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Résumé de l'article

Durant le dernier siècle, le développement des sciences sociales dans les institutions canadiennes d'enseignement supérieur a été spectaculaire. En effet, pendant la période qui suit la Seconde Guerre mondiale, le nombre d'étudiants a augmenté de manière exponentielle, le corps professoral a suivi en proportion, et le volume de la recherche et des publications a explosé. Pourtant une analyse globale et quantitative de l'évolution des sciences sociales canadiennes manque encore. Si d'excellentes monographies ont contribué à une meilleure connaissance de l'histoire de certaines disciplines, les chercheurs canadiens n'ont pas encore produit une cartographie globale du développement des sciences sociales dans le dernier siècle. C'est précisément ce que cet article tente d'accomplir. Dans la première section, nous explorons la montée des inscriptions étudiantes (avec une attention portée à la question du genre); dans la seconde, nous nous attardons à la croissance du corps professoral; dans la troisième, nous formulons quelques hypothèses pour expliquer cette croissance spectaculaire à travers une discussion du livre de Frank et Gabier, *Reconstructing the University*. En présentant l'évolution numérique des sciences sociales dans les institutions universitaires canadiennes, ce premier survol général nous permet de mieux saisir les changements qui ont affecté les sciences sociales canadiennes depuis plus d'un siècle.

Job Market Boom and Gender Tide: The Rise of Canadian Social Sciences in the 20th Century*

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Abstract: In the last century, the development of the social sciences in institutions of higher learning has been nothing short of spectacular. This is especially true when considering the period opened by the Second World War, a time when the number of students rose exponentially, faculty body grew accordingly, and the volume of research and publications skyrocketed. Yet a global and quantitative analysis of the evolution of Canadian social sciences is still lacking. If some excellent monographs have contributed to a better knowledge of specific disciplines, Canadian scholars did not produce a global cartography of social sciences' development over the last century. This is precisely what this paper endeavours to provide. Its first section explores the rise in student enrolment (with a special analysis of gender composition), the second looks at the growth of faculty hiring and the third section suggests some hypotheses concerning the spectacular growth of social science disciplines through a discussion of Frank and Gabler's recent book, *Reconstructing the University*. These sections will provide an introductory global overview of the evolution of social sciences in university-level institutions in Canada. This historical analysis will help us better grasp the changes that affected Canadian social sciences through the last century.

Résumé : Durant le dernier siècle, le développement des sciences sociales dans les institutions canadiennes d'enseignement supérieur a été spectaculaire. En effet, pendant la période qui suit la Seconde Guerre mondiale, le nombre

* The authors wish to thank the anonymous referees for their detailed comments. Thanks also to Christopher Murray for compiling the data on Canadian students and faculty.

d'étudiants a augmenté de manière exponentielle, le corps professoral a suivi en proportion, et le volume de la recherche et des publications a explosé. Pourtant une analyse globale et quantitative de l'évolution des sciences sociales canadiennes manque encore. Si d'excellentes monographies ont contribué à une meilleure connaissance de l'histoire de certaines disciplines, les chercheurs canadiens n'ont pas encore produit une cartographie globale du développement des sciences sociales dans le dernier siècle. C'est précisément ce que cet article tente d'accomplir. Dans la première section, nous explorons la montée des inscriptions étudiantes (avec une attention portée à la question du genre); dans la seconde, nous nous attardons à la croissance du corps professoral; dans la troisième, nous formulons quelques hypothèses pour expliquer cette croissance spectaculaire à travers une discussion du livre de Frank et Gabler, *Reconstructing the University*. En présentant l'évolution numérique des sciences sociales dans les institutions universitaires canadiennes, ce premier survol général nous permet de mieux saisir les changements qui ont affecté les sciences sociales canadiennes depuis plus d'un siècle.

In the last century, the development of the social sciences in institutions of higher learning has been nothing short of spectacular. This is especially true when considering the period opened by the Second World War, a time when the number of students rose exponentially, faculty body grew accordingly, and the volume of research and publications skyrocketed. Yet, regardless of these general trends, social scientists have always complained about the lack of recognition and the low support from university administrations. They have often felt either marginalized or ignored by the academic stakeholders or the various public granting institutions. Furthermore, they have often succumbed to an 'existential' or 'epistemological' malaise, announcing the 'coming crisis' of their disciplines, the 'end' of social knowledge, the inevitable 'decadence' of Canadian university, or the 'dissolution' of society. Every new generation has brought its harvest of books about the downfall of social sciences.¹ This may explain why an objective and quantitative analysis of the evolution of Canadian social sciences is still lacking. If some excellent monographs have contributed to a better knowledge of specific disciplines (anthropology, sociology, psychology, economics, geography, etc.),² Canadian scholars have yet to produce a global cartography of social sciences' development over the last century. This is precisely what this paper endeavours to provide.

1. Jean-Charles Falardeau, "Les Chaînes de Prométhée," *Liberté* 1, 2 (1959): 69-78; Irving Louis Horowitz, *The Decomposition of Sociology* (New York: Oxford University Press, 1993); Neil McLaughlin, "Canada's Impossible Science: Historical and Institutional Origins of the Coming Crisis in Anglo-Canadian Sociology," *The Canadian Journal of Sociology* 30, 1 (2005): 1-40.

2. See the articles in this issue and the references therein.

This article is divided into three sections. The first explores the rise in student enrolment (with a special analysis of gender composition), the second looks at the growth of faculty hiring and the third section addresses the reasons for the spectacular growth of social science disciplines through a discussion of Frank and Gabler's recent book, *Reconstructing the University* (2006). These sections will provide an introductory global overview of the evolution of social sciences in university-level institutions. We are conscious that the global trends hide idiosyncrasies and specificities that depend on disciplines, regions, and institutions. But before trying to explain these local features, it may be useful to consider the global picture. As Frank and Gabler recently observed, specialised empirical literature can sometimes be "too narrow to sustain general conclusions about changes in the body of university knowledge."³ Hence a historical synthesis may help us better grasp the changes that affected Canadian social sciences through the last century.

The data collected in this article were gathered from various sources: Dominion Statistics, Statistic Canada, and CAUT (Canadian Association of University Teachers) statistics. Sources for undergraduate and graduate student population were the Dominion Statistics of Canada for the period 1929-1991 and the online statistics "E-STAT" for the period 1992-2003. Sources for university professor populations were the Dominion Statistics of Canada for the period 1956-1971 and the CAUT for the period 1972-2003. The problem of using different sources comes from lack of homogeneity. The categories defining social sciences have changed over the years and differ from one source to another. Depending on which disciplines fall into the social sciences box, the proportion of social sciences in Canadian universities is altered accordingly.⁴ However, our

3. David John Frank and Jay Gabler, *Reconstructing the University. Worldwide Shifts in Academia in the 20th Century* (Stanford: Stanford University Press, 2006), 55.

4. The Social Science Categories for Graduate Studies (1972-1991) and Undergraduate Studies (1980-1991) as determined by The Dominion Bureau of Statistics are: Anthropology, Area Studies, Business Commerce, Business Administration, Commerce, Economics, Environment Studies, Man/Environment Studies, Geography, Law, Political Science, Psychology, Secretarial Science, Social Work, Sociology, and Social Sciences (Other). Before 1980, undergraduate figures are gathered from this set of categories when listed. The Social Science Categories for Graduate Studies and Undergraduate Studies as determined by E-STAT (1992-2003) are: Social Sciences (General), Anthropology, Archaeology, Criminology, Demography and Population Studies, Economics, Geography and Cartography, International Relations and Affairs, Political Science and Government, Sociology, Urban Studies/Affairs, Social Sciences (Other). Social Science Categories for university professors as provided by CAUT for 1972-2003 are: Anthropology, Archeology, Canadian Studies, Area Studies, Commercial Management, Business Administration, Criminology, Specialized administrative Service, Demography, Economics, Geography, Law, Man/Environmental Studies, Political Sciences, Psychology, Secretarial Science, Social Work, Sociology, Military Studies, Other Social Services, Social Sciences & Related.

objective in this article is not to provide fixed and ‘uncontroversial’ numbers but to simply portray the long-term trends that have affected the university-level academia. As will be discussed further, using different categories comprising the field of social sciences (including, among other disciplines, communication and psychology),⁵ Frank and Gabler (2006) identify much similar historical tendencies.

Undergraduate Students Enrolments

In our view, the global history of Western academic departments can be roughly divided in three periods, each determined by a specific economic and social context. The later half of the 19th century corresponded to a domination of the humanities and liberal arts. Law, medicine, philosophy, theology, and literature composed the bulk of the curriculum. At the closing of the 19th century and in the first half of the 20th century the industrial revolution provoked a far-reaching transformation in the institutions of higher learning. Emerging disciplines were incorporated into the university curriculum. Engineering, administration, biology, chemistry, forestry and other natural or applied sciences, were gradually perceived as necessary for the material prosperity of societies. For example, according to Dominion Statistics, in 1882, law and medicine comprised more than a third (35.2%) of all enrolment in Canadian universities, whereas sixty years later, this proportion had shrunk to 9.8%. Engineers, who first appear as a Dominion Statistics category in 1891, represented 5.6% of all enrolment that year, and 11.8% in 1940.

If specific social sciences courses were effectively introduced as early as the end of the 19th century (for example, Adam Shortt was promoted to professor of political science at Queens in 1891), one cannot emphasize enough how this incorporation was limited and fragile. Up until 1945, the social sciences—as defined by the Dominion Bureau of Statistics and comprising, among other disciplines, commerce and law—remained marginal, representing a mere 5% of all Canadian undergraduate students.

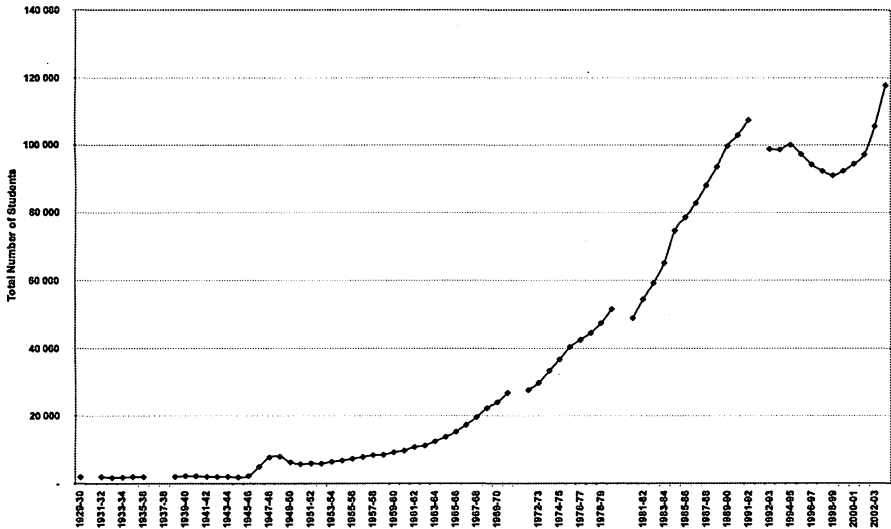
Following our hypothesis of the impact of industrialization on university-level education, that situation would radically change with the advent of the welfare State and the passage to a tertiary sector economy in the second half of the 20th century. The social sciences were massively institutionalised in universities when, displacing the manufacturing of goods as the priority of capitalist society, social relations were also increasingly produced on a large scale. Whether it was marketing, pedagogy, social work or journalism, to name only a few fields, all social

5. Anthropology, Economics, Geography, Political Science / Political Economy / Government, Psychology, Sociology, Business, Area Studies, Household Sciences / Home Economics, Military Sciences, Social Work, Education, Communication, Advertising, Journalism.

science disciplines were promoted with this unprecedented wave of ‘social engineering’.

Indeed, the evolution of undergraduate students in the social sciences has followed a general exponential growth until the beginning of the 1990s. But this general upward trend has not been without some local downturns. In absolute terms (Figure 1) as well as in proportion (Figure 2) we can roughly distinguish six phases.

Figure 1. Annual Number of Full-time Undergraduate Students in Social Sciences (1929-2004).



Source: Data provided by the Dominion Bureau of Statistics – Statistics Canada.⁶

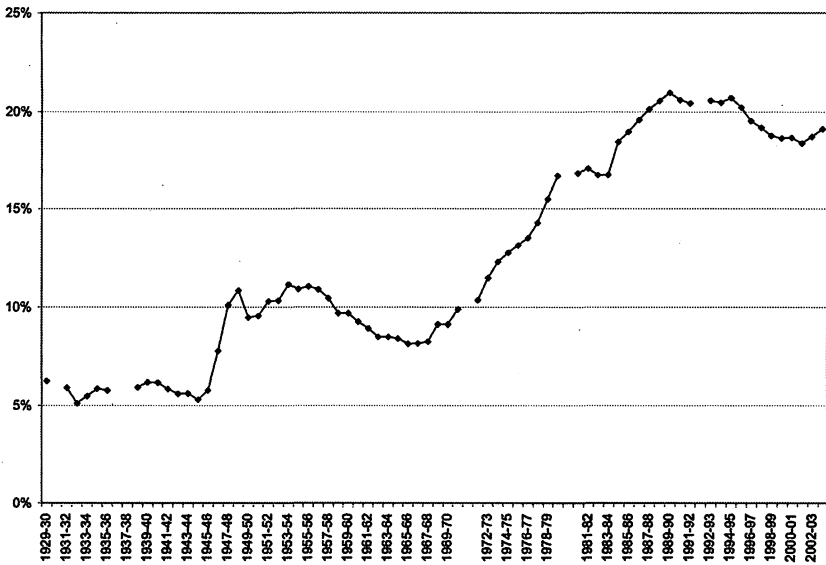
The first phase (covering the years 1929-1945) is one of stable marginality during which the total number of undergraduate students fluctuates around 2000 or 5% of total enrolments. The second phase corresponds to the beginning of exponential growth generated by the prosperity that followed the war and the development of the welfare state. In the first half of this phase, the small “bump” between 1946 and 1950 is essentially due to the end of the war and to demobilization programs that awarded special grants to veterans who wished to access university.⁷ A large proportion of these students chose science and engineering programs

6. Given the change in sources’ categories, the data for the period 1981-1992 have been adjusted by subtracting (for each year) 29,336 students, that number being the average difference between the sources for the year 1979-1980 and the year 1991-1992.

7. J.L. Trudel, “Born in War: Canada’s Postwar Engineers and Toronto’s Ajax Division,” *Scientia Canadensis* 21, 50 (1997): 3-27.

(38%) and about 17% registered in the social sciences.⁸ From 1945 to the end of the 1950s, students of social sciences were multiplied by 5 (reaching roughly 10,000 undergraduate students) and doubled in proportion, reaching a little more than 10% of the student population. Reflecting on “The Nature and Function of the Social Sciences” just before the end of the war, the president of the Canadian Political Association (which at that time published the *Canadian Journal of Economics and Political Science* and included many economists and sociologists as well as political scientists) R. A. MacKay had correctly predicted that an “increasing demand for social technicians to manage a paternalistic society” would foster interest in the social sciences.⁹

Figure 2. Annual Proportion of Full-time Undergraduate Students in Social Sciences (1929-2004).



Source: Data provided by the Dominion Bureau of Statistics – Statistics Canada.¹⁰

8. P. Neary, “Canadian Universities and Canadian Veterans of World War II” in *The Veterans Charter and Post-World War II Canada*, eds. P. Neary and J.L. Granatstein (Montreal: McGill-Queen’s University Press, 1998), 121.

9. R.A. MacKay, “The Nature and Function of the Social Sciences,” *The Canadian Journal of Economics and Political Science* 10, 3 (1944): 277.

10. Given the change in sources’ categories, the data for the period 1981-1992 have been adjusted by subtracting (for each year) 11%, that percentage being the average difference between the sources for the year 1979-1980 and the year 1991-1992.

In the following phase, which expands from around 1960 to 1970, the numbers continued to grow but declined in proportion. This is certainly surprising for all of those who defined the 1960s as the 'social sciences decade'. In fact, quantitatively speaking, it was not and one has to wait for the 1970s to observe a steep raise in the proportion of social science students from a low of 8.2% in 1965 to more than 15% at the end of the 1970s.

The fourth phase, from 1970 to 1990 was extremely beneficial to the social sciences. In 1970, more than 26,000 students were registered in one program or another; and twenty years later, they constituted around 150,000 registrations. Since the rest of the undergraduate university population less than doubled in size, the proportion of social sciences students jumped from about 10% to 20% of the total undergraduate student body over these two decades (1970-1990) after a period of stability around 16% in the first half of the 1980s.

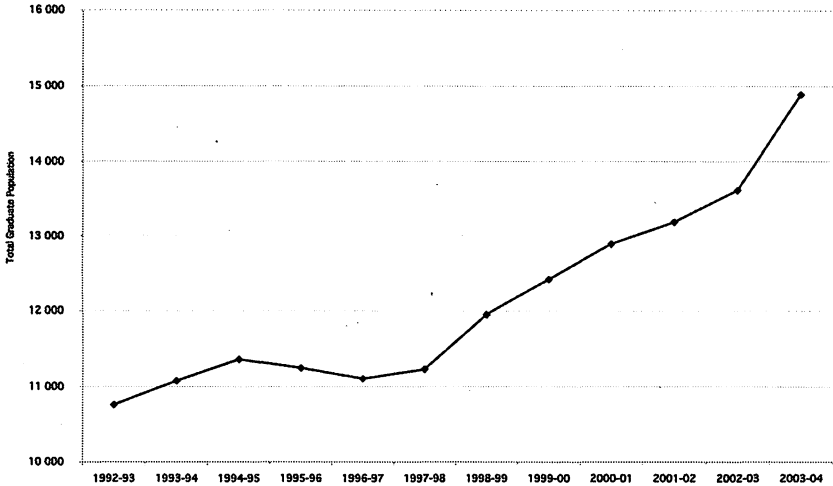
The fifth phase, covering the 1990s has been experienced and described as the worst in the history of Canadian social sciences. However, it corresponds to a period of decline in absolute numbers but relative stability (around 20%) in relative terms during the first half of the decade, followed by only a slight decline (to 17%) which stopped in 2001 when relative enrolments in the social sciences took an upward turn again. The outcry seems to be an effect of an ecological fallacy where actors look only at the absolute numbers of enrolments in their immediate disciplines without considering the general decline of the university student population.

The sixth and most recent phase began on the eve of the 21st century. Enrolments started rising again in absolute numbers in 1999, and the proportion of total enrolments in the social sciences took an upward turn two years later.

Graduate Students Enrolments

Numbers of graduate students enrolments (Figure 3) cannot be compiled for the entire period but the proportion of social sciences graduate students appears very constant from 1972 to 2003. From 1991 to 2003, although they increased their presence in absolute numbers, social sciences graduates were stagnating at 15% of the total graduate student body.

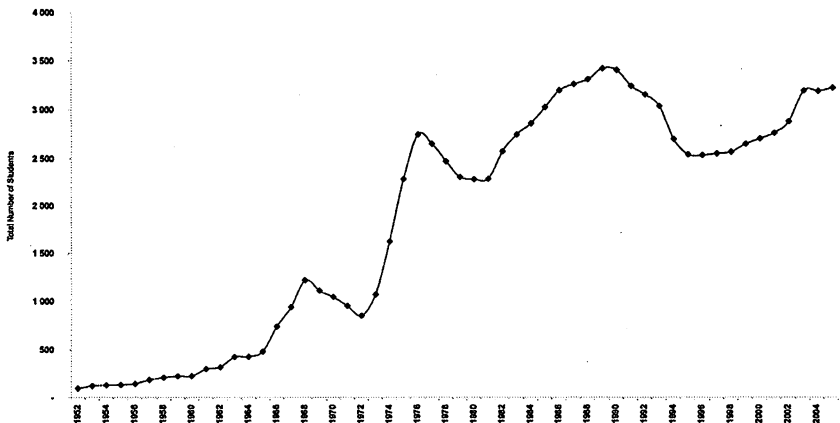
Figure 3. Annual Number of Full-time Graduate Students in Social Sciences (1992-2004).



Sources : Data provided by the Dominion Bureau of Statistics – Statistics Canada.

The general national trend was obviously not followed scrupulously by each Canadian university. For instance, at Laval University, although generally consistent with the Canadian trend, graduate enrolments (Figure 4) at the Faculty of Social Sciences show a series of ups and downs that can only be explained by taking the local environment into account.

Figure 4. Annual Number of Graduate Students in Social Sciences at Laval University (1952-2004).

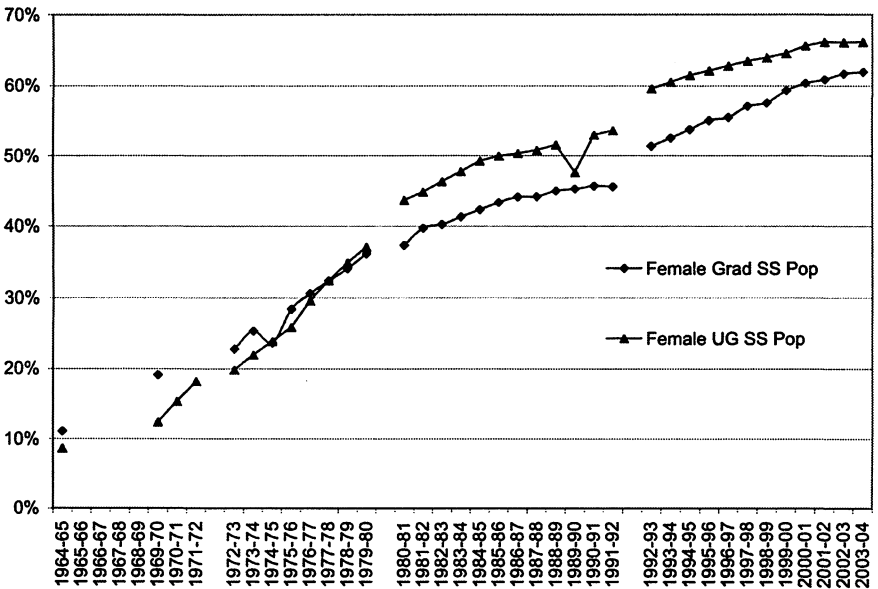


Sources : Data provided by the Dominion Bureau of Statistics – Statistics Canada.

The Rise of Women in Social Sciences

The most visible and impressive aspect of the rise of enrolments in the social sciences is the growing presence of undergraduate female students (Figure 5). Almost absent from university, let alone social science departments in the first half of the 20th century, women literally conquered these disciplines in the second half of that century. They represented less than 10% of the undergraduate population in 1960; today they constitute two thirds of the total enrolment—compared with 56,7% of total full-time university student population. In the last few years, it seems, the proportion of women has reached a plateau, which is not surprising given the fact that their presence is now overwhelming. In psychology, social work, or sociology, they represent close to three-fourth of the student population. Indeed, when one considers the progress made by the social sciences in Canada in the last half-century, one may attribute the essential part of this ‘success’ to the choices of female students. More than 90% of the increase in all the undergraduate social sciences programs from 1983 to 2003, come from female enrolments.

Figure 5. Annual Full-time Female Enrolment of Undergraduate (UG) and Graduate Students (Grad) in Social Sciences (1964-2004).



Source: Data provided by the Dominion Bureau of Statistics – Statistics Canada.

Looking at the graduate student data (Figure 5) in the social sciences, we witness the same phenomenon. The progress achieved by female graduate students in these fields is as impressive as the one achieved by female undergraduate students. Female graduate and undergraduate students were approximately equally represented in 1972 (22.8% versus 19.8%), and their growths has been impressively parallel. In 2002, thirty years later, female undergraduate students represent two-thirds of the total number of students while their graduate colleagues also form a majority with 61.7% of the total population.

The female enrolment in the social sciences self-evidently reflects the global cultural changes occurring in the larger society about gender roles which reflects itself in women's access to the labour market. Between 1911 and 1951, the percentage of women of working age on the labour market (the participation rate) rose from 19% to 24%. In 1961, it reached 30%, and in 1970 it surpassed 40%. It now stands slightly above 70%.¹¹

But such statistics do not explain why women decided *en masse* to study the social sciences. Three factors combined to favour this choice. Firstly, the social sciences are generally less well paid than other disciplines. As a consequence, the resistance to the inclusion of women in institutions of higher learning must have been less virulent in those sectors. Secondly, women, who did not have a long history of schooling at the higher levels, may have preferred areas of study where they could easily and rapidly obtain a diploma leading them directly to the labour market. In the first decades of the 20th century, for instance, social work must have appeared as more within their reach than engineering. Finally, the social sciences occupy a domain which is akin to the one where women were long segregated: the social. By pursuing careers in consumption, education, gerontology, and so forth, women could have the impression that they were simply professionalizing the work traditionally done in the household.¹²

Faculty Hiring

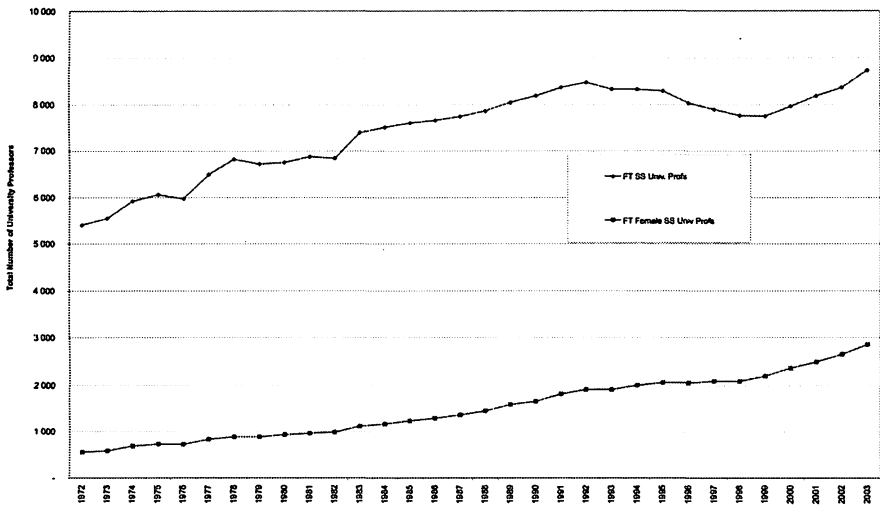
Not surprisingly, the academic boom in the social sciences that occurred in the aftermath of the Second World War affected faculty hiring as well. For example, having achieved their independence from philosophy, psychology departments have seen their faculty jumped from 22 in 1940 to

11. Marcel Bédard and Louis Grignon, *Overview of Evolution of the Canadian Labour Market from 1940 to the Present* (Hull: Applied Research Branch, Human Resources Development Canada, 2000).

12. Nathalie Roy, *Les Études, l'Enseignement et la Recherche Universitaire: Enjeux Émergents pour les Femmes*, memoir presented to the 'commission parlementaire sur la qualité, l'accessibilité et le financement des universités' (Quebec: Conseil du statut de la femme, Service des communications, 2000).

more than 100 in 1960.¹³ Such a growth typifies the general trend. According to Dominion Statistics, the proportion of full-time social sciences university professors increased by 40% in less than fifteen years (1956-1970). Although less spectacular, the rising tide has continued up to this day – despite a short decline in the 1990s (Figure 6). Grouping 5,408 professors (representing 22.6% of the total university body) in 1972, social sciences faculty numbered 8,736 in 2003, about a quarter (26.7%) of the total professoriate. Proportionally, the growth appears even more steadfast throughout the period, with only two brief halts, in 1978-1982, and again in 1998-2000 (Figure 7). Not particularly affected by the economic depressions of 1982 and 1990 the social sciences full-time teaching staff pursued its proportional progression, its evolution following more or less a straight line, which reached a sort of plateau in 1997.

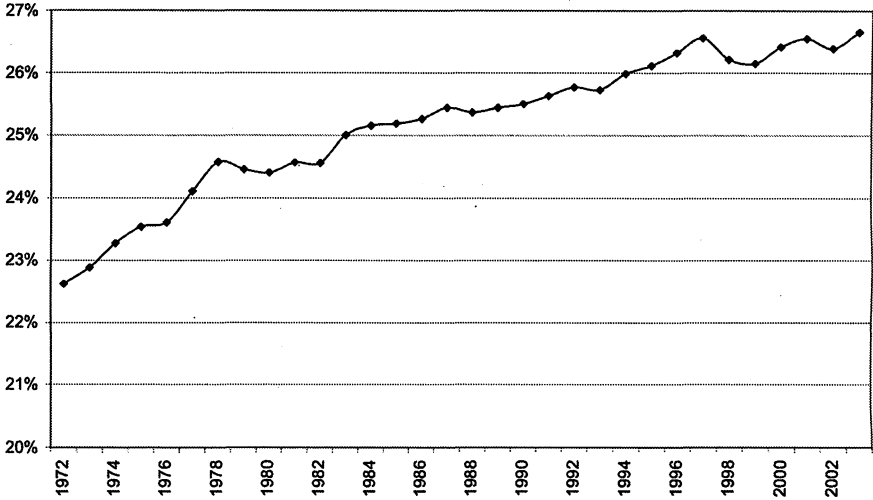
Figure 6. Annual Number of Female and Total Full-Time University Professors in Social Sciences (1972-2003).



Sources: Data provided by the Canadian Association of University Teachers.

13. Robin S. Harris, *A History of Higher Education in Canada, 1663-1960* (Toronto and Buffalo: University of Toronto Press, 1977), 520.

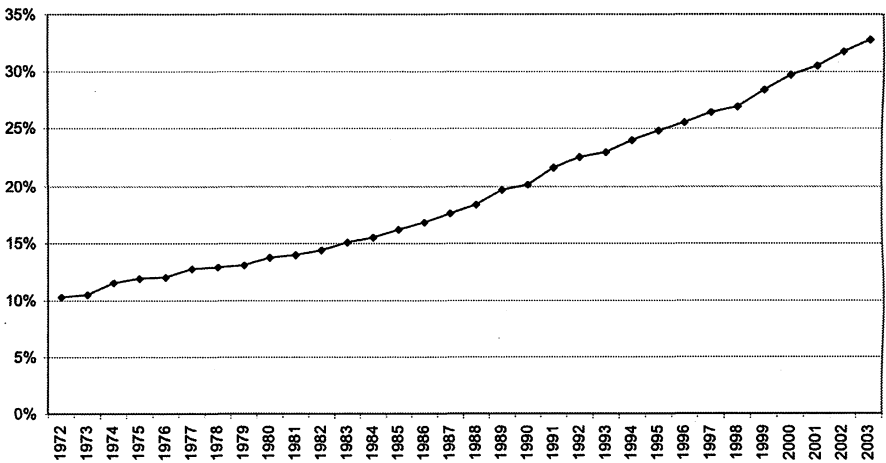
Figure 7. Proportion of Full-Time University Professors in Social Sciences (1972-2003).



Source: Data provided by the Canadian Association of University Teachers.

The progression of female university professors in the social sciences has followed the trajectory of female undergraduate students (Figures 6 and 8). It has tripled in proportion over thirty years, from 10.5% in 1973 to 32.8% in 2003, a proportion comparable to women’s presence in the total faculty body (31.7%).

Figure 8. Proportion of Full-Time Female University Professors in Social Sciences (1972-2003).



Source: Data provided by the Canadian Association of University Teachers.

Why such a growth?

It is often said that social sciences (as well as the sciences) were always driven by some “disinterested” goal and detached intellectual mission.¹⁴ From that point of view, the social sciences would only recently have been overwhelmingly subjected to external forces attempting to transform them into producers of pragmatic and applied knowledge.

But what the astronomical progression of Canadian social scientists over the last century suggests is quite the opposite. In fact, the social sciences appear so connected to modern society’s needs that one may argue that their very division into disciplines mirrors the different fundamental functions of an industrialised society. As Frank and Gabler noted, “the fields coalesced around what were conceived to be modern society’s defining entities and processes—public governance and order (political science), social prosperity and development (economics), society’s relationship with nature (geography), modern and traditional social forms (sociology and anthropology), and the individual elements of society (psychology).”¹⁵ During the 1915-1935 period, for example, the most important department in British Commonwealth Countries was economics, followed by political science, psychology, geography, anthropology, and sociology.¹⁶ This roughly corresponds to the priorities of the day throughout the British Empire.

Certainly, social scientists incorporated some of the old humanities’ tradition in their quest for truth or in their fight to preserve universities from external pressures and influences, but they were far more rooted in the spirit of the age not to legitimate their place and role by insisting on their capacity to regulate society rationally and efficiently. All across the country, social sciences appeared to be the new knowledge required by managers and lawmakers. As early as 1890s G. W. Ross, the minister of Education for Ontario, supported the creation of a chair of Political Economy and Constitutional History at Toronto “in the earnest hope that [it] would be able to afford to the undergraduates of [the] University a comprehensive course of training in economics and political philosophy, which would fit [students] for dealing with the many social and constitutional problems which require particular attention in a rapidly expanding country like Canada.”¹⁷ Academic administrators were convinced that, in a time of profound changes, no one could ignore economics anymore, or, for that matter, social work, political economy,

14. See for example, Aline Giroux, *Le Pacte Faustien de l’Université* (Montreal: Liber, 2006).

15. Frank and Gabler, *Reconstructing the University*, 119.

16. *Ibid.*, 133.

17. Quoted by Harris, *A History of Higher Education in Canada, 1663-1960*, 142.

management and political science. All these various branches of knowledge were perceived as instrumental in the economic and social progress of the day.

The development of Canadian social sciences is one which pushes universities further in the direction of applied knowledge. Striving to prove their usefulness to capitalist corporations and modern states, social scientists were on the ring-side seat of reforms and social changes to better society. Along with engineers who endeavoured to “smoothen the path of Civilization” by fostering the development of resources and the material advancement of Canadian industry and commerce, social scientists wanted to contribute to the well-being of the nation. Whereas the humanities and the natural sciences favour a world revolving around the notions of Truth, Beauty, and Justice, the social sciences were more immediately based on values of efficiency and rationality. “It is a common impression, wrote the president of the Canadian Political Science Association in 1966, that [...] recognition of the practical contributions that trained social scientists can make to assembling and interpreting the knowledge required for wise decision-making in many areas of social policy has rapidly increased the demand for their services as both researchers and teachers [...]”¹⁸ This is not to suggest that abstract and theoretical questions did not occupy the minds of social scientists (moral philosophy was for many years an essential part of any Canadian social sciences curriculum). We simply want to emphasize that, historically, social sciences were spontaneously directly involved in the engineering of society. Contrary to the basic humanities and basic sciences, which witnessed a proportional decrease over the period spanning from 1915 to 1995, the basic and applied faculties in social sciences expanded massively. “One factor behind the basic/applied equality in the social sciences, venture Frank and Gabler, may have been that, even in their so-called basic form, the social sciences—the newest of the three main branches of learning—originated in forms that were already highly rationalized or applied.”¹⁹ Transforming the world—as much as understanding it—has always been an implicit goal of social scientists.

If this last statement is true, then one may explain the progression of various disciplines in Canada by studying their usefulness from a job market point of view. At UQAM, for example, enrolments in the fine arts declined by 22% over the period 1972-1983, and philosophy declined by 36%; whereas political science enrolments more than doubled, and sociology’s tripled, business, management, and business administration

18. Harry G. Johnson, “The Social Sciences in the Age of Opulence,” *Canadian Journal of Economics and Political Science* 32, 4 (1966): 424.

19. Frank and Gabler, 69.

combined were multiplied by more than 15.²⁰ According to Steven Brooks and Alain G. Gagnon, these trends indicate that UQAM was becoming a more 'utilitarian' university. In our view they simply show how changing demands arising from society have always affected the development of departments.

To speak in Marxist terms, these demands are strongly influenced by the 'infrastructure' of the economy. Indeed, in Canada, to an age of general culture (1850-1900) succeeded an age of material production (1900-1950), which led the way to an age of social control (1950-2000). The country was transformed from a primary, to a secondary, and finally to a tertiary sector economy. The tertiary sector increased its share of total employment from 40% to 74% from 1946 to 1995; conversely, the secondary sector slipped from 31% to 21%, and the primary sector experienced even greater losses (from 30% to 5%).²¹

These global social and economic changes did not leave academia unaffected. On the contrary, the evolution of the academic curriculum of institutions of higher learning accompanies the transformation of Canadian economy. Engel's old hypothesis again finds a confirmation in the history of the Canadian institutions of higher learning: "If society has a technical need, it serves as a greater spur to the progress of science than do ten universities."²² The social sciences have now gained an unprecedented place in Canadian universities because undergraduates and graduates find employment in state apparatus and tertiary sector firms and organizations. On the one hand, social scientists are more likely to be hired by the Canadian government because the modern State controls large portions of the public sector, starting with education, health care, and sanitary services. On the other hand, tertiary sector organizations increasingly address issues involving marketing techniques, business skills, polling methods, etc.

While one may certainly accept Frank and Gabler's hypothesis of "shifts in the global institutional frame" which led to the replacement of "the naturalness once assigned to fixed categories" by "dynamic networks,"²³ such an evolution remains a very abstract level of analysis. Much more tied to the trends are the changes affecting the job market in a very

20. Steven Brooks and Alain G. Gagnon, *Social Scientists and Politics in Canada. Between Clerisy and Vanguard* (Montreal and Toronto: McGill-Queen's University Press, 1988), 66.

21. Rachel Bernier, "The Labour Force Survey: 50 Years Old!," *Canadian Economic Observer* 9, 3 (1996): 5. On the formation of the welfare state, see Dennis Guest, *The Emergence of Social Security in Canada* (Vancouver: University of British Columbia Press, 1997); Alan Moscovitch and Jim Albert, eds., *The Benevolent State: The Growth of Welfare in Canada* (Toronto: Garamond Press, 1987).

22. Quoted in Sidney Hook, *Towards the Understanding of Karl Marx: A Revolutionary Interpretation* (London: Prometheus Books, 1933), 106.

23. Frank and Gabler, 32.

pragmatic and immediate manner. Also of importance is the spectacular growth of female enrolments. Quite surprisingly this aspect is not analysed in Frank and Gabler's recent book, though the weight of women in the social sciences can certainly not be neglected. Perhaps the "globally institutionalised ontology" was reinterpreted in the past two hundred years, but the growth of social science disciplines is directly affected by women's decisions to turn in greater and greater numbers to anthropology, social work, marketing, and areas studies. If it were only for male registrations, social sciences would possibly have experienced a more modest increase over the century.

From 1964 to 2003, 72.9% of the increase in students' enrolments in the social sciences is attributable to women. Whereas the total male population in the social sciences was multiplied by 2.3, the women population was multiplied by 65. In other words, if it were only for male registrations, the social sciences would have experienced a relative *decline* vis-à-vis the natural sciences and the humanities.

Conclusion

The end result of the past century's social and economic transformations is that the humanities which constituted the core of a fixed curriculum and therefore welcomed the vast majority of Canadian students in 1850 now occupy a small fraction of their former share. The natural sciences have declined slightly over the same period but remain strong. As for the Canadian social sciences, which barely existed as independent disciplines on the eve of the 20th century, they have experienced a tremendous boom and currently occupy a position many observers would have had difficulty to predict fifty years ago.

This national evolution parallels the development of the total faculty number in each of the three main branches of learning in British Commonwealth Countries, as analyzed by Frank and Gabler. Using the *Commonwealth University Yearbook* as a source data on the evolution of the professoriate by disciplines, they show that the humanities comprised 33.2% of faculty in 1915-1935, and only 19.5% in 1975-1995. The natural sciences also declined, although less abruptly, from 57.5% to 50.6%. As for the social sciences they were the only disciplines to experience a general growth, rising from 9.3% to 29.9% of the total professoriate. Given the fact that the humanities declined proportionally by 41%, and natural sciences by 12%, the 222% increase for the social sciences appears quite spectacular.²⁴ The fact that research budgets and administrative priorities do not favour social sciences, does not contradict social sciences' spectacular growth over the 20th century. By contrast,

24. Frank and Gabler, 64.

humanities have similar problems securing research grants but, as shown by Frank and Gabler, they faced a major decline over the same period.

Though our data fits the general pattern established by Frank and Gabler, these authors reject the rise of the tertiary sector as proximate cause and pass in silence over women's access to higher education as an important factor in the rise of social science. They rather suggest that these trends can be explained by the more fundamental macro social changes in the nature of legitimate action: the movement from god given hierarchies to human based action generating the shift from humanities to social sciences while leaving the sciences essentially untouched. While we can agree that such a basic shift toward secularization and human centered action is a world-wide shift that affected higher education, it remains that proximate causes like industrialization and equality of rights movements are also world-wide phenomena which, moreover, appear more directly connected to observable shifts in university-level education. For without the development of a strong tertiary sector and the strong presence of women in social sciences, these disciplines' growth over the century would have been strikingly less dramatic than it actually was.