last visited December 15, 2008).

G. Nichol, "Gene Nichol's statement on closing of UNC poverty center" The News & Observer, February 27, 2015, at: www.newsobserver.com/opinion/op-ed/article1247222.html (last visited March 5, 2015).

R. Nickel & A. Martell, "How a Canadian Prairie city made an Ebola vaccine" Reuters, August 14, 2014, at: <http://www.reuters.com/article/2014/08/14/us-health-ebola-canada-idUSKBN0GE22E20140814> (last visited October 5, 2014).

B. Als-Nielsen, *et. al.* "Association of Funding and Conclusions in Randomized Drug Trials: A Reflection of Treatment Effect or Adverse Events?" (2003) 290 J.A.M.A.

R. Fuentes-Nieva & N. Galasso, "Working For the Few: Political Capture and Economic Inequality, 178 Oxfam Briefing Paper (Oxford: Oxfam GB, 2014).

T. Nitti, “Is The IRS Investigating Lance Armstrong's Livestrong Foundation?” Forbes Magazine November 21, 2012, at: <http://www.forbes.com/sites/anthonymitti/2012/11/21/is-the-irs-investigating-lance-armstrongs-livestrong-foundation/>.

W.A. Niskanen, “Reaganomics” in *The Concise Encyclopedia of Economics* at: <http://www.econlib.org/library/Enc/Reaganomics.html>.<http://www.econlib.org/library/Enc1/Reaganomics.html> (last visited April 2, 2008).

T. Noah, “The Make-Believe Billion: How drug companies exaggerate research costs to justify absurd profits” Slate, March 3, 2011, at: <http://www.slate.com/id/2287227/> (last visited March 25, 2011).

J. Nocera, “Facebook’s Brilliant Disaster” The New York Times, May 25, 2012, at: <http://www.nytimes.com/2012/05/26/opinion/nocera-facebooks-brilliant-disaster.html> (last visited May 27, 2012).

F. Norris “Big Estimate, Worth Little, on Bailout” The New York Times, July 20, 2009, at: <http://www.nytimes.com/2009/07/21/business/economy/21bailout.html> (last visited July 25, 2009).

North Carolina State University, “University Licensing Revenues and Patent Activity for Fiscal 2001” at: http://www2.acs.ncsu.edu/upa/peers/current/research_intensive/lice_pant_res.htm (last visited November 29, 2006).

Office of the President, University of Arizona, at: <http://president.asu.edu/node/762> (last visited March 1, 2011).

N.F. Olivieri, *et. al.* “Long-term Safety and Effectiveness of Iron-chelation Therapy with Deferiprone for Thalassemia Major” (1998) 339 (7) N.E.J.M.

N.F. Olivieri, “A Response from Dr. Nancy Olivieri” (2006) 174 C.M.A.J.

N. Onishi, “As Oil Riches Flow, a Poor Village Rises Up,” The New York Times, December 22, 2002.

Op-Ed, “No monopoly on human nature” The Globe and Mail, June 18, 2013.

OECD Economic Surveys, cited by K. Yakabuski, “Burned Out: The Search for a New Innovation Identity” The Globe and Mail, August 17, 2013.

OECD – Staff, “OECD reports new developments in tax information exchange” April 19, 2013, at: <http://www.oecd.org/ctp/oecd-reports-new-developments-in-tax-information-exchange.htm> (last visited May 1, 2013).

W. Osler, "The Student Life" (1906) 39 *The Canada Lancet*.

Oxfam, "Broken at the Top: How America's dysfunctional tax system costs billions in corporate tax dodging" Oxfam America, April 14, 2016, at: http://www.oxfamamerica.org/static/media/files/Broken_at_the_Top_FINAL_EMBARGOED_4.12.2016.pdf (last visited April 16, 2016).

Oxford Dictionaries Online at: <http://www.oxforddictionaries.com/definition/cure> (last visited August 2, 2010).

M.C. Oved, "Canadian medical journals hijacked for junk science" *The Toronto Star*, September 29, 2016, at: <https://www.thestar.com/news/world/2016/09/29/canadian-medical-journals-hijacked-for-junk-science.html> (last visited September 30, 2016).

B. Patsner, "Keeping Generic Drugs off the Market: Do Patents Hinder Healthcare?" (July 2008) *Health Law Perspectives* U. of Houston, at: <http://www.law.uh.edu/healthlaw/perspectives/homepage.asp> (last visited September 24, 2010).

N. Pattison & L. Warren, "2002 Drug Industry Profits: Hefty Pharmaceutical Company Margins Dwarf other Industries" (Washington: Public Citizen – Congress Watch, 2003) at: www.citizen.org/documents/Pharma_Report.pdf (last visited May 8, 2007).

S. Pearlstein, "The Lesson Colleges Need to Learn" *Washington Post*, December 17, 2003.

J. Pearce, "Dr. David Golde, 63, Expert On Blood Disorders, Is Dead" *The New York Times*, August 14, 2004, at: <http://query.nytimes.com/gst/fullpage.html?res=9D06EFD8153FF937A2575BC0A9629C8B63> (last visited August 22, 2008).

T.J. Penny, "Facts Are Facts" *National Rev.* September 4, 2003, at: <http://www.nationalreview.com/article/207925/facts-are-facts-timothy-j-penny> (last visited February 28, 2017).

S. Peoples & N. Benac, "'I love the poorly educated': Donald Trump celebrates big win in Nevada by thanking his supporters, young and old" *The National Post*, February 24, 2016, at: <http://news.nationalpost.com/news/world/i-love-the-poorly-educated-donald-trump-celebrates-big-win-in-nevada-by-thanking-his-supporters-young-and-old> (last visited February 29, 2016).

M. Perelman, "The Political Economy of Intellectual Property" in (54) 8 *Monthly Review* 2003 at: <http://monthlyreview.org/0103perelman.htm>.

M. Perelman, "The Political Economy of Intellectual Property" (2003) 54 *The Monthly Review*.

M. Perelman, "The Role of Higher Education in a Security State" (2005) 182 *The N.E.A. Ed. J.*

T. Perkins, "Progressive Kristallnacht Coming?" *The Wall Street Journal*, January 24, 2014, at: http://online.wsj.com/news/article_email/SB10001424052702304549504579316913982034286-1MyQjAxMTA0MDIwNzEyNDcyWj (last visited January 23, 2014).

I. Peritz, "The fight of their lives: After years of neglect, Canadian Thalidomide survivors make a plea for help" *The Globe and Mail*, November 21, 2014, at: <http://www.theglobeandmail.com/news/national/the-aftermath-of-thalidomide/article21689771/> (last visited November 23, 2014).

I. Peritz, "Drug firms refused to contribute to fund for thalidomide survivors" *The Globe and Mail*, July 10, 2016, at: <http://www.theglobeandmail.com/news/national/drug-firms-refused-to-contribute-to-fund-for-thalidomide-survivors/article30848096/> (last visited July 11, 2016).

M.A. Peters, "Leo Strauss and the Neoconservative Critique of the Liberal University: Postmodernism, Relativism and the Culture Wars" (2008) 49(1) *Crit. Stud. Ed.*

W. Pfaff "Deregulation gone mad" *The New York Times*, April 3, 2006 at: http://www.nytimes.com/2006/04/03/opinion/03iht-edpfaff.html?_r=1 (last visited May 10, 2007).

PharmedOut, "Journal Articles - Publications" (Georgetown: PharmedOut Publications, 2010) at: <http://www.pharmedout.org/publications.htm> (September 9, 2010).

A. Picard, "Patent expiry for some blockbuster drugs presents huge saving opportunity" *The Globe and Mail*, June 23, 2010 at: <http://www.theglobeandmail.com/life/health/patent-expiry-for-some-blockbuster-drugs-presents-huge-saving-opportunity/article1615338/> (last visited September 4, 2010).

G. Plast, "The Globalizer Who Came In From the Cold" *The Observer* (London) October 10, 2001, at: <http://www.gregpalast.com/the-globalizer-who-came-in-from-the-cold/>. (last visited September 16, 2009).

B. Patsner, "Keeping Generic Drugs off the Market: Do Patents Hinder Healthcare?" (July 2008) *Health Law Perspectives* U. of Houston, at: <http://www.law.uh.edu/healthlaw/perspectives/homepage.asp>.

N. Pattison & L. Warren, "2002 Drug Industry Profits: Hefty Pharmaceutical Company Margins Dwarf Other Industries" (Washington: Public Citizen Congress Watch, 2003) at: www.citizen.org/documents/Pharma_Report.pdf (last visited October 4, 2007).

A. Pollack, “Eugene Goldwasser, Biochemist Behind an Anemia Drug, Dies at 88” The New York Times, December 20th, 2010, at: http://www.nytimes.com/2010/12/21/health/21goldwasser.html?_r=0 (last visited January 3, 2011).

A. Pollack, “Mylan Tries Again to Quell Pricing Outrage by Offering Generic EpiPen” The New York Times, August 29, 2016, at: http://www.nytimes.com/2016/08/30/business/mylan-generic-epipen.html?_r=0 (last visited September 16, 2016).

R. Pope & R. Selten, “Public Debt Tipping Point Studies Ignore How Exchange Rate Changes May Create a Financial Meltdown” (2012) 59 Real-World E. Rev.

C. Porter, “Begin the Beguine” in Begin the Beguine (New York: Bluebird, 1938).

J. Porter, “The Democratisation of the Canadian Universities and the Need for a National System” (1970) 8(3) Minerva.

A. Posadzki, “HudBay won’t appeal ruling bringing Guatemala case to Canada” The Globe and Mail, August 30, 2013, at: <http://www.theglobeandmail.com/news/national/hudbay-wont-appeal-ruling-bringing-guatemala-case-to-canada/article14060058/> (last visited September 1, 2013).

R.A. Posner, “How I Became a Keynesian” The New Republic, September 23, 2009, at: <http://www.tnr.com/article/how-i-became-keynesian> (last visited November 3, 2009).

N. Postman, “Informing Ourselves to Death” (1990) German Informatics Society at: http://w2.eff.org/Net_culture/Criticisms/informing_ourselves_to_death.paper (last visited September 29, 2011).

F.D. Prager, “Brunelleschi’s Patent” (1946) 28 J. Pat. Off. Soc.

E. Press & J. Washburn, “The Kept University” (2000) 285(3) The Atlantic Monthly.

PRNewire – Staff, “Pharmaceutical Industry Bracing for Record Patent Expiries, EvaluatePharma Data Reveals” PRNewswire, February 2, 2011, at: <http://www.prnewswire.com/news-releases/pharmaceutical-industry-bracing-for-record-patent-expiries-evaluatepharma-data-reveals-115099789.html> (last visited February 23, 2011).

‘Professor X,’ “In the Basement of the Ivory Tower” The Atlantic, June 1, 2008, at: <http://www.theatlantic.com/magazine/archive/2008/06/in-the-basement-of-the-ivory-tower/306810/> (last visited December 1, 2014).

B. Protess, “Slowing the Revolving Door Between Public and Private Jobs” The New York Times, November 11, 2013, at: <http://dealbook.nytimes.com/2013/11/11/slowing->

[the-revolving-door-between-public-and-private-jobs/?_php=true&_type=blogs&_r=0](#)
(last visited September 20, 2013).

Public Citizen, “WTO U – Higher Education: Public Good or Global Service Industry?” at: <http://www.citizen.org/trade/subfederal/services/education/> (last visited December 10, 2010).

Queen’s University at Kingston, “Corporate Partnerships” in Queen’s Partnership Program, at: <https://adv.queensu.ca/dod/dynamic.php?first=42e7d2571e10a&second=42e7eada7865b> (last visited July 15, 2008).

Queen’s Press Release, “Innovation Park at Queen’s University connects to global grid of research networks” December 2, 2008, at: <http://www.innovationpark.ca/article/innovation-park-queen%E2%80%99s-university-connects-global-grid-research-networks> (last visited January 10, 2009).

D. Quist & I. Chapela, “Transgenic DNA Introgressed into Traditional Maize Landraces in Oaxaca, Mexico” (2001) 414 Nature.

M.J. Racusin, “Thyssen Has \$3,000,000 in New York Vaults” The New York Herald Tribune, July 31, 1941.

M. Ramirez, “Dr. Eugene Goldwasser, 1922-2010: Biochemist behind lifesaving drug, father of EPO” The Chicago Tribune, December 21, 2010 at: http://articles.chicagotribune.com/2010-12-21/features/ct-met-goldwasser-1222-20101221_1_epo-new-drug-key-hormones (last visited January 3, 2012).

C. Rampell, “‘Great Recession’: A Brief Etymology” The New York Times, March 11, 2009, at: <http://economix.blogs.nytimes.com/2009/03/11/great-recession-a-brief-etymology/>.

J. Randerson, “Father of the ‘God Particle’” The Guardian, June 30, 2008, at: <http://www.guardian.co.uk/science/2008/jun/30/higgs.boson.cern> (last visited September 5, 2011).

R. Reagan, “Ronald Reagan’s First Inaugural Address delivered 20 January 1981” at: <http://www.americanrhetoric.com/speeches/ronaldreagandfirstinaugural.html> (last visited August 4, 2009).

G.L. Reback, “Patently Absurd” Forbes Magazine, June 24, 2002, at: <http://www.forbes.com/asap/2002/0624/044.html> (last visited May 23, 2008).

E. Reguly, “Apple sacrificing innovation on the altar of shareholder value” The Globe and Mail, August 31, 2013.

R.B. Reich, "How Capitalism Is Killing Democracy" Foreign Policy, October 12, 2009, at: <http://foreignpolicy.com/2009/10/12/how-capitalism-is-killing-democracy/> (last visited August 21, 2015).

R.B. Reich, "The Share-the-Scraps Economy" Robert Reich Blog, February 2, 2015, at: <http://robertreich.org/post/109894095095> (last visited February 13, 2017).

C. Reinhart & K.S. Rogoff, "Growth in a Time of Debt" (2010) 100(2) Amer. Econ. Rev.

A.S. Relman, "The New Medical-Industrial Complex" (1980) 303 N.E.J.M.

D. Rennie & L.A. Bero, "Throw it away, Sam: the controlled circulation journals" (1990) 155 A.J.R. Am. J. Roentgenol.

Research Corporation, Research Corporation for Scientific Advancement, at: <http://www.rescorp.org/about-rdsa> (last visited May 2, 2008).

M. Rees, "A Longitude Prize for the twenty-first century" Nature, May 20, 2014, at: <http://www.nature.com/news/a-longitude-prize-for-the-twenty-first-century-1.15259> (last visited December 5, 2014).

Reuters Staff, "Lance Armstrong fails to have doping damages lawsuit thrown out: Ex-teammate Floyd Landis and US government seek more than US\$100m from cyclist stripped of seven Tour de France titles" The Guardian, June 20, 2014, at: <http://www.theguardian.com/sport/2014/jun/20/lance-armstrong-fails-to-have-doping-damages-lawsuit-thrown-out> (last visited June 21, 2014).

Reuters Wire Service, "Daybook: August 25 – Technology Tablet Wars" The Globe and Mail, August 25, 2011.

F.H.T. Rhodes, "The Advancement of Learning: Prospects in a Cynical Age" 142 (2) (1998) Proceedings of Amer. Phil. Soc.

G. Rhoades & S. Slaughter, "Academic Capitalism and the New Economy: Challenges and Choices American Academic at: 37 - www.aft.org/pdfs/highered/academic/june04/Rhoades.qxp.pdf. (last visited March 4, 2009).

F. Rich, "The Billionaires Bankrolling the Tea Party" The New York Times, August 28, 2010, at: http://www.nytimes.com/2010/08/29/opinion/29rich.html?_r=1 (last visited August 30, 2010).

H. Rickover, "The University And Small Business Patent Procedures Act" Hearings Before the Senate Committee on Judiciary, 96th Cong., 1st Sess. (Washington: Government Printing Office, 1979).

- R.C.B. Risk, "Canadian Law Teachers in the 1930s: 'When the World was Turned Upside Down'" (2004) 27 Dalhousie L.J. 43.
- R.C.B. Risk, "Here Be Cold and Tygers: A Map of Statutory Interpretation in Canada in the 1920s and 1930s" (2000) 63 Sask. L. Rev. 195.
- M. Robinson & J. O'Kane, "Corporate 'dead money' rises to buoy GDP" The Globe and Mail, Saturday September 1, 2012.
- T. Roosevelt, President Theodore Roosevelt Letter to Upton Sinclair, March 15, 1906, at: <http://www.teachingamericanhistory.org/library/index.asp?document=1299> (last visited May 24, 2008).
- M. Rose, "The author as proprietor: Donaldson v. Becket and the genealogy of modern authorship" (1988) 23(1) Representations.
- H. Rosenberg, "Political and Social Consequences of the Great Depression of 1873-1896 in Central Europe" (1943) 13 (1-2) Econ. Hist. Rev.
- J.P. Rushton & A.R. Jensen, "Thirty Years of Research on Race Differences in Cognitive Ability" (2005) 11 Psyc. Pub. Pol. & L.
- E.M. Rusli & P. Eavis, "I.P.O./Offerings Facebook Raises \$16 Billion" The New York Times, May 17, 2012, at: <http://dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/> (last visited May 20, 2012).
- W. Safire, "Sh-Sh-Sh – Quietism" The New York Times, December 21, 2003, at: <http://www.nytimes.com/2003/12/21/magazine/21ONLANGUAGE.html> (last visited September 4, 2014).
- P.A. Samuelson, "The Pure Theory of Public Expenditure" (1954) 36(4) R. Econ. & Stats.
- S. Saul "Senators ask drug giant to explain grants to doctors" The New York Times, July 6, 2005.
- E. Schlosser, "The Prison-Industrial Complex" Atlantic Monthly (December 1998) at: <http://www.theatlantic.com/doc/199812/prisons> (last visited April 10, 2009).
- R. Schrambling, "Julia Child, the French Chef for a Jell-O Nation, Dies at 91" The New York Times, August 13, 2004, at: <http://www.nytimes.com/2004/08/13/dining/13CND-CHILD.html?pagewanted=3> (last visited March 3, 2011).
- B. Schrottenboer, "Lance Armstrong fights government questions about sex life" The Toronto Star, July 2, 2015, at: <http://www.thestar.com/sports/2015/07/02/lance-armstrong-fights-government-questions-about-sex-life.html> (last visited July 4, 2015).

A. Schulman, "The Caldera v. Microsoft Dossier" in O'Reilly Media, at: <http://www.oreillynet.com/network/2000/02/07/schulman.html> (last visited December 3, 2010).

J.A. Schumpeter, "The Present World Depression: A Tentative Diagnosis" (1931) *Amer. Econ. Rev. Sup.*

F.R. Scott, "A Policy of Neutrality for Canada" (1939) 17 *Foreign Affairs*.

F.R. Scott, "Centralization and Decentralization in Canadian Federalism" (1951) 29 *Can. Bar Rev.* 1095.

S.E.C., "Churn" U.S. Security and Exchange Commission (Washington: April 15, 2009) at: <http://www.sec.gov/answers/churning.htm> (last visited April 1, 2010).

R. Sennett, "Labours of Love" *The Guardian*, February 2, 2008, at: <http://www.theguardian.com/books/2008/feb/02/featuresreviews.guardianreview14> (last visited January 15, 2015).

R. Shady, J. Haas & W. Creamer, "Dating Caral: A Preceramic Site in the Supe Valley on the Central Coast of Peru" (2001) 292 *Science*.

K. Sharp, "Armstrong's fraud paralleled EPO-maker's feud" *Cycling News* November 5, 2012, at: <http://www.cyclingnews.com/features/armstrongs-fraud-paralleled-epo-makers-feud#null> (last visited December 7, 2012).

H. Sheffield, "Libor: three former Barclays traders found guilty in benchmark rate rigging trial" *The Independent*, July 4, 2016, at: <http://www.independent.co.uk/news/business/news/libor-trial-barclays-traders-convicted-rate-rigging-fraud-pabon-mathew-merchant-a7118886.html> (last visited July 4, 2016).

H. Sheffield, "Fifty biggest US companies stashing \$1.3trn offshore: Coca-Cola, Walt Disney, Alphabet (Google) and Goldman Sachs all implicated in Oxfam report" *The Independent*, April 14, 2016, at: <http://www.independent.co.uk/news/business/news/fifty-biggest-us-companies-stashing-13trn-offshore-a6983256.html> (last visited April 16, 2016).

A. Sherwin, "Crickhowell: Welsh town moves 'offshore' to avoid tax on local business" *The Independent*, November 10, 2015, at: <http://www.independent.co.uk/news/uk/crickhowell-welsh-town-moves-offshore-to-avoid-tax-on-local-business-a6728971.html> (last visited November 11, 2015).

A. Shnier, *et. al.* "Too Few, Too Weak: Conflict of Interest Policies at Canadian Medical Schools" (2013) *Public Library of Science* at: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0068633> (last visited June 30, 2013).

- M. Shuchman, "The Olivieri dispute: no end in sight?" (2002) 166 C.M.A.J.
- H. Siddiqui, "Chomsky and Said stir the soul," *The Toronto Star*, June 18, 2000.
- U.B. Sinclair, "What Life Means to Me" *Cosmopolitan* (October, 1906).
- N.R. Singer "Voodoo Economics: Soul Work in the Age of Reagan" (2000) 30(1) *Iowa Rev.*
- K. Silverstein, "Millions For Viagra, Pennies For Diseases Of The Poor" *The Nation*, July 19, 1999.
- 60 Minutes*, (New York: C.B.S. News Productions, air-date December 19, 1999).
- G. Smith, "Why I Am Leaving Goldman Sachs" *The New York Times*, March 14, 2012, at: http://www.nytimes.com/2012/03/14/opinion/why-i-am-leaving-goldman-sachs.html?pagewanted=all&_r=0.
- J. Smith, "Sanitation, maintenance problems noted at Alberta plant where E. coli scare began" *The Toronto Star*, Friday October 5, 2012, at: <http://www.thestar.com/news/canada/politics/article/1267497--e-coli-scare-reaches-newfoundland-one-person-sick-with-same-strain-found-at-xl-foods-plant>.
- R. Smith, "Medical Journals Are an Extension of the Marketing Arm of Pharmaceutical Companies" (2005) 2 P.L.O.S. Med. at: <http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0020138> (last visited May 1, 2006).
- D. Soberman, "Letter to MacLean's Magazine" November 23, 1998.
- Social Security, "National average wage indexing series, 1951-2007" *Social Security Online* at: <http://www.ssa.gov/OACT/COLA/AWI.html> (last visited May 18, 2009).
- R.A. Solo, "A Return to The Golden Age of Laissez Faire?" (1980) 2 (1-3) *Tocqueville Rev.*
- M.A. Somerville, "A postmodern tale: the ethics of research relationships (2002) 1 *Nat. Rev. Drug Discovery*.
- D. Spence, "Bad Medicine: Pain" (2010) 340 *B.J.M.*
- S. Spithoff, J. Lexchin & C. Kitai, "It's time to examine pharma funding of doctor's education" *Healthy Debate*, December 2, 2015, at: <http://healthydebate.ca/opinions/more-transparency-needed-on-pharma-funding-of-education> (last visited February 17, 2016).

Staff, “Journalist Chris Hedges Barred by University of Pennsylvania Over Israel Dig” Forward, December 28, 2014, at: <http://forward.com/news/breaking-news/211736/journalist-chris-hedges-barred-by-university-of-pe/> (last visited September 16, 2016).

J. Stanford, “Temporary worker program changes just a new rubber stamp” The Globe and Mail, April 29, 2013, at: <http://www.theglobeandmail.com/commentary/temporary-worker-program-changes-just-a-new-rubber-stamp/article11606920/> (last visited May 1, 2013).

J. Stanford, “Ebola vaccine story shows folly of free-market drugs” November 3, 2014, at: <http://www.theglobeandmail.com/globe-debate/ebola-vaccine-story-shows-folly-of-free-market-drugs/article21422767/> (November 20, 2014).

J. Stempel, “Lance Armstrong must face U.S. doping lawsuit, judge rules” The Globe and Mail, June 19, 2014, at: <http://www.theglobeandmail.com/sports/more-sports/lance-armstrong-must-face-us-doping-lawsuit-judge-rules/article19254770/> (last visited June 21, 2014).

H. Stewart, “Facebook paid £4,327 corporation tax despite £35m staff bonuses” The Guardian, October 11, 2015, at: <https://www.theguardian.com/global/2015/oct/11/facebook-paid-4327-corporation-tax-despite-35-million-staff-bonuses> (last visited October 13, 2016).

G.J. Stigler, “The Politics of Political Economists” (1959) 72 Quart. J. Econ.

J.E. Stiglitz, “Prizes, Not Patents” Project Syndicate, March 7, 2007, at: <http://www.project-syndicate.org/commentary/stiglitz81/English> (last visited March 28, 2008).

J.E. Stiglitz, “How Intellectual Property Reinforces Inequality” The New York Times, July 14, 2013, at: <http://opinionator.blogs.nytimes.com/2013/07/14/how-intellectual-property-reinforces-inequality/?hp> (last visited July 15, 2013).

J.E. Stiglitz, “Ebola and Inequality” Project Syndicate, November 10, 2014, at: <http://www.project-syndicate.org/commentary/ebola-highlights-inequality-by-joseph-e-stiglitz-2014-11> (last visited November 29, 2014).

G. Stix, “The Mice That Warred” (2001) 284(6) Scientific Amer.

S.G. Stolberg, “Institute Restricted After Gene Therapy Death” The New York Times, May 25, 2000, at: <http://www.nytimes.com/2000/05/25/us/institute-restricted-after-gene-therapy-death.html?ref=jessegelsinger> (last visited June 4, 2010).

G.R. Stone, “A Deadly Assault on Academic Freedom” Huffington Post, February 28, 2015, at: http://www.huffingtonpost.com/geoffrey-r-stone/a-deadly-assault-on-academic-freedom_b_6776322.html (last visited March 5, 2015).

O. Stone, *Wall Street* (Century City: 20th Century Fox, 1987).

M. Strauss, “Loblaw calls on industry to end ‘unacceptable risk’ in Bangladesh” The Globe and Mail, May 3, 2013.

V. Strauss, “Ravitch answers Gates” Washington Post, November 30, 2010 at: <http://voices.washingtonpost.com/answer-sheet/diane-ravitch/ravitch-answers-gates.html> (last visited December 3, 2010).

J. Strummer, M. Jones, P. Simonon & T. Headon (a.k.a. “The Clash”) “Something About England” on *Sandinista!* (New York: Epic, 1980).

L.H. Summers, “The Toxic Waste Memo” (Washington: World Bank, December 12, 1991) at: <http://twentyfive.ucdavis.edu/includes/tt/10/summers-memo.pdf> (last visited January 2, 2011).

R.L. Swarns, “Drug Makers Drop South Africa Suit Over AIDs Medicine” The New York Times, April 20, 2001, at: <http://www.nytimes.com/2001/04/20/world/drug-makers-drop-south-africa-suit-over-aids-medicine.html> (last visited June 4, 2010).

R. Syal & P. Wintour, “MPs attack Amazon, Google and Starbucks over tax avoidance” The Guardian, December 2, 2012, at: <http://www.guardian.co.uk/business/2012/dec/03/amazon-google-starbucks-tax-avoidance> (last visited January 28, 2013).

W.C. Symonds, “Should Public Universities Behave Like Private Colleges?” Business Week November 15, 2004 at: http://www.businessweek.com/magazine/content/04_46/b3908089.htm (last visited March 14, 2009).

T. Tahir, “The irresistible rise of academic bureaucracy” The Guardian, March 30, 2010, at: <http://www.theguardian.com/education/2010/mar/30/academic-bureaucracy-rise-managers-higher-education> (last visited November 3, 2014).

M. Taibbi, “Why is Nobody Freaking Out About the LIBOR Banking Scandal?” Rolling Stone, July 3, 2013, at: <http://www.rollingstone.com/politics/blogs/taibblog/why-is-nobody-freaking-out-about-the-libor-banking-scandal-20120703#ixzz2ckIyFIO2> (last visited July 10, 2013).

M. Taibbi, “Too Smug to Jail: ‘The Economist’ issues a myopic defense of the white-collar criminal” Rolling Stone, November 1, 2016, at:

<http://www.rollingstone.com/politics/features/too-smug-to-jail-w447825> (last visited November 2, 2016).

T. Talaga, “Canada willingly makes tax deals with tax havens: Billions of dollars are moving out of Canada – nearly all tax free – with 92 tax treaties signed” The Toronto Star, June 18, 2016, at: <https://www.thestar.com/news/world/2016/06/18/canada-willingly-makes-tax-deals-with-tax-havens.html> (last visited June 19, 2016).

B. Taper, “Miniaturizing Agriculture” (1979) 80(1) Science.

C. Taylor, “Hegel’s Ambiguous Legacy for Modern Liberalism” (1989) 10 Cardozo L. Rev.

P. Taylor, “New meds aren’t always ‘safe and effective’” The Globe and Mail, August 29, 2008.

M.H. Teicher, C. Glod & J.O. Cole, “Emergence of intense suicidal preoccupation during fluoxetine treatment” (1990) 147 Amer. J. Psyc.

P. Temin, “Technology, Regulation, and Market Structure in the Modern Pharmaceutical Industry” (1979) 10(2) Bell J. of Econ.

D. Tierney, D. Bruser, J. McLean & A. Bailey, “Drug companies wine and dine family physicians” The Toronto Star, February 16, 2016, at: <http://www.thestar.com/news/canada/2016/02/16/drug-companies-wine-and-dine-family-physicians.html> (last visited February 17, 2016).

K. Thomas, “J.&J. to Pay \$2.2 Billion in Risperdal Settlement” The New York Times, November 4, 2013, at: http://www.nytimes.com/2013/11/05/business/johnson-johnson-to-settle-risperdal-improper-marketing-case.html?_r=0 (last visited January 3, 2014).

K. Thomas & M.S. Schmit, “Glaxo Agrees to Pay \$3 Billion in Fraud Settlement” The New York Times, July 2, 2012 at: http://www.nytimes.com/2012/07/03/business/glaxosmithkline-agrees-to-pay-3-billion-in-fraud-settlement.html?_r=1&hp (last visited July 2, 2012).

E. P. Thompson, “History from Below,” Times Literary Supplement, 7 April 1966.

E.J. Topol, “Failing the Public Health – Rofecoxib, Merck, and the FDA” (2004) N.E.J.M. at: <http://www.nejm.org/doi/full/10.1056/NEJMp048286> (last visited May 20, 2011).

S. Thorne, “Don’t mess with census, statisticians tell Tories” The Globe and Mail, July 09, 2010 at: <http://www.theglobeandmail.com/news/politics/dont-mess-with-census-statisticians-tell-tories/article1635031/print/> (last visited July 11, 2010).

P. Tough, “The Alchemy of OxyContin: From Pain Relief to Drug Addiction” The New York Times Magazine, July 29, 2001.

T-Rex, “Children of the Revolution” *Tanx* (Paris: Strawberry Studios, 1972).

J.L. Turk, “Universities must serve the public interest, not private ones” The Record, March 12, 2012, at: <http://www.therecord.com/opinion-story/2600550-universities-must-serve-the-public-interest-not-private-ones/> (last visited March 4, 2014).

J.L. Turk, “Human Capital Theory: Bad for Education, Bad for the Economy” (1989) 1(3) Our Schools/Our Selves.

C. Turner, “Stephen Harper’s war on experts” The Toronto Star, September 16, 2015, at: <http://www.thestar.com/opinion/commentary/2015/09/16/stephen-harpers-war-on-experts.html> (last visited September 17, 2015).

L. Turner & P. Knoepfler, “Selling Stem Cells in the USA: Assessing the Direct-to-Consumer Industry” (2016) Cell Stem Cell, at: <http://dx.doi.org/10.1016/j.stem.2016.06.007> (last visited July 8, 2016).

R. Turner, *Study on Transfer Pricing in Working Paper 96-10* (Ottawa: The Technical Committee on Business Taxation Committee, Department of Finance, 1996).

M. Tushnet, “An Essay on Rights” (1982) 62 Tex. L. Rev.

M. Twain, “Letter from Mark Twain to a Snake Oil Peddler” November 20, 1905, at: <http://boingboing.net/2010/01/27/letter-from-mark-twa.html> (last visited August 30, 2010).

United Nations – Staff, *Standard Country or Area Codes for Statistical Use* (New York: Statistical Services Branch, Statistics Division, United Nations, Room DC2-1620, 2008) at: <http://unstats.un.org/unsd/methods/m49/m49.htm#ftn1>. (last visited December 4, 2010).

United Nations, *Millennium Ecosystem Assessment – Synthesis Report* (New York: United Nations, 2005) at: <http://www.maweb.org/> (last visited December 10, 2011).

United Nations, *Standard Country or Area Codes for Statistical Use* (New York: Statistical Services Branch, Statistics Division, United Nations, Room DC2-1620, 2008) at: <http://unstats.un.org/unsd/methods/m49/m49.htm#ftn1> (February 10, 2010).

U.S. Historical Tables, Budget of the United States Government, Table 7.1 — Federal Debt at the End of Year: 1940–2014 at: <http://www.gpoaccess.gov/usbudget/fy10/hist.html> (last visited November 10, 2010).

U.S. Senate Roll Call Votes 115th Congress – 1st Session, *Klobuchar Amendment* No. 178 to S.Con.Res. 3., at:

https://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=115&session=1&vote=00020#position (last visited February 2, 2017).

J. Urry, “The System of Automobility” (2004) 21 (4/5) *Theo., Cult. & Soci.*

D. Vaver, “Intellectual Property Today: Of Myths and Paradoxes” (1990) 69 *Can. Bar Rev.*

Y. Varoufakis, “Egalitarianism’s Latest Foe: A Critical Review of Thomas Piketty’s Capital in the Twenty-Frist Century” (2014) 69 *World Econ. Rev.*

Y. Varoufakis, “How I became an erratic Marxist” *The Guardian*, February 18, 2015, at: <http://www.theguardian.com/news/2015/feb/18/yanis-varoufakis-how-i-became-an-erratic-marxist> (last visited March 9, 2015).

Y. Varoufakis, interview with *la Repubblica*, “Basta ingerenze qui in Grecia e più tempo sul debito” *la Repubblica*, January 5, 2015, at: http://www.repubblica.it/economia/2015/01/05/news/yanis_varoufakis_basta_ingerenze_qui_in_grecia_e_pi_tempo_sul_debito-104320969/ (last visited January 25, 2015).

T. Veblen, “Why Economics is Not an Evolutionary Science” (1898) 12(4) *Quart. J. Econ.*

J. Vertuno, “Armstrong ‘done’ with defending legacy from agency” *National Post*, Saturday August 25, 2012.

T. Vi Pham, “Gender and the Management of Nature Reserves in Vietnam,” (October 2002) *Kyoto Rev. S.E. Asia.*

K. Vonnegut “Physicist, Purge Thyself – Address to the American Physical Society” *Chicago Tribune Magazine*, June 22, 1969.

T. Waits, “Step Right Up” *Small Change* (Hollywood: Asylum, 1976).

S.A. Waksman, “What Is an Antibiotic or an Antibiotic Substance” (1947) 39 (5) *Mycologia.*

P. Waldie, “But was it time theft?” *The Globe and Mail*, September. 9, 2011.

P. Waldie, “Does surfing the Internet at work qualify as ‘time theft?’” *The Globe and Mail*, September. 9, 2011, at: <http://m.theglobeandmail.com/news/national/does-surfing-the-internet-at-work-qualify-as-time-theft/article2159136/?service=mobile> (last visited September 10, 2011).

T. Walkom, “Brampton case shows P3s work – just not for the public” January 10, 2008, at: <http://www.thestar.com/article/292722> (last visited June 30, 2009).

M.W. Walsh & W. Bogdanich, “Syringe Manufacturer Settles Claim of Market Manipulation” The New York Times, July 3, 2004, at: <http://www.nytimes.com/2004/07/03/business/syringe-manufacturer-settles-claim-of-market-manipulation.html> (last visited July 1, 2014).

C.-L. Wang “Palo Alto Tiny BASIC” in *Dr. Dobb’s Journal of Tiny BASIC Calisthenics & Orthodontia: Running Light without Overbyte* (ed.) J. Warren (San Francisco: CPM Media, May/June 1976).

S.V. Ciriacy-Wantrup & R.C. Bishop “Common Property” as a Concept in Resources Policy (1975) 15 Nat. Res. J.

A.M.C. Waterman, “Analysis and Ideology in Malthus’s Essay on Population” (1991) 31(58) Australia Econ. Papers.

P.B. Watkins, “Drug Safety Sciences and the Bottleneck in Drug Development” (2011) 89 Clin. Pharma. & Therapeutics.

J. Watts, “Berta Cáceres, Honduran human rights and environment activist, murdered” The Guardian, March 4, 2016, at: <https://www.theguardian.com/world/2016/mar/03/honduras-berta-caceres-murder-environment-activist-human-rights> (last visited June 1, 2016).

D. Weatherall, “Research conduct and the case of Nancy Olivieri” (2005) 366 The Lancet.

C. Weeks, “Some antidepressants linked to aggression and suicide in young people, study says” The Globe and Mail, January 27, 2016, at: <http://www.theglobeandmail.com/life/health-and-fitness/health/some-antidepressants-linked-to-aggression-and-suicide-in-young-people-study-says/article28422986/> (last visited January 28, 2016).

C. Weeks & J. Taber, “Tory campaigner resigns over plagiarized speech” The Globe and Mail, Wednesday September 30, 2008 at: <http://www.theglobeandmail.com/servlet/story/RTGAM.20080930.welexnplagiarism0930/BNStory/politics/> (last visited October 5, 2008).

S.T. Weiss, “Eat dirt – the hygiene hypothesis and allergic diseases” (2002) 347(12) N.E.J.M.

J. Westheimer, “Higher Education or Education for Hire? Corporatization and the Threat to Democratic Thinking” (2010 April-May) The J. of Higher Ed. at: <http://www.academicmatters.ca/2010/04/higher-education-or-education-for-hire->

[corporatization-and-the-threat-to-democratic-thinking/#sthash.WRxGZg85.dpuf](#) (last visited April 4, 2014).

P.J. Williams, "Mourning in America" *The Nation*, July 30, 2007, at: <http://www.thenation.com/article/mourning-america> (last visited October 12, 2011).

C. Wilson, U.S. Department of Defence at: http://www.defense.gov/specials/secdef_histories/bios/wilson.htm. (last visited June 4, 2010).

D. Wilson, "Drug Firms Face Billions in Losses in '11 as Patents End" March 6, 2011 at: <http://www.nytimes.com/2011/03/07/business/07drug.html> (last visited March 25, 2011).

D. Wilson, "Push to Market Pill Stirs Debate on Sexual Desire" *The New York Times*, June 16, 2010, at: www.nytimes.com/2010/06/17/business/17sexpill.html?_r=0 (last visited July 20, 2011).

R. Wilson, "Presentation on behalf of the Nepean Chamber of Commerce to the Ontario Standing Committee on Social Development" March 17th, 1997, at: http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&BillID=&ParlCommID=54&Date=1997-03-17&Business=Bill+104%2C+Fewer+School+Boards+Act%2C+1997&DocumentID=18831#P142_9717 (last visited December 17, 2011).

R.F. Wilson, "The Death of Jesse Gelsinger: New Evidence of the Influence of Money and Prestige in Human Research" (2010) *Am.J.L. & Med.*

J. White, "Why it's time to resurrect a centuries" (2014) 222 (2970) *New Scientist*.

WHO, UNAIDS & UNICEF, *Towards Universal Access: Scaling Up Priority HIV/AIDS Interventions in the Health Sector: Progress Report 2010* at: <http://www.who.int/hiv/pub/2010progressreport/report/en/index.html> (last visited January 10, 2011).

J.G. Wright, "Clinicians and patients' welfare: where does academic freedom fit in?" (2004) 329 *B.M.J.*

J. Yang, "U.S. overlooked in debate over 'stem-cell tourism'" *The Toronto Star*, June 30, 2016, at: <https://www.thestar.com/news/world/2016/06/30/us-overlooked-in-debate-over-stem-cell-tourism.html> (last visited July 8, 2016).

G.J. Yonover, "What Hath (Not) *Chakrabarty* Wrought: From The Mouse That Roared To Hello Dolly And Beyond" (1998) 32 *Valparaiso U. L. Rev.*

D. Zamora, "Interview: Can We Criticize Foucault? (2014) Jacobin – Online, at: <https://www.jacobinmag.com/2014/12/foucault-interview/> (last visited December 25, 2014).

D.E. Zinner, "Medical R&D at the Turn of the Millennium" (2001) 5 Health Affairs.

Z. Rodionova, "Panama Papers: Credit Suisse and HSBC dismiss claims" April 5, 2016, at: <http://www.independent.co.uk/news/business/news/panama-papers-credit-suisse-and-hsbc-dismiss-claims-a6969011.html> (last visited June 25, 2016).

R. Zoellick, "Commodifying Wildlife? World Bank Launches Market Scheme for Endangered Species" Democracy Now! at: http://www.democracynow.org/2010/12/9/commodifying_wildlife_world_bank_launches_market (last visited December 14, 2010).

LEGISLATION

Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994, at: http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm (last visited December 4, 2010).

Agricultural Adjustment Act (AAA) (Pub. L. 73-10, enacted May 12, 1933).

An Act for the Prevention and Suppression of Combines Formed in Restraint of Trade [1889] S.C. c. 41.

An Act for Providing a Publick Reward for such Person or Persons as shall Discover the Longitude at Sea (1714) 12 A. St.2. c.15.

Bank of Canada Act, S. of C., 1934, c. 43.

Bayh-Dole Act of 1980, Pub. L. No. 96-517.

Bill C-32, An Act to amend the Copyright Act, at: <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=4580265&Language=e&Mode=1> (last visited December 1, 2010).

Constitution Act, 1982 (Schedule B of the *Canada Act 1982* (UK)) s. 91.

Canada Health Act, R.S.C. 1985, c. C-6.

Canada Pension Plan Act, R.S.C. 1985, c. C-8.

Drug Price Competition and Patent Term Restoration Act, P.L. 98-417 (1984).

Federal Food and Drugs Act (1906) (The “Wiley Act”) 34 Stat. L. 768.

Amendment to the Federal Food, Drug, and Cosmetic Act 76 Stat. 780 (1962).

Federal Reserve Act (ch. 6, 38 Stat. 251, enacted December 23, 1913, 12 U.S.C. ch.3).

Federal Technology Transfer Act of 1986, Pub. L. No. 99-502.

Food, Drug and Cosmetic Act of 1938, 52 US Stat. 1040.

Importation Act, 1846 (9 & 10 Vict. c. 22).

Harrison Narcotics Tax Act of 1914, Ch. 1, 38 Stat. 785.

An Act further to amend “The Indian Act, 1880,” S.C. 1884 (47 Vict.), c. 27, s. 3.

Medicare Prescription Drug, Improvement, and Modernization Act of 2003, P.L. 108-173 117 Stat. 2066 (2003).

Ministry of Reconstruction: Report of the Machinery of Government Committee, Cd. 9230, 1918 (U.K.).

National Industrial Recovery Act (NIRA), (Ch. 90, 48 Stat. 195, formerly codified at 15 U.S.C. sec. 703, enacted June 16, 1933).

National Prohibition Act of 1920, Pub.L. 66-66.

Narcotic Drugs Import and Export Act of 1922, 42 Stat. 596.

The 1937 Marijuana Tax Act, Pub. 238, 50 Stat. 551.

Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 STAT. 1590.

Old Age Security Act, R.S.C. 1985, c. O-9

Patent Act of 1836, Ch. 357, 5 Stat. 117 (July 4, 1836).

Patent Act, R.S.C. 1985, c. P-4, s. 2.

Production Of Recombinant Erythropoietin, US Pat. No. 5441868 A.

Representation of the People Act 1832 (2 & 3 Will. IV, c. 45).

Servicemen’s Readjustment Act of 1944, P.L. 78-346, 58 Stat. 284m.

Sherman Anti-Trust Act of July 2, 1890, 26 Stat. 209, 15 U.S.C. §§ 1-7.

Social Security Act (Act of August 14, 1935), ch. 531 49 Stat. 620.

Stevenson-Wydler Technology Innovation Act of 1980, Pub. L. 96-480.

TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 320 (1999), 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

Universal Declaration of Human Rights, GA Res 217A (III), UN GAOR, 3rd Sess., Supp. No. 13, UN Doc A/810 (1948) 71, Art. 19.

Universal Declaration on the Human Genome and Human Rights, 11 November 1997, Art. 12(b).

CASES

Abrams v. United States, 250 U.S. 616, 40 S.Ct. 17, 63 L. Ed. 1173 (1919).

American Tobacco Company vs. United States, 328 U.S. 781 (1946).

Apotex Inc. v. Wellcome Foundation Ltd. (2001), 10 C.P.R. (4th) 65, [2001] 1 F.C. 495, 195 D.L.R. (4th) 641 (F.C.A.), aff'd 21 C.P.R. (4th) 499, 219 D.L.R. (4th) 660 (S.C.C.).

Atlantic Works v. Brady 107 U.S. 192 (1883).

Association for Molecular Pathology v. Myriad Genetics, No. 11-725 U.S. (2012).

Association for Molecular Pathology v. Myriad Genetics, 569 U.S. 12-398 (2013).

Attorney General of Canada v. Attorney General of Ontario (Labour Conventions) [1937] A.C. 326.

Attorney General of Canada v. Attorney General of Ontario (The Employment and Social Insurance Act) [1937] A.C. 355.

Board of Regents of the State of Florida v. Taborsky, 648 So.2d 748 (Fla. 2d DCA 1994).

Bristol-Myers Squibb v. FH Faulding (1998) 41 I.P.R.

Burwell v. Hobby Lobby Stores, Inc., 2014 BL 180313, U.S., No. 13-354.

Canadian Broadcasting Corp. v. SODRAC 2003 Inc. [2015] 3 S.C.R. 615.

Citizens United v. Federal Election Commission, No. 08-205, 558 U.S. 310 (2010).

Consolboard Inc. v. MacMillan Bloedel (1981) 56 C. P. R. (2d) 145 (S.C.C.).

Consolboard Inc. v. MacMillan Bloedel (Saskatchewan) Ltd. (1981), 56 C.P.R. (2d) 145, 122 D.L.R. (3d) 203 (S.C.C.).

Diamond v. Chakrabarty, 447 U.S. 303 (1980).

Donaldson v. Beckett, 2 Brown's Parl. Cases 129, 1 Eng. Rep. 837; 4 Burr. 2408, 98 Eng. Rep. 257 (1774).

Dunsmuir v. New Brunswick, 1 S.C.R. 190; 2008 SCC 9.

Edwards v. AG Canada [1930] A.C. 123, 1 D.L.R. 98 (P.C.).

Fentress v. Shea Communications, No. 90-CI-06033 (Jefferson. Cir. Ct., Ky. March 29, 1991).

Forsyth v. Eli Lilly & Co., 904 F. Supp. 1153 (D. Haw. 1995).

Hamlyn v. More (the Case of Gloucester School, 1410) B. & M. 613.

“Harvard Mouse” Patent No. 4,736,866.

Harvard College v. Canada (Comm'r of Patents) (2002), 21 C.P.R. (4th) 417, 219 D.L.R. 4th 577 (S.C.C.).

Harvard College v. Canada (Commissioner of Patents) [2002] 4 S.C.R. 45, 2002 SCC 76.

Heaven v. Pender (1883) 11, Q.B.D. 503.

Holiday Shores Sanitary District v. Syngenta Crop Protection Inc et al, Illinois Southern District Court, Case No. 3:04-cv-00688, docket://gov.uscourts.ilsd.3-04-cv-00688, in “Court-released documents: Exhibit 19, part 1,” Source Watch – Center for Media and Democracy at: http://www.sourcewatch.org/images/f/f6/Exhibit_19_Part1.pdf (accessed April 2, 2014).

“Arlene May – Coroner’s Inquest – Jury’s Verdict and Recommendations,” Inquest into the deaths of Arlene May and Randy Iles, February 16 - July 2, 1998, Coroners Courts, Toronto, Ontario, at: <http://www.owjn.org/archive/arlene3.htm>.

Monsanto Canada Inc. v. Schmeiser (2004) 31 C.P.R. (4th) 161 (S.C.C.).

Monsanto Canada Inc. v. Schmeiser [2004] 1 S.C.R. 902.

Moore v. The Regents of University of California, 793 P.2d 479 (Cal. 1990).

Naglee v. Ingersoll 7 Pa. 185 (1847).

Railway Company. v. Sayles [1878] 97 US 554.

R. v. Parks, [1992] 2 S.C.R. 871.

Regina v. Dudley and Stephens 14 Q.B.D. 273 (1884).

Retractable Technologies, Inc. vs. Becton Dickinson and Company (Civil Action No. 2:07-cv-250, United States District Court, Eastern District of Texas).

Rockwell Graphic Sys., Inc. v. DEV Industries, Inc., 925 F.2d 174, 180 (7th Cir.1991).

Santa Clara County v. Southern Pacific Railroad, 118 U.S. 394 (1886).

Salomon v. A Salomon & Co Ltd [1897] AC 22.

Smith & Nephew PLC v Convatec Technologies Inc., & Anor [2013] EWHC 3955(Pat) (12 December 2013) at: <http://www.bailii.org/ew/cases/EWHC/Patents/2013/3955.html>.

“Opening Brief of Schering-Plough Corp.” WI. 3557974, (11th Cir. June1, 2004).

Tennessee Eastman Co. v. Comm’r of Patents (1970), 62 C.P.R. 117 (Ex.Ct.), aff’d 8 C.P.R. (2d) 202, 33 D.L.R. (3d) 459 (S.C.C.).

Tobin v. SmithKline Beecham Pharmaceuticals, 164 F. Supp. 2d 1278 (D.Wy. 2001).