KNOWLEDGE, UNDERSTANDING AND TALENT IN THE MAKING OF SUCCESSFUL SOCIETIES: CANADA’S FOURTH CHAPTER
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INTRODUCTION

It is a two-fold privilege and pleasure to have this chance to contribute to the Reddin Symposium for 2007. For many years now, I have watched with admiration as the Canadian Studies Center here at Bowling Green State University has played a leading role in the advancement of research and teaching about Canada. Professor Mark Kasoff’s own contributions to the Association of Canadian Studies in the United States reflects this leading role and it has been wonderful to work with him on the ACSUS board. Secondly, the focus of the 2007 Reddin Symposium on the question of higher education relates directly to my own historical research as well as to the challenges and opportunities of my new position as President of the Social Sciences and Humanities Research Council of Canada (SSHRC). Created in 1977 by an Act of Parliament, SSHRC is Canada’s federal agency responsible for enhancing the support of graduate students, researchers and partners in the social sciences and humanities. During the past thirty years, SSHRC has promoted excellence in research and research training for the benefit of Canada in an international context. The specific ways in which SSHRC has pursued its mandate has evolved considerably in keeping with the changing times, and there is no doubt that Canada has now arrived at a key turning point involving intense debate about the best way forward in the 21st century. In this context, the Reddin Symposium offers a splendid occasion to address one of the most important questions facing countries around the world: how can, and should, higher education contribute to the making of successful societies in a globalized and digital world? More specifically, what should be the role of research and research training in ensuring societies have the knowledge and talent necessary to confront the challenges and seize on the opportunities of this new era?

The following discussion first addresses these questions by situating the current debate within a historical re-interpretation of the role of knowledge and talent in the making of Canada as a “successful society” during the course of the 19th and 20th century. This re-interpretation will be presented as a hypothesis that is consistent with the historical evidence
but which remains speculative in the absence of definitively connected causal relationships. And it will be described in stylized terms that do not do justice to its complexity and diverse pertinence over time and across Canada. Nonetheless, this historical re-interpretation offers a new way of thinking about the current higher education debate and it can then be used to examine the results of a new public opinion survey about research, in particular. In turn, this examination leads to a concluding description of how campuses are now being transformed in ways that offer Canadians the prospect of moving forward in the 21st century by building on past success, and of falling backward within the rapid and profound global changes. I will close by sketching three scenarios for higher education during the coming decades as a way of emphasizing the importance of our answers to the current questions of higher education.

**The Value of Higher Education to Society**

Scholars have long argued that the emergence of formal education as an increasingly important characteristic of growing up in western countries like Canada and the U.S. was a key feature of the making of the 19th and 20th centuries. But little agreement has been reached about the actual roles of schools within social, economic, cultural, and political transformations. Did schooling reflect these transformations? Did they hinder them by reproducing established ideas and behavior? Or did schools accelerate change by encouraging innovative thinking and action?

These questions are different articulations of one question: Does formal education matter? One central conclusion of recent research in the history of education concerns the complex ways in which schools have indeed reflected the larger society, including maintaining social inequities. Scholars have now shown, in myriad ways, how an earlier view of schooling as an instrument of continued progress since the 18th century was unfounded. In my own work for example, I have shown in various studies the differentiated character of the expansion of mass schooling, ranging from school attendance rates of different socio-economic groups to the impact of language-of-instruction policies, and from demographic and geographic patterns, to distinct social and cultural classroom configurations. Detailed studies have shown how sexist, racist, and economically exploitative school settings have harmed specific individuals and groups during both the 19th and 20th centuries. In the Canadian context, the tragic story of Indian residential schools is an example whose consequences continue today. Clearly, there is no single history of education but rather multiple histories involving uneven and contested trajectories in keeping with the complex and contradictory character of specific times and places. At the same time though, I think that the historical evidence also supports an overall interpretation that emphasizes the role of formal education in social, economic, cultural, and political transformations. In other words, the historical evidence suggests that while schools have certainly contributed to maintaining the status quo in various ways, they have also been forces of profound change. Moreover,
I think that the most compelling hypothesis is that, on balance, formal education has played a central role in the making of Canada as a successful society during the 19th and 20th centuries.

Just as it is crucial to emphasize caution and qualification before focusing on the components of the historical re-interpretation of the role of knowledge, understanding and talent in Canada, it is similarly essential to emphasize the limitations associated with the notion of a “successful society.” For the purposes of this discussion, the starting point is the OECD and related international rankings of recent years that consistently placed Canada at or near the top if judged by criteria related to prosperity and quality of life. There is certainly no international consensus on what criteria define a “successful society” but it is noteworthy that Canada characteristically does quite well in such rankings regardless of which specific social, economic, cultural, or political features are measured. Of course, Canadians are well aware that such country-wide rankings mask considerable internal differentiation. Just as the history of Indian residential schools illustrates the limitations of general statements about Canada’s educational history, the example of aboriginal communities suggests the pitfalls of using national patterns for international comparisons of indicators like literacy or suicide rates. Indeed, Canada includes considerable diversity across regions, communities and groups, and any notion of “success” must be interpreted in this context.

It is also important to recognize that the recent claims about Canada as one of the world’s most successful societies are quite unanticipated and require explanation, if viewed from a historical perspective. Observers have often cited Prime Minister Wilfrid Laurier’s prediction in 1906 that Canada’s development in the 20th century would replicate the United States’ emergence in the 19th century, but this claim was beyond far-fetched. At the time, Canada included a small population strung across a fragmented landscape in internationally marginal communities characterized by dependent economies and dominant colonial cultures. My sense is that even Laurier would be astonished to see Canada’s inclusion in the G8 at the center of the international stage. In looking back, scholars have usually implied that Canada’s “success” in the 20th century can be explained either in terms of the benefits of abundant natural resources or its location next to the United States. But neither explanation is convincing. If these factors are so determinate, how can we explain the 20th century experience of bountiful Argentina or next-door Mexico?

My own thinking about this question has been influenced by recent research on national failure as much as by studies focused on success. The research on societal failure has certainly paid attention to the role of economic resources and material circumstances but has increasingly tended to attribute importance to social and cultural conditions in determining a country’s fortunes. Moreover, scholars are now emphasizing the complex interplay of economic, political, social, and cultural forces in explaining why some countries succeed and others fail. Economists now stress the interrelationships among civil society, political institutions, and economic
possibilities with governance being a critical factor that both helps explain failure and holds the promise of success. Similar recent analyses of state failures situate economic forces within a larger context of political and social issues. In other words, national prosperity and quality of life—whether analyzed and measured in terms of success or failure—are concepts that include far more than material considerations. Indeed, recent research points to the importance of how individuals and groups see themselves and each other, and how they behave and act towards others within and across societies.

In studying the successes and failures of societies and countries, scholars have certainly emphasized the importance of education but they have not put schooling at the center of their analyses in the ways that I think are needed to explain the Canadian experience. Specifically, the hypothesis described in the following paragraphs explains the story of Canada as a successful society in terms of three distinct chapters underpinned by a distinct Canadian conviction: that the building of a successful society depends upon public investments in the advancement of knowledge and understanding, and the development of talent as a public good. As will be described, this conviction was applied differently in each chapter of Canada’s history in keeping with the different circumstances of the changing times. Similarly, how we should think about “higher education” must reflect the era and context under consideration. It is in this sense that historical understanding provides the necessary background for coming to grips with the 21st century.

THE CHAPTERS OF CANADA’S EDUCATIONAL HISTORY

CHAPTER 1 tells the story of the establishment of common schooling during the 19th century across all the provinces that became part of Canada beginning in 1867. While most of the images of Canada’s emergence as a new country include fur, fish, forests, and farms (and railroads!), the building of schools and the establishment of provincial educational systems were central features of the century. While confessional schools became a key part of the landscape in keeping with the composition of the provincial and local populations, a consensus developed around the importance of formal and common education for all children. Accordingly, what became the distinct Canadian conviction of public investments in education as a public good became expressed through property taxes. Personally-funded, private schooling did not become a prominent feature of the Canadian educational landscape. Overall, Canada became one of the world’s most literate societies during the nineteenth century despite considerable periods of economic uncertainty, political instability, substantial migration, and competing internal and external pressures.

The central plot of Chapter 1 describes how knowledge, understanding and talent enabled Canada to develop a remarkably successful commercial agricultural economy supported by a resilient civil society. Public investments in education for the public good produced significant and ongoing returns in human capital (as the economists would say) that were
needed to create a new country in 1867 and to expand it successfully across the continent by 1905.

CHAPTER 2 continues this story but now emphasizes the emergence of public universities in the late 19th and into the 20th centuries. These universities remained small but their graduates contributed significantly to the transition from a rural agricultural society to a successful urban industrial society. In the context of hydroelectric development, the increased settlement of the West, and other major developments in nation-building, the universities produced the professionals that enabled the growth of institutions, services and industries characteristic of modernity. The conviction that the development of knowledge, understanding, and talent is a public good continued to mature during the first half of the 20th century; while high school became a characteristic feature of growing up, public rather than private universities became the Canadian way for a small but significant group of students from quite diverse backgrounds. By the mid-20th century, Canada emerged from two world wars and the Great Depression as a politically sovereign country now visible on the world stage; my hypothesis is that Canada’s intellectual assets and human capital played a central role in determining this experience.

Against this background, CHAPTER 3 focuses on the creation of a made-in-Canada society enabled by the building of a made-in-Canada research community. While Canada had developed as an urban, industrialized society and had gained official political autonomy by the mid-20th century, the country’s colonial legacy had yet to be left behind. While primary and secondary schools were somewhat less likely to be still using textbooks with British-authored content, universities were not Canadian, if judged by the curriculum materials or graduate training of the professors. In my own case, for example, almost all the professors I had at McGill University during the late 1960s and early 1970s had received their graduate training outside of Canada. And the curriculum and instructional materials common on campuses were predominately focused on Europe and to a lesser extent the United States and Asia. This pattern varied somewhat across the Canadian universities (especially in francophone universities) but evidence of Canada’s colonial legacy was everywhere.

Then, Canada began developing a made-in-Canada society. Beginning in the 1960s with the building of new universities, higher education became increasingly rooted in the Canadian experience. New textbooks poured off the shelves, curricula were redefined, and graduate programs and research activities were expanded across the country. Thanks to increased public funding, Canadians could now pursue higher education in every field and every region supported by Canadian instructional material. A Canadian voice was increasingly heard within international scholarly debate and Canadian-trained graduates increasingly occupied leadership positions across the private and public sectors. These developments helped Canada move successfully to center stage of the post-industrial world.
The increasing importance of higher education within the overall Canadian conviction about the public value of knowledge, understanding, and talent is illustrated by Figure 1 which traces the growth of undergraduate and graduate enrollment through the mid-20th century. Although primary schooling and then secondary schooling became characteristic of growing up between the mid-19th and mid-20th centuries, universities remained small and only developed as significant institutions for certain groups during Canada's transition into an urban-industrial society. During the first half of the 20th century, universities produced the small but increasing numbers of professionals needed, especially in the growing cities and institutions. During this period, some small graduate programs were established primarily at the master's level.

**FIGURE 1: Undergraduate and Graduate Enrollment in Canada, 1861-1960**

The modest but increasing enrollments in higher education produced a similar pattern in the degrees awarded by Canadian universities and colleges before the later 20th century. A gradually increasing number of students received undergraduate degrees especially after the First World War while those receiving graduate degrees were rare indeed even at mid-century. Thus, it should have been no surprise to me that my university professors had characteristically received their graduate training in Europe or the United States in the late 1960s. (Figure 2).
In contrast, Canadian higher education developed rapidly after the 1960s as illustrated by the increasing number of degrees awarded during the later 20th century (Figure 3). After the 1960s, Canadian participation rates at the undergraduate level rose to the top of the international standard. At the same time, the increase in master's and doctoral enrollment was much slower with the result that Canadians have received relatively fewer graduate degrees especially doctorates if compared internationally. The implications of these patterns are highly significant for the re-interpretation of the role of teaching and research in
the making of Canada as a successful society. On the one hand, it is clear that Canada benefited significantly during the later 20th century from the talent developed in colleges and university undergraduate programs. These graduates enabled Canada to meet, far more successfully than would have been otherwise possible, the challenges and opportunities of the post-industrial era. On the other hand, the more modest growth of graduate enrollments suggests the possibility that Canada might have made an even more successful transition during this period with a labor force composed of a greater number of master's and doctoral graduates.

While the increases in graduate degrees beginning in the 1960s did not place Canada among the world leaders, they did foster the creation of the made-in-Canada research community that changed significantly the character of campuses across the country. One illustration of the maturing of this Canadian research community is offered by the changing background of researchers who applied for federal research funding for projects in the social sciences and humanities. In the 1960s and early 1970s, the largest group of applicants for federal support had received their doctorates in the United States. During these years, the relative percentage of applicants with Canadian doctorates increased steadily and then replaced those with American doctorates as the predominant category of applicants (Figure 4). In other words, Canadian-trained professors became characteristic of Canadian universities during the closing decades of the 20th century.

**FIGURE 4: Percentage of Doctoral Degree Holders by Country and Year Obtained**

![Percentage of Doctoral Degree Holders by Country and Year Obtained](source: SSHRC corporate database)
Redefining Teaching and Research

In addition to the overall greater importance of higher education by the end of the 20th century, the character and content of university campuses are now being transformed by three interrelated developments: the redefinition of teaching; the redefinition of research; and the redefinition of how teaching and research are related to each other and to activities beyond the campus.

In stylized terms, the redefinition of teaching now involves the move from a transmission-of-knowledge model based on “passive learning” (increasingly considered an oxymoron) to a construction-of-knowledge model based on “active learning.” In the former model, students are expected to learn by reading, memorizing, and recounting the information and interpretations formulated by experts and provided to them through lectures and curriculum material. This pedagogical assumption underpinned the metaphor of an educational pyramid in which students moved from broad surveys of academic fields (to start undergraduate programs) to mastery of established wisdom on specific topics (in upper-level courses and initial graduate courses) as preparation for their own specialized attempt to advance knowledge through original research (primarily in thesis projects).

In recent years, an active learning model has increasingly been implemented in universities. In this approach, students are expected to learn about the research results of those who have gone through their own efforts to construct knowledge and formulate interpretations. In other words, the concept of an educational pyramid of increasing specialization with mastery preceding originality is being dismantled in favour of a mentoring-coaching-apprenticeship approach in which students are always actively engaged in the learning process. We no longer see the competent graduate as someone who has imbibed a received body of knowledge, but rather as someone who has learned to construct knowledge.

Viewed until recently as dichotomous, teaching and research are now seen as separate articulations of the same process. For this reason, the value and importance of professorial research projects are now defined not only in terms of their potential to advance knowledge and understanding but also in terms of their role in developing the talent of all those involved in them. This new emphasis was well-articulated in the federal government’s recent economic fiscal update: “Federal granting councils fund projects that provide students with opportunities to work with the best minds and participate in groundbreaking research. This experience prepares students to add tremendous value to Canadian businesses, health science centres, and Canada’s health, social services and other organizations once they graduate.” (Advantage Canada, “Building a Strong Economy for Canadians,” 23 November 2006.) In other words, a new federal-provincial partnership is beginning to underpin an updated conceptualization of the character of higher education in the 21st century.

Just as we are re-conceptualizing teaching, we are also enlarging how we attempt to advance knowledge and build understanding through
research. The key word is connections: across disciplines, between the campus and the community, and from Canada to the world. Rather than imagining that we will advance knowledge only through increased specialization (in keeping with the metaphor of a pyramid), we are now moving to a deeper appreciation of the value of contextualizing and connecting our efforts to those working in other disciplines, institutions and the larger society. In other words, we are increasingly fostering on our campuses both specialization (the discipline of the discipline) and contextualization (discipline-based interdisciplinarity, campus-community collaboration, and Canadian-global connections). And we are attempting to move from an insistence on one strategy as “the best” to an embrace of multiple possibilities including both disciplinarity and interdisciplinarity as well as individual and collaborative activity on campuses or beyond.

It was in the changed conceptual context of teaching, research and campus-community connections that computerization began accelerating the transformation of universities. The past three decades have witnessed the computerization of almost all aspects of our work. Computerization has particularly facilitated the redefinition of students as nascent researchers by providing unprecedented resources that transcend the physical holdings of university libraries and laboratories. New technologies have also fuelled the internationalization of university life and given new meaning to the invisible colleges of earlier times. In this sense, computerization is accelerating the new model of a horizontally-connected one-ness of scholarship in a global context.

In this context, a profound change is underway in which we are rethinking the established scholarly distinctions between the baccalaureate, master’s and doctoral levels. Over the past decade, the emerging pattern is for all levels to adopt a construction-of-knowledge approach to the curriculum and to view a healthy research environment as a necessary condition for educational quality. This pedagogical approach combines, in a dialectical way, a back-and-forth, active and passive, engagement with both previous scholarly findings and original research activities. It is in this sense that the baccalaureate is itself becoming a research degree.

The redefinition of undergraduate teaching in terms of research-like activities complements the increasing importance of graduate programs. The ability to think and work like a “researcher” is the prime characteristic of the “talent” now sought by employers across the private and public sectors as the epicenter of the economy continues the historic move from farm to factory to office to virtual space. The competitive global labor market is seeking those who can combine established knowledge and understanding with independent analysis and articulate expression. In this way, the rethinking of the teaching-research dichotomy is intimately connected to the recognition that our era calls for more creativity, informed critical thinking, and campus-community collaborative experience.

At the same time, universities are becoming more expensive not less. In the context of the new conceptualization of teaching, research and campus-community connections, universities are becoming more labor intensive
and more dependent upon top-quality research infrastructure to support both undergraduate and graduate programs. Fortunately for Canada, the federal government increased public investment in research beginning in the late 1990s and has maintained its leading international position in terms of the public support of research and development. This increased investment has contributed significantly to Canada’s ability to come to grips with the post-industrial changes of recent years. But overall university budgets, including those for research activities, have not kept pace with the emerging redefinition of teaching, research and campus-community connections. In recent years, Canada has fallen well behind the leading countries of the world if judged by overall investments in higher education especially at the provincial level. The financial difficulty for universities reflects both provincial underfunding (especially if compared to the United States) and provincial tuition policies that limit increases in keeping with the conviction that education is mostly a public good (the characteristic percentage represented by tuition was allowed to increase in recent years from about 15 percent to 35 percent of the total cost but no further increases are allowed to compensate for the public underfunding). While universities have been able thus far to provide enough seats for qualified applicants, the quality of the programs reflects the diminished public investment. For example, the number of students for each professor has doubled in recent years in many undergraduate and graduate programs. Once higher education became a priority for Canadians, universities were able to hire professors in proportion to Canada’s growing population for much of the later 20th century (Figure 5). In recent years, however, this steady correlation has weakened considerably. Overall, undergraduate enrollment in Canadian universities has increased by 45 percent since the late 1980s while the number of professors has risen only 5 percent.

FIGURE 5: Full-Time Faculty v. Population, 1960-2002
Moreover, opportunities to undertake research including those exploiting new technologies are now too limited for both students and professors. Current resource levels often work against the new research-oriented educational initiatives leaving too many students facing old-fashioned tests and rote learning in inappropriately large classes while their professors struggle to undertake research projects. In other words, universities do not now have the appropriate resources to take full advantage of the opportunity to help Canadians meet the demands of the globalized 21st century.

The good news for Canada is that current public opinion appears to favor a re-affirmation of what has become a distinct Canadian conviction about public education for the public good. This favorable opinion includes attitudes about research and its value for Canadian society. For example, when Canadians are asked about their impression of research, they respond quite favorably for all types of research; more than nine out of ten individuals view health sciences research at least somewhat favorably while this proportion only declines to eight out of ten in the case of the social sciences and humanities (Figure 6).

FIGURE 6: Public Opinion Survey Results: Impressions about Research

Canadians' favorable impression of research is complemented by an especially favorable view of university researchers. In response to the question, "How much trust do you have in each of the following when they talk about issues related to science and research in Canada?" respondents identified university researchers as highly trustworthy and far more so than other groups (Figure 7).
The favorable views of Canadians toward research in general, and university researchers in particular, underpin a strong conviction about the great value of research for the larger society. This conviction is held for all research areas including those in the social sciences and humanities. When asked, “To what extent do you think research in the social sciences and humanities contributes to Canada’s overall quality of life?” almost half of all Canadians think that these research areas contribute to a great extent to the overall quality of life, while more than another third of respondents agree that they do so to some extent; fewer than one-sixth of Canadians do not share this favorable view (Figure 8).

FIGURE 7: Public Opinion Survey Results: Trustworthiness of Leaders in Science and Research

The Media 28%
Federal Government Officials 25%
Provincial Government Officials 25%
Business Executives 19%
Politicians 10%

University Researchers 81%
University Scientists 80%
Government Scientists 54%
Government Researchers 54%
Private Sector Researchers 50%
Private Sector Scientists 49%

FIGURE 8: Public Opinion Survey Results: Contribution of Research to Life Quality

2 14 37 48

DK/NR  No extent whatsoever (1-3)  Some extent (4)  Great extent (5-7)
CONCLUSION

The proposed re-interpretation of the making of Canada as a successful society implies that a new chapter is being written in the early 21st century. Will Chapter 4 tell the story of how Canada re-affirmed its strategy of investing in knowledge, understanding, and talent in order to successfully meet the challenges and opportunities of the new age? On the one hand, the public opinion survey results suggest that Canadians continue to hold views that are consistent with the historic conviction that public investments should support public education as a public good. On the other hand, Canada is beginning to fall behind the international leaders in higher education especially at the graduate level. At the same time, the redefinition of teaching and research is enhancing the quality of both the undergraduate and graduate experience in keeping with global trends, but these redefinitions are also increasing the cost of high quality university programs. Since Confederation in 1867, the size of universities expanded from those of no more than a few hundred students to a sizable array of both small and large institutions. In terms of participation rates, universities at the opening of the 21st century look much like primary schooling during the mid 19th century and secondary schooling during the earlier 20th century. Will Canadians invest in knowledge, understanding, and talent to ensure the making of a successful society in the 21st century?

The importance of addressing this question from a historical perspective can be illustrated by imagining three scenarios. In the first scenario, the argument that publicly-supported university education including expanded graduate programs is the best strategy for the 21st century proves to be completely persuasive. This argument carries the day just as mass schooling came to be seen as essential for modern democratic societies in the 19th century and as secondary schooling became the requisite for urban-industrialized jurisdictions in the 20th century. The result in this scenario is that significantly increased federal and provincial investments enable considerable enrollment growth especially at the master's and doctoral levels. Some new universities are created while graduate programs expand rapidly across all fields of study. Postsecondary education becomes a characteristic feature of the 21st century.

In the second scenario, Canadians invest in universities as essential to overall quality of life but with a specific and limited role in developing knowledge, understanding and talent. Rather than following the 19th century expansion of primary schools and the 20th century growth of secondary schools, universities are attributed a specific place within an overall expanding and diversified postsecondary landscape. The result is that very few new universities are created during the century, and undergraduate participation rates never rise above a third of the population. In contrast, graduate programs are expanded significantly so that their relative space within the post-secondary environment increases dramatically.
In the third scenario, rapidly rising societal expectations about higher education and continued public underfunding continue on a collision course during the 21st century. Pressure to accept more and more students leads to a steadily declining quality of university education at both the undergraduate and graduate levels. Frustration and anger among students, parents, policymakers, and leaders in the private and public sectors are increasingly directed at universities just as primary schooling came under attack by the turn of the past century followed by criticisms of secondary schools during the later 20th century.

The policy implications that flow from scenarios such as these are profound in terms of the consequences for Canada’s prospects in the 21st century. A failure to think about such scenarios works against the development of consistent and coherent policy. When the British-North America Act in 1867 allotted health, welfare, and education to the provinces, these responsibilities played minor roles in government activities. One hundred and forty years later they occupy center stage at all political levels. Moreover, they are now recognized to be dependent on each other, with the universities playing a foundational role in enabling a healthy and prosperous society. For this reason, a concerted federal-provincial, multi-layered approach is now essential to build upon Canada’s deep and successful commitment to developing its intellectual assets, its human capital, while also advancing knowledge and building understanding about the past and present. We must act now to ensure that Canada’s fourth chapter in the making of a successful society ends well.

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