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Revisiting Academic Capitalism in Canada: No Longer the Exception

In many countries, neoliberalism, globalization, and the concomitant rise of interest in New Public Management have led to changes in the funding relationship between the State and higher education institutions (Alderman, 2001; Deem, Hillyard, & Reed, 2007; Ferlie, Musselin, & Andresani, 2008; Savoie, 1995; Schimank, 2005). A decade ago, in a survey of the effects of political and economic changes on universities in four English-speaking countries, Slaughter and Leslie (1997) branded the resource-seeking behaviors undertaken as a reaction to redirected government spending as “academic capitalism.” Among Australia, the United Kingdom, the United States, and Canada, they noted that only the latter showed signs of resisting the forces that led the other countries to adopt national-level policies that targeted funding toward high technology programs and industrial research collaborations, while shifting expenditures away from undergraduate education and toward potential revenue-generating areas. They concluded,

The Canadian case suggests that changes stemming from the emergence of a global economy do not have to be met by changes in national higher education policy which promote academic capitalism. The crucial question in the immediate future is whether Canada can maintain a system committed to high student subsidy, basic or “curiosity-driven” research, and faculty and institutional autonomy, given the size of Canada’s national debt. (p. 214)

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If Canada can still be considered an “exception” to academic capitalism, its structures and strategies might serve as a policy model for other nations facing similar economic forces. However, throughout *Academic Capitalism: Politics, Policies, and the Entrepreneurial University* (1997), Slaughter and Leslie lamented the lack of current statistics from Canadian sources in order to analyze the country’s higher education system adequately, raising the question as to whether or not their conclusion in regard to the Canadian case was premature. Indeed, the availability of data on Canadian higher education continues to plague research efforts today, and this has been exacerbated by the near-privatization of Statistics Canada (Nilsen, 2001), the federal agency charged with information gathering and data dissemination for postsecondary education. As such, in this paper I revisit Slaughter and Leslie’s study of academic capitalism in Canada, but with the benefit of statistics released after their book was published in 1997 and aided by the further theoretical development of academic capitalism by Slaughter and Rhoades (2004). By examining current scholarship on Canadian higher education from this theoretical lens, I find that the changes in funding policies for postsecondary education over the past decade and the emergence of new policy initiatives that are focused on marketization are evidence that Canada is certainly no longer, and perhaps never was, the “exception” to academic capitalism as Slaughter and Leslie had suggested ten years ago.

The Canadian Case, a Decade Later

Rather than simply reanalyze the Canadian case with now-available data, I begin by adapting the research questions posed by Slaughter and Leslie and my data collection efforts to better suit the Canadian context. This is necessary for three reasons. First, the international comparative context of *Academic Capitalism* was useful to show macro-level trends in higher education in the four countries, but was not sufficient to examine the complex changes occurring within each case. In the instance of the U.S. this has necessitated a follow-up study conducted by Slaughter and Rhoades (2004), in which they further developed the theory of academic capitalism, especially as seen in that country. In addition, the amount of data presented for each country in the 1997 book was uneven, due in part to the authors’ familiarity with their home country (the U.S.) and an opportunity to conduct a large-scale, Fulbright-funded study in Australia. Thus, the Canadian case figures less prominently in the book, and the complex provincial/federal relationship with regard to higher education policy-making and funding patterns is not fully explored. I contend that *Academic Capitalism* is still relevant as a comparative text

that highlights trends in English-speaking countries, and it should serve as a starting point for further exploration at the country-level (as was done with the U.S. case by Slaughter and Rhoades), but not as a definitive source of information about academic capitalism in each of the four countries. Furthermore, Canadian bilingualism (English and French are both official languages) and the distinct higher education system found in Francophone Québec provide additional reasons to extricate the Canadian case from an international comparative analysis of English-speaking countries.

Second, as Slaughter and Leslie mentioned, Canada is an extremely decentralized system, with provinces determining not just how federal transfer dollars for postsecondary education will be spent, but also the structure of the system itself. Furthermore, provincial budgets show wide disparities, with some provinces at present showing surpluses in the billions while others have large deficits,¹ affecting available funds for higher education. As such, national-level data, even when it is readily available, is too general to offer a complete picture of Canadian higher education. Yet, provincially-focused research on marketization in Canada (e.g., Quirke & Davies, 2002; Young, 2002), although important to our understanding of local contexts, does not provide much of a picture of the national situation (for exceptions, see Chan & Fisher, 2008; Fisher et al., 2006). Furthermore, close attention must be paid to the format of national-level datasets, so that one does not unwittingly compare apples to oranges by assuming that “postsecondary” data only includes universities and colleges, since it can also include trade-vocational institutions.

Third, the lack of timely, accurate, and public data on Canadian higher education complicates research endeavors and is worthy of analysis in itself. As Kirsti Nilsen wrote in *The Impact of Information Policy: Measuring the Effects of the Commercialization of Canadian Government Statistics* (2001), conservative government policies have altered public access to data from Statistics Canada. She discussed a shift in Canadian information policy in the mid-1980s from a philosophy of open access to a market model, which resulted in Statistics Canada charging user fees and implementing cost-recovery strategies for previously free statistical information. These fees constrain the study of higher education in Canada, as the user fees prohibit what might be called “data browsing,” and the costs associated with ordering special tabulations are high. As such, the marketization of public information and the change in information policy in Canada at the national level have had a negative impact on the analysis of the higher education policy process (on this point see also Canadian Council on Learning, 2007). In

many ways, this marketization of the public sphere affects our understanding of marketization in the public sphere; a circular conundrum.

Therefore, in addition to data obtained directly from Statistics Canada, in this study I have consulted data made available through Canadian Association of University Business Officers (CAUBO). CAUBO makes revenue and expenditure data available to institutional members, and as much of the data is collected in conjunction with Statistics Canada (essentially the same data as that provided by Statistics Canada but in a more accessible format for members), the CAUBO data is a way around the government's user fees for Canadian researchers. Yet, precisely because these datasets are available free only to people affiliated with member institutions (all of which are in Canada), the CAUBO data are not substitutes for the public information previously supplied by Statistics Canada, which was at one point available to anyone regardless of institutional affiliation (including researchers outside of the country).² A more open policy towards data access would permit more research to be done on Canadian higher education, which has been under-studied and under-theorized relative to other countries (particularly Australia, the U.K., and the U.S.).

Once I began the process of re-examining academic capitalism in Canada, it was immediately apparent that the scope of the research would extend beyond that which can be reported in a single article. As such, this is an overview of what has happened in Canadian higher education since 1997 relative to the themes presented in *Academic Capitalism*. I first summarize Slaughter and Leslie's assessment of trends in Canadian higher education. In this section I re-examine the data presented in the 1997 book while considering the limitations that might have affected the findings. Next, I present data on postsecondary revenues and expenditures in Canada for the period between 1997 and 2006 (the most recent data available). Here I turn to several data sources, contrasting the provincial and federal arenas in terms of policies, resource allocation, and revenue generation. Finally, I discuss policy initiatives that have increased academic capitalism in Canada, several of which are far more overtly entrepreneurial than what has occurred in the U.S. case, and perhaps for Australia and the U.K. as well.

Academic Capitalism in Canada: The 1980s and 1990s

Slaughter and Leslie surmised that growing global markets, also known by the highly contested and complicated process called globalization (Carnoy, 2000), led nations to consider their relative position vis à vis international competitiveness (see OECD, 1997). As postsecondary edu-

cation and universities in particular were considered in the 1980s and early 1990s to be economic drivers in terms of workforce development and the creation of new products (Friedman & Friedman, 1990; Godin & Gingras, 2000; Henry, Lingard, Rizvi, & Taylor, 2001; Skolnik, 1983), nations began to target funds toward applied research programs in academe. To fund these applied research programs, especially in an era of national deficits, Slaughter and Leslie noted that governments reduced the amount of money given to postsecondary institutions in the form of block grants to general operations. As a result, academics and institutions were placed in a competitive resource environment as they vied for grants and contracts to fund basic operations and new expenditures, which were often deemed necessary due to expanding enrolments.³

Drawing upon the work of Weber (1958), Slaughter and Leslie saw university employees as “state-subsidized entrepreneurs” (1997, p. 9), who “implement their academic capital through engagement in production” (p. 11). They used the term academic capitalism to refer to, “institutional and professorial market or market-like efforts to secure external moneys” (p. 8). Market-like behaviors are those that involve competition for funds from external resource providers, such as “grants and contracts, endowment funds, university-industry partnerships, institutional investments in professors’ spinoff companies, or student tuition and fees,” while market behaviors are for-profit activities such as patenting, licensing, and the sale of goods and services (p. 11). Many other scholars have noted the “marketization,” “commercialization,” or “commodification” of postsecondary education that has occurred in North America steadily since the late 1980s (Alexrod, 2002; Bok, 2003; Chan & Fisher, 2008; Gould, 2003; Kirp, 2003; Tudiver, 1999; Washburn, 2005; White & Hauck, 2000).

In the case of Canada, Slaughter and Leslie noted that “business leaders worked closely with university and government leaders to push for change in the tertiary system” (p. 52). With the formation of the Corporate-Higher Education Forum in the 1980s, Canadian industry executives and university presidents joined to form new ties between the public and private sectors.⁴ Slaughter and Leslie noted that the Canadian government was also directly involved in the relationship between industry and higher education by forming the National Council for Science and Technology, to encourage the private sector to fund university-based research and development. Public/private ties were strengthened when provincial and federal governments also formed the InnovAction program, established university research parks, and created the National Centres of Excellence program.⁵ Even with these initiatives and investments, however, Slaughter and Leslie found Canadian

scientists to be less likely to work collaboratively with industry than their counterparts in Australia, the U.S., and the U.K. They cited work by Jones and Skolnik (Jones & Skolnik, 1992; Skolnik, 1990) in which the authors discussed the decentralization of the Canadian postsecondary education system, leading Slaughter and Leslie to surmise that structural effects might be why “Canadian academics have perhaps been able to resist pressures by business and the federal government” (1997, p. 54).

The analysis of the Canadian case in *Academic Capitalism* was hampered by a lack of data on postsecondary revenues and expenditures from the 1990s. This absence was particularly troublesome as it prevented them from conducting a thorough comparison with the other countries in their sample, and the existing data did not include the critical recession years when governments underwent a phase of fiscal retrenchment. Slaughter and Leslie had to rely upon earlier studies by Buchbinder and Newson (1990) and Buchbinder and Rajagopal (1993) that showed a decline in government funding in the 1980s, but they had little evidence of Canadian higher education spending in the 1990s. As a result, no tables of Canadian postsecondary statistics were included in the book. Slaughter and Leslie noted that Canada was clearly the “most stable” (p. 101) of the countries in their study according to the published reports, but many of their academic colleagues in Canada felt that the turn toward academic capitalism in Canada was already happening in the mid-1990s, although this shift was not yet evident in the publicly released data from Statistics Canada (S. Slaughter, personal communication, January 21, 2006).

Reassessing Academic Capitalism in Canada, 1997–2006

Another complicating factor for Slaughter and Leslie and subsequent researchers is the nature of Canadian postsecondary education funding itself. As Canada has moved from a centralized welfare state to a decentralized system of federal transfers for health and human services, federal transfers for postsecondary education have become somewhat hidden within block transfers for a variety of social programs (Fisher et al., 2006). Federal *transfers* should not be misunderstood as federal *expenditures*, as these funds are collected through a unified tax system at the federal level and are distributed to the provinces based on a formula that considers population density and other factors. As such, the transfer fund is more like state-level tax revenues in the United States, although it is supplemented with federal dollars for specific programs. Indeed, it

is not in the federal mandate to fund postsecondary education, a matter which is the jurisdiction of the provinces. Yet, federal funding does go to postsecondary education in the form of research support and funding for targeted programs, as will be shown below.

To make matters more complicated, the funding for postsecondary education in Canada has shifted several times among the federal transfer programs as they have been split, consolidated, and split once again. Prior to the 1970s, the federal and provincial governments were involved in a cost-sharing plan where health and social services were funded equally by both levels of government. As the costs of social services rose (especially healthcare) and the federal deficit along with it, the federal government ended the 50-50 cost-sharing system and replaced it with two block grants for health and social services, allowing the federal government to decrease its contributions. Thus, two programs emerged in the mid-1960s: Established Program Financing (EPF) and the Canada Assistance Plan (CAP). The EPF funded healthcare and postsecondary education while the CAP funded social assistance.

The net effect of these block transfers was that the provinces were burdened with covering more of the costs of social services, as well as postsecondary education. Furthermore, since postsecondary education was combined in the same transfer as healthcare, with provinces left to their own devices to divvy up funds between the two areas, postsecondary education suffered while the provinces struggled to cope with the burgeoning costs of medical services. This unfortunate pairing was not much remedied in the 1990s when the EPF and CAP were combined into the Canada Health and Social Transfer (CHST) program. The CHST provided each province with per capita grants in the form of cash or tax credits, leaving the provinces to decide how to spread the transfer between healthcare, postsecondary education, and social assistance programs. The structure of the CHST made “following the money” from the federal purse to institutions’ operating budgets all the more difficult.

The most recent change in the federal transfer system, prompted by a call for healthcare reform from the provinces, was the introduction of a second split in 2004, this time into the Canada Health Transfer (CHT) and the Canada Social Transfer (CST). Postsecondary education was finally separated from healthcare, and now the federal contribution flows through the CST. However, there is still not a “line item” for postsecondary transfers. Although the federal transfer of funds to the provinces is now split into two streams for health and social services, the “lump sum” transfer hides the federal transfer for postsecondary education. For this level of detail it is necessary to examine provincial expenditures.

Postsecondary Revenues and Expenditures by Province

Although the federal transfers for health and social services are currently made on a per capita basis, each province is able to spend the funds and their own resources on postsecondary education as they see fit. When reported in the aggregate, these expenditures do not give us a picture of spending by institutional type (e.g., trade-vocational institutions, colleges, and universities). Furthermore, given the enormous variation in the number and types of institutions in the ten provinces, Canadian postsecondary finance should be examined at the provincial level.⁶ In addition, from an academic capitalism perspective, the relationship between public and private expenditures on postsecondary education is an important consideration. As reported in Table 1, public expenditures on postsecondary education are federal, provincial, and local funds, while private expenditures include student fees, non-governmental grants and contracts, donations and bequests, sales, investments, and miscellaneous institutional revenues.

To better understand the extent of the provincial variation and the public/private funding balance, Table 1 displays the total public and private expenditures on postsecondary education by type, in Canada overall and by province, for the period 1997–1998 to 2002–2003. These data report expenditure data collected from Canadian universities, colleges (which are largely similar to community colleges in the U.S.), and trade and vocational training centers (which rarely offer baccalaureate degrees). For the most part, Canadian higher education institutions are publicly funded, and there are few private for-profit or private non-profit institutions.

As seen in Table 1, Statistics Canada reported a 10.4% increase in public expenditures on postsecondary education from 1997 to 2003, yet private contributions to postsecondary increased by 53.9% over this same period. Trade and vocational education experienced a reduction in public expenditure (–19.5%), while universities benefited from the largest increases (30.4%). Private funding for all institutional sectors increased, by nearly 28% for trade-vocational institutions, almost 17% for colleges, and 66% for universities.

The stratified spending patterns among the different institutional sectors can be understood as a part of a larger governmental and industrial strategy to direct investments toward “world class” research-intensive institutions, of which a handful receive the greatest support. These research-intensive universities are known as the Group of Thirteen (G13), and they receive the most federal and provincial dollars. The “equalization” era of Canadian higher education is drawing to a close, and a hier-

TABLE 1

Public and Private Expenditures on Postsecondary Education by Type, Canada and Provinces, 1997–1998 to 2002–2003 (in millions of 2001 constant Canadian Dollars)

	Trade-Vocational		College		University		All Post-Secondary	
	Public	Private	Public	Private	Public	Private	Public	Private
Canada								
1997/1998	\$5,633	\$535	\$4,008	\$1,059	\$8,811	\$4,403	\$18,451	\$5,998
1998/1999	\$6,322	\$588	\$4,064	\$1,035	\$9,185	\$4,593	\$19,570	\$6,216
1999/2000	\$5,082	\$505	\$4,585	\$1,172	\$10,302	\$5,014	\$19,969	\$6,691
2000/2001	\$5,219	\$589	\$4,334	\$1,333	\$10,843	\$5,737	\$20,397	\$7,659
2001/2002	\$5,033	\$599	\$4,387	\$1,437	\$10,856	\$6,609	\$20,276	\$8,645
2002/2003	\$4,533	\$683	\$4,354	\$1,239	\$11,489	\$7,310	\$20,375	\$9,231
% Change	-19.5%	27.5%	8.7%	16.9%	30.4%	66.0%	10.4%	53.9%
Newfoundland and Labrador								
1997/1998	\$435	\$20	\$25	\$13	\$179	\$73	\$640	\$107
1998/1999	\$328	\$11	\$24	\$8	\$185	\$76	\$537	\$96
1999/2000	\$188	\$14	\$34	\$2	\$198	\$85	\$419	\$101
2000/2001	\$186	\$14	\$32	\$2	\$200	\$85	\$418	\$100
2001/2002	\$184	\$17	\$38	\$4	\$213	\$95	\$435	\$116
2002/2003	\$185	\$21	\$35	\$3	\$219	\$86	\$439	\$109
% Change	-57.4%	1.7%	35.8%	-76.2%	22.1%	16.5%	-31.4%	2.3%
Prince Edward Island								
1997/1998	\$52	\$7	\$16	\$13	\$38	\$11	\$106	\$31
1998/1999	\$48	\$7	\$14	\$10	\$38	\$15	\$100	\$32
1999/2000	\$29	\$7	\$14	\$10	\$36	\$22	\$79	\$39
2000/2001	\$29	\$6	\$15	\$8	\$41	\$22	\$84	\$36
2001/2002	\$27	\$5	\$17	\$9	\$41	\$25	\$84	\$39
2002/2003	\$30	\$6	\$20	\$11	\$62	\$11	\$112	\$28
% Change	-43.1%	-14.8%	23.4%	-18.3%	63.2%	0.2%	5.2%	-10.9%
Nova Scotia								
1997/1998	\$210	\$10	\$67	\$12	\$284	\$218	\$562	\$240
1998/1999	\$215	\$9	\$80	\$17	\$308	\$251	\$603	\$276
1999/2000	\$104	\$13	\$92	\$16	\$336	\$303	\$532	\$332
2000/2001	\$127	\$15	\$90	\$15	\$341	\$320	\$559	\$350
2001/2002	\$111	\$12	\$94	\$17	\$326	\$355	\$531	\$384
2002/2003	\$79	\$12	\$94	\$17	\$325	\$405	\$499	\$434
% Change	-62.4%	14.4%	39.7%	34.2%	14.5%	86.3%	-11.3%	80.6%
New Brunswick								
1997/1998	\$215	\$14	\$60	\$12	\$242	\$104	\$516	\$130
1998/1999	\$207	\$8	\$70	\$13	\$223	\$120	\$500	\$141
1999/2000	\$204	\$11	\$49	\$18	\$237	\$121	\$491	\$149
2000/2001	\$273	\$13	\$61	\$15	\$248	\$126	\$582	\$154
2001/2002	\$262	\$11	\$71	\$14	\$247	\$134	\$580	\$159
2002/2003	157	15	67	16	257	147	481	177
% Change	-27%	6.4%	13.0%	29.0%	6.0%	41.2%	-6.9%	36.3%
Quebec								
1997/1998	\$1,103	\$52	\$1,894	\$232	\$2,521	\$849	\$5,518	\$1,133
1998/1999	\$1,812	\$62	\$1,864	\$255	\$2,674	\$710	\$6,350	\$1,026
1999/2000	\$1,137	\$61	\$1,862	\$255	\$2,616	\$1,070	\$5,616	\$1,386

TABLE 1 (Continued)

Public and Private Expenditures on Postsecondary Education by Type, Canada and Provinces, 1997–1998 to 2002–2003 (in millions of 2001 constant Canadian Dollars)

	Trade-Vocational		College		University		All Post-Secondary	
	Public	Private	Public	Private	Public	Private	Public	Private
2000/2001	\$1,238	\$49	\$1,949	\$252	\$2,845	\$1,038	\$6,032	\$1,339
2001/2002	\$1,174	\$66	\$1,941	\$286	\$3,047	\$1,184	\$6,161	\$1,536
2002/2003	\$1,237	\$60	\$1,893	\$251	\$3,335	\$1,368	\$6,465	\$1,679
% Change	12.1%	14.5%	-0.1%	8.1%	32.3%	61.2%	17.2%	48.2%
Ontario								
1997/1998	\$1,512	\$125	\$1,013	\$475	\$2,859	\$1,905	\$5,384	\$2,505
1998/1999	\$1,412	\$159	\$1,050	\$409	\$2,972	\$2,138	\$5,434	\$2,706
1999/2000	\$1,298	\$100	\$1,486	\$553	\$3,764	\$1,924	\$6,548	\$2,577
2000/2001	\$1,165	\$129	\$1,105	\$654	\$3,607	\$2,496	\$5,877	\$3,278
2001/2002	\$1,060	\$106	\$1,096	\$712	\$3,419	\$2,987	\$5,574	\$3,805
2002/2003	\$848	\$219	\$1,117	\$575	\$3,536	\$3,289	\$5,502	\$4,083
% Change	-43.9%	75.3%	10.3%	21.1%	23.7%	72.7%	2.2%	63.0%
Manitoba								
1997/1998	\$201	\$19	\$89	\$10	\$349	\$140	\$639	\$169
1998/1999	\$233	\$22	\$87	\$12	\$372	\$163	\$692	\$198
1999/2000	\$197	\$19	\$95	\$15	\$403	\$165	\$695	\$199
2000/2001	\$219	\$19	\$101	\$18	\$446	\$160	\$766	\$196
2001/2002	\$223	\$23	\$102	\$15	\$413	\$214	\$738	\$253
2002/2003	\$206	\$29	\$102	\$25	\$439	\$230	\$747	\$283
% Change	2.8%	47.1%	14.2%	152.0%	25.8%	64.4%	16.9%	67.5%
Saskatchewan								
1997/1998	\$262	\$21	\$58	\$7	\$374	\$180	\$694	\$208
1998/1999	\$287	\$20	\$59	\$6	\$389	\$162	\$736	\$188
1999/2000	\$307	\$19	\$58	\$7	\$428	\$198	\$792	\$225
2000/2001	\$313	\$17	\$66	\$6	\$511	\$167	\$889	\$190
2001/2002	\$304	\$24	\$66	\$9	\$484	\$240	\$853	\$272
2002/2003	\$266	\$22	\$67	\$8	\$488	\$297	\$821	\$327
% Change	1.5%	2.1%	16.2%	23.6%	30.5%	65.2%	18.4%	57.5%
Alberta								
1997/1998	\$636	\$119	\$299	\$137	\$813	\$355	\$1,748	\$611
1998/1999	\$749	\$152	\$305	\$172	\$837	\$409	\$1,891	\$733
1999/2000	\$598	\$128	\$395	\$188	\$959	\$502	\$1,952	\$818
2000/2001	\$666	\$192	\$416	\$264	\$1,029	\$659	\$2,112	\$1,115
2001/2002	\$658	\$195	\$417	\$255	\$1,119	\$637	\$2,194	\$1,086
2002/2003	\$611	\$162	\$426	\$221	\$1,128	\$672	\$2,165	\$1,055
% Change	-3.9%	36.6%	42.7%	60.8%	38.8%	89.1%	23.9%	72.6%
British Columbia								
1997/1998	\$795	\$143	\$436	\$143	\$1,065	\$568	\$2,296	\$854
1998/1999	\$794	\$135	\$459	\$130	\$1,095	\$550	\$2,348	\$815
1999/2000	\$859	\$128	\$437	\$104	\$1,231	\$625	\$2,526	\$856
2000/2001	\$893	\$133	\$437	\$93	\$1,483	\$664	\$2,812	\$890
2001/2002	\$909	\$135	\$486	\$112	\$1,447	\$738	\$2,842	\$984
2002/2003	\$791	\$133	\$469	\$106	\$1,607	\$804	\$2,867	\$1,043
% Change	-0.6%	-7.4%	7.7%	-25.8%	50.9%	41.6%	24.9%	22.1%

Source: Statistics Canada. (2007). Education indicators in Canada: Report of the Pan-Canadian Education Indicators Program. (Catalogue no. 81-582-XIE). Ottawa.

archy of institutions and within-sector types is emerging (Godin, Doré, & Larivière, 2002). Federal-level research policy further contributes to the increasing stratification, with science and technology policies pushing for more funding for “curiosity-driven” research at the universities and “workforce skills” assessments at the college level (Metcalf & Fenwick, 2009). The public sector’s shift away from funding trade-vocational education toward university-level education is also worth noting as a trend toward a more targeted postsecondary funding policy.

When we examine each province, it is apparent that some have increased their postsecondary spending and others have decreased it, in accordance with provincial strengths and regional economic development strategies. The most dramatic decline in public spending was in Newfoundland and Labrador (–31.4%), but this is explained by Statistics Canada as an adjustment to “normal” spending after a short-term increase in funding in the mid-1990s. Of the Atlantic provinces, only Prince Edward Island increased public spending on postsecondary education, at a modest 5.2%. In the rest of Canada, British Columbia led in increased public spending (24.9% increase), but this was closely followed by Alberta (23.9%).

In terms of private spending, Ontario received the most funds but Nova Scotia had the highest percentage change in funding from private sources over this period. In general, there were greater increases in *both* public and private spending on postsecondary education in the Western provinces than in central Canada, with the exception of Québec, which had a 17.2% increase in public spending and 48.2% increase in private spending over this period. These patterns mirror provincial population growth and industrial expansion.

In Ontario, public spending on postsecondary education overall has been relatively stagnant (gaining only 2.2%), but private investments have increased sharply (63%). To some degree this is a product of the removal of tuition caps and an increase in undergraduate tuition rates, a revenue-generation policy that has been extremely political and controversial (Fisher et al., 2006). The private investments of individual students have contributed to the rise in overall private spending increases, yet other forms of revenue generation at Ontario universities are also factors (Axelrod, 1982, 2002).

As a percentage of the overall revenue sources, private funding through tuition has increased at the national level. Tuition increases have been a source of contention throughout Canada in the 1990s and early 2000s, with student groups in the various provincial systems forming coalitions to oppose the removal of tuition caps (Johnson & Rahman, 2005). In constant 2001 dollars, undergraduate student tuition in Canada

rose from an average of \$1,998 per year in 1991/1992 to \$3,788 in 2005/2006, a change of 90% (Canadian Education Statistics Council, 2007). This rise in tuition, while contributing to an increase in private (household) spending on postsecondary education, also contributed to a rise in the public subsidy for higher education through the need to increase student scholarships and loan assistance programs. Overall, in the period between 1997 to 2006, tuition as a percentage of total university and college revenue rose from 17% to 21%. In this same period, support to students rose from nearly 2% of the total expenditures to about 3.5%, showing that the increase in the price of tuition has been offset somewhat by a continued public subsidy. As Slaughter and Rhoades have recently remarked, “academic capitalism in the new economy involves a shift, not a reduction in public subsidy” (2008, p. 22), which can be clearly seen in the Canadian case in the form of student financial aid and federal investments into areas such as research. Both forms of subsidy are “rationalized” at level of institutions and granting councils in that these funds are now *awarded* where previously they had been *allocated* as part of the government transfer (block funding).

The federal investments in postsecondary education include all “tri-council” grants from the various national research support agencies and other special funds. As federal support for targeted programs and tuition increased as sources of revenue for Canadian colleges and universities, provincial dollars fell relative to other sources. As provincial support forms the foundation of postsecondary funding in Canada, this shift in funding composition has been significant and can be compared to the trends seen in the early 1990s in Australia, the U.K., and the U.S. by Slaughter and Leslie. Type of public funds is also an important consideration (Tables 2 and 3).

As Canada’s revenue streams shifted in the late 1990s, there was a similar change in expenditure patterns. While the administrative expenditures declined slightly, educational expenditures fell the most relative to other spending on colleges and universities in Canada, although in real dollars the amount rose relative to inflation. Much of the percentage decrease is accounted for in the rise in two other expenditure areas: support to students (a consequence of higher tuition) and other expenditures, which would cover a variety of items that are difficult to determine at this level of data. These patterns are most consistent with Slaughter and Leslie’s findings in the other countries, and can in themselves be seen as indicators of academic capitalism in Canada.

An examination of current (2006) provincial revenues and expenditures (Tables 4 and 5) confirms that tuition and provincial funds are the largest sources of income in general, but it is interesting to note the

TABLE 2

Current University and College Revenue and Expenditures, Canada, 1997-2006 (in thousands of Canadian Dollars)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total current revenue	\$16,729,056	\$17,389,686	\$20,064,718	\$20,380,239	\$21,732,604	\$23,262,806	\$25,359,135	\$28,048,472	\$30,390,710	\$318,50,915
Tuition fees	\$2,889,160	\$3,179,565	\$3,506,275	\$3,881,521	\$4,144,097	\$4,486,787	\$5,085,897	\$5,765,824	\$6,366,403	\$6,649,086
Other sales of goods and services	\$2,298,673	\$2,520,232	\$2,538,427	\$2,833,861	\$3,227,036	\$3,645,445	\$3,940,594	\$4,099,279	\$4,477,374	\$4,684,353
Investment income	\$408,272	\$556,419	\$476,694	\$592,797	\$604,613	\$396,046	\$370,231	\$821,554	\$900,089	\$945,312
Other revenue from own sources	\$1,057,088	\$1,190,922	\$1,366,126	\$1,483,746	\$1,654,715	\$1,810,929	\$1,847,635	\$2,022,264	\$2,201,017	\$2,299,833
Federal government	\$1,022,516	\$980,566	\$1,112,046	\$1,352,613	\$1,624,714	\$1,922,197	\$2,270,560	\$2,564,931	\$2,767,845	\$2,902,432
Provincial and territorial governments	\$9,028,729	\$8,932,862	\$11,049,246	\$10,221,834	\$10,451,811	\$10,947,140	\$11,817,345	\$12,745,152	\$13,645,770	\$14,335,434
Local governments	\$24,618	\$29,120	\$15,904	\$13,867	\$25,618	\$54,262	\$2,6873	\$29,468	\$32,212	\$34,465
Total current expenditures	\$16,804,525	\$17,194,597	\$18,022,802	\$19,478,054	\$21,278,479	\$23,454,251	\$25,590,341	\$28,050,725	\$30,385,993	\$31,842,146
Administration	\$3,205,490	\$3,251,008	\$3,438,931	\$3,826,107	\$4,267,373	\$4,662,921	\$4,717,093	\$5,161,947	\$5,580,693	\$5,861,237
Education	\$9,176,367	\$9,253,953	\$9,724,860	\$9,806,404	\$10,447,939	\$11,372,063	\$12,485,313	\$13,749,835	\$14,886,311	\$15,600,477
Support to students	\$307,665	\$347,649	\$407,889	\$513,845	\$603,597	\$718,845	\$818,445	\$960,656	\$1,063,972	\$1,111,258
Other	\$3,691,718	\$3,909,506	\$4,107,541	\$4,653,676	\$5,250,922	\$5,963,501	\$6,799,363	\$7,334,121	\$7,952,824	\$8,329,527
Special retraining services	\$0	\$0	\$0	\$240,451	\$243,966	\$272,106	\$271,758	\$268,516	\$297,457	\$309,031
Debt charges	\$423,285	\$432,481	\$343,581	\$437,571	\$464,682	\$464,815	\$498,369	\$575,650	\$604,736	\$630,616

Source: CANSIM, Table 385-0007, Statistics Canada.

TABLE 3
Current University and College Revenue and Expenditures, Canada, 1997–2006 (percentage distribution)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total current revenue	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tuition fees	17.27%	18.28%	17.47%	19.05%	19.07%	19.29%	20.06%	20.56%	20.95%	20.88%
Other sales of goods and services	13.74%	14.49%	12.65%	13.90%	14.85%	15.67%	15.54%	14.61%	14.73%	14.71%
Investment income	2.44%	3.20%	2.38%	2.91%	2.78%	1.70%	1.46%	2.93%	2.96%	2.97%
Other revenue from own sources	6.32%	6.85%	6.81%	7.28%	7.61%	7.78%	7.29%	7.21%	7.24%	7.22%
Federal government	6.11%	5.64%	5.54%	6.64%	7.48%	8.26%	8.95%	9.14%	9.11%	9.11%
Provincial and territorial governments	53.97%	51.37%	55.07%	50.16%	48.09%	47.06%	46.60%	45.44%	44.90%	45.01%
Local governments	0.15%	0.17%	0.08%	0.07%	0.12%	0.23%	0.11%	0.11%	0.11%	0.11%
Total current expenditures	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Administration	19.08%	18.91%	19.08%	19.64%	20.05%	19.88%	18.43%	18.40%	18.37%	18.41%
Education	54.61%	53.82%	53.96%	50.35%	49.10%	48.49%	48.79%	49.02%	48.99%	48.99%
Support to students	1.83%	2.02%	2.26%	2.64%	2.84%	3.06%	3.20%	3.42%	3.50%	3.49%
Other expenditures	21.97%	22.74%	22.79%	23.89%	24.68%	25.43%	26.57%	26.15%	26.17%	26.16%
Special retraining services	0.00%	0.00%	0.00%	1.23%	1.15%	1.16%	1.06%	0.96%	0.98%	0.97%
Debt charges	2.52%	2.52%	1.91%	2.25%	2.18%	1.98%	1.95%	2.05%	1.99%	1.98%

Source: CANSIM, Table 385-0007, Statistics Canada.

Québec case as an alternative narrative. Québec relies the most on provincial funding for its postsecondary system, and the least on tuition. Due to several important research centers and other special programs, federal funding to institutions in Québec is somewhat higher than the national average, second in actual dollars only to Ontario. If we think of academic capitalism as being marked by a shift from public funding to private funding (tuition, special fees, etc.), Québec deserves further analysis as part of an alternative model in North America (Rhoades, Maldonado-Maldonado, Ordorika, & Velazquez, 2004).

Academic Capitalism in Canada: New Programs, New Markets

Although it is consistent with Slaughter and Leslie's methods to examine revenue and expenditure data as I have done above, other evidence exists to indicate that Canada has moved swiftly into the realm of academic capitalism. Several new policy initiatives have emerged at the provincial and federal levels since the mid 1990s as part of a national innovation strategy (Industry Canada, 1996) and regional economic development. I focus here on the Canada Foundation for Innovation and its leveraging of public funding and industrial partnerships at the provincial level and the trend toward the commercialization of research that has been undertaken at the institutional level through an agreement between the federal government and the Association of Universities and Colleges of Canada (AUCC).

Canada Foundation for Innovation

Competitive research grants are becoming increasingly important to Canadian higher education (Metcalf & Fenwick, 2009; Polster, 2007). In the 1990s, a Canadian "competitiveness coalition" was formed by both the Conservative and Liberal parties (Palda, 1993; Prosperity Secretariat, 1991), not unlike what was happening in the United States at the time (Slaughter & Rhoades, 2004). The Canada Foundation for Innovation (CFI) emerged in 1997 from this political, social, and economic milieu to become one of the most influential organizational bodies in Canadian research. In terms of academic capitalism theory, the CFI can be understood as an "intermediating organization," situated between government, industry, and academe (Metcalf, in press; Slaughter & Rhoades, 2004). Through the work of the CFI, the Canadian federal government has leveraged provincial governments and industry to devote more resources to research, particularly in high-tech fields and the sciences. It can be argued that the CFI thus circumvents the provincial jurisdiction for higher education, and has become a significant external

TABLE 4
Current University and College Revenue and Expenditures by Province, 2006 (in thousands of Canadian Dollars)

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Total current revenue	\$530,121	\$132,835	\$960,293	\$432,877	\$7,176,352	\$12,605,754	\$933,762	\$1,213,474	\$3,800,923	\$3,998,174
Tuition fees	\$81,736	\$32,948	\$293,144	\$124,599	\$633,503	\$3,403,665	\$169,500	\$206,646	\$821,140	\$879,522
Other sales of goods and services	\$82,271	\$23,265	\$173,736	\$59,081	\$802,655	\$2,077,730	\$89,123	\$199,352	\$513,453	\$647,622
Investments income	\$2,989	\$3,199	\$26,650	\$7,065	\$172,044	\$419,446	\$15,473	\$43,526	\$154,318	\$100,237
Other own source revenue	\$13,517	\$5,804	\$62,591	\$21,422	\$540,291	\$1,016,754	\$86,973	\$79,219	\$231,312	\$241,950
Federal government	\$62,793	\$10,674	\$83,624	\$42,369	\$797,580	\$1,099,060	\$78,255	\$105,641	\$318,357	\$303,244
Provincial governments	\$286,628	\$56,945	\$320,433	\$178,311	\$4,225,137	\$4,574,457	\$494,416	\$578,531	\$1,749,196	\$1,824,978
Local governments	\$187	\$0	\$115	\$30	\$5,142	\$14,642	\$22	\$559	\$13,147	\$621
Total current expenditures	\$544,353	\$144,258	\$971,143	\$444,302	\$7,261,714	\$12,549,219	\$946,624	\$1,245,584	\$3,702,134	\$3,969,043
Administration	\$112,274	\$47,101	\$194,606	\$86,586	\$1,230,038	\$2,173,167	\$214,395	\$214,133	\$845,065	\$732,538
Education	\$308,740	\$65,686	\$487,699	\$211,633	\$3,605,818	\$6,084,588	\$483,984	\$618,001	\$1,752,443	\$1,929,447
Support to students	\$17,634	\$2,237	\$35,286	\$10,657	\$169,969	\$617,910	\$12,091	\$30,916	\$117,596	\$96,962
Other education expenses	\$104,801	\$22,904	\$240,311	\$133,491	\$1,791,507	\$3,306,830	\$232,349	\$362,710	\$965,131	\$1,169,493
Debt charges	\$904	\$935	\$13,241	\$1,935	\$364,377	\$180,476	\$3,805	\$2,441	\$21,899	\$40,603
Surplus or deficit	-\$14,232	-\$11,423	-\$10,850	-\$11,425	-\$85,362	\$56,535	-\$12,862	-\$32,110	\$98,789	\$29,131

Source: CANSIM, Table 385-0007, Statistics Canada.

TABLE 5
Current University and College Revenue and Expenditures by Province, 2006 (percentage distribution)

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Total revenue	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tuition fees	15.42%	24.80%	30.53%	28.78%	8.83%	27.00%	18.15%	17.03%	21.60%	22.00%
Other sales of goods and services	15.52%	17.51%	18.09%	13.65%	11.18%	16.48%	9.54%	16.43%	13.51%	16.20%
Investments income	0.56%	2.41%	2.78%	1.63%	2.40%	3.33%	1.66%	3.59%	4.06%	2.51%
Other own source revenue	2.55%	4.37%	6.52%	4.95%	7.53%	8.07%	9.31%	6.53%	6.09%	6.05%
Federal government	11.85%	8.04%	8.71%	9.79%	11.11%	8.72%	8.38%	8.71%	8.38%	7.58%
Provincial governments	54.07%	42.87%	33.37%	41.19%	58.88%	36.29%	52.95%	47.68%	46.02%	45.65%
Local governments	0.04%	0.00%	0.01%	0.01%	0.07%	0.12%	0.00%	0.05%	0.35%	0.02%
Total expenditures	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Administration	20.63%	32.65%	20.04%	19.49%	16.94%	17.32%	22.65%	17.19%	22.83%	18.46%
Education	56.72%	45.53%	50.22%	47.63%	49.66%	48.49%	51.13%	49.62%	47.34%	48.61%
Support to students	3.24%	1.55%	3.63%	2.40%	2.34%	4.92%	1.28%	2.48%	3.18%	2.44%
Other education expenses	19.25%	15.88%	24.75%	30.05%	24.67%	26.35%	24.55%	29.12%	26.07%	29.47%
Debt charges	0.17%	0.65%	1.36%	0.44%	5.02%	1.44%	0.40%	0.20%	0.59%	1.02%

Source: CANSIM, Table 385-0007, Statistics Canada.

funding source, particularly for research universities. Furthermore, the CFI promotes the institutionalization of entrepreneurial behavior in higher education by requiring matching funds to be raised, increasing ties between institutions and the private sector.

As an intermediating organization, the CFI is different from Canada's other funding councils (the Social Sciences and Humanities Research Council, the Canadian Institutes of Health Research, and the Natural Sciences and Engineering Research Council) in several important ways. First, the CFI was created as an independent organization, at arm's length from government. While it is loosely connected to the Ministry of Industry through its reporting channels, the CFI has its own governance structure, with a board of directors and members. Although it submits an annual report to the Ministry, the CFI considers itself more accountable to the public at large than to the federal government. However, its organizational structure must be understood in the context of public-sector privatization and New Public Management theories that were popular in the late 1990s and early 2000s (Barzelay, 2001; Savoie, 1995). Second, the CFI is chiefly concerned with building infrastructure, and therefore the organization mostly funds equipment, buildings, laboratories, and databases that support research rather than the research activities.⁷ Due to this mandate, most CFI funds are disbursed to institutions, not individuals *per se*, situating the organization between higher education institutions and government, rather than between "science" and government as is typical for research funding councils. Third, the CFI is a foundation rather than a government agency with an annual budget, so it is somewhat insulated from the political budget cycle and the day-to-day parliamentary agenda. As a foundation, the CFI invests its money, diversifying the funds into money market accounts, mortgage-backed securities, and bonds. As the market fluctuates, presumably so does the available funding, a point that deserves attention as world markets experience periods of instability. This type of fund management necessitates a business-like orientation, and an atypical focus on the market when compared with traditional research councils. Finally, in concept the CFI funds a broad range of research infrastructure projects and is not solely a science council, yet in practice it operates very much as such, targeting investments towards a sphere of "innovation" that has strong ties with industry.

Although the CFI is different in form and function from other research funding agencies in Canada, perhaps its most significant difference in terms of academic capitalism is the way funds are distributed. The CFI only provides 40% of project funding, with institutions and provinces left to come up with the remaining funds and to seek private partners. By funding institutions, the CFI has direct contact with acade-

mic research administrators, by-passing both the provincial jurisdiction for higher education and the traditional review processes established at the other granting councils. This creates new networks of communication and circuits of knowledge, characteristics of academic capitalism as theorized by Slaughter and Rhoades (2004). Furthermore, the CFI requires that recipient institutions develop a strategic research plan, which has had the effect of focusing administrative attention on research capacity and long-term strategies to achieve award competitiveness. Additionally, to administer the CFI grants and their challenging funding schema, many campuses have hired CFI liaisons, increasing the administrative ranks in the area of research support. This contributes to an “expanded managerial capacity” mentioned by Slaughter and Rhoades (2004) as a hallmark of academic capitalism.

The net effect of the CFI is that higher education institutions in Canada are more strategically oriented toward research capacity, are required to consider funding partners at the provincial level and in the private sector to cobble together the 60% of matching funds for each project, and are moving beyond researcher-centric support to a more firm-based model of research funding. By the latter I mean that faculty are de-emphasized in the CFI process to some extent, as institutional representatives (research administrators, CFI liaisons, etc.) are foregrounded, as are industrial partnerships (Crespo & Dridi, 2007; Mesny & Maihot, 2007). As such, the CFI can be understood as expanding capacities for market-like behaviour at the institutional level, contributing to academic capitalism in Canada.

Commercialization of Research

Perhaps the most explicit sign that Canadian higher education is now firmly entrenched in academic capitalism is the formalization of an agreement between the federal government and the leading advocacy group for higher education, the Association of Universities and Colleges of Canada (AUCC), to triple the amount of commercialization from academic research before 2010. The AUCC is a powerful organization in the Canadian higher education field, as it is the de facto “accrediting body” in the country—institutional members of the AUCC are legitimized through a careful screening process. In 2002, the AUCC and the federal government completed a long review process of commercialization, and entered into a formal agreement that in return for greater federal investments in research, AUCC member universities (i.e., all Canadian research universities and most research-active comprehensive universities) would (a) double the amount of research they conducted, and (b) triple the amount of commercialization of academic research, both by 2010.

The 2002 agreement, titled the *Framework of Agreed Principles on Federally Funded University Research* (AUCC & Government of Canada, November 18, 2002), necessitated a set of indicators with which to measure both research productivity and commercialization. The latter will be measured by Statistics Canada, and the “total income from the commercialization of intellectual property” is based on earned income from intellectual property and cash dividends on equity holdings (but not the value of held equity) from academic research ventures. The AUCC is also collecting data on the value of spin-off companies, patents, licenses, and industrial research contracts, although revenue from these sources will not be included in the commercialization targets for 2010 (AUCC, 2006).

The role of Statistics Canada in the data collection has been met with some resistance from research administrators, as the agency is not known for timely reporting of data. In addition, most research universities in Canada already collect and report similar data for public reporting and 40 Canadian institutions participated in the 2007 Association of University Technology Managers’ (AUTM) Canadian Licensing Survey. However, due to concerns that the AUTM survey would not provide the best opportunities for Canadian institutions to showcase their commercialization efforts in a format that would serve the AUCC agreement with government, a new organization was formed, called the Alliance for Commercialization of Canadian Technology. This group is working to further professionalize technology transfer and research management at Canadian institutions, a move that further expands managerial capacity in Canadian higher education. As the measurement of research commercialization is codified and professionalized, it is likely that the assessment of research outputs and academic performance will be institutionalized as well, with policy implications at the university, provincial, and federal levels.

To date, the AUCC reports that Canadian universities are well on their way toward reaching the 2010 commercialization targets. In their recent report, *Momentum: The 2008 Report on University Research and Knowledge Mobilization*, the AUCC stated,

In 1999, the first year in which comprehensive national data were collected and the base year for the tripling target, total income derived from the commercialization of university intellectual property was estimated at \$23.4 million. The most recent data from 2006 indicate that overall income has increased by 131 percent, to \$54 million. These figures suggest that universities collectively remain on track to meet the tripling target of \$70.2 million by 2010. (AUCC, 2008, p. 128)

Six indicators are used to measure commercialization, with the AUCC reporting in the 2008 *Momentum* report gains in each from 1999 to

2006: operational expenditures on IP management (increase of 93.2% to \$42.5 million in 2006), disclosures (up 51.8%), new patent applications (up 119.8%), number of spin-offs (up 48.7%), new licenses (up 88.4%), and the value of industrial research contracts (up 140.9% to \$370.5 million in 2006). It is not reported what the “pay-off” of meeting the target of tripling commercialization will be in terms of increased federal funding toward research. However, it is clear that incentive-based funding in Canada has passed through the “start-up” phase and is moving into a more “operational phase” with “the government instruments play[ing] a key role in the development of commercialization infrastructure at Canadian universities” (Rasmussen, 2008, p. 515).

Conclusion

It has not been my intention in this article to fault Slaughter and Leslie’s assessment of Canada in *Academic Capitalism* (1997). Rather, my aim was to draw attention to the Canadian case and to re-examine it in light of currently available data and changes in the higher education policy context. As I have presented here, the record now shows that nationally and in particular provinces, Canada has moved from a system of block public subsidy that was described by Slaughter and Leslie to a system where public funds are used to strategically position Canadian institutions (particularly research universities) on the path toward increased revenue generation. Policy initiatives have contributed to academic capitalism in Canada by creating new circuits of knowledge, intermediating organizations, and expanded managerial capacity as well as increased private revenue streams. As Polster (2007) observed,

The clearest expression of the instrumentalism engendered, however, is the ongoing transformation of the *raison d’être* of Canada’s universities and those who work within them. Rather than simply using their resources to do valuable things, universities and academics are becoming increasingly preoccupied with, and intent on, acquiring valuable resources. (p. 615)

As with the other countries studied by Slaughter and Leslie, Canada has decreased its proportional share of local public (provincial) funding on higher education, and has increased reliance upon private sources of income, namely through tuition, the sales of goods and services, and industrial partnerships. Federal spending has become more strategically targeted, through the Canada Foundation for Innovation and the commercialization agreement between government and the Association of Universities and Colleges of Canada. Furthermore, leading advocates of higher education in Canada, including the AUCC, have given their con-

sent to increased accountability in terms of research performance and alignment with private-sector interests. These developments have been met with resistance by some Canadian faculty concerned with academic autonomy (Newson & Polster, 2008), but have also been embraced by some who see technology transfer and commercialization as central university activities (Pries & Guild, 2007). Future research should be undertaken to explore the tensions between faculty on either side of the commercialization debate to better understand the affect of academic capitalism on the Canadian academic profession.

In addition, there has been provincial variation on the path to academic capitalism, and institutional variation as well, although not discussed here. These differences could be better understood with more research. The Québec case, for example, deserves a more thorough investigation, as higher education in that province is situated in a complex linguistic (Francophone/Anglophone) and cultural context that influences the social value of public subsidy and relations between the federal and provincial levels of government (Jones & Young, 2004). Of particular interest is the way Québec's AUCC institutions, many of which are highly regarded in terms of research capacity, will participate in the federal commercialization agenda, or not as the case may be. In many ways, Canadian exceptionalism to academic capitalism may rest upon the sustainability of the so-called "Québec exceptionalism" (Fisher, Rubenson, Jones, & Shanahan, 2009) as a consistent provincial variation to the national trend.

Finally, the Canadian case may be the ideal context for a more thorough investigation of the social implications of academic capitalism in terms of the commercialization of research. An agenda of "science for the social good" is emerging in Canada's research-intensive universities (AUCC, 2008), and analysis of the benefits and limitations of commercialization is warranted. In so doing, it is also prudent to "interrogate" the data themselves, as the role of Statistics Canada as both a governmental agency and a cost-recovery endeavor must be considered. Indeed, as data limitations also hampered Slaughter and Leslie's assessment of the Canadian case, in general the role of information must be better understood in the higher education policy process.

Notes

¹Due to a global rise in the price of oil and Alberta's lucrative petroleum-extraction industry, the 2006 Alberta provincial budget forecasted a \$4.1 billion dollar surplus. In contrast, historically cash-strapped Ontario projected a \$1.6 billion deficit in their provincial budget (Ontario, 2006). Provincial fiscal health has at least some impact on

the availability of funds for postsecondary education, although the political environment in each province is a factor in the way these dollars are spent. (All figures in Canadian currency.)

²Other sources of data for Canadian higher education are the Association of Universities and Colleges of Canada (AUCC) and the Canadian Association of University Teachers (CAUT). The Association of University Technology Managers (AUTM) also collects data on about 40 Canadian institutions.

³Much of the rise in demand for higher education came from women, whose numbers have grown within the academy but whose position remains economically segregated in terms of participation in high-status fields with close connections to the market. For a discussion of how corporatism has affected women in Canadian higher education, see Reimer (2004).

⁴As with the U.S.-based Business Higher Education Forum that Slaughter examined in her earlier work (Slaughter, 1990), the Canadian organization Corporate-Higher Education Forum (CHEF) was seen to play a role in the formation of public-private partnerships to strategize how to solve the resource gap between government and higher education.

⁵For an overview of the Networks of Centres of Excellence see Fisher, Atkinson-Grosjean, and House (2001). A more recent and thorough description is available in Atkinson-Grosjean (2006).

⁶For example, in Québec, prior to entering university-level education, students are required to attend a *Collège d'enseignement général et professionnel* (CEGEP) institution for two years. The CEGEP institutions provide post-secondary education in the form of vocational and university-transfer programs, and are similar to American community colleges in many respects, except for their function as mandatory pre-university institutions. The CEGEP institutional type is not found in the other provinces, but does pose some difficulties for pan-Canadian data collection and analysis as these institutions blur the boundaries between what is considered a "college" and a "university," particularly in relation to first and second year undergraduate education.

⁷The CFI was created to fund the infrastructure needs for research pertaining to physical spaces and equipment, but not personnel or indirect costs. Indirect costs for research are not covered by Canada's federal "tri-council" granting agencies either, although the Government of Canada introduced a stand-alone Indirect Costs Program (ICP) in 2003. The CFI does include one funding program that is meant to serve the infrastructure needs of individual researchers (such as Canada Research Chairs), but the Leader's Opportunity Fund is scheduled to account for only about 10% of the overall funds awarded by the CFI by 2010 (CFI, 2008).

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