# Retrospectives

# Hume on Money, Commerce, and the Science of Economics

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This feature addresses the history of economic terms and ideas. The hope is to deepen the workaday dialogue of economists, while perhaps also casting new light on ongoing questions. If you have suggestions for future topics or authors, please write to Joseph Persky of the University of Illinois at Chicago at 〈 jpersky@uic.edu〉.

### Introduction

David Hume (1711–1776) is arguably the most esteemed philosopher to have written in the English language. Many current philosophers, either in moral and political philosophy or in epistemology and metaphysics, describe themselves as Humeans (Norton and Taylor, 2009). During his lifetime, however, Hume was as well if not better known for his contributions to political economy, particularly for the essays published as the *Political Discourses* (1752). Hume left his mark on the economic thought of the physiocrats, the classical economists, and the American Federalists. Adam Smith, who met Hume circa 1750, was his closest friend and interlocutor for some 25 years. Their correspondence suggests that Smith labored under the formidable shadow cast by Hume, and that this accounts partly for Smith's prolonged delay in publishing *The Wealth of Nations* (Ross, 1995, pp. 243–47).

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Among modern economists, Hume's essays on money and trade have informed theorists of both Keynesian and Monetarist persuasions (Friedman, 1975; Samuelson, 1980; Mayer, 1980; Lucas, 1996). When asked what economists had learned about monetary theory in the past 25 years, Milton Friedman (1975, p. 177) replied that the better question would be to ask what had been learned in the 200 years since Hume. The answer is very little, he concluded: "We have advanced beyond Hume in two respects only: first, we have now a more secure grasp on the quantitative magnitudes involved; second, we have gone one derivative beyond Hume." In a similar spirit, Robert Lucas (1996) deemed Hume's 1752 work as the "beginnings of modern monetary theory." Hume's analysis of money more or less settled the prevailing questions of his time such that money ceased, with a few exceptions, to be central to economic discourse until the work of Knut Wicksell, Irving Fisher, and John Maynard Keynes.<sup>1</sup>

In this essay, we begin by discussing Hume's monetary economics, and then spell out his theory of economic development, noting his qualified enthusiasm for the modern commercial system. We end with an assessment of his views on the scientific standing of economics, specifically his counterintuitive argument that economics could be epistemologically superior to physics.

## **Hume's Monetary Theory**

Hume is best known among modern economists for his articulation of the quantity theory of money in an open economy. It was futile, Hume argued, to seek to attract ever more gold or silver (specie) within a nation, since this would only raise the overall price level, rendering imported goods more desirable, thus leading to an outflow of specie and a return to the original price level. This process, which came to be known as the specie-flow mechanism, insures that the domestic quantity of money is commensurate to each nation's level of output and thus achieves a global equilibrium. Like the oceans, money—defined in this case as metallic coins or specie—is always at sea-level, flowing to the nation with the most advantageous exports (Duke, 1979; Samuelson, 1980; Cesarano, 1998).

While Hume's global analysis treats money as neutral, within a nation he grants money the capacity to have real growth effects during the period between an increase in the money stock and the subsequent rise of prices and wages. "We find, that, in every kingdom, into which money begins to flow in greater abundance than formerly, every thing takes a new face: labour and industry gain life; the merchant becomes more enterprising, the manufacturer more diligent and skilful, and even the farmer follows his plough with greater alacrity and attention" (Hume, 1752

<sup>&</sup>lt;sup>1</sup> Except for the Banking-Currency School debates of the early 1800s, most classical economists relegated money to the sidelines. As John Stuart Mill (1848 [1965], vol. 3, p. 506) characteristically maintained, there is no "more insignificant thing, in the economy of society, than money."



[1985], p. 286). This view may appear to be inconsistent with Hume's specie-flow mechanism, which seems to demand that prices and wages adjust instantaneously to changes in the money supply, with neutral results on output.

We have each independently argued, albeit for different reasons, that the inconsistency is only apparent. One way to make sense of Hume's monetary theory is to recognize that he took pains to present the specie-flow mechanism in the form of a thought experiment, unleashed by a hypothetical overnight doubling of the money stock. This device served to establish the neutrality of money as a propensity, which is never fully instantiated (Schabas, 2008b). By contrast, Hume's account of a region with an influx of metallic money was imbedded in a real-world scenario, one in which a positive balance of trade enables the existing credit obligations to be discharged by coins. The eighteenth-century economy functioned significantly on credit, both because of the rapid expansion of banking and because of the scarcity of coins, the vast majority of which were also clipped and damaged (Muldrew, 1998; Sargent and Velde, 2002; Wennerlind, 2011). According to Hume, the injection of coins into a region had the effect of inspiring the weavers and farmers to work with greater intensity, in part because they purchased, without resorting to IOUs, more and better-quality goods from their local purveyors prior to any rise in employment, prices, or wages (Perlman, 1987; Schabas, 2008a).

More significantly, Hume's account of an increase in the money stock distinguished between an inflow of coins from abroad due to an increase in manufacturing exports and a domestic expansion of paper money engineered by the state (Wennerlind, 2005). While both types of monetary expansions had the temporary capacity to spark industry, only in the former case was the economic growth—the initial increase in manufacturing and the subsequent multiplier process—sufficient to absorb the new stock of money and minimize the ensuing inflation (Rotwein, 2007, pp. 197–98). The latter operation, of expanding the paper currency, however, should be avoided at all cost: "to encrease such a credit, can never be the interest of any trading nation" (Hume, 1752 [1985], p. 284). If we recognize the sharp distinction Hume drew between the two different types of monetary expansion, it also becomes clear that in the case of manufacturing exports, Hume was not an unqualified quantity theorist (Wennerlind, 2005).

A legislator seeking economic prosperity should promote manufacturing and commerce and let money take care of itself; any attempt to interfere with its natural level and diffusion would only prove counterproductive (Wennerlind, 2008). That said, a legislator could encourage pecuniary transactions in place of barter, prohibit the hoarding of silver and gold, and promote the "right use of paper-money," by which Hume meant privately issued banknotes (Hume, 1752 [1985], p. 318; see Wennerlind, 2001, 2006). Hume also acknowledged the fact that publicly issued redeemable notes constituted a permanent feature of "every opulent kingdom," but he vociferously cautioned against their over-issuance (Hume, 1752 [1985], p. 284). Hume was particularly concerned with paper notes associated with the national



debt, such as the Bank of England bills and Exchequer notes. As John Law's experiment with the French currency from 1716 to 1720 had shown, linking the public debt to the nation's paper currency could have disastrous consequences (p. 361).<sup>2</sup> Hume also noted that a similar lack of discipline had transpired in the American colonies. Publicly issued paper notes had for some time "passed in all payments, by convention," and this "might have gone on, had it not been abused by several assemblies, who issued paper without end, and thereby discredited the currency" (quotation by Hume, in Rotwein, 2007, p. 215).

Hume was critical of the Crown's liberties with public credit, particularly the measures taken by Sir Robert Walpole, First Lord of the Treasury (1721–42), because they facilitated war on an ever-grander scale (Hume, 1752 [1985], pp. 350–52). In Hume's lifetime, there were only brief periods when Britain was not at war, and he himself witnessed combat as a young man while serving as personal secretary to Lt.-General James St. Clair, first in France and then in the Netherlands. Even if Britain continued to prevail in its military conflicts, its power and independence would be seriously compromised by its increasing indebtedness. Taxes to service the debt, Hume conjectured, would become so crippling that "either the nation must destroy public credit, or public credit will destroy the nation" (1752 [1985], pp. 360-61; see also Hont, 2005).

#### **Hume on Commercial Modernization**

Hume did not fully subscribe to any of the prevailing eighteenth-century schools of thought such as mercantilism or cameralism, nor could Hume be said to rob Adam Smith of his place as the founder of classical political economy. Although Hume explicitly sought laws pertaining to economic phenomena such as money and prices, trade and commerce, he did not offer a systematic economic theory as we know it. To appreciate Hume's economic vision, one must read his essays of 1752 in conjunction with his other works. His Treatise of Human Nature (1739–40) contains a rich and trenchant account of human agency as well as insights on the nature of contracts, property, and money (Wennerlind, 2001; Davis, 2003; Sugden, 2006; Grüne-Yanoff and McClennen, 2008). Hume's multivolume History of England (1754–62) attends throughout to economic conditions and, more significantly, forges a coherent narrative of the advent and growth of modern commerce that

<sup>&</sup>lt;sup>2</sup> On Hume's complicated regard for John Law, see Emerson (2008). As a young man living in London and Edinburgh, Hume rubbed shoulders with leading bankers and merchants and thus understood the function of bonds, bills, and lines of credit (Hume, 1752 [1985], pp. 318-20). Later in life, during his employment at the British embassy in Paris in the mid 1760s. Hume assisted in the settlement of Quebec's paper (playing card) currency. Because of the long winter of 1685 that restricted shipments of gold, the authorities resorted to playing cards as a temporary measure. The cards continued to circulate, were infrequently redeemed, and became legal tender by 1705 (Dimand, 2008).



celebrates its civilizing and salutary effects (Wennerlind, 2002; Skinner, 2009; Wootton, 2009).

When seen in its entirety, Hume's favorable account of the rise and spread of commerce across the globe nevertheless raised fundamental questions about the significance of wealth for human flourishing. For example, while Hume championed certain kinds of luxury consumption as sources of pleasure and as incentives to industriousness, he also pointed out that there are other kinds of luxuries that soon "draw ruin upon us, and incapacitate us for business and action" (Hume, 1739–40 [2000a], p. 389). Certainly, "the most expensive luxury" is inferior to the enjoyment of "a poem or a piece of reasoning" (Hume, 1741a [1985], p. 5). A pursuit of luxury that does not leave enough time for "ambition, study, or conversation, is a mark of stupidity, and is incompatible with any vigour of temper or genius" (Hume, 1752 [1985], p. 269).3 Hume worried about the human propensity for greed; in his words, avarice is "insatiable, perpetual, universal, and directly destructive of society" (Hume, 1739–40 [2000a], p. 316). If the system of private property was respected, however, avarice could be channeled so as to promote a higher standard of living, especially among the middling sorts. As wealth expanded over time, stimulated by industry, prudence, and the accumulation of property, manufactured luxuries would eventually become conveniences and even necessities.

Hume championed higher wages, arguing that a healthy remuneration was the best incentive for diligence and ingenuity and that higher levels of consumption tend toward greater happiness, at least up to a point. While conservative in temperament, he discerned that at the margin, higher incomes brought more happiness to the poor than to the rich (Hume, 1752 [1985], p. 265). He saw that the low price of capital generally coincided with high wages, in his view because of the abundance of capital in a flourishing state. Hume thus stressed the importance of capital accumulation, including efforts to foster both knowledge and virtue. "We cannot reasonably expect, that a piece of woollen cloth will be wrought to perfection in a nation, which is ignorant of astronomy, or where ethics are neglected" (Hume, 1752 [1985], p. 270–71). Arguing that there was an "indissoluble chain" linking "industry, knowledge, and humanity," Hume further suggested that modern commerce had enhanced our capacity for honesty, probity, sociability, and politeness in both the private and public spheres. This enhancement of virtue contributed to the overall stock of trust, as evidenced by the increased circulation of bank notes, as well as the dramatic growth of wholesale markets, in which contracts based on sampling and future delivery were prevalent (Ignatieff, 1984; Schabas, 1994; Boyd, 2008).

Hume believed that it was in the interest of all nations to undergo commercialization and that, once they were part of the fraternity of trading nations, a kind of global justice would ensue. Since capital was more mobile than labor, its outflow to

<sup>&</sup>lt;sup>3</sup> Hume appreciated the Stoics for their account of the "empty and transitory nature of riches" (Hume 1748 [2000b], p. 35). Susato (2006), Berry (2008), and Schabas (forthcoming) canvass Hume's circumspect views on the acquisition of luxuries.



regions with lower wages meant that a nation, once developed, could not sustain its economic hegemony indefinitely. Hume saw this migration of economic opportunity as potentially unlimited; each nation would reach its economic height only to be superseded by another. As such, he saw that the future lay rather with America or even China, if shipping costs could be brought down. In a letter to James Oswald, Hume noted presciently that "a Chinese works for three-halfpence a day, and is very industrious. Were he as near us as France or Spain, everything we use would be Chinese" (quotation by Hume, in Rotwein, 2007, p. 198).

Hume was cosmopolitan by inclination. Nevertheless, his experience with the underdevelopment and political instability of the Scottish Highlands figured prominently in the genesis of his economics (Emerson, 2008). While he was unequivocally in favor of commercial modernization, he predicted that social strife would increase if the transition unfolded too quickly. He therefore tried to convince the political elite of Edinburgh to move more cautiously in the aftermath of the Jacobite rebellion of 1745. Commerce, Hume argued, could not be imposed on the region until a generation or more had enjoyed an agrarian surplus. The best policies were therefore to ensure that property and contracts were honored and commodity taxes kept to a moderate level to promote industrious habits; manufacturing and trade would follow in their wake.

Hume granted the possibility that a wealthy country, though no longer the dominant economic power, might sustain its prosperity by maintaining the skills that enabled it to rise in the first place (Hont, 2005). Hume pointed to the examples of Holland and England, the former for its prominence as a shipping nation and the latter as a major textile producer. In the first half of the eighteenth century, a series of pamphlets expressed the English worry that lower wages in Ireland and Scotland would hasten the demise of its cloth manufacturing (Hont, 2008). In response, Hume argued that England had little to fear from the dismantling of its trade barriers, as long as its cloth was produced efficiently and reputably. Overall, he was in support of freer trade, although not without some qualification: in near-famine conditions, grain should be priced so as to avoid starvation, and in the case of infant industries, such as linen production in Scotland in the 1740s, tariffs could be justified (Berdell, 1996; Emerson, 2008).

Hume may be at his finest in addressing the problem of the uneven distribution of wealth among nations, the so-called "rich-country poor-country question" (Hont, 2005; 2008). He weaves a tapestry both colorful and diverse, looking back to ancient Rome and forward to the Yankee supremacy. Wealth ebbed and flowed from one nation to another such that each upturn and inevitable downturn in a given nation unfolded at a rate of about three or four centuries (Schabas, 2008a). But it was also possible, concomitant with these long waves, for the aggregate wealth of the globe to increase through international trade and world peace. "Nature, by giving a diversity of geniuses, climates, and soils, to different nations, has secured their mutual intercourse and commerce, as long as they all remain industrious and civilized" (quotation by Hume, in Rotwein, 2007, p. 79).



## **Hume on the Scientific Standing of Economics**

Hume's (1752 [1985], p. 254) opening essay of the *Political Discourses* aspires to devise a science of commerce, one with "universal propositions, which comprehend under them an infinite number of individuals, and include a whole science in a single theorem." In an earlier essay of 1742, he asserts that there are some laws of politics (which included economics) that may be "almost as general and certain . . . as any which the mathematical sciences afford us" (Hume, 1941b [1985], p. 16). Indeed, a striking characteristic of Hume's economic writings is his categorical voice, asserting causal relations that are known "almost with certainty" or that "no one can doubt." This is in contrast to the more skeptical tenor of his earlier writings on epistemology and metaphysics (Henderson, 2010).

From his earliest publications, Hume elevated the moral sciences (economics and politics) to the epistemic level of the natural sciences. One reason for this was his allegiance to "fallibilism," the belief that all scientific laws are probabilistic and thus subject to revision. Another was his account of mental machinery, whereby our minds operated along a limited stock of associations or causal paths that in turn yielded a predictable account of human behavior. And yet another reason stemmed from his efforts to secure empirical support, both qualitative and quantitative, for his theoretical claims in economics. We will examine each in turn.

Book One of Hume's *Treatise of Human Nature* can be viewed as a systematic dismantling of the received view in natural philosophy. Among his targets are the contributions of Isaac Newton, particularly Newton's commitment to atomic particles, the vacuum, and "God's sensorium"—the framework of absolute space and time that was required to motivate the existence of forces (Schliesser, 2007). Hume was also wary of Newton's law of gravitational attraction: not the formal properties of the law that are logically entailed by positing a central force, but the fact that we have no empirical access to the purported mechanisms by which bodies attract one another. As a thorough-going empiricist, Hume insisted that our ideas of "power, force, [and] energy" remain "obscure and uncertain" (Hume (1748 [2000b], p. 50).<sup>4</sup>

Hume was even more devastating about the tools by which we build our edifice of knowledge. There is no guarantee that the future will resemble the past; the world might at any moment take a radical turn in its operations. "The scenes of the universe are continually shifting, and one object follows another in an uninterrupted succession; but the power or force, which actuates the whole machine is entirely concealed from us" (Hume, 1748 [2000b], p. 51). While Hume grants that we might over time discern more underlying powers or forces, he is adamant that we will never reach

<sup>&</sup>lt;sup>4</sup> To Newton's credit, he also admitted to complete ignorance on this matter. Hume (1739–40 [2000a], p. 47n) noted that "nothing is more suitable to that [Newtonian] philosophy, than a modest scepticism to a certain degree, and a fair confession of ignorance in subjects, that exceed all human capacity." Incidentally, Albert Einstein acknowledged a debt to Hume leading up to his 1905 pronouncements on special relativity, with specific appreciation for Hume's sensory reductionism and eschewal of all things metaphysical (Norton, 2010).



the fundamental causes. He notes "how soon nature throws a bar to all our enquiries concerning causes, and reduces us to an acknowledgment of our ignorance" (pp. 49–50). In sum, we cannot prove that nature is fundamentally uniform.

To find a way out of this skepticism, Hume points towards our ability to survive as a species and to regulate our conduct in the world. Our relative success in this gives us reason to hope that there is a "pre-established harmony between the course of nature and the succession of our ideas" (Hume, 1748 [2000b], p. 44; see also Stroud, 1977; Baier, 1991). Our perceptual apparatus, in short, enables inferences and patterns that correspond, in part, to some underlying regularity. With repeated instances of correlated events, we start to track uniformities and thus form reliable expectations (Biro, 2009).

For Hume, scientific inquiry is a natural extension of this same process. Laws are the product of the habitual exposure to similar events for which there has been no exception, but the possibility of a single counterexample in the future must always be entertained (Hume, 1748 [2000b], p. 47). Nevertheless, the little knowledge we humans possess serves to promote our functioning as creatures. Hume emphasizes that all knowledge of the external world is delimited by our human capacities, and hence we must first arrive at generalizations about our behavior before developing the natural sciences: "the science of man is the only solid foundation for the other sciences" (Hume, 1739–40 [2000a], p. 4).5

Indeed, for Hume, we ascribe a greater number of uniformities to the human realm than we do to the natural realm; "from observing the variety of conduct in different men, we are enabled to form a greater variety of maxims, which still suppose a degree of uniformity and regularity" (Hume, 1748 [2000b], p. 65). In other words, there is no law that demonstrates the overarching uniformity of physical nature, just laws about specific uniformities—planets and pendula, for example. Hume believed that it was impossible to know that the fundamental building blocks of the physical world were uniform. There is, however, more justification for the meta-induction that establishes overarching uniformity in the human realm, precisely because, for Hume, there was a larger and more varied set of supporting regularities.<sup>6</sup>

Introspection served Hume well in this regard. Hume believed that the mind operated according to a limited set of faculties or "mental powers" and that these could be observed and ascertained by "reflection" (Hume, 1748 [2000b], pp. 10–11). Once understood, the patterns of our beliefs and desires explain the patterns

<sup>&</sup>lt;sup>6</sup> Hume is reasoning in a circle here, since he must use induction to draw this comparison of the degrees of overarching uniformity in the two realms. Newton's law of universal gravitation might also tip the balance in favor of the natural sciences, but Hume did not see things this way (nor would his contemporaries). By the nineteenth century, philosophers such as John Stuart Mill put much more weight on the convergence and ever-increasing number of laws in natural science as the means to motivate the belief in nature's uniformity, although Mill also firmly believed in the scientific legitimacy of economics and its comparable standing to physics (Scarre, 1998; Schabas, 2005, pp. 126–33).



<sup>&</sup>lt;sup>5</sup> J. M. Keynes and F. A Hayek both drew inspiration from Hume's privileging of the human sciences (Dow, 2009).

evinced by human actions. In the economic realm, where we deal with "the actions and volitions of intelligent agents," we can safely assume that "the conjunction between motives and voluntary actions is as regular and uniform, as that between the cause and effect in any part of nature." For example, a producer "expects, that, when he carries his goods to market, and offers them at a reasonable price, he shall find purchasers; and shall be able, by the money he acquires, to engage others to supply him with those commodities, which are requisite for his subsistence" (Hume, 1748 [2000b], pp. 67–68).

Hume believed that in economic inquiry we have the means to venture more deeply into the internal causes of the relevant phenomena than in the physical sciences, where we are well-advised to "confine our speculations to the *appearances* of objects to our senses, without entering into disquisitions concerning their real nature and operations" (Hume, 1739–40 [2000a], p. 46n). In a well-known passage that contrasts the natural and the human sciences, Hume (p. 258) remarks that the human sciences are superior "because we not only observe, that men *always* seek society, but can also explain the principles, on which this universal propensity is founded." Moreover, if we are presented with an account of human action that contravenes what we know from these additional explanatory resources, we can be confident in ascribing a higher degree of falsity to such claims.<sup>7</sup>

To give a modern-day version of this, consider Amartya Sen's (1977) account of counter-preferential behavior in his seminal essay "Rational Fools," which digs one layer beneath the framework of revealed preference theory. Sen appeals to our own sense of inner decency (truth-telling and honesty) to demonstrate the shortcomings of the mainstream account of rational choice. It would be much harder in physics to find resources that could notionally challenge the veracity of the principle of inertia, for example, except to turn to mathematical operations (Cartwright, 1983, pp. 59–62).

A careful reading of Hume's economic writings reveals a systematic thinker who generated his economics not only from the armchair but also an engagement with the world and the extant empirical record. Hume was first and foremost a philosopher, but he was also a man of the world, meeting and corresponding with merchants and bankers, statesmen and aristocrats. His accounts of his travels to France, Holland, Austria, and Italy in the 1730s and 40s draw comparisons about standards of living, patterns of urbanization, and commercial practices (Ross, 2008;

<sup>&</sup>lt;sup>7</sup> Adam Smith held similar views. As a young man fresh from Oxford, he became an expert in the history of physics and astronomy and, in his first book, the *Theory of Moral Sentiments* (1759), he ridiculed the French natural philosophers for subscribing to the Cartesian system of vortices for nearly a century. No account in the human sciences, however, could "deceive us so grossly, nor depart so very far from all resemblance to the truth." A person may describe a distant country and provide absurd fictions that he disguises as matters of fact, "but when a person pretends to inform us of what passes in our neighbourhood, . . . he may deceive us in many respects, yet the greatest falsehoods which he imposes upon us must bear some resemblance to the truth, and must even have a considerable mixture of truth in them" (Smith, 1759 [1976], pp. 313–14). Natural science is that distant country and economics our local parish.



Rothschild, 2009). His economic writings reflect sustained efforts to observe and estimate features of the European economic landscape, noting price differentials for grain, taxes, duties, and interest rates.

Hume also took advantage of the inexpensive print material on commerce that became readily available during the first half of the eighteenth century—hundreds of pamphlets, broadsides, and periodicals debated the questions of trade and finance (Poovey, 2008; Mokyr, 2009). Whether reading the Gentleman's Magazine, Jonathan Swift's Short View of the State of Ireland (1727–28), or Malachy Postlethwayt's Universal Dictionary of Trade and Commerce (1751), to name but a few, Hume had access to an abundance of economic data.<sup>8</sup> He refers authoritatively to the leading economic indicators of his time, such as estimations of aggregate money supply, output, trade levels, and population. He also made stabs at price indexing, drawing temporal comparisons on the price of corn measured in silver. The nominal price of corn in France in 1750, for example, was the same as it had been in 1683, but given a significant debasement of the currency, this meant that the silver price had been reduced considerably and bread was much cheaper.<sup>9</sup>

Classical texts similarly provided a wealth of data. In one comparison, Hume estimated that a mere 1.6 million pounds per annum was needed to sustain the Roman Legions, while the British Navy alone cost 2.5 million (Hume, 1752 [1985], pp. 282–83n). Most impressive was his use of a wide array of sources to establish, contrary to the conventional wisdom of his day, the superior size of the European population of 1750 to Rome at its height (pp. 377–464).

Hume's statistical (and probabilistic) bent is evident throughout his writings. Indeed, there is good reason to believe that one of his works published posthumously, Dialogues Concerning Natural Religion (1779), was informed by the ideas of Thomas Bayes (d. 1761), progenitor of Bayesianism (Salmon, 1978; Raynor, 1980). Although it is unlikely that Hume knew or understood Jacob Bernoulli's proof for the law of large numbers issued in 1713, he more than once noted the benefits of a large sample and the pitfalls of hasty generalization. When it comes to human actions, Hume suggests that more than half of our quotidian inferences are "attended with more or less degrees of certainty, proportioned to our experience of the usual conduct of mankind in such particular situations." As an example, he suggests "a man who at noon leaves his purse full of gold on the pavement at Charing Cross, may as well expect that it will fly away like a feather, as that he will find it untouched an hour after" (1748 [2000b], pp. 69-70).

<sup>&</sup>lt;sup>9</sup> Hume took his figures from a well-known text by Charles Ferrère Du Tot (Hume, 1752 [1985], p. 287; see also Velde, 2009). The silver price of corn was later adopted by Adam Smith as the best index for century-by-century comparisons.



<sup>&</sup>lt;sup>8</sup> The Gentleman's Magazine periodically included regional price charts for corn and other commodities, as well as other economic statistics. Swift was one of Hume's favorite authors (Hume (1752 [1985], p. 310); Ross (2008, p. 33), Postlewayt's Dictionary was wideley circulated in installments (Hutchison (1988, pp. 241-43)

It is important to realize that Hume forged his views about the epistemic advantages of the human sciences before 1750, when it was still reasonable to challenge the legitimacy of Newtonian physics (Schliesser, 2007). The general laws of economics, while not as systematically or rigorously laid out as those in physics and astronomy, were nonetheless able to appeal to a significant quantity of evidence, and Hume made a concerted effort to deepen this body of knowledge. More importantly, Hume was confident that he had command of a robust system of economic relationships, one that was confirmed by observations found around the world and reaching back to antiquity. It was this confidence and sustained enthusiasm, whether warranted or not, that helped propel economic discourse along the path towards scientific respectability by the early nineteenth century.

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#### References

Baier, Annette. 1991. A Progress of Sentiments. Cambridge: Cambridge University Press.

Berdell, John. 1996. "Innovation and Trade: David Hume and the Case for Freer Trade." History of Political Economy, 28(1): 107–26.

Berry, Christopher J. 2008. "Hume and Superfluous Value (or the Problem with Epictetus' Slippers)." In David Hume's Political Economy, ed. Carl Wennerlind and Margaret Schabas, 49-64. London and New York: Routledge.

Biro, John. 2009. "Hume's New Science of the Mind." In The Cambridge Companion to Hume, 2<sup>nd</sup> edition, ed. David Fate Norton and Jacqueline Taylor, 40-69. Cambridge: Cambridge University Press.

Boyd, Richard. 2008. "Manners and Morals: David Hume on Civility, Commerce, and the Social Construction of Difference." In David Hume's Political Economy, ed. Carl Wennerlind and Margaret Schabas, 65-85. London and New York: Routledge.

Cartwright, Nancy. 1983. How the Laws of Physics Lie. Oxford and New York: Oxford University Press.

Cesarano, Filippo. 1998. "Hume's Specie-Flow

Mechanism and Classical Monetary Theory: An Alternative Interpretation." Journal of International Economics, 45(1): 173-86.

Davis, Gordon F. 2003. "Philosophical Psychology and Economic Psychology in David Hume and Adam Smith." History of Political Economy, 35(2): 269-304.

Dimand, Robert W. 2008. "David Hume on Canadian Paper Money." In David Hume's Political Economy, ed. Carl Wennerlind and Margaret Schabas, 168-80. London and New York: Routledge.

Dow, Sheila C. 2009. "David Hume and Modern Economics." Capitalism and Society, 4(1): 1-29.

Duke, Michael. 1979. "David Hume and Monetary Adjustment." History of Political Economy, 11(4): 572–87.

Emerson, Roger L. 2008. "The Scottish Contexts for David Hume's Political-Economic Thinking." In David Hume's Political Economy, ed. Carl Wennerlind and Margaret Schabas, 10-30. London and New York: Routledge.

Friedman, Milton. 1975. Discussion in the



symposium "25 Years after the Rediscovery of Money: What Have We Learned?" *American Economic Review*, 65(2): 176–9.

Grüne-Yanoff, Till, and Edward F. McClennen. 2008. "Hume's Framework for a Natural History of the Passions." In *David Hume's Political Economy*, ed. Carl Wennerlind and Margaret Schabas, 86–104. London and New York: Routledge.

**Henderson, Willie.** 2010. The Origins of David Hume's Economics. London and New York: Routledge.

**Hont, Istvan.** 2005. *Jealousy of Trade*. Cambridge, MA: Harvard University Press.

Hont, Istvan. 2008. "The 'Rich Country-Poor Country' Debate Revisitied: The Irish Origins and French Reception of the Hume Paradox." In *David Hume's Political Economy*, ed. Carl Wennerlind and Margaret Schabas, 243–323. London and New York: Routledge.

**Hume, David.** 1739–40 [2000a]. A Treatise of Human Nature, ed. David Fate Norton and Mary J. Norton. Oxford: Oxford University Press.

**Hume, David.** 1741a [1985]. "Of the Delicacy of Taste and Passion." Reprinted as part of *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, 3–8. Indianapolis, IN: Liberty Classics.

**Hume, David.** 1741b [1985]. "That Politics May be Reduced to a Science." Reprinted as part of *Essays: Moral, Political, and Literary*, ed. Eugene F. Miller, 14–31. Indianapolis, IN: Liberty Classics.

**Hume, David.** 1748 [2000b]. *An Enquiry Concerning Human Understanding*. Reprint of 1772 edition, ed. Tom L. Beauchamp. Oxford: Oxford University Press.

**Hume, David.** 1752 [1985]. *Political Discourses*. 1777, 11<sup>th</sup> edition reprinted as part of *Essays: Moral, Political, and Literary* ed. Eugene F. Miller. Indianapolis, IN: Liberty Classics.

**Hume, David.** 1754–62 [1983]. *The History of England*. Reprint of the 1778 edition, ed. William B. Todd. Indianapolis, IN: Liberty Classics.

Hume, David. 1779 [2007]. Dialogues Concerning Natural Religion (pub. 1779), in Dialogues Concerning Natural Religion and Other Writings (pub. 2007), ed. Dorothy Coleman. Cambridge: Cambridge University Press.

**Hutchison, Terence.** 1988. Before Adam Smith: The Emergence of Political Economy, 1662–1776. Oxford: Basil Blackwell.

**Ignatieff, Michael.** 1984. The Needs of Strangers. London: Chatto and Windus.

**Lucas, Robert.** 1996. "Nobel Lecture: Monetary Neutrality." *Journal of Political Economy*, 104(4): 661–82. Mayer, Thomas. 1980. "David Hume and Monetarism." *Quarterly Journal of Economics*, 95(1): 89–101.

Mill, John Stuart. 1848 [1965]. Principles of Political Economy. Reprint of the 1871, 7<sup>th</sup> edition in vols. 2 and 3 of Collected Works of John Stuart Mill, ed. J.M. Robson. Toronto: University of Toronto Press.

**Mokyr, Joel.** 2009. The Enlightened Economy: An Economic History of Britain 1700–1850. New Haven, CT: Yale University Press.

**Mossner, Ernest Campbell.** 1980. *The Life of David Hume,* 2<sup>nd</sup> ed. Oxford: Clarendon.

Muldrew, Craig. 1998. The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England. New York: St. Martin's Press.

Norton, David Fate, and Jacqueline Taylor, ed. 2009. *The Cambridge Companion to Hume*, 2<sup>nd</sup> ed. Cambridge: Cambridge University Press.

Norton, John D. 2010. "How Hume and Mach Helped Einstein Find Special Relativity." In *Discourse on a New Method: Reinvigorating the Marriage of History and Philosophy of Science*, ed. M. Dickson and M. Domski, 359–86. Chicago: Open Court.

**Perlman, Morris.** 1987. "Of a Controversial Passage in Hume." *Journal of Political Economy*, 95(2): 274–89.

**Poovey, Mary.** 2008. Genres of the Credit Economy: Mediated Value in Eighteenth- and Nineteenth-Century Britain. Chicago and London: University of Chicago Press.

**Postlethwayt, Malachy.** 1751. The Universal Dictionary of Trade and Commerce, 2 vols. London.

**Raynor, David.** 1980. "Hume's Knowledge of Bayes's Theorem." *Philosophical Studies*, 38(1): 105–106.

Ross, Ian Simpson. 1995. The Life of Adam Smith. Oxford: Clarendon.

Ross, Ian Simpson. 2008. "The Emergence of David Hume as a Political Economist: A Biographical Sketch." In *David Hume's Political Economy*, ed. Carl Wennerlind and Margaret Schabas, 31–48. London and New York: Routledge.

Rothschild, Emma. 2009. "The Atlantic Worlds of David Hume." In Soundings in Atlantic History: Latent Structures and Intellectual Currents, 1500–1830, ed. Bernard Bailyn and Patricia Denault, 405–50. Cambridge: Harvard University Press.

**Rotwein, Eugene, ed.** 2007. Writings on Economics, David Hume. New Brunswick, NJ: Transaction Publishers. (Orig. pub. 1955).

**Salmon, Wesley C.** 1978. "Religion and Science: A New Look at Hume's *Dialogues*," *Philosophical Studies*, vol. 33: 143–76.



Samuelson, Paul. 1980. "A Corrected Version of Hume's Equilibrating Mechanism for International Trade." In *Flexible Exchange Rates and the Balance of Payments: Essays in Memory of Egon Sohmen*, ed. John Chipman and Charles Kindleberger, 141–58. Amsterdam: North Holland.

Sargent, Thomas J., and François R. Velde. 2002. *The Big Problem of Small Change*. Princeton: Princeton University Press.

Scarre, Geoffrey. 1998. "Mill on Induction and Scientific Method." In *The Cambridge Companion to Mill*, ed. John Skorupski, 112–38. Cambridge: Cambridge University Press.

Schabas, Margaret. 1994. "Market Contracts in the Age of Hume." In *Higgling: Transactors and Their Markets*, ed. Neil De Marchi and Mary S. Morgan, 117–34. Durham and London: Duke University Press.

**Schabas, Margaret.** 2005. *The Natural Origins of Economics*. Chicago: University of Chicago Press.

Schabas, Margaret. 2008a. "Temporal Dimensions in Hume's Monetary Theory." In *David Hume's Political Economy*, ed. Carl Wennerlind and Margaret Schabas, 127–45. London and New York: Routledge.

Schabas, Margaret. 2008b. "Hume's Monetary Thought Experiments." *Studies in the History and Philosophy of Science*, 39(3): 161–69.

Schabas, Margaret. Forthcoming. "Hume on Economic Well-Being." In *The Continuum Companion to Hume*, ed. Alan Bailey and Dan O'Brien. London and New York: Continuum.

Schliesser, Eric. 2007. "Hume's Newtonianism and Anti-Newtonianism." *Stanford Encyclopedia of Philosophy* (online). http://plato.stanford.edu/entries/hume-newton/.

**Sen, Amartya K.** 1977. "Rational Fools: A Critique of the Behavioral Foundations of Economic Theory." *Philosophy and Public Affairs*, 6(4): 317–44.

**Skinner, Andrew.** 2009. "Hume's Principles of Political Economy." In *The Cambridge Companion to Hume* (2<sup>nd</sup> ed.), ed. David Fate Norton and Jacqueline Taylor, 381–413. Cambridge: Cambridge University Press.

Smith, Adam. 1759 [1976]. The Theory of Moral

Sentiments, Reprint of the 1790, 6<sup>th</sup> edition, ed. D. D. Raphael and A. L. Macfie. Oxford: Clarendon Press

Stroud, Barry. 1977. *Hume*. London: Routledge. Sugden, Robert. 2006. "Hume's Non-instrumental and Non-propositional Decision Theory." *Economics and Philosophy*, 22(2): 365–91.

**Susato, Ryu.** 2006. "Hume's Nuanced Defense of Luxury." *Hume Studies*, 32(1): 167–86.

**Swift, Jonathan.** 1727–8. A Short View of the State of Ireland. Dublin.

**Velde, François.** 2009. "The Life and Times of Nicolas Dutot." *Working Paper Series* WP-09-10, Federal Reserve Bank of Chicago.

Wennerlind, Carl. 2001. "The Link between David Hume's *A Treatise of Human Nature* and His Fiduciary Theory of Money." *History of Political Economy*, 33(1): 139–60.

**Wennerlind, Carl.** 2002. "David Hume's Political Philosophy: A Theory of Commercial Modernization." *Hume Studies*, 28(2): 247–70.

Wennerlind, Carl. 2005. "David Hume's Monetary Theory Revisited: Was He Really a Quantity Theorist and an Inflationist?" *Journal of Political Economy*, 113(1): 223–37.

Wennerlind, Carl. 2006. "David Hume as a *Political* Economist." In *History of Scottish Economic Thought*, ed. Alisdair Dow and Sheila Dow, 46–70. London: Routledge.

Wennerlind, Carl. 2008. "An Artificial Virtue and the Oil of Commerce: A Synthetic View of Hume's Theory of Money." In *David Hume's Political Economy*, ed. Carl Wennerlind and Margaret Schabas, 105–26. London and New York: Routledge.

Wennerlind, Carl. 2011. Casualties of Credit: The English Financial Revolution, 1620–1720. Cambridge, MA: Harvard University Press.

Wennerlind, Carl, and Margaret Schabas, ed. 2008. *David Hume's Political Economy*. London and New York: Routledge.

**Wootton, David.** 2009. "Hume 'The Historian'." In *The Cambridge Companion to Hume*. 2<sup>nd</sup> edition, ed. David Fate Norton and Jacqueline Taylor, 447–79. Cambridge: Cambridge University Press.



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