

The political economy of post-secondary education: a comparison of British Columbia, Ontario and Québec

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Abstract A policy sociology approach is taken to examine the connections between neo-liberalism, post-secondary provincial education (PSE) policy in Canada and the impact of those policies. Our thesis regarding the broad political economy of PSE is that over the last two decades the adoption of this ideology has been a major cause of some dramatic changes in these policies and has brought about a fundamental transformation of PSE in Canada. The discussion builds on a comparative, multiple, nested case study conducted at the provincial (Québec, Ontario and British Columbia) and national level. Through the analysis of key provincial and federal documents, the team concludes that five themes dominated the PSE policy-making process. These themes are Accessibility, Accountability, Marketization, Labour Force Development and Research and Development. In discussing these themes, we illustrate their impact on and within the three provincial PSE systems: BC, Ontario and Québec. In the conclusion, we place the changes in their political and economic contexts and explicate the intended and unintended consequences of these policy priorities. We argue that the pressure for access has led to the emergence of new institutional types, raising new questions about differentiation, mandate and identity and new lines of stratification. A trend toward vocationalism in the university sector has coincided with ‘academic drift’ in the community college sector, leading to convergences in programming and institutional functions across the system, as well as competition for resources, students, and external partners. Unprecedented demand has made education a viable industry, sustaining both a proliferation of private providers and a range of new entrepreneurial activities within public institutions. Levels and objectives of public funding have swung dramatically

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over the period. Public investments in PSE, in the form of capital grants and tuition subsidies, have alternately expanded and contracted, being at some times applied across the board and at others targeted to specific social groups or economic sectors. Likewise, policymakers have treated PSE at times as a mechanism for social inclusion and equality, at others as an instrument for labour force development, and at yet others as a market sector in its own right.

Keywords Political economy · Neo-liberalism · Post-secondary education systems · Comparative · Policy sociology · Accessibility · Accountability · Marketization · Labour force development · Research and development · Stratification · Quasi-markets

Neo-liberalism promotes free markets and unfettered free-trade. It prescribes a limited role for government and emphasizes the role of the private sector, encouraging deregulation, decentralization and privatization. Drawing on the micro-economic theory of rational choice, and rational actor theory, neo-liberalism is also a microeconomic theory that promotes freedom and choice for individuals. As in the rest of the Anglo-Saxon world, neo-liberalism has come to comprise the *raison d'être* of Canadian politics over the last two decades (Clement and Vosko 2003).

It has narrowed the discourse of political, economic, and social debate, transforming what it means to be liberal, social democratic, or even progressive conservative by asserting itself against social entitlements, rights, and citizenship (p. viii).

In the 1990s, the battle against federal and provincial deficits and the adoption of neo-liberal assumptions concerning the role of the state (Carroll and Shaw 2001), lead governments to inflict considerable budget cuts in education. In this article we take a policy studies approach to examine the connections between neo-liberalism, post-secondary provincial education (PSE) policy and the impact of those policies.

Our thesis regarding the broad political economy of PSE is that over the last two decades the adoption of this ideology has been a major cause of some dramatic changes in these policies and has brought about a fundamental transformation of PSE in Canada. The pressure for access has led to the emergence of new institutional types, raising new questions about differentiation, mandate and identity and new lines of stratification. A trend toward vocationalism in the university sector has coincided with 'academic drift' in the community college sector, leading to convergences in programming and institutional functions across the system, as well as competition for resources, students, and external partners. Unprecedented demand has made education a viable industry, sustaining both a proliferation of private providers and a range of new entrepreneurial activities within public institutions. Levels and objectives of public funding have swung dramatically over the period. Public investments in PSE, in the form of capital grants and tuition subsidies, have alternately expanded and contracted, being at some times applied across the board and at others targeted to specific social groups or economic sectors. Likewise, policy-makers have treated PSE at times as a mechanism for social inclusion and equality, at others as an instrument for labour force development, and at yet others as a market sector in its own right.

The discussion builds on a comparative, multiple, nested case study conducted at the provincial (Québec, Ontario and British Columbia)¹ and national level.² In the analysis policies are treated as the operational statements of values, ‘statements of prescriptive intent’ (Kogan 1975). Defining policy and policies in this way draws our attention to the importance of power, control and conflict in the policy-making process. This situates our work in the tradition of policy sociology which is concerned with theorizing the nature of policy and its production and with illuminating the policy discourse (Gale 1999, 2001; Taylor et al. 1997, p. 22). Policy sociology is an amalgam of two strands of work in policy studies, namely, the ‘social science project’ (Ozga 2000) and ‘critical policy analysis’ (Taylor 1997; Taylor et al. 1997). More emphasis is placed on political economy than earlier approaches. Policy sociology takes into account more fully the structural context and the social forces impinging on the system. By definition, policies are housed in and help construct the socio-political-economic context.

Based on a review of key provincial and federal policy documents³ the rest of this article is divided into five major thematic sections and a conclusion. The five themes in their order of presentation are Accessibility, Accountability, Marketization, Labour Force Development and Research and Development. While not in order of priority, we do contend that these five themes dominated the PSE policy-making process. In discussing these themes, we will illustrate their impact on and within the three provincial PSE systems: BC, Ontario and Québec. In the conclusion, we place the changes in their political and economic contexts and explicate the intended and unintended consequences of these policy priorities.

While we focus on the provincial context in relation to the five themes we are at the same time aware of the major paradox characterizing Canadian federalism (Fisher et al. 2006). This paradox stems from the fact that the provinces have the constitutionally derived responsibility for social welfare, health and education while concerns of national interest, equality of treatment and opportunity, economic development, Indians and lands reserved for Indians is a federal responsibility.⁴ In fact federal governments have always viewed PSE in relation to their own responsibilities for national well-being.⁵ Federal governments have used the powerful instrument of the ‘federal spending power’⁶ to

¹ In 2004, the total population of Canada was 32.4 million. The three provinces accounted for approximately 73% of this total. By far the largest was Ontario (40%) followed by Québec and British Columbia which accounted for 20 and 13%, respectively. In the same order, the three provinces accounted for 42, 27 and 9% of the total university FTE enrolment in Canada in 2003–2004 (CAUT 2006, pp. 20 and 49).

² This work was produced within a larger research project funded by the Ford Foundation known as the Alliance for International PSE Policy Studies (AIHEPS). The more detailed case studies on BC, Ontario and Québec are available at the AIHEPS website. This article draws on the work of the two Québec team members, Claude Trotter and Jean Bernatchez.

³ The team did a content analysis of all the relevant legislation, including White and Green Papers, as well as all the relevant committee documents at the federal and provincial levels over the period 1980–2005.

⁴ Education for Aboriginal peoples is controversial and a critical historical issue in Canada. Section 91(24) of the Canadian Constitution Act, 1982 designates “Indians and Lands reserved for the Indians” as a federal responsibility. This means registered (status) Indians (living on-reserve or on Crown land) are under legal jurisdiction of the Indian Act, kept on register by the Department of Indian and Northern Affairs Canada (INAC) and their schooling is a federal responsibility. INAC is responsible for Indian education in the three territories.

⁵ Beyond the supra-provincial issues referred to above, the federal government is responsible for education in the territories, of service personal (and their children) and training programs operated for inmates in prisons.

⁶ The federal spending power draws on the historic, prerogative right of the Crown to make gifts to its citizens (Cameron 2004, p. 7).

intervene in PSE over the last two decades to reduce indirect transfers to PSE and to channel that money into direct funding to universities for research, research chairs, research infrastructure, and, the ‘indirect costs’ of research (Fisher et al. 2001).

Given the constitutional division of powers it is not surprising that changes in the ideological perspective of provincial governments have had a substantial impact on PSE policy. In succession, we have seen the election of free-market, neo-liberal governments in Ontario (1995–2003), British Columbia (2001-cont.) and Québec (2003-cont.). The trend to the Right begins in Ontario in 1995 with the election of the Progressive Conservatives under Premier Harris. The Harris government and subsequent Progressive Conservative administrations until 2003, set out to change the society through what they called a ‘Common Sense Revolution’. In classic neo-liberal manner Ontario was moved quite dramatically closer to the market. British Columbia followed suit in 2001, when the Liberals under Premier Campbell were elected on a clear neo-liberal platform. In both cases, the New Right took over from the Old Left, represented by the New Democratic Party (NDP). Finally, in Québec a neo-liberal version of the Liberal party under Premier Charest took power from the Left-wing Parti Québécois.

Accessibility

By far the most important priority in the development of PSE policy since the mid-1980s is the desire to create more access into the system. While the emphasis has varied between different governing parties, successive governments in all three provinces have developed a clear consensus on this issue.

A mainstay of Québec policy over this whole period up to the election of the Liberal government in 2003 has been to make PSE financially accessible. This is housed in the concern with nation building but also in the attachment of the Parti Québécois to democratic socialist principles. Many of their fiscal strategies were aimed at promoting access: tuition-free college education; allocation of a specific amount for the implementation of the school success plans to be integrated with the Cégeps’ (Collèges d’enseignement général et professionnel) strategic plans; university funding based on the number of students enrolled; regulation of university tuition fees; loan and bursary programs; and university funding partly based on the number of degrees awarded. In addition, Québec has created a system of fellowships for post-graduate students parallel to the federal programs. Others were of a more specific nature: tax deductions for students or their parents, special funding for the Télé-Université and universities in outlying areas, and support programs for members of Aboriginal communities and for integration of the disabled.

While not as extensive or pronounced we can observe a similar trend in BC during the 1990s. When the NDP government took office in 1991, they made the Social Credit government’s ‘Access For All’ policy the foundation of its integrated reforms in academic PSE. The NDP governments also gave more attention to under representation in post-secondary education by minority groups, especially Aboriginal youth. To address the concerns of the latter, special aboriginal institutions were created. Furthermore, the NDP government also focused on new forms of vocationally oriented post-secondary education offerings as well as responding to the unions demand for expanding apprentice training. Significantly, despite the pressure to de-regulate student fees, the NDP maintained their commitment to low fees by freezing them over the last 5 years of their mandate (1996–2001).

The election in Ontario of the Progressive Conservative government in 1995 saw the beginning of a very different approach to accessibility. The ‘Common-Sense Revolution’

translated into the de-regulation of tuition fees and thereby the creation of a quasi market in the public sector (Marginson 1997). Later, on the grounds that these measures would increase access and choice, the government opened up degree granting status to the private sector by allowing for the establishment of not-for-profit universities.

The Liberal government in BC (2001) took up similar themes. Having introduced a 3-year spending freeze on education and health but still expecting the PSE system to increase enrolment by 8,500 seats over the period 2002–2005, the Liberal government allowed institutions to fill the funding gap with increased fees.

The winds of political change had an impact on student fee policy in all three provinces. The election of Liberal governments in both Ontario and Québec in 2003 brought a reversal of fortunes. In Ontario, the centrist Liberals moved to re-regulate fees while in Québec the administration embarked on policies designed to decrease the amount of financial assistance and to de-regulate fees. In BC, a vastly improved fiscal environment and political considerations, in conjunction with the upcoming provincial election in 2005, resulted in a fundamental reversal of the Liberal's tuition fee policy. The 2005 Throne Speech re-regulated fees and stipulated that any further increase be limited to the rate of inflation.

As alluded to above behind the consensus on increasing accessibility there are major differences between political parties and across the three provinces on how this shall be achieved, particularly on issues relating to government funding, student aid and system design. In the next section we take a closer look at how these differ between provinces and political parties in power.

PSE expenditures

The influence of the federal government on access to PSE is indirect and exercised through transfer payments, loans, scholarships and fellowships. The sharp decline over the last two decades in federal transfers to PSE has severely affected the provincial resources for PSE. Between 1988/1989 and 2005/2006, the total transfer (both cash and tax points)⁷ for PSE in 1988 dollars decreased by 40% (Fisher et al. 2006, Chart 6 and Appendix 1).⁸ In Ontario and Québec the decline in government transfers for PSE is clear and dramatic. Between 1992/1993 and 2004/2005 the provincial expenditure on PSE in 2004 dollars declined by 14.8 and 9.6%, respectively. In contrast, the provincial expenditure during the same period in BC rose by a massive 28.4% (CAUT, Almanac, 2006, Fig. 1.1, p. 1). Historically BC invested less in PSE than the other two provinces. Thus, when we examine provincial expenditures on post-secondary education as a share of total provincial expenditures the gap between the three provinces is less pronounced. BC still shows an increase from 5.9 to 6.1%, while the other two provinces register a decline from 5.8 to 4.7% in Ontario and from 7.6 to 6.0% in Québec (*Ibid.*, Fig. 1.2, p. 2).

When we examine provincial transfers to Colleges and Universities per FTE student enrollments between 1993/1994 and 2004/2005 (2004 dollars), we can see the impact of the

⁷ Conventionally, the ability to tax is measured in points. When the federal government transfers tax points to the provinces they are effectively giving up potential tax income and thereby increasing the value of the transfer for PSE.

⁸ The best estimate we have of the decline in the amount of the federal transfer being spent on PSE comes from a briefing note to the minister of human resources and skills development obtained under the access to information legislation. This note was first reported in the Ottawa Citizen, 5 April 2005 and then in the CAUT April 2005 Bulletin. We would like to thank Sarah Schmidt of the National Post Ottawa Bureau for sharing a copy of the original document.

Table 1 Provincial government transfers to colleges and universities per FTE student enrolments, 1993/1994 to 2004/2005 (\$2004)

	1992/1993	2003/2004	Percent
Change			
British Columbia	\$14,356	\$14,689	2.3
Québec	\$10,913	\$11,584	6.1
Ontario	\$10,346	\$7,080	−31.6

Source: CAUT Almanac of Post-Secondary Education (2006, Fig. 1.4, p. 2)

low priority that the Ontario governments have given to the sector during this period. Three findings stand out in Table 1. First, Québec and BC register an increase in provincial funding per FTE of 6.1 and 2.3%, respectively while Ontario registers a massive decrease −31.6%. Second, while the funding per FTE was about the same in Ontario and Québec in 1992/1993 the latter allocates about \$3,000 more per FTE than the former in 2003/2004. Third, BC has by far the highest provincial transfers to Colleges and Universities per FTE of any of the provinces. In 2003/2004 BC allocated twice the amount per student FTE than did Ontario.

With funding not keeping up with enrolment total government spending as a share of university operating revenue between 1994 and 2004 declined in all provinces. The decrease was most pronounced in Ontario where the share went from 73 to 49%. In Québec and BC, the share decreased by about the same amount, from 80 to 72%, and 73 to 60%, respectively (CAUT 2006, p. 3). Over the same time period, tuition as a share of university operating revenue increased for all provinces except Newfoundland (*Ibid.*, Fig. 1.2, p. 2). Ontario had by far the largest increase from 22 to 38%, followed by BC with an increase from 18 to 30%. Québec registered by far the smallest increase from 14 to 16%.

Student financial aid

Post-secondary studies are more affordable in Québec than in Ontario or BC. Québec's students have access to tuition-free college education. They benefit from 1 or 2 years more of tuition-free education than their counterparts, depending on whether they are taking a pre-university program or a career program at their geographically designated Cégep. University tuition fees in Québec are the lowest in Canada. The situation is somewhat more complicated when we examine fees for out-of-province students. Contrary to the other nine provinces, Québec does charge higher fees to such students but this policy is made somewhat acceptable because the out-of-province fees are set at the mean levied by the other provinces.

The difference in fees for the three provinces in this study becomes even more obvious when we plot the changes in undergraduate tuition fees across the period 1986/1987 to 2003/2004 using 1986 dollars. As Table 2 illustrates while Québec has maintained very

Table 2 Average undergraduate tuition fees for full-time students

	1991/1992	1995/1996	2001/2002	2005/2006
Québec	\$1,308	\$1,772	\$1,842	\$2,003
Ontario	\$1,785	\$2,579	\$4,492	\$4,269
BC	\$1,911	\$2,636	\$2,527	\$4,613
Canada	\$1,714	\$2,486	\$3,577	\$4,028

low fees, the change in government policy in the mid-1990s in Ontario and then in 2001 in BC, lead to dramatic increases in the fees charged.

Further, students in Québec have access to a needs-based loans and bursaries program that is far superior to the rest of Canada. Two conclusions can be drawn from the data on student financing. First, the clear link between political ideology of the party in power and second how central student access to PSE has been to the Québec nation building program.

System structure

System structure is another central policy instrument affecting access. In Québec, where the strong commitment to accessibility harks back to the 1960s, access is tied to a reconfiguration of the PSE system. The implementation of a unified two-level system, development of the Cégep network in the regions, and foundation of the Université du Québec were aimed, among other things, at promoting geographical accessibility to postsecondary education and reducing inequalities connected with gender and language of instruction while the loans and bursaries program, discussed above, was aimed at reducing inequalities stemming from socioeconomic status. The creation of the Télé-université distance education university as well as the continuing education initiatives of the Cégeps and other universities were designed to favour access to post-secondary education for adults. In 1993, and then again in 2005, the government reiterated its decision to have a two-level system in order to encourage access.

In BC, a consistent aim has been to increase access for both full and part time students to degree-granting programs outside the Lower Mainland and Victoria. Through a series of major reports and legislation, this priority was further translated into action by the Social Credit government. Actions, for example, like the creation of the first university outside the Lower Mainland and the establishment of University Colleges came to have a clear impact on the structure of the PSE system. In order to facilitate access to university, the BC colleges were from the outset designed to prepare a large proportion of their students for transfer into university degree programs. The British Columbia Council on Admissions & Transfer (BCCAT) was created to organize and facilitate these transfers and has been a major success story. Most recently, degree-granting status has been granted to virtually all PSE institutions in a hierarchy of undergraduate and graduate applied and 'pure' degrees.

In contrast to BC, despite numerous provincial and national reports recommending integration between the sectors, successive Ontario governments have refused to make structural changes to the system. Ontario colleges were created as a completely separate sector with clearly defined non-degree functions. Only universities could award degrees. Instead, accessibility was improved during this era by overall expansion of the number of post-secondary institutions and the introduction of post-secondary bilingual programs in Colleges of Applied Arts & Technology (CAATs) where French was the primary language of instruction. In 2000, the progressive conservative government as part of a package designed to increase choice, passed legislation to allow the CAATs to award applied degrees as long as the programs did not duplicate existing ones offered by a university. In parallel to the Télé-université in Québec, Ontario as well as BC created similar institutional structures to promote distance learning and serve the non-traditional learner.

The differences we can observe between the three provinces are to some extent a result of both political ideology and the economy. Québec, more than any other province in Canada, has made accessibility for all its citizens a top priority. BC since the late 1980s has made a concerted effort to increase its recruitment to PSE while Ontario seems to have

reduced its responsibility for PSE. In the next section we will analyze how policies have affected recruitment to PSE.

Post-secondary participation rates

Comparing participation rates across Canadian provinces is not easy because there is no uniform demarcation between secondary and post-secondary levels. While recognising this problem we can see that in all three provinces participation rates have increased during the 1990s for both the 18–24 and the 25–29 year olds (see Table 3). Between 1990 and 2000, BC and Québec experienced similar gains of around 10% for the 18 and 24 group, while Ontario gained 6%. BC recorded the largest increase for the 25–29 group at 7% while Ontario and Québec had smaller increases of approximately 2%. By the end of the 1990s Ontario's participation rates had fallen below Quebec and British Columbia in both age categories. This pattern corresponds to a period of cuts to PSE funding to universities and colleges, tuition increases and restructuring of student assistance programs in Ontario and a concerted effort in BC to increase a previously low participation rate in PSE.

When discussing participation rates in PSE in Canada it is important to note that participation for Aboriginal and Inuit students lags far behind the rates for the general population. While an increasingly large number of Aboriginal students have been funded through INAC, completion rates are poor. Further, many eligible students do not receive support. The question remains as to whether the federal government will recognize PSE as a treaty/Aboriginal right.

Accountability

An underlying but consistent theme across all three provinces and across party political lines has been the commitment by governments to make the connections between educational spending and useful outcomes more transparent and understandable by the general public. This policy priority has taken on different forms in the three provinces. Both

Table 3 PSE participation rates by age (18–24 and 25–29)

	1976	1990	1997	2000
BC				
Age 18–24	18.8	29.3	36.8	38.7
Age 25–29	7.7	7.2	14.4	14.6
ON				
Age 18–24	23.3	31.8	36.8	37.8
Age 25–29	8.5	9.8	11.5	11.9
QC				
Age 18–24	21.1	35.2	45.2	43.0
Age 25–29	6.7	10.6	11.5	13.0

Source: BC Stats, Labour Force Statistics, October 1998 (release Nov 6, 1998; issue 98-10), Fig. 2: PSE Participation Rates by Age, Canada and Provinces, p. 3

BC Stats, Labour Force Statistics, August, 2001 (release Sept 7, 2001; issue 01-08), Fig. 2: PSE Participation Rate, Selected Age Groups, Canada and Provinces, 1990 and 2000, p. 4

Québec and Ontario have made this a major policy priority. While in BC the emphasis has been on the general public interest aspect rather than institutions.

Québec has the longest history of regulating universities. In the 1970s, the Ministère de l'Éducation (MEQ) created the Conference of Rectors and Principals of the Universities of Québec (CREPUQ) committee and charged it with evaluating the 'quality' of degree programs. Since the early 1990s and as part of the government's desire to promote both accountability and efficiency, universities were required to do internal evaluations which are in turn monitored by government. All programs are evaluated with regard to quality and relevance.

In Ontario, institutional accountability has been the major priority. Institutions are required to account for public funds and to demonstrate achievements on government prescribed benchmarks or indicators. A system-wide accountability perspective has been more problematic in Ontario because of the lack of system level planning. Moreover, the form of accountability has proven more controversial in the post-secondary system and has been the area most subject to change.

Accountability first became a priority in the early 1990s, as the NDP government began an auditing system for universities which rested with the institutional governing bodies. The Progressive Conservatives were far more aggressive in their approach. Accountability and quality were identified as major thrusts of their PSE platform. Key Performance Indicators (KPIs) were introduced and all colleges and universities were required to report on a set of KPIs for each program. In the 2000 budget the government started to put money back into the system by way of operating grants.⁹ The new funding was tied to performance indicators: enrolment growth¹⁰ and university performance.¹¹

In BC, the NDP commitments to accessibility and to vocationalism are good examples of the ways governments have attempted to make the PSE system more accountable to the public interest. Through a series of skill and training initiatives, the Private Post-Secondary Education Council (PPSEC), as well as the use of other intermediary bodies the government used KPIs to make institutions in both the public and the private parts of the college sector more directly accountable in their planning and the student outcomes. At the university level, the NDP created the New Programs Committee to monitor and approve all new degree programs. The creation of new vocational niche universities and the emergence of applied degrees increased the vocational orientation of the PSE system and were aimed at making the system more accountable to the economy.

While the NDP took this direct approach during the 1990s, the Liberals in Ontario have adopted a different definition of accountability. Accountability has come to mean both quality assurance in the most general sense as well as a blurring of the boundary between the public and the private sectors. In the latter case, this is direct political accountability to the capital interests that are the main backers of the Liberal party. As they put in place a Quality Assurance Board (2003) they put their faith in the market as the best means of making institutions accountable.

More than any other province, Québec has been concerned with efficiency. In 2000, the government introduced a new management framework focusing on outcomes, respect for

⁹ They have also created the SuperBuild Fund which allows for capital expansion (upgrades, renovations or existing building and new residences) but does not contribute to operating costs.

¹⁰ Enrolment growth is determined by growth of first entry undergraduate programs and second entry professional and graduate programs.

¹¹ Performance is determined by institutions graduation and employment rates, and student loan default rates.

the principle of transparency, and increased accountability. Likewise, according to the Québec Policy on Universities, it is one of the principles on which government and university initiatives are based: the policy says that universities are supported financially by the state and that they must run their institutions efficiently by using the resources at their disposal optimally. The policy's second priority is described in the following terms: the universities' performance in terms of education quality, research excellence and the system's overall efficiency (MEQ 2000, p. 17).

Marketization

Marketization in PSE is reflected in a shift of the education system from state-centred towards market-driven approaches through the introduction of notions of market primacy, free trade, deregulation and privatizations with a corresponding reduced role of the public sphere (Shanahan 2002; Young 2002). This trend has been particularly strong in Ontario and BC which have introduced legislation that creates the conditions for the establishment of quasi-markets in post-secondary education (Marginson 1997; Marginson and Considine 2000).

In Ontario, The Ministry of Training, Colleges and Universities passed new legislation for degree granting and operating a university in Ontario entitled the *Post-secondary Education Choice and Excellence Act, 2000*. This new Act permits organizations to offer programs leading to a degree, or to operate a university, either with the consent of the Minister of Training, Colleges and Universities or by an act of the Legislative Assembly of Ontario. The QAB evaluates programs offered by out-of-province institutions, new free-standing institutions and college applied degree programs. The government claims that private universities will increase choice for students, enhance competition between publicly funded universities and improve accessibility. To date there are 17 institutions that have been granted restricted degree-granting authority by the Legislative Assembly of Ontario. All are bible colleges or small religious-affiliated institutions.

The Ontario government has also been lobbied extensively to allow private for-profit universities such as the University of Phoenix, Lansbridge University (formerly Unexus University) and the British IMC University to offer degree programs in Ontario. To date the private non-profit University of Southern California has been granted permission in November 1999 to offer diploma programs in Ontario.

The policies adopted by each administration from 1985 reflect different ideologies but also different economic climates. Consistent among the administrations is the increasing tendency to view PSE policy as an instrument of economic development with each administration also placing varying emphases on social, equitable and educational goals and principles (Lang et al. 1999). Ideology has also been reflected in the respective government's focus on the elimination of the deficit, balancing the budget and the increased role of the market.

Private career colleges are privately owned and are operated as commercial enterprises. They must be registered under the *Private Career Colleges Act*, administered by the Ministry of Education and Training. The non-degree private sector was the only part of the Ontario system that experienced significant expansion. The number of these colleges rose from over 200 in 1990 (Jones 1997, pp. 137–161) to 320 in 1994/1995 and finally to over 450 in 2004 (Ministry Website). While the number of institutions has more than doubled it does not appear that enrolment has kept pace. Further, this includes only those private career colleges required to register with the Ministry under the Private Career Colleges Act, that is, those that offer vocational programs. Other unregistered institutions offer a myriad of non-vocational programs but neither government, or anyone else is keeping track.

In BC, Bill 15, the Degree Authorization Act (2002) set out criteria under which new institutions, including private and public institutions from outside the province, would be authorized to offer degree programs and grant degrees in British Columbia. In addition, the bill allows public colleges and institutes to offer ‘applied baccalaureate degrees’ and university colleges to offer ‘applied master’s degrees’ (Hansard, April 11, 2002). Two private universities have been approved thus far under this legislation.

The BC Liberals also authorized during their first year in office the creation of a new, private degree-granting institution near the upscale ski resort of Whistler. A Private Member’s Bill was introduced in May 2002 to establish Sea to Sky University (re-named Quest University), and passed without debate. The university will offer intense, three-week liberal arts courses for \$3,000 a course including room and board.

In BC, the number of private institutions registered with the PPSEC has mushroomed from 358 in 1993 to approximately 840 in 2005. The number of private institutions operating in the province is approximately 1,200. Over the same period, the number of students has increased dramatically from 48,000 to 115,000. As part of this expansion, the number of private ESL schools has risen from 5 in the early 1980s to over 180 today (Culos 2005).

The situation in Québec appears to be relatively stable. Québec has no private universities and only a small private sector at the college level. The system contains 62 small private colleges that teach mainly technical subjects. In 2002–2003, 156,488 students were enrolled in colleges. While the private colleges account for 51% of the total number of colleges, they only account for 8% of the total number of students. Within the private sector, 24 colleges have a licence to operate and receive operating funds from the Québec government. The other 38 private colleges merely have a permit to operate but do not receive any public funds. Operating funds are allocated and calculated on the basis of five criteria: number of students; students field of study; renting value of building; part-time students; and specific activities supported by the Ministry of Education.

Labour force development

In some ways federal involvement in vocational and technical training issues had more impact on provincial systems of education than any other intervention. During the 1960s and 1970s, the federal government adopted a ‘grand design’, the essence of which was the development of ‘manpower’. ‘Manpower policy’ used labour market training and job creation programs as a means to an economic end of increasing economic growth, decreasing unemployment and promoting economic stability. The massive infusion of funds enabled many provinces to expand their adult training systems and was the foundation upon which provinces built their community college systems.

For both levels of government, this priority refers to the wish to bring training programs closer to socioeconomic realities and meet the demand for highly skilled human resources. Vocational and skills training, was articulated within the context of work organization changes, new technologies, and increased productivity, economic development and competitiveness requirements related to globalization of the economy. Provincial policies were designed to adapt the structure of the economy, modernize companies, and develop value-added light industry in technology sectors. This goal entails collaboration with business and the forging of partnerships so that market requirements can be properly met.

Through into the 1980s, the federal government purchased training courses or seats from provincial training institutes for its clients, mainly unemployed persons. In the 1980s,

the federal government shifted away from the funding of training facilities and programs in provincial training institutes. The introduction of the Canadian Jobs Strategy (CJS) in 1985 served notice to provinces that the federal government planned to reduce institutional training purchases in coming years and to redirect these funds to private and voluntary sectors. This led to reduced funding through federal-provincial training agreements in the late 1980s, and a phasing out of such agreements by the early 1990s. The ‘grand design’ was replaced by a Labour Force Development Strategy and the Canadian Labour Force Development Board (CLFDB).

By the mid-1990s, much of the responsibility and funding for training had been devolved to the provinces and territories, through negotiated Labour Market Development Agreements (LMDAs) with every jurisdiction except Ontario. A patchwork of agreements emerged including a ‘strategic partnership’, ‘co-management’ and for five provinces and two territories, ‘devolution’. Some interest has recently been expressed in expanding the federal role with the introduction of the Innovation Strategy which also includes a new emphasis on apprenticeship training.

While the Government of Canada’s role in training and the labour market is ever-evolving, provincial and territorial jurisdictions in Canada have become increasingly interested in human capital and human resource strategies because of major demographic and labour demand shifts. While provincial policies are similar there are differences in emphasis. A defining characteristic of the NDP administrations during the period 1991–2001 in BC was their commitment to vocationalism and skill training. The underlying theme was that academic education had received most of the attention in previous decades and now it was time to rectify this unevenness and to better serve the interests of labour. Through a series of reports and legislation, successive governments increased both economic and institutional resources for non-academic and applied education. The roadmap in BC for the NDP’s skills agenda was set by a series of reports during the early 1990s. The grand aim was to dramatically reduce structural unemployment. What followed was a massive expansion in the number of vocational spaces as the new funding mechanisms took effect. The BC Liberal government took a different approach. The “New Model for Industry Training” removed the government from its direct involvement with apprentices, gave business a dominant role in the governance of the training system, and introduced a system of ‘flexible’, modular training courses that could be adapted to suit the needs of specific employers and delivered by private trainers (British Columbia Ministry of Advanced Education 2002).

We can observe a distinct shift in emphasis in Ontario’s PSE system away from liberal education towards a vocational, technical education. The change in funding mechanisms toward tied and matched private sector funding has moved the system towards the market and has placed a greater emphasis on vocational training as a means of meeting labour market demands. The challenges facing the Ontario economy were and are very different to those facing BC. The technologically-dominated economy pushed governments to look for ways to increase the links between industry, colleges and universities. The Progressive Conservatives (1995–2003) favoured market principles in achieving these objectives. This government’s post-secondary policy emphasized serving labour market needs—that is educational training was linked to the labour market to build industry infrastructure and to sustain industrial competitiveness. This was accomplished through vocationally-oriented programs and through market-oriented research. For example, the first new university created in 40 years in Ontario under the new degree granting legislation is an amalgamation of Durham College and the new Ontario University Institute of Technology. This is a *publicly-funded* university but its mission is explicitly to serve the needs of the surrounding

labour market, and the automotive and power industry in the neighbouring region. Since 2000, the government has used targeted funding mechanisms and matching funding programs to emphasize its vocationalism and skill development, and thereby induce the post-secondary institutions to embrace its priorities.

In Québec the commitment to this policy theme, while unequivocal, has been much more sporadic than in the other two provinces. At the same time, for those who promote this vision in Québec, technicians, professionals and management should all learn more about internationalization, to the extent that they will have to deal with people in other countries, or even work abroad. Successive governments have re-affirmed the foundational role of Cégeps in career training. Further, while pushing educational institutions toward industry and to the needs of the marketplace, governments have also been clear about the need for institutions not to be diverted from their primary education missions and for them to protect their institutional autonomy. According to the policy on universities, quality training must also be relevant. In other words, it must enable students to acquire the competencies, skills and tools they need to develop as individuals and to play their part in society. At the college level, this policy is actualized through a vocational and career education committee composed of representatives from MEQ and public agencies; employers; and union and association representatives. At the university level, several committees and commissions have been charged with the task of evaluating programs from the point of view of their relevance.

Research and development

During the last decade successive federal Liberal governments have made a concerted effort to increase dramatically the research funding going to universities which in turn has had a profound impact on the structure of PSE in Canada. As one might expect, Ontario, Québec and BC receive a very large proportion of the federal research funding through the granting councils (Canadian Association of University Teachers [CAUT] 2006, p. 44) accounting for 37, 30 and 11%, respectively, in 2003/2004. We can observe a similar distribution when we examine the share of the total sponsored research funding.

At the provincial level, a wide variation exists between the three provinces in the extent to which they have created their own research and development infrastructure. BC has introduced a few programs, most recently its Chairs of Excellence program, but has tended to rely on federal provision. All three provinces have faced similar increases in the allocation of funds for research because of the matching requirements imposed through the Canada Foundation for Innovation (CFI) and Canadian Research Chairs (CRC) programs.

Ontario has in some ways lead this policy initiative with for example a 'centres of excellence' program (OCE) that preceded the federal Networks of Centres of Excellence program (NCE) and was used as a model for federal policy. The OCE, the University Research Incentive Fund (URIF), the Premier's Council Technology Fund, and the Industry Research Program were all established in 1987. Ten years later, the Ministry of Energy, Science and Technology was created and the Research and Development Challenge fund was established. The R&D Challenge fund emphasized university–industry liaisons, to support job creation and economic growth, and to attract and keep skilled researchers in Ontario.

Supporting the Ontario R&D Challenge fund, a 20% refundable research and development tax credit was established for corporate sponsored research and development in universities and other post-secondary institutions. A cooperative education tax credit in

information technology was expanded, and an intellectual property tax credit was established. Other provinces have also introduced a tax policy (e.g. Quebec in 2001) to provide particular incentives for research and development and technology. In 2002, the Ontario Research Performance Fund was announced. The fund provides an additional \$30 million annually to colleges, universities and research institutes to cover the overhead costs associated with Ontario-funded research. The R&D Challenge fund was also increased to \$100 million.

Québec has over the last two decades developed a parallel system of research and development funding agencies that covers all disciplines and is by far the most extensive structure of any Canadian province. The decision to create a parallel structure begins with the Parent Commission in the mid-1970s which placed the accent on basic research and the idea of a ‘republic of science’ in charge of its own decisions. It also emphasized that Québec’s researchers needed to catch up with researchers in the rest of Canada in order to be able to compete with them. Québec is the only province that set up structures for supporting university research directly due in large part to this ‘catching-up’ ideology.¹² In this sense the focus on research and development has always been about nation-building. This priority was based on the principle that research must contribute more closely than before to the state’s economic and social goals.

During the 1990s, the concept of ‘progress’ which was generally associated with the above goals was replaced by that of ‘innovation’. According to the Québec Policy on Science and Innovation, it is by focusing more on inter-sector networks and partnerships that research will be able to truly contribute to innovation. In a White Paper on Scientific Research published in 1980, university research was positioned in relation to government research and industry research. Its aim was described as the advancement of knowledge. Universities were asked, however, to start concerning themselves more with research spin-offs and their effect on regional economic development. In the economic policy published in 1982 about the high tech boom, or technological turning point, *Le virage technologique*, the need to develop close ties with business and see that programs addressed industrial training needs better was emphasized. In 1983, the *Act to promote the advancement of science and technology in Québec* created the Conseil de la Science et de la Technologie (CST), whose mandate was to advise the Ministère de la Recherche, de la Science et de la Technologie (Ministry of research, science and technology) on all matters relating to scientific and technological development in Québec.

The Québec Policy on Science and Innovation, published in 2001, was based on a concept of the requirements of the knowledge society. University research was assigned an instrumental function: it had to be geared towards innovation. This concept referred to three different types of realities: product technological innovation, which involved perfecting and marketing a product that was better than those already on the market; process technological innovation entailed perfecting and adopting new or improved production and distribution methods; and social innovation referred to any new approach, practice or intervention—or any completely new product—developed to improve a situation or solve a social problem in connection with institutions, organizations or communities. By referring to the concept of social innovation in this way, the Québec government distanced itself from the strict technological innovation marketing promoted by the OECD and other

¹² The Québec government closely monitors the success rates of Québec’s researchers vis-à-vis federal programs. For instance, with 23.7% of Canada’s population, 27.89% of SSHRC’s spending in 2002–2003 was in Québec, which was good, whereas only 23.08% of NSERC’s spending in 2001–2002 was in Québec, which was only average.

governmental organizations (Milot 2005, p. 3). More specifically, this policy aimed: (a) to adapt the research support provided by Québec's subsidizing agencies; (2) support companies ensuring knowledge transfer by recognizing and promoting the value of university research; and (3) harmonize universities' intellectual property policies so that they all recognized research accomplishments as institutional property. On the heels of this policy, the government proceeded to restructure its granting councils (FCAR, CQRS and FRSQ) into three distinct organizations along the lines of the federal granting agencies: One for the natural sciences (FQRNT), one for the humanities and social sciences (FQRSC) and one for the medical sciences (FRSQ). To facilitate the new policy the government tabled a plan of action on intellectual property management and continued to offer companies a generous tax credit for R&D expenditures.

The original focus for Québec was upon the human sciences. Since 2001, the amount of funding provided by FRQS as a proportion of the amount coming to Quebec researchers from SSHRC/CRSH, has increased dramatically. As the figures below indicate, the proportion has risen from 23 to 83%.¹³

Conclusions

PSE policy at the federal and provincial levels has been driven by a changing political-economic imperative. The Canadian political establishment and, the university community on the whole accept the position taken by the OECD (2003) that increased investment in R&D will enhance economic development. In working around the constitutional divisions of power, and as a means to increase accountability, the Liberal federal governments of the 1990s created a raft of new policy instruments that were designed to dramatically increase R&D funding going to the academy. These investments would, it was argued, produce knowledge that in turn would lead to economic development and improved competitiveness in the international market place. At the same time, both Conservative and Liberal federal governments have used the political ideology of markets and quasi-markets to try and steer the academic community toward adopting commercial goals. The aim of science and technology policy since the late 1980s has been to soften the boundary separating the academy from industry.

At the provincial level, the 'human resource' argument had by the 1990s replaced the language of 'human capital' and was used as in previous decades to justify increased accessibility. Investing in 'human resources' would contribute to economic development at both the individual and societal levels. While this language of justification cut across political parties and all three provinces explored in this article, we can still see the force of different political ideologies. Québec exceptionalism and nationalism had driven the

¹³ CONSEIL DE RECHERCHES EN SCIENCES HUMAINES ET SOCIALES DU CANADA (CRSH)

2001	\$28,491,862
2002	\$32,115,710
2003	\$36,685,486
Total	\$97,293,058

Fonds Québécois de la Recherche sur la Société et la Culture

2001	\$6,658,113
2002	\$24,720,132
2003	\$30,488,310
Total	\$61,866,555

relationship between the two levels of government to the extent that the province has benefited as much as the other provinces and on many key occasions has benefited more. The parallel R&D structures are designed to make the academic research enterprise in Québec stronger than in any other province. The structure of the system and all of the provincial policies concerning students are designed to maximize accessibility. In contrast, BC and Ontario while very much in favour of increasing access have also encouraged the creation of quasi-markets through the de-regulation of fees. Again the force of political ideology is clear as NDP, conservative and liberal regimes replace each other, and in turn reverse or adopt new student fee policies.

As we look across the five policy themes, the three provinces intended to have an impact under the headings of accessibility, accountability, labour force development, marketization and research and development. Neo-liberal ideology had the least impact in Québec and in that sense the policy-making process was the most stable. This province's long-standing commitment of accountability translated into the strongest emphasis on efficiency in the system. The emphasis on labour force development was sporadic but still important. Québec was by far the leader in developing a research and development infrastructure and in providing for access and participation. This latter emphasis expressed itself through the mass-system structure, regulated low tuition fees and strong financial assistance programs. In order, Ontario and BC were most affected by neo-liberal ideology.

Ontario was at the forefront of creating quasi-markets by reducing funding and de-regulating tuition fees. In conjunction with the pressure to move the system toward the market we also observe a strong emphasis on accountability through performance indicators as well as a concomitant shift toward pushing the system to meet the demands of the labour market. While not as extensive as Québec, the Ontario government did more than any of the other eight provinces to support research and development. Whereas labour force development and general accessibility issues were dominant during the 1990s, we find that marketization and accountability become the dominant themes with the election of the Liberal government in 2001. Research and development has been a minor theme in BC.

As noted earlier, the most important theme overall has been accessibility. During the 1990s, BC made the largest increases in funding, Québec experienced a relative steady state, while Ontario decreased funding. Tuition fees remain low in Québec but increase dramatically in both Ontario and BC following de-regulation (See Table 4). Participation rates go up in all three provinces so that by 1990 each can claim the status of 'universal or near universal' system (Trow 1973). These rates go up the most in BC, followed by Québec and then Ontario. These data suggest that the implementation of neo-liberal ideology does not in and of itself translate into negative outcomes.

The dominance of accountability and marketization themes has not lead to privatization. Rather as Slaughter and Rhoades (2004) point out, academic capitalism blurs the boundaries between public and private sectors, but it sustains a substantial level of public subsidy of

Table 4 Total government spending and tuition fees as a share of university operating revenue, 1994–2004

	Québec		British Columbia		Ontario	
	Government spending %	Tuition %	Government spending %	Tuition %	Government spending %	Tuition %
1994	80	14	73	18	73	23
2004	72	16	60	30	49	38

Source: Adapted from CAUT Almanac 2006, Fig. 1.4, p. 3 and Fig. 1.2, p. 2

higher education. Simultaneously, the public space in the academy is re-defined as public monies shift to subsidize different activities, fields of work, and professionals. In many cases, capitalism-academic style is not very successful in generating net revenues, and it leads to unanticipated, undesirable practices and outcomes. In the context of a conception of institutional purpose that is reduced to revenue enhancement, the academic knowledge/learning regime leads to an expanded range of educational services to a reduced range of traditional-aged students. In perhaps a final irony, we see an increasingly similar pattern of effort to intersect global information, new economy opportunities in ways that reduce distinctive involvement in local communities by various types of universities and colleges.

The re-definition of the public space as part of the academic capitalist knowledge/learning regime is particularly noticeable in Canada. As previously noted, since 1997, the federal government has used a number of new policy instruments, as well as the three established funding councils, to dramatically increase research funding going to universities. As a result, a key development in the academic research enterprise over the last 15 years has been the emergence of a clear, and separable strata of research intensive universities. The increase in research funding has been concentrated into this relatively small group of universities. In 2004, 15¹⁴ of the 83 universities listed by CAUT, accounted for 80.69% of the total university research income.¹⁵ Within all Canadian universities the natural, applied and health sciences have been favoured thereby exacerbating the level of internal stratification.

The re-definition of the public space in Canada is illustrated by the increases in federal funding going to support university R&D. In 2005–2006 federal spending at \$2.5 billion, for the first time exceeded its own internal R&D expenditures (Council of Canadian Academies 2006, Figs. 4.2 and 4.3, pp. 39–40).¹⁶ At the same time, and in spite of the very generous tax-credits offered as an incentive to make these investments (Council of Canadian Academies 2006, p. 104), Canada records a relatively low business expenditure on research (BERD) as compared to other OECD countries (Council of Canadian Academies 2006, Fig. 4.4, p. 41).

While successive federal governments fully intended to favour the natural, applied and health sciences with the increases in R&D, an unintended consequence has been the emergence of this new, strata of ‘national’ research intensive universities and increased differentiation across regions and between different types of university. The ‘group of 10’ (now 13) universities quickly took on the new identity as they enthusiastically competed for the R&D dollars. In this way, Canadian universities have themselves become part of a quasi-market.

References

- BC, Ministry of Advanced Education (2002). Bill 15, the Degree Authorization Act.
 Cameron, D. M. (2004). Collaborative federalism and PSE: Be careful what you wish for. <http://jdi.econqueensu.ca/Files/Conferences/PSEconferencepapers/Cameronconferencepaper.pdf>. Accessed 19 September 2004.

¹⁴ The 15 universities in order of the amount of research funds received are Toronto, McGill, Montréal, British Columbia, Alberta, Laval, Calgary, McMaster, Western Ontario, Ottawa, Queen’s, Manitoba, Guelph, Waterloo and Saskatchewan.

¹⁵ Calculated from CAUT Almanac 2006, Table 5.6, p. 46.

¹⁶ In 2004, the federal government intramural spending on R&D was almost \$2.3 billion, a figure that has remained fairly constant of the previous 6 years (Council of Canadian Academies, Box 6.4, p. 109 and Fig. 4.3, pp. 39–40).

- Canadian Association of University Teachers. (2006). *CAUT Almanac of post-secondary education in Canada*. Ottawa: CAUT Publications.
- Carroll, W. K., & Shaw, M. (2001). Consolidating a neoliberal policy bloc in Canada, 1976–1996. *Canadian Public Policy*, 27, 195–217.
- Clement, W., & Vosko, L. (Eds.). (2003). *Changing Canada: Political economy and transformation*. Montreal, PQ: McGill-Queen's University Press.
- Council of Canadian Academies, The Committee on The State of Science & Technology in Canada. (2006). *The state of science and technology in Canada*. Ottawa: The Council of Canadian Academies.
- Culos, G. (2005). Electric with education: Private post-secondary education policy in British Columbia. MA Thesis, The University of British Columbia.
- Fisher, D., Atkinson-Grosjean, J., & House, D. (2001). Changes in academy/industry/state relations in Canada: The creation and development of the Networks of Centres of Excellence. *Minerva*, 39, 299–325.
- Fisher, D., Rubenson, K., Shanahan, T., Trottier, C., Bernatchez, J., Clift, R., et al. (2006). *Canadian federal policy and post-secondary education*. Vancouver: Centre for Policy Studies in Higher Education and Training.
- Gale, T. (1999). Policy analysis: Treading the discursive path of policy analysis. *Discourse*, 20(3), 393–407.
- Gale, T. (2001). Critical policy sociology: Historiography, archaeology and geneology of policy analysis. *Journal of Education Policy*, 16(5), 379–373.
- Jones, G. (1997). Higher education in Ontario. In G. Jones (Ed.), *Higher education in Canada: Different systems, different perspectives* (pp. 137–161). New York: Garland Publishing.
- Kogan, M. (1975). *Educational policy-making: A study of interest groups and parliament*. London: Allen & Unwin.
- Lang, D., House, D., Young, S., & Jones, G. (1999). *University finance in Ontario*. Toronto: OISE/UT.
- Marginson, S. (1997). *Markets in education*. St. Leonards: Allen & Unwin.
- Marginson, S., & Considine, M. (2000). *The enterprise university: Power, governance, and reinvention in Australia*. Cambridge: Cambridge University Press.
- Milot, P. (2005). *Note de recherche. La commercialisation des résultats de la recherche universitaire: une revue de la littérature*. Rapport soumis au Conseil de la science et de la technologie, Montréal, Centre inter-universitaire de recherche sur la science et la technologie.
- Ministère de l'Éducation [MEQ]. (2000). *Québec policy on universities: Priorities for our future*. Québec: Gouvernement du Québec.
- OECD. (2003). *The sources of economic growth in OECD countries*. Paris: OECD.
- Ontario Ministry of Training, Colleges and Universities. (2000). Directives and guidelines for applying for Ministerial Consent under the Post-secondary Education Choice and Excellence Act, 2000.
- Ozga, J. (2000). *Policy research in educational settings: Contested terrain*. Philadelphia: Open University Press.
- Shanahan, T. (2002). Legal scholarship. Unpublished Doctoral Thesis, University of Toronto.
- Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state and higher education*. Baltimore: Johns Hopkins University Press.
- Taylor, S. (1997). Critical policy analysis: Exploring contexts, texts, and consequences. *Discourse: Studies in the Cultural Politics of Education*, 18(19), 23–35.
- Taylor, S., Rizvi, F., Lingard, B., & Henry, M. (1997). *Educational policy and the politics of change*. London: Routledge.
- Trow, M. (1973). *Problems in the transition from elite to mass education*. Paris: Carnegie Commission on Higher Education.
- Young, S. (2002). The use of market mechanisms in higher education finance and state control: Ontario considered. *The Canadian Journal of Higher Education*, XXXII(2), 79–102.

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