The business of the university: Research, its place in the 'business', and the role of the university in society

by

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BAdmin, Athabasca University, 2001
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Supervisory Committee

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Abstract

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Neoliberal ideologies have been adopted through most of the developed world. In North America, they dominate and provide the backdrop for the way decisions are made, organisations are governed, and policies are considered and implemented. Universities have not been exempt from the pressures of neoliberalism and increasingly are becoming what is being referred to as 'corporatised'.

Using a multi-institutional ethnographic case study, drawing on elements of institutional ethnography and using discourse analysis and interviews, this research focused on these topics with four research intensive universities in British Columbia: UBC, UNBC, UVic and SFU. This research sought to answer the question: *In what ways is corporatisation visible in the practices and discourses related to university research in British Columbia, and, in turn, what impacts are being felt?*

The findings from the research indicated that there is, as might be expected, strong support for post-secondary education. The rhetoric in the documents from the universities and governments shows a 'grand vision' for education as the cornerstone of a successful society. The findings confirm that universities are viewed internally and externally as important and that, in turn, research and discovery is paramount. However, what the

research also showed was that there are differing views among those in power regarding how that vision plays out. Those differences can be summarized as: citizen preparation versus job training; social innovation versus commercial innovation; targeted research (both in the type of research carried out and to what ends); and the level of autonomy of the university. These tensions can be considered through the theoretical frameworks that guided the research: commodification (i.e., of education and research); resource dependence theory; and institutional theory.

Universities are increasingly being corporatised and this is visible in: increased oversight and control by governments with regard to the direction of the university, both from an educational and research perspective; an emphasis on the fiscal bottom line; increased accountability requirements (in complexity and frequency) related to funding for educational programs and research; increased demands for, and focus on, demonstrable impacts and quantifiable measures from research; a reduced amount of collegial governance; increased bureaucracy; and pressures to adopt business models, practices, and processes from the private sector.

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Acknowledgments

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To my husband, Dan, who read various iterations, listened to my ramblings about the research, and dealt with my anxiety and worries that it wouldn't be good enough, thank you. To my son Michael, and daughter Sheryl, who have had a lifelong learner for a mother, thank you for never resenting that studies took time away from you.

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Dedication

This work is dedicated to my children, Michael and Sheryl. You both inspire me daily with your ideas, intelligence, values, successes and the ways you embrace life.

Never stop learning.

Chapter one: The problem to be studied

Introduction

Many scholars argue that the role and value of the university is changing as it responds to, and pursues, the demands of the market (e.g., Taylor, 2010; Giroux & Giroux, 2009; Dreyer & Kouzmin, 2009; Rasmussen, 2008; Rhoades & Liu, 2008; Newfield, 2008; Menzies & Newson, 2007; Giroux, 2006; Giroux & Giroux, 2006a, 2006b; Carroll, 2004a, 2004b; Slaughter & Rhodes, 2004; Giroux, 2003; Stromquist, 2002; Axelrod, 2002; Leys, 2001; Stromquist & Monkman, 2000; White & Hauck, 2000; Newson, 1998). Increasingly, they suggest universities are being governed as businesses and adopting methods, models and structures more commonly found in the business / private sector. More than ever, higher education appears to be driven by the market and market principles. For many, post-secondary education's cache is in its measurable value in the global economy (Clark, 2004; Steck, 2003; Tavenas 2003; Axelrod, 2002; Delanty, 2002; Leys, 2001).

These changes are attributed primarily to the adoption of neoliberal ideals, policies, principles and practices. Neoliberalism has become dominant throughout much of the world over the last three decades and has spawned new public management (Lapsley & Miller 2004; Reed, 2004; Daniel, 2003; Johnson, Kavanagh & Mattson, 2003a, 2003b, 2003c, 2003d; Mignot-Gerard 2003; Parker, 2002; Daniels, Blasch & Caster, 2000; Parenti, 2000; Ruben, 2000). Neoliberalism advocates the primacy of market principles in economic and social policy and supports decentralization, debt-reduction for the state, deregulation, removing social services from the control and responsibility of the state, growth in foreign investment, liberalization, changes to trade union rights, privatization,

and various tax reforms (Davies, Gottshce & Bansel, 2006; Giroux, 2004; Stromquist, 2002; Carroll & Little, 2001; Martinez & Garcia, 2000; Braun & Merrien, 1999; Bourdieu, 1998).

All sectors of social life have been affected by neoliberalism, with certain changes welcomed and others criticized. Reduced state expenditures, unemployment and privatization have been widely questioned by many (Faulkner, 2009; Larner, 2009; Rose & Dustin, 2009; Apple, 2006; Harvey, 2005; Rai, 2005; Carroll & Shaw, 2004; Wagner, 2004; Burbles & Torres, 2000; Kernaghan, Marson & Borins, 2000; Minogue, 2000; Mossberger, 2000; Chomsky, 1999; Borins, 1995; Savoie, 1990), while increased accountability for governments and the public sector has been lauded by others (deLong, 2010; Friedman, 1995, 2005). At all levels of education, neoliberal practices and new public management have resulted in pressures towards: stronger ties between the workplace and school with an emphasis on providing 'employable' graduates; developing and then streaming students into specific and targeted programs; an increased focus on specific disciplines such as science, mathematics and engineering as well as professional fields such as education and health; a change in the organisational design of schools and educational institutes to manage them using corporate models; increased requirements for accountability and reporting; the establishment of performance indicators and measures to determine quality; competition for limited funding; and increased fiscal austerity.

Publicly funded universities in Canada have not been exempt from these pressures and concerns with regard to running the university like a business have been noted (Carroll & Beaton, 2004; Slaughter & Rhoades, 2004; Sears, 2003; Gumport, 2000; Kniffen, 2000; Steck & Zweig, 2000; Craig, Clarke & Amernic, 1999), particularly around the increased

prominence of the fiscal bottom line and the "constant preoccupation with finances, measurement, marketing, and accountability" (Stromquist, 2002, p. 113).

The increased focus on the fiscal bottom line, pressures for accountability, imposition of quantifiable measures, increased oversight and control by governments, demands for return on investment, less collegial governance, and adoption of business models, norms and principles, are what I refer to in this dissertation as 'corporatisation of the university'. This corporatisation is not a metaphor but rather it is to be taken literally. It is reflected in documents developed by the universities and in documents related to higher education at the provincial and national government levels. It is evident in relative power relations within the university, and in an increased focus on efficiency, cost-effectiveness, and return on investment. It is also evident in struggles and juxtaposition between commercial and social innovation, job training and citizen preparation, and the various types of research supported. The impact on the role of the university in society as a result of the adoption of this approach is uncertain.

While change is not new for the university, the last 'radical' change was the 'massification' of education in the 1960s. Since then, the university has been seen as a place which produces and promotes the discovery of new knowledge, serves as a neutral domain, and where objective and impartial information can be found. Within the university, we expect to find information to guide us in considering both sides of an issue rather than just one purported as the 'right' or 'only' perspective. The university is also seen as a place where human potential is developed, tolerance is learned and diversity is celebrated, where knowledge is pursued for its own sake, individuals develop the capacity to deal with uncertainty and are prepared to be active and critical citizens. The

university's role includes ensuring a balance between democratic values and market fundamentalism, where personal autonomy and social criticism are developed, where struggles and compromise are encouraged, and where questions can be raised regarding what institutions should do, who they should serve, who makes decisions and how those decisions are made and implemented.

Research is an integral part of universities and contributes to prestige, growth, and fiscal stability. The role of research has changed over time, with increasing pressures to commercialise results of research (both products and services) and generate revenue for the university. Research is sought which answers 'real world' issues and questions – environmental sustainability, conflict management, leadership, community and societal sustainability, etc., and pressures for tangible and 'quick' results are rising.

Areas that provide support for the research enterprise are also impacted as a result of corporatisation. New and more detailed administrative requirements by funders are common and in many cases new tracking, monitoring and reporting processes must be developed. University-industry liaison offices, offices of technology transfer, contract specialists, development coordinators, grants facilitators, and research accountants are now commonplace. Recently, there have been added directives to charge and collect overhead and indirect costs, anticipate and negotiate intellectual property (IP), have research centres recover their costs, measure the return on investment, and document the impact of research. There is an acknowledgement that traditional bibliometrics including citations, number of patents, licenses, spin-off firms, revenue generated, etc., are insufficient for measuring actual impacts of research.

Problem statement and research question

While research is currently being undertaken regarding metrics that could be used to better measure the impact of research, there is little or no research on how universities are balancing demands for demonstrable impacts (particularly quick impacts) and research targeted to funder priorities with the desire and need to conduct traditional, pure, disciplinary research. There is a paucity of research on the full impact of university corporatisation on research and research administration and on the evolving role of research and how it contributes to the strategic direction of universities. Using a multi-institutional ethnographic case study, this doctoral research focused on these topics within four research intensive universities in British Columbia (BC): University of British Columbia – UBC; Simon Fraser University – SFU; University of Victoria – UVic; and University of Northern British Columbia – UNBC. The overall question that guided this study was: *In what ways is corporatisation visible in the practices and discourses related to university research in BC and, in turn, what impacts are being felt?*

My interest in this topic developed in the late 1990s. Working in the post-secondary system, I had been given the task in a small university to help raise the profile of research and help develop a research culture / climate. Research administration was part of my role when the Canada Foundation for Innovation (CFI) program and the Canada Research Chairs (CRC) program were launched. The change to the perceived value and importance of research was immediate and dramatic. At the same time, demand for post-secondary education (at all levels) was increasing and society as a whole held the belief that university education was the path to a better job and a better life. I was in my 30s and neoliberal practices were the norm for me. As I moved into more senior roles and met with colleagues across the country, I saw, as well as experienced, the increasing demands

for accountability, tracking and reporting, and was part of discussions regarding outcomes and impacts.

Research continued to grow, and universities sought prestige based on their research success and activities. I completed a masters' degree in integrated studies and began to look at research that offered alternatives to neoliberal ideas and that questioned, critiqued, and disputed the methods and models that were in place throughout the western world. As economic recessions came and went, and governments cut services and funding, pressures to show impact and value with regard to research increased yet again. My understanding of the world beyond neoliberalism had also increased and as demands grew to run the university and research as a business, the ideas around the impact of this 'corporatisation' resonated with me. I began discussing these impacts at meetings with colleagues, and with faculty and senior administration in the university. I sought publications and research around these topics and found gaps that I wanted to explore – those gaps helped focus the direction for this dissertation.

Theoretical framework

There were primarily three theoretical influences that related to this research: institutional or organisational theory, resource dependence theory, and commodification. While each was considered independently, there are a number of links or connections between the three.

As so much of what a university 'is' is connected to culture, institutional theory was chosen to show the impact of corporatisation from that cultural perspective. Resource dependence theory deals more with the external environment and considers how the control of resources impacts the behavior of the organization. This theory is especially

relevant in terms of externally funded research. Commodification was the third theory that was looked at in relation to this research from the perspectives of both the commodification of education and the commodification of research.

Overview of methodology and methods

This research used a multi-institutional ethnographic case study approach which drew on institutional ethnography and employed discourse analysis and individual interviews. Data collection included gathering strategic research plans, research policies, strategic university plans and other information from each of the universities. These were analysed for business terminology, reference to the role of research and the role of the university, and the connection of research to the goals of the university. Analysis also focused on terminology and statements related to impacts, measures and return on investment. Data was also gathered regarding students, programs, and education / teaching as well as regarding the value of the university in society and its mission / vision. I gathered provincial and federal government documents as well as relevant documents from major funders (e.g., Tri-Agencies) and other organisations (see Appendix A for a complete list).

Semi-structured interviews were conducted with a mixture of VP / AVP research, deans / associate deans of graduate studies, directors of offices of research / research services, and directors or equivalent of offices of community based research. In addition, I interviewed deputy minister(s) / assistant deputy minister(s) at BC's Ministry for Advanced Education and Labour Market Development. Vice presidents research / associate vice presidents research were selected as they had the strategic view of research, its importance within the university, and the overall view of the university's role and the role of research. Directors of offices of research were selected as they added

an administrative 'on the ground' perspective. Deans / associate deans of graduate studies were selected as they added additional depth to views of the demands, attitudes and expectations of students regarding the role of the university and how research contributes to that role. Directors of community based research (CBR) were selected as I felt that given that research and partnerships undertaken through CBR are generally more 'grass roots', focused on community engagement, and driven by a community and that community's needs, they offered insights from that perspective. The view of provincial government representatives added a perspective outside of the university and provided a further layer to the study. Interviews sought to gather perspectives on: the role of the university in society (past, present, future); the role of research and its evolution; impact of business norms / neoliberal principles on the university and research; students' attitudes and expectations; impact of pressures for measures; demands to demonstrate value and return on investment; impact of targeted funding; and demands for more applied research (see Appendix B for interview details).

Throughout, a constant comparative method was used in order to identify patterns, complexities and variations between the organizations, and between participants. Aspects that stood out as contradictions were identified as were more subtle differences. In particular, comparisons with regard to word use and participants' role in the organization were undertaken, as well as comparisons across the various themes.

The institutions included in this study were BC universities that are publicly funded, members of the Association of Universities and Colleges of Canada (AUCC), members of the Canadian Association of Graduate Studies (CAGS) and the Western Canadian Deans of Graduate Studies (WCDGS), that are considered research intensive, and that

have been in operation for at least 20 years. These criteria ensured that there was not 'selection' bias, and provided a comprehensive look across the province. This research will serve as a starting point to consider other comparisons within BC, with other provinces, among regions, and to look at Canada as a whole. Beyond a full Canadian study, it provides an opportunity for research to compare Canada with other similar countries (e.g., New Zealand, Australia, etc.).

Importance of the research

This research is important as universities face increasing competition for funding, competition for students, requirements for collaboration and partnerships, and changing demographics of students, faculty and leadership (Loeffler, 2011; Folbre, 2010; Krychowski & Quelin, 2010; Newfield, 2008; Santos, 2006; Lynch, 2004; Wagner, 2004; Breton & Lambert, 2003; Giroux, 2003, 2006; VanGinkel, 2003; Marginson & Considine, 2000; Stromquist & Monkman, 2000). This research will help universities determine and assess how research contributes to development, growth, prestige, educational quality, and financial stability. It will inform current research on assessing accountability, measures, impacts, and communications. It will be of interest for vice presidents research, directors of graduate studies, and those in strategic planning positions. It may also be of interest to provincial and federal governments, Tri-Agencies, and to the general public with regard to communicating the role of the university and the expectations for that role in the future.

Chapter two: Theoretical framework and review of literature

This chapter begins with a discussion regarding the theories that influenced this research and continues with a review of relevant literature.

Theoretical frameworks

There are primarily three complementary theoretical influences that relate to this research: institutional theory (DiMaggio & Powell, 1983); resource dependence theory (Hillman, Withers & Collins, 2009; Jaeger & Thornton, 2005; Barney, 1986, 1991; Pfeffer, 1982; Pfeffer & Salanick, 1978, 2003); and commodification (Davies & Bansel, 2007; Leys, 2001; Willmott, 1995). As so much of what a university 'is' is connected to culture, institutional theory was chosen to show the impact of corporatisation from that cultural perspective. Resource dependence theory deals more with the external environment and considers how the control of resources impacts the behavior of the organization. This theory is especially relevant in terms of externally funded research. Commodification was the third theory that was looked at in relation to this research from the perspectives of both the commodification of education and the commodification of research.

Institutional theory

Institutional theory is closely connected to culture and the impact and influence of culture on norms and ways of doing things. At its basic level, cultural expression manifests itself in various forms – through the art of a society (paintings, sculpture, dance, architecture, literature, music, etc.), public outcry, legends and myths, language and terminology, speeches and/or demonstrations, and sometimes through war or violence. These expressions influence what become the norms of a society over time and

determine what its members will and will not accept from those within and outside of the society. Culture provides an outline for 'the way things are done'. However, looking into culture is not a simple process as culture is never static – it is changing, shifting, and forming sub cultures, each of which will have unique features.

There are a variety of views related to organisational culture; those that focus on assumptions (Schien, 1985), shared values (Boisnier & Chatman, 2002; Peters & Waterman, 1982), ideologies (Harrison, 1972), social norms and customs (Morgan, 1997) shared beliefs (Wilkins & Ouchi, 1983) and the programming of the mind (Hofstede, 1991). Stromquist (2002) suggests that organisational culture is "the complex set of beliefs, values and practices that unify a given social group …culture comprises several subsystems, notably those of organisation, communication, resource allocation, social interaction, reproduction, and ideology. It also includes such factors as statutes, roles, ritual, and traditions, and the nature of time and space" (p. 65). Culture can provide a competitive advantage for an organisation as Daumard (2001) notes, stating that "a strong culture, one with which the staff can readily identify, has a positive impact on staff motivation" (p. 68).

Discussions around culture, organisational culture, and institutional theory are complicated by issues of globalisation – the advent of a much 'smaller' and connected world where information flows in real time. Castells (2000) contends that "in a world of global flows of wealth, power and images, the search for identity, collective or individual, ascribed or constructed, becomes the fundamental source of social meaning" (p. 3). Furthermore, "people increasingly organise their meaning not around what they do, but on the basis of who they are, or believe they are" (p. 3). When that culture is

perceived as threatened, people tend to regroup around primary identities: religious, ethnic, territorial, national, and at times, this leads to tragedy. For many, culture provides a safety zone against the "invasion of ideas, identities and forms of life extraneous to the specific local region in question" (Kellner, 2000, p. 304).

Institutional theory considers the formal and informal norms, rules and routines which govern an organisation and form its culture (Scott 2004; Aten & Howard-Grenville 2011; Hatch & Zilber 2011).

Each university studied as part of this dissertation has a distinct and unique culture which impacts how research, and how corporatisation, is viewed. Those cultures are influenced by the age and size of the institution and its location in the province. UBC is the oldest and largest of the four and located in Vancouver. Second in size only to the University of Toronto in the Canadian system, UBC holds considerable power and influence. Its traditions are long standing. SFU and UVic are both comprehensive universities with SFU located in Burnaby, a suburb on the outskirts of Vancouver, and UVic located in Victoria, on Vancouver Island. Location and size impact their culture with SFU providing an alternative to UBC for students in the region or students coming for other locations, and UVic providing the only research intensive university on Vancouver Island. UNBC is the youngest of the four and the smallest, and is located in Prince George, a considerable distance from any other major centre. Much more tightly tied to its community, UNBC is much more regionally focused than the other three. In addition, the universities together make up part of the larger culture of BC and Canadian universities. Governments, both provincial and federal, also have distinct cultures, as do various ministries and funding agencies (Tri-Agencies, Human Resources and Skills

Development Canada [HRSDC], etc.) within them. While conducting the research, I looked for themes that were common across the universities and connected to culture, as well as those that were distinct.

Resource dependence theory

While institutional theory focuses internally on an organisation, resource dependence theory (RDT) focuses externally. RDT, developed by Pfeffer and Salancik (1978), considers how external factors and resources impact the behaviour of an organisation. In essence, RDT is about power – s/he who controls the resources holds the power (Hayward & Boeker, 1990).

RDT suggests that organisations depend on resources to function, and that often those resources are controlled by other organisations, therefore perspectives regarding negotiation, exchange, relationships and transactions all are considered. The theory includes three core ideas: that "(1) social context matters; (2) organisations have strategies to enhance their autonomy and pursue interests; and (3) power (not just rationality or efficiency) is important for understanding internal and external actions of organisations" (Davis & Cobb, 2009, p. 5).

The emphasis on power through the control over resources is a key factor of RDT and distinguishes it from other theories such as real options theory (Davis & Cobb, 2009; Jaeger & Thornton, 2005; Ulrich & Barney, 1984). Interestingly, Davis and Cobb (2009) suggest that resource dependence theory is experiencing a revival as a result of the current global situation, noting that the "economic crisis, dissatisfaction with political leadership, increased social activism" (p. 24), is similar to the state of the world when the theory was first conceptualized.

There has been substantial growth in funded research in the last 10+ years, much of it targeted to the specific wishes of the funder. During the interviews and the analysis of the data, I looked for specific areas of tension around the issues of power – power of the provincial and federal governments, and the power of the universities. I also considered whether and how resource dependency may have influenced behaviour with regard to research and targeted funding opportunities.

Commodification

Commodification, Leys (2001) contends, has four requirements that must be satisfied to transform what has traditionally been a service area into a market:

1) the goods or services must be reconfigured in a way which allows them to be priced and sold;

2) people must be convinced to want to buy the good or service;

3) the culture of the workforce involved in providing the good or service must be shifted from one with collective aims focused on service to a culture that produces a profit and which is subject to market discipline; and

4) the capital which is now moving into what was a non-market field needs to have the risk underwritten by the state.

Carroll and Beaton (2004) note that within neoliberal discourse, "products of universities—knowledge and credentialed labour-power—are commodities that flow into circuits of capital accumulation in a tendentially international economy, improving prospects for local and national competitiveness" (p. 181). Under commodification, suggest Davies and Bansel (2007), education and knowledge become just another product to be bought and sold.

Leys's first factor for reconfiguring post-secondary education into a commodity can be achieved in a number of ways. Course materials are broken down into standard, goal specific modules, and course packages include course materials, syllabi, learner and student guides, and lecture notes (Harrison & Dugdale, 2003; Leys, 2001; Noble, 2000, 2003). As such, courses can be delivered by term or contract faculty, sessionals, or as independent study. The course becomes a product separate from the instruction and has the ability, to some extent, to stand on its own.

Leys' second factor for commodification deals with persuading the public to want to purchase the service or good. A university education is seen as having a good return on investment, i.e., graduates generally get better paying jobs than those who don't get a degree. Even though tuition fees continue to climb, demand for post-secondary education continues to grow, in particular for professional programs at undergraduate and graduate levels.

Leys' third factor entails redefining and re-motivating the existing labour force to become "wage workers producing commodities to generate a surplus for shareholders" (Leys, 2001, p. 84). This is one area where commodification has not yet taken hold in terms of Canadian universities. While there has been an increase in the number of non-tenured and sessional faculty, and in contract teaching staff (and indeed contract and term staff throughout the university), publicly funded post-secondary institutions are not producing profits for shareholders. In Canada, private educational institutions have been allowed to offer programs (e.g., DeVry, Quest University Canada) and throughout North America, private for-profit institutions have set up on-line and distance programs (e.g., U of Phoenix).

The final factor outlined by Leys for commodification is that the state must underwrite some of the investment and risk involved in the shift to 'for-profit' orientations. In the case of education in Canada, provincial governments have always funded some portion of post-secondary costs through operating funds and infrastructure grants. At the federal government level, funding in terms of research grants and indirect costs help offset costs.

As the view of education shifts towards that of a commodity, there is also a growing trend to define students as clients or customers (Newson, 2004; Giroux, 2003), and professors as instructors. In the words of one research university president, his institution is "the 'largest export industry', a phrase that implies that students come to the university from abroad to buy knowledge" (Stromquist, 2002, p. 116). Students are seen as more than just consumers however, they are also considered as 'inputs' and 'outputs' who impact the prestige of the university based on their marks and the grants they secure. The institution serves as 'marketer' (Slaughter and Rhoades, 2004), advertising their courses, programs, and credentials, but also marketing their campus and the experience of the student as a lifestyle. Once students have selected an institution and enrolled,

> their status shifts from consumers to captive markets, and colleges and universities offer them goods bearing the institutions' trademarked symbols, images, and names at university profit centres such as unions and malls … When students graduate, colleges and universities present them to employers as output/product, a contribution to the new economy, and simultaneously define students as alumni and potential donors. Student identities are flexible, defined and redefined by institutional market behaviours (Slaughter & Rhoades, 2004, p. 2).

When universities openly and increasingly pursue commodification and commercialisation, it "legitimizes and reinforces the pursuit of economic self-interest by students and contributes to the widespread sense among them that they are in college solely to gain career skills and credentials" (Harkavy, 2006, p. 14). Students increasingly believe they are entitled to a credential (product) because they have paid tuition. Institutions talk about being learner-focused rather than learning-focused and students increasingly appeal grades, seek exemptions from various policies, demand better 'service', and complain about layers of bureaucracy (Delanty, 2002; Gumport, 2000).

During the analysis of the interviews and data, I looked for evidence under each of the four criteria related to commodification to determine how far along this path universities have moved in terms of education and research.

Relevant literature

Many scholars argue that the role and value of the university is changing as it responds to, and pursues, the demands of the market (Dreyer & Kouzmin, 2009; Rasmussen, 2008; Rhoades & Liu, 2008; Giroux & Giroux, 2006a, 2006b; Carroll, 2004a, 2004b; Slaughter & Rhodes, 2004; Sears, 2003; Axelrod, 2002; Stromquist, 2002; Leys, 2001; Stromquist & Monkman, 2000; White & Hauck, 2000; Newson, 1992, 1998; Polster, 1992, 1998, 2000, 2005; Buchbinder & Newson, 1990). This research suggests that increasingly, universities are being governed as businesses and adopting corporate methods, models and structures. Axelrod (2002) suggests that more than ever, higher education is driven by the market and market principles. For many, post-secondary education's cache is in its measurable value in the global economy (Clark, 2004; Steck, 2003; Tavenas 2003; Axelrod, 2002; Delanty, 2002; Axelrod, Anisef, & Lin, 2001; Leys, 2001). How value is

defined varies depending on the view of the individual. For some, value is measured by the ability to get a ‘good’ job after graduation; for others, by the amount of knowledge gained through the education and, for others, by the impact of research and the research experience. Value can be measured in terms of the contribution of the university to the community, new inventions and spin-off companies, rankings in surveys, or the amount of taxpayer dollars supporting the institution.

These perceived changes in role and value are attributed in part to the adoption of neoliberal ideals, policies, principles and practices which have become dominant through much of the world over the last four decades and which have spawned new public management (Lapsley & Miller 2004; Reed, 2004; Daniel, 2003; Johnson, Kavanagh & Mattson, 2003a, 2003b, 2003c, 2003d; Mignot-Gerard 2003; Parker, 2002; Daniels, Blasch & Caster, 2000; Parenti, 2000; Ruben, 2000).

The remainder of this chapter outlines the global context and the development and rise of neoliberalism and its impact on post-secondary education. It then considers literature and research regarding the role of the university, issues related to faculty and tenure, university research and its evolution, and research administration.

Globalisation and neoliberalism

Globalisation

For many years, we have heard the term globalisation (Giroux & Giroux, 2009; Desai, 2007; Giroux & Giroux, 2006b; Arrighi, 2005a, 2005b; Croucher, 2004; Atasoy, 2003; Breton & Lambert, 2003; Lindsay, 2003; Collier, 2002; Pyle & Forrant, 2002; Teeple, 2000; Beveridge, 1996) – the global society, global economy, global citizenship, global market, etc. Globalisation will ‘save’ us; globalisation is ‘evil’; globalisation is ‘new’; globalisation is ‘old’. While the use of the term rose to the forefront in the 1990s, there

was, and is, considerable debate regarding what globalisation is, or isn't; whether it is simply a re-occurrence of past developments, and whether globalisation is being used as a 'catch all' term for other distinct events, including the rise of neoliberalism and the dominance of a market economy. It is worth looking briefly at some of the research regarding the term 'globalisation'.

When tied to the economy, globalisation can be defined as an expansion of capitalism in "the arrival of 'self-generating capital' at the global level: that is, capital as capital, capital in the form of the transnational corporation, increasingly free of national loyalties, controls, and interests" (Teeple, 2000, p. l79). Most commonly, globalisation refers to processes that: connect sectors and societies; facilitate integration and interconnectedness at economic, political and social levels; facilitate a single world economy; reorganise modes, methods and locales of production; provide opportunities for shared thought, language and symbols; and reduce barriers for communication, trade, and other links between countries (Marques, 2005; Croucher, 2004; Enders, 2004; Robinson, 2004; Brooks, 2003; Chernomas & Sepehri, 2003; Currie, 2003; Osland, 2003; Held & McGrew, 2002; Gross Stein, 2001; Cameron & Gross Stein, 2000; Morrow & Torres, 2000; Aycock, 1999; Friedman, 1999; Tabb, 1999; Gibson-Graham, 1996; Hirst & Thompson, 1996, 2002; Mittelman, 1996; Robertson, 1991).

Globalisation, however, can also refer to cultural hegemony, in particular the rise and dominance of United States of America (USA) ideals, values and icons (Gross Stein, 2001). Increasingly there is the perception that the world is being reshaped into a single social space. This is being done primarily through economic and technological advancements and interests developed in one area of the world, but which significantly

affect the lives of individuals, societies and nations in other parts of the world (Levin, 2002, 2003, 2007; Ritzer, 2000; Castells, 1997a, 1997b, 1997c, 1997d, 2000). The term globalisation is sometimes criticized as being misleading (Deasi, 2007; Ralston Saul, 2004; Atasoy, 2003; Carroll, 2003: Kellner, 2000; Teeple, 2000; Wallerstein, 1999). Carroll (2003) points out that globalisation "is a problematic term. It invites us to exaggerate the differences between our present era and the past, when a strong case can be made that the same dynamics of uneven capitalist development have continued into the present" (p. 36). Much of the difficulty arises because globalisation is seen as an ideology that is unstoppable, driven by international entities and touted as the answer to the world's problems (Atasoy, 2003; Teeple, 2000; Hall & Tarrow, 1998; Herman, 1999).

Long before globalisation became a buzz word, however, historians and economists documented the emergence of integrated global economies (Arrighi, 2005a, 2005b; Osterhammel & Petersson, 2003; Collier, 2002). Throughout history there are records of a unified single world society. It can be argued that the time of ancient Egypt was one such phase in which a single world power held control over the 'world' of the time. The Roman Empire is another such example. Arrighi (2005a) links these examples with a recurrent pattern of world capitalism, highlighting four other critical cycles:

> a Genoese-Iberian cycle, stretching from the fifteenth through the early seventeenth centuries; a Dutch cycle, stretching from the late sixteenth through the late eighteenth centuries; a British cycle, stretching from the mid eighteenth through the early twentieth centuries; and a US cycle, stretching from the late nineteenth through the current phase of financial expansion (p. 3).

In more recent years, a fifth critical cycle is being purported in relation to China. It is interesting to note that after about 1880, globalisation became much more politicised and a function of national power (Osterhammel & Petersson, 2003). There was a shift into nationalism during the years of the Great Depression and following World War II, however, after that point, the phase of globalisation we are most familiar with began. Trade barriers were reduced, costs for transport fell, and organisations began to cluster together. With the collapse of the USSR and the Soviet bloc in the 1970s, the global power structure which had been established during the Cold War ended (Carroll & Ratner, 2005; Osterhammel & Petersson, 2003; Carroll & Shaw, 2004a, 2004b; Teeple, 2000; Castells, 1997a, 1997b, 1997c, 1997d; Beveridge, 1996). At the same time, Keynesian policies designed to support full employment, stable growth, and social programs were blamed for an economic crisis in which deficit levels skyrocketed, interest rates rose to more than 15%, and recessions began in a number of countries (Carroll & Ratner, 2005; Carroll & Shaw, 2004; Hursh, 2003, 2005; Sears, 2003; Kwiek, 2001; Teeple, 2000).

Neoliberalism

Neoliberalism became prominent in the late 1970s and early 1980s, under leaders such as Thatcher in Britain, and Reagan in the USA, in an effort to address these issues and respond to a slowing economy in which "state revenues failed to keep pace with social expenditures, [and] taxpayers began to express resentment toward those who benefited the most from state revenues" (Burbles & Torres, 2000, p. 5). Neoliberalism advocates the primacy of market principles in economic and social policy. Neoliberal policies support decentralisation, debt-reduction for the state, deregulation, removing social

services from the control and responsibility of the state, growth in foreign investment, liberalisation, changes to trade union rights, privatization, and various tax reforms (Davies, Gottshce & Bansel, 2006; Giroux, 2004; Carroll, 2003; Stromquist, 2002; Carroll & Little, 2001; Martinez & Garcia, 2000; Braun & Merrien, 1999; Bourdieu, 1998; Tabb, 1999). These policies have resulted in: funds being cut from public service; downsizing and the loss of public sector jobs; increasing government deficits; outsourcing production to third world countries and special economic zones; increasing polarization in jobs; widening of the gap between rich and poor; shrinking of the middle class; creation of a society of low-skilled workers; an increase in levels of poverty and the number of poor; attempts to eliminate the concept of 'the public good'; and the emergence of a culture of permanent insecurity and fear (Apple, 2006; Giroux & Giroux, 2006a; Harvey, 2005; Giroux, 2004; Carroll, 2003; Hill, 2003; Hursh, 2003, 2005; Sears, 2003; Cameron & Gross Stein, 2000; Beveridge, 1996). Teeple (2000) summarizes this noting:

> there is a progressive increase in economic inequality, with structural unemployment and poverty growing continuously; the trends in planetary pollution and environmental destruction continue to deepen; there is a decline in national sovereignty, with autocratic rule and coercive social control gradually becoming more common and alternations of the party in power increasingly meaningless; and there are widespread legislative assaults on wages, trade union rights, and labour standards (p. 4).

Neoliberalism is, suggests Harvey (2005), "a theory of political economic practices that proposed that human well-being can best be advanced by liberating individual

entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade" (p. 2). Neoliberalism has transformed the state from one responsible for human well-being as well as economics, to "a state that gives power to global corporations and installs apparatuses and knowledge through which people are reconfigured as productive economic entrepreneurs of their own lives" (Davies & Bansel, 2007, p. 248).

Under neoliberalism, the market becomes the organising principle for decisions, be they social, economic or political, and within society, "everything either is for sale or is plundered for profit" (Giroux, 2004, p. vxiii). This market-oriented approach sees everyone as an entrepreneur seeking personal gain and managing their life and decisions based on those values (Fitzsimons, 2002). From a market-logic perspective, a belief was developed in which science and technological innovation drove the economy (Popp Berman, 2012). In the 1980s in fact, "universities also saw science as having the potential to actively drive economic growth by serving as a fount of innovation that could launch new industries or transform old ones beyond recognition. Science, universities came to believe, could actually serve as an economic *engine*" (Popp Berman, 2012, p. 3).

Neoliberalism has become 'common sense'—what everyone knows and understands (Davies & Bansel, 2007). Davies and Bansel (2007) suggest that "In the apparently inevitable face of the IT revolution and global economics, the introduction of institutional and workplace changes, which deprived students and workers of previous freedoms, were accepted as the acts of responsible governments introducing measures necessary for individual, institutional and national economic survival" (p. 250). Furthermore, they note that "a particular feature of neoliberal subjects is that their desires, hopes, ideals and fears

have been shaped in such a way that they desire to be morally worthy, responsibilized individuals, who, as successful entrepreneurs, can produce the best for themselves and their families" (Davies & Bansel, 2007, p. 251).

Carroll (2003) suggests that neoliberal globalisation is a

> political project that entails 1) the protection of the interests of capital and expansion of accumulation; 2) the tendency towards homogenization and harmonization of state policies and even state forms in the direction of protecting capital and expanding accumulation; 3) the elaboration of a layer of transnationalised institutional authority above the states, with the aim of penetrating states and re-articulating them to global capital accumulation; and 4) the exclusion of dissident social forces from the arena of policy formation, thereby insulating the neoliberal state forms against the societies over which they preside (p. 38).

Neoliberalism has dominated throughout the world and the scope of global connectivity and economic integration since its adoption has been unprecedented (Giroux & Giroux, 2006a, 2006b; Carroll, 2005; Carroll, 2004a, 2004b; Croucher, 2004; Carroll, 2003; Lindsay, 2003; Leys, 2001; Cameron & Gross Stein, 2000; Collier, 2000; Teeple, 2000). Giroux and Giroux (2006a) argue that neoliberalism has become "one of the most pervasive and dangerous ideologies of the twenty-first century … [in which] free market fundamentalism rather than democratic idealism is now the driving force of economics and politics in most of the world" (p. 22). The neoliberal agenda is still the main agenda on the political table (Teeple, 2000). Some countries have approached its adoption

cautiously, for example, Sweden (Davies & Bansel, 2007), while others such as Chile are beginning to feel pressures to conform.

There is increasing criticism, resistance and challenge to neoliberalism, evident in growing protests and calls for action world-wide (Apple, 2006; Rai, 2005; Carroll, 2003; Coburn, 2003; Dhruvaragan, 2003; Dalby, 2002; Leys, 2001; Tabb, 1999). Resistance is seen in various labour movements, Aboriginal alliances, environmental protection agencies / organisations, consumer protection groups, old age advocacy groups, unions of the unemployed, civil liberty associations, anti-nuclear groups, the women's movement (Carroll & Ratner, 2005; Teeple, 2000), and through social media strategies (e.g., the 'occupy' movements). Carroll (2003) suggests that movements contesting neoliberal globalisation

> question the authority of unaccountable elites, the equation of freedom with the abstract individual, the reduction of citizenship to a form of consumerism, the rationality of a race to the bottom under the sign of competing nationalism, the morality of an economic formation that guarantees permanent material disparities, and the ecological viability of that same formation. They also offer hope of moving beyond the fragments of identity politics, of building bridges across movements and borders, of harnessing the new information technologies into networks of communicative action and empowerment, of constructing a transnational counter-hegemonic bloc around a project of democracy, sustainable development, human welfare and social justice' (p. 48).

All sectors of social life have been affected by neoliberalism. Public service management, however, took the brunt of the reform with a rethinking of its very nature (Hood & Peters, 2004; Minogue, 2000; Polidano, 1999; Charih & Rouillard, 1997; Kernaghan, 1997; Borins, 1995; Hood, 1995).

Neoliberalism, new public management (NPM) and the impact on post-secondary education

As neoliberal policies gained strength and became dominant, and funding to social programs and governments was cut, public service management was reorganised, revamped, and reengineered as new public management. Reforms were intended to redefine the role of the state, eliminate the deficit, reduce the size of the public sector, cut bureaucracy and 'red tape', implement effective management practices and facilitate a culture of client satisfaction as related to public administration (Hood & Peters, 2004; Kerhaghan, Marson & Borins, 2000; Thompson, 2000; Common, 1998; Charih & Rouillard, 1997; Langford, 1997; Wright & Rodal, 1997; Leeuw, 1996; Hood, 1995).

Key elements of NPM include: finding new ways of producing and delivering services that are less costly; privatising and sub-contracting services where possible; introducing user-fees for public services; encouraging partnerships between government, private enterprise and volunteer organisations; restructuring and reducing the public sector; encouraging and facilitating competition within the public service and with the private sector; improving efficiency; deregulating line management; instituting customer-focused services; and obtaining 'value for money' through performance management and auditing (Hood & Peters, 2004; Chandler, Barry & Clark, 2002; Longford, 2002; Box, Marshall, Reed & Reed, 2001; Bakvis, 2000; Brudney, O'Toole & Rainey, 2000; Kernaghan, Marson & Borins, 2000; McGregor, 2000; Minogue, 2000; Peters, Marshall &

Fitzsimons, 2000; Polidano, 1999; Charih & Daniels, 1997; Charih & Rouillard, 1997; Clarke & Newman, 1997; Kernaghan, 1997; Borins, 1995; Hood, 1995; Savoie, 1995a, 1995b).

New public management puts a greater focus on accountability and measurable outcomes and results (Golembiewski, 2000; Dwivedi & Gow, 1999; Charih & Rouillard, 1997; Gagne, 1996; Hood, 1995; Savoie, 1990) with a corresponding ethos of 'public service'. As Blackman (2002) points out, "new public management theory spawned the audit culture and its focus on results. It emphasises the measurement of performance against objectives, with defined responsibilities for achieving these objectives and the use of data – especially cost and output information – to evaluate performance and decide whether to apply sanctions or rewards" (p. 1).

Impact on post-secondary education

At all levels of education, neoliberal practices and new public management have resulted in pressures towards: stronger ties between the workplace and school with an emphasis on providing 'employable' graduates; developing and then streaming students into specific and targeted programs; an increased focus on specific disciplines such as science, mathematics and engineering as well as professional fields such as education and health; a change in the organisational design of schools and educational institutes to manage them using corporate models; increased requirements for accountability and reporting; and the establishment of performance indicators and measures to determine quality, competition for limited funding, and increased fiscal austerity (Rhoads & Liu, 2008; Apple, 2006; Kachur & Harrison, 1999). In the K-12 sector, reforms that tie teachers' pay to classroom performance or measure effectiveness through standardised

testing have been introduced (Cowley & Veldhuis, 2011; Lavy, 2007; Darling-Hammond, 1994). These, and other reforms, have an emphasis on "effectiveness—setting standards, measuring progress toward those standards, and imposing rewards or penalties for meeting or failing to meet them" (Lavy, 2007, p. 102).

Publicly funded post-secondary institutions in Canada have not been exempt from these pressures. For some inside and outside the post-secondary system, increased accountability and running the university as a business are considered as positive changes. Organisations are seen as having a better sense of their financial position, at being able to reduce duplication and redundancy, and implementing efficiencies. As Popp Berman (2012) notes, "proponents … emphasize the benefits of these changes, pointing to the role of the market in getting science into broader use, the contribution of university inventions to economic development, and the importance of rewarding scientists whose work has a real-world impact" (p. 7). Increased research regarding organisation models, leadership, learning organisations and performance management has also been undertaken and strategies developed for this 'new' environment (Clegg, Kornberger & Pitsis, 2005; Jacob & Hellstrom, 2003; Barr, 2002; Askling & Kristensen, 2000; Rosell, 1999; Hickok, 1998; Morgan, 1997; Wheatley & Kellner-Rogers, 1996; Senge, 1990).

However, concerns are also felt around the increased prominence of the fiscal bottom line, controls set in place by funders and governments, measurement and marketing, and pressures for quick returns on the investment of dollars (Faulkner, 2009; Larner, 2009; Rose & Dustin, 2009; Apple, 2006; Harvey, 2005; Rai, 2005; Carroll & Shaw, 2004; Wagner, 2004; Stromquist, 2001; Carroll & Little, 2001; Burbles & Torres, 2000; Kernaghan, Marson & Borins, 2000; Minogue, 2000; Mossberger, 2000; Chomsky, 1999;

Borins, 1995; Newson, 1992, 1994; Savoie, 1990; Buchbinder & Newson, 1985), Terms such as return on investment, performance management, accountability, and profitability are now common place (Dreyer & Kouzmin, 2009). Gross Stein (2001) comments on the rise of efficiency, accountability, responsiveness, autonomy, and choice, noting that "in the post-industrial age, efficiency has become an end, a value in its own right" (p. 191). She further suggests that

> efficiency grows out of the competition that markets bring, and accountability comes through the survival of the fittest in the market. For the high priests of efficiency, the conversation ends here. There is nothing more to talk about. What we are efficient at is discussed less and less often, and sometimes not at all. When efficiency becomes an end instead of a means, a value along with all over values, our public conversation is impoverished (p. 191).

As requirements for accountability increase, university operating units are responsible not only for submitting detailed multi-year budgets (complete with enrolment and staffing projections), but also for tracking expenditures, providing detailed explanations for variances, and estimating where costs and revenues will be at year end. Each department is seen as its own semi-independent business and many programs are designed to be fully cost-recovery (Currie, 2003). Mid-year financial reviews may lead to a shift in funds in the event of unexpected 'surpluses' which are often redirected towards large technology or infrastructure projects – they seldom go to operating costs. Department heads and deans are encouraged to undertake cost cutting measures throughout the year (increased workloads, delaying hiring staff, etc.) in order to generate

a surplus. Departments rush to spend left over funds at year end rather than lose the money, and areas in a deficit position are frequently required to undergo detailed review.

Higher education is "perceived as a marketable product to be consumed, and therefore the price of attendance is best left to market regulation" (Rhoades & Liu, 2008, p. 293). Rose and Dustin (2009) outline concerns regarding the tendency under neoliberal influence to "reduce students—especially undergraduate students—to numbers. When the 'health' of a university course is a function of the number of occupied seats, when body counts become the determining factor in an academic department's viability … the classic notion of a college education as a social service is degraded" (p. 400).

Market ideals are incorporated into teaching, research and service functions of colleges and universities (Rhoades & Liu, 2008; Levin, 2007; Torres & Rhoads, 2006; Geiger, 2004; Good, 2004; Slaughter & Rhoades, 2004; Clark, 2001, 2004; Marginson & Considine, 2000; Slaughter and Leslie, 1997). Increasingly, faculty are pressured to increase their funded research to secure more grants and contracts and generate overhead and indirect costs to help offset the university's costs (Vannini, 2006; Jaeger & Thornton, 2005).

There has also been a rise in the number, responsibility and power of administrative professionals and managers in the university and this affects the ways in which the university conducts its business. As managers gain increased control, several things occur: the academy is viewed as a resource that can be exploited rather than as a place for the diffusion and growth of knowledge; it is assumed that the methods, models and values which are part of the world of business, corporations, and finance are appropriate and necessary; the importance and value of the teaching function is diminished; there is a

greater secrecy in the running of the institution; and there is a greater emphasis on leadership and senior executive control and less on collective or collegial decision-making (Tuchman, 2009; Polster, 2005; Rondinelli & Cheema, 2003; Parker, 2002; Mora, 2001a, 2001b; Cassin & Morgan, 1992; Willmott, 1995). In this new structure, presidents are seen as Chief Executive Officers and "as people whose main concern, although often expressed in suitably academic terms, is with the established managerial priorities of efficiency, cost effectiveness, and the need for 'flexibility' in the conditions under which they can get on with the business of running a tight ship" (Cassin & Morgan, 1992, p. 250). Giroux (2006) concurs also identifying the focus of university presidents on fundraising and connecting academia with business. Increasingly, faculty are governed 'by' administration rather than 'with' administration (Tuchman, 2009; Giroux, 2006), and the university is "more concerned with the 'image' used to market their product (a university education) to customers (students and their parents) and clients (the firms that would hire the university's graduates) than with the product itself" (p. 11).

Gouthro (2009) summarizes this topic noting:

> Neoliberalism, with its emphasis on individualism, competition and marketplace values, reflects the encroachment of what Habermas (1987) terms system imperatives on lifeworld domains. Increasingly, power brokers in the global economy dictate access and content around education. Textbooks turn into sales items, with digitalized test banks far removed from local contexts determining learning assessment. Students become individualized consumers competing to purchase degrees, rather than learners engaging a mutual process of discovery and exploration. Educational 'CEO's'

> spend more time seeking corporate donations for new buildings than concentrating upon broader learning endeavours (p. 161).

Indeed, Giroux (2003) cautions:

> History has been clear about the dangers of unbridled corporate power (see Baran & Sweezy, 1996). The brutal practices of slavery, the exploitation of child labour, the sanctioning of the cruellest working conditions in the mines and sweatshops of America and abroad, and the destruction of the environment have all been fuelled by the law of maximizing profits and minimizing costs especially when there has been no countervailing power from civil society to hold such powers in check. This is not to suggest that capitalism is the enemy of democracy, but that in the absence of vibrant public spheres and the imperatives of a strong democracy, the power of corporate culture when left on its own appears to respect few boundaries based on self-restraint and those non-commodified, broader human values that are central to a democratic civic culture, all of which is accentuated through the recent corruption and scandals involving major corporations such as Enron, WorldCom, Tyco International, Quest Communication, Computer Associate and IMClone Systems (p. 182).

Corporatisation

This study illustrates the many ways corporatisation is visible in the practices and discourse of university research and focuses particularly on how corporatisation is impacting the university's role. The concept of corporatisation itself is open to considerable interpretation and that is part of the problem with regard to how it is

defined, accepted, or rejected. For the purposes of this research, a definition of corporatisation is drawn from a variety of sources (Faulkner, 2009; Giroux & Giroux, 2009, 2006a; Tuchman, 2009; Rasmussen, 2008; Rhoads & Liu, 2008; Levin, 2007; Apple, 2006; Carroll, 2005; Polster, 2005; Carroll & Beaton, 2004; Croucher, 2004; Reed, 2004; Slaughter & Rhoades, 2004; Carroll, 2003; Jacob & Hellstrom, 2003; Axelrod, 2002; Stromquist, 2002; Leys, 2001; Brudney, O'Toole & Rainey, 2000), and is defined as: increased oversight and control by governments regarding the direction of the university, both from an educational and a research perspective; an emphasis on the fiscal bottom line; increased accountability requirements (in complexity and frequency) related to funding for educational programs and research; increased demands and focus for demonstrable impacts and quantifiable measures from research; reduced amount of collegial governance; increased bureaucracy; and pressures to adopt business models, practices and processes from the private sector.

The role of the university

This corporatisation of the university is not a metaphor but rather it is to be taken literally and the impacts of the adoption of business principles, practices, models and the increased foci on efficiency and cost-effectiveness (Gumport, 2000; Strathern, 2000; Bleiklie, 1998) on research, on students, and on the role of the university have not yet been clearly articulated.

Universities are an interesting subject to analyze. Damrosch (1995) remarks that it is "a mistake to suppose that the modern university is purely and simply modern. Old patterns can persist in many types of organisations, but universities are almost unique in their degree of independence from year-to-year social change. In our society, only religious

structures have an even longer life" (p. 19). This does not suggest however, that the role of the university has not changed over the course of history (M'Gonigle & Starke, 2006; Fallis, 2005; Clark, 2004; Bok, 2003; Noble, 2003; Kwiek, 2001; Abrozas, 1998). Originally, universities in Europe were under the control of the Roman Catholic Church and "enmeshed with the authority and dogma of Christendom. Neither an autonomous communal endeavour, nor a productionist one for economic ends, the early university's goal for humankind was to serve God" (M'Gonigle & Starke, 2006, p. 27). During the Renaissance, a change took place and the university's role shifted to building the emerging nation state. As a reflection of the social and political movement of the era, the university began to consider and celebrate human reason, enlightenment and science. In the 1700s in Scotland, new universities were developed to focus on meeting the needs of the economy and government. Collectively, they were directed to increase accessibility and provide 'universal public education'. This mission was duplicated in the US as part of the "creation of the system of land grant colleges" (M'Gonigle & Starke, 2006, p. 29) in the 1800s. At the same time, Kant's vision for the university, proposed in 1798, and which outlined the following two primary functions: 1) to provide educated leaders for government; and 2) to undertake research which produced new knowledge (Taylor, 2010) began to gain popularity. Von Humboldt's ideas, which "clearly echo Kant's vision for the philosophical faculty … insisted that university study should be 'unforced and non-purposeful.' The goal of education is the pursuit of knowledge for knowledge's sake, which leads to the process of self-cultivation" (Taylor, 2010, p. 64). Kant's philosophies saw education as essential for the development of humankind and he trained his students to "become comprehending, reasonable and scholarly persons" (Kanz, 1993, p. 791), able

to lead society. The main goals of education were, in Kant's view, "a) disciplined thinking; b) creation of a cultivated outlook; c) enhancement of civilisation; and d) imparting moral rectitude" (Kanz, 1993, p. 793).

The vision, however, of the university as more than an elite finishing school and of post-secondary education as truly accessible began to be actualized in the 1960s. New universities and colleges were created and existing universities expanded programs and research. As growth escalated, universities took on new tasks, some not necessarily educational (e.g., fundraising for huge capital expansion campaigns, etc.) (Newfield, 2008). As size and complexity increased, Damrosch (1995) suggests that there was, in fact, an industrialisation of academic life and work. The dramatic increase in the number of students, development of new programs, and growth in research activity all required management, and bureaucracies and methods from industry were adopted. Given the culture of the university as a site of debate and 'questioning', coupled with political and social issues and challenges at the time, it is little wonder that campuses became places of controversy and protests to a degree never before seen (Taylor, 2010). In fact, Taylor (2010) observes that "the end of the postwar expansion of colleges and universities and the changing demographics of the student population collided with national and international events to create a volatile environment in which students demanded sweeping changes that faculty members and administrators were unable or unwilling to make" (p. 17). One of the essential roles of the university, it is argued, is that it "serves as a place where civil debate and constructive dialogue may take place even on 'explosive', unpopular or controversial subjects" (AUCC, 2011e, n/p).

Since that expansion and massification of the 1960s and 70s, the university's role has seemed clear and stable. Almost any university's mission statement includes a focus on teaching, research and service (Jaeger & Thornton, 2005). Within that mission, the university is seen as a place which produces and promotes the discovery of new knowledge and which serves as a neutral domain where objective and impartial information can be found. Within a university, we expect to find information to guide us in considering both sides of an issue rather than just one purported as the 'right' or 'only' perspective. The university is seen as a place where human potential is developed, tolerance is learned and diversity is celebrated, where knowledge is pursued for its own sake, and individuals develop capacity to deal with uncertainty and are prepared to be active, critical, and responsible citizens (Bowen, 2010; Reed, 2004; Bok, 2003; Brooks, 2003; Giroux, 2003; Delanty, 2002; Hartman, 2002; Apple, 2000; Coaldrake, 2000; Kachur & Harrison, 1999; Ambrozas, 1998; Clarke & Newman, 1997; Goia & Thomas, 1996). In his inaugural speech as Chair of AUCC, Stephen Toope (2011) noted that the role of universities is "to contribute to the creation and advancement of knowledge in order to make a positive difference in the world … our highest responsibility is the wellbeing of Canadians, the health of education and the ability of higher education to make a positive difference for people, for our communities, and for the world" (n/p). We expect that, within a university, balance will be found between democratic values and market fundamentalism, that personal autonomy and social criticism will be developed, that struggles and compromise will be encouraged, and that questions will continue to be raised regarding what institutions should do, who they should serve, who makes decisions, and how those decisions are made and implemented (e.g. Reed, 2004; Bok,

2003; Giroux, 2003; Hartman, 2002; Apple, 2000; Coaldrake, 2000; Kachur & Harrison, 1999; Ambrozas, 1998).

The university is not exempt from challenges arising as a result of social and ecological crises. In fact, Gerum (2011) suggests

> many contend that post-secondary education is obligated to act for the improvement of social and ecological ills and contribute to a more just future. This obligation is especially relevant considering that the university has arguably contributed to the instigation of these problems, as well as their perpetuation. As stated by professor David Orr, "This is not the work of ignorant people. Rather, it is largely the results of work by people with BAs, BScs, LLBs, MBAs, and PhDs" (n/p).

As a site where it is felt that democracy should be promoted, the university's role includes developing a culture where authority (whether sacred or secular) can be questioned, where struggles regarding relations of power can be carried out, where critical thought can be nurtured, where the search for truth can be conducted, where concentrations of power in business and government can be identified and counteracted, and where there can be a space for dialogue (Harkavy, 2006; Tannock, 2006; Giroux & Giroux, 2006b; Fallis, 2005; Giroux, 2004; Breton, 2003; Breton & Lambert, 2003). These are key components to the notion of academic freedom which is built on "the freedom to explore, question and challenge … with evidence and truth as guiding principles, academic freedom is fundamental to the role of universities in a democratic society … [it] calls for reasoned discourse, rigorous and extensive research and scholarship, and peer review" (AUCC, 2011e, n/p).

Almost a hundred years ago, Van Hise (1916) outlined that the role of both the endowed and the state funded university was to "give a liberal college education to the youth of the country, to give professional training for various vocations, to give advanced work to those expecting to become scholars, and to increase the sum of human knowledge" (n/p).

Bray and Bray (2000) suggest that, within a university, community values should be considered more important than material values, the liberal arts should be nurtured, history and science should be taught to all students, ethics should be relevant and demonstrable, and students should connect with faculty and other students and be regarded as citizens, not future employees. Canadians expect graduates of universities to be independent, creative and knowledgeable and to accept the challenges of the 21st century (Council of Ministers of Education Canada [CMEC], 1999). While the population expects universities to prepare graduates for jobs, they also expect that university graduates will make important and relevant contributions to society, will undertake and draw on research that enhances our understanding of the world, and actively participate in public life (Giroux, 2003; Axelrod, 2002; Ralston Saul, 2001; CMEC, 1999). The university provides an opportunity to "cultivate intellectual creativity, autonomy, and resilience; critical thinking; a combination of intellectual breadth and specialised knowledge; the comprehension and tolerance of diverse ideas and experiences; informed participation in community life; and effective communication skills" (Axelrod, 2002, p. 24-25).

Shapiro (2005) sums this up, noting that a university is:

> a place where learning, knowledge, skills, and traditions are preserved, re-evaluated and transmitted; where new ideas, scholars, and teachers are born; and where interests and cultural commitments of all kinds meet and inform one another. From a more historical perspective, it is a place where the achievements, hopes, and interests of our recovered past meet and interact with those of the present as we shape our cultural traditions for the future. The contemporary research university, therefore, can also be thought of as holding a continuing conversation with both past and future generations regarding those matters that are truly significant. In prosaic terms, the three principal tasks of the university are the preservation, transmission and advancement of knowledge. These tasks and the freedom to interpret what they mean, however, are always in transition (p. 10).

It is clear that a university education is viewed as more than simply preparing people for the workforce (Giroux & Giroux, 2009; Lynch, 2004; Lowe, 2001; Kachur & Harrison, 1999; Oblinger & Verville, 1998; Reid, 1996). However, with the adoption of neoliberal principles and business models and practices, this role is perceived as undergoing a transformation. For example, we have seen a change in the production and value of knowledge and its shift to a type of 'currency'. Popp Berman (2012) notes the belief by many governments that technological innovation helps drive the economy. Businesses, governments, and educators around the world talk about the knowledge economy (Newfield, 2008), its evolution and its importance. Dreyer and Kouzmin (2009) suggest that under neoliberal ideologies, knowledge becomes a private good rather than a public good and contributes to the economy of the nation. Gaffikin and Perry (2009)

indicate that universities were once "privileged sites of knowledge and sites of national, often local, identity and accomplishment to which people physically traveled to learn and collaborate in knowledge production" (p. 123). In contrast, the production, transfer and dissemination of knowledge is no longer limited to a specific location or site, and is not limited to traditional institutions such as the academy. Information and knowledge is produced by corporations, small groups and individuals, and disseminated virtually through the internet, blogs, and social networks. For some, this change is referred to as a "Copernican change" (VanGinkel, 2003, p. 76), a series of seismic shifts generated by neoliberalism and the globalising relations of the 'information society' (Castells, 1997a, 1997b), and which impact the role the university plays.

As neoliberal ideas continue to dominate, and the adoption of business models and principles becomes common place, universities increasingly find themselves answerable to a variety of stakeholders: students who pay increasingly more in tuition and demand a return on that investment; private industry that funds an increasing amount of the research and development and pushes for commercialisation in order to maximize investment; and government, which sustains the university largely in principle (Rose & Dustin, 2009). As such, universities and education in general, are viewed as "less concerned with developing the well-rounded liberally educated person and more concerned with developing the skills required for a person to become an economically productive member of society" (Hursh, 2005, p. 3). The concern is that the university is becoming an institution for 'higher training' as opposed to 'higher learning' (Tuchman, 2009; Rhoads & Liu, 2008; Aronowitz, 2000) in this evolving world and the traditional

ideals of liberal learning and advancing knowledge for knowledge's sake have taken a backseat to teaching, service and research (Rhoades & Liu, 2008; Bok, 2003).

Gouthro (2009), Tuchman (2009), Giroux (2003), and Buchbinder and Newson (1985) have all suggested that education is increasingly seen by various stakeholders for its 'practicality' rather than its ability to develop critical thinking, to pursue questions around social justice, diversity and democracy, and its nurturing of civic responsibility. The growth in professional programs (engineering, nursing, education, etc.) shows that increase in the 'practical' nature of post-secondary education. Burnett (2011) proposes that

> when economies go into crisis, policymakers look to schools to solve the immediate challenges of unemployment and thereby raise expectations that schools will simply 'produce' the workers needed to solve the economic challenges. This is also why the for-profit sector in education has become so large; they play into the fears learners have that they will not be employed unless they have specific skills needed for specific jobs (n/p).

The connection between education and the formation of a democratic society appears to be lost (Giroux, 2006) as education focuses on job training and preparation. Dreyer and Kouzmin (2009) take this further arguing that

> to subject the educational spirit and ethos to the economic imperative is a cognitive distortion and undermines any concept of a knowledge society or a learning nation. Learning then becomes more akin to indoctrination on how to act efficiently and effectively in accordance with the prescribed set of beliefs. Creativity and innovation become very utilitarian" (p. 10).

These shifts and pressures to transform come from the top down: from federal and provincial governments, funding agencies, and senates / boards of governors. Federal and provincial governments set out post-secondary institutions' role as critical in providing knowledge and skills citizens need to succeed in the labour market and in response to changing skills requirements of that labour market (Government of Canada, 2007). This is further complicated by private sector interests which have, since the 1970s, collapsed the space between the public and private sector. Funding agencies identify target areas and expect collaboration with business and industry for the purposes of commercialisation, and senates / board(s) of governors are generally composed of citizens-at-large (e.g., accountants, lawyers, entrepreneurs). While neither change nor the involvement of private business in the university is new, there is, however,

> evidence of increased ties emanating from inside universities, as major university presidents become members of the corporate elite. Such ties suggest a deepening of corporate-university relations, as chief executive officers of universities and corporations rub shoulders in corporate boardrooms and participate in a common managerial culture (Carroll & Beaton, 2004, p. 197).

As these ties deepen, corporate interests have more impact on, and input into, the control of the university including financial direction, programs offered, research undertaken and the type of graduates produced (Carroll, 2004; Slaughter & Rhoades, 2004; Gumport, 2000; Noble, 2000, 2003; Newson, 1994, 1998). Issues and concerns that drive private business are becoming absorbed into, and taken up by, the university as it

reorganises, remodels and redefines its structure (Levin, 2002, 2007; Kwiek & Mickiewicz, 2000; Reid, 1996).

This impacts all levels of the university, including its governance. Most often, universities have a bicameral governance structure with both a senate, or board of governors, and a faculty council. This structure became standard during reforms in universities in the 1960s when faculty and student groups argued that their rights and interests were not considered or appropriately represented in decision making (Jones, Shanahan & Goyan, 2001). Under bicameralism, faculty councils are generally responsible for decisions around academic issues of the university – academic quality of programs, policies around appeals, entrance requirements, etc. These councils are made up primarily of faculty representatives from various departments / centres as well as other key administrators such as the registrar, librarian(s), etc. Senates, on the other hand, are seen to some extent as the arm of government. Senates and board of governors are made up primarily of individuals external to the university, generally business people from the larger community / society, and are responsible for reviewing and approving the budget, approving the strategic plan of the institution and overseeing the role of the president.

Unlike private sector organisations, universities are historically built on the idea of collegial governance; on debate, openness, and transparency. While most universities continue to have a faculty council in which academics have the dominant voice, it is becoming more ceremonial with the real control held by the executive, senior management, and the senate or board of governors (Delanty, 2002).

According to Carroll and Beaton (2004), universities are increasingly permeated by "discourse that defines the university as a business organisation, treating spending on

universities as a social investment that yields quantifiable returns in the form of productive knowledge, technical innovation, and marketable skills" (p. 183). And while "corporate participation in universities may or may not directly produce capital or realize surplus value … a corporate presence on campus helps to legitimate capitalism as a way of life" (Carroll & Beaton, 2004, p. 183). There is, some believe, a very core and fundamental disconnect; the focus of business is on the bottom line, on profit, whereas the focus of a university is, or should be, on knowledge (Mason, 1998).

Until recently, universities in Canada have not been perceived as highly competitive organisations (Enders, 2004; Harrison & Dugdale, 2003). Students were drawn primarily from surrounding communities, demand was high and there were always more students applying than there were spaces available. In Canada, at the undergraduate level, there is not the same kind of 'weighting' of value as has been seen in the US where top tier institutions recruit students internationally. The belief is that if you get a degree from a publicly funded university in Canada, it is going to be reasonably similar regardless of which institution it is received from, particularly at the undergraduate level. The quality of the education based on the individual professors may change, but the degree is reasonably standard. There is a Pan-Canadian protocol / agreement that enables students to transfer the first two years of an undergraduate degree completed at any Canadian university (publicly funded) to another.

Demographics, however, are changing, with a smaller number of high school graduates than in the past and therefore concerns regarding 'bums in seats' grows. The number of international students on campuses has risen in recent years and universities compete for the 'best and brightest' students from around the world. Entrance requirements have risen

in a number of disciplines (grade point averages [GPA] of more than 90% to get into some business programs in Canada), and new methods of delivery (online, distance, blended learning) have allowed students to remain in their home communities and continue to work while pursuing post-secondary education, opening access for previously untapped groups of society. The emergence of ranking systems which compare universities on a number of factors are encouraging competition. Criteria for ranking "involve several indicators, all of which reward exclusivity in student selection and the ability of faculty to secure research funds … none of these indicators is sensitive to the specific objectives of particular universities or to the extent to which students may be gaining knowledge and skills to become better citizens" (Stromquist, 2002, p. 110). This is evident in the *McLeans'* magazine and other annual rankings of Canadian institutions, as well as in various international rankings which Canadian institutions participate in. Institutions ranked at the top of the list are considered of higher quality than those lower on the list. Those at the top end can be more selective in who they admit and, as tuition becomes deregulated, can conceivably charge more than other institutions. Those at the bottom end of the list are seen as inferior and as not providing a quality education. Scores are posted on university's sites in an effort to show transparency and accountability. This climate positions "university against university, department against department, and professors against each other" (Stromquist, 2002, p. 112). Enders (2004) concurs noting that

> the scenery is now being changed … the increasing rivalry among higher education institutions along with the other competitive challenges … is leading universities that wish to compete, or to find new niches in the

> emerging international market, to develop more adaptable and flexible means of organising and managing academic work (p. 366).

Ironically, all of this is occurring in the midst of demands from governments for universities to avoid duplication, collaborate, and partner with each other to maximize efficiencies.

Human resource practices

Universities are also adopting human resource practices taken from the business world including contracts rather than employee / employer relationships, as well as short term and part-time appointments, and this is evident at all levels of the university. Among faculty, more and more part-time and non-tenure-track instructors are being hired rather than tenured faculty (Caison, 2003; Johnson, Kavanaugh & Mattson, 2003a, 2003c; Moser, 2001; Steck & Zweig, 2000; Enders, 1999, 2004). As a result, rather than a community of scholars which governs itself, the professoriate has been reduced to just another group or union on campus whose work is analyzed and 'graded' with merit pay rewards for those fortunate enough to have full-time jobs (Johnson, Kavanaugh & Mattson, 2003a, 2003b, 2003c, 2003d; Tanguay, 2003). Faculty are working in a 'market' in which they sell their skills and knowledge. More and more, faculty must respond to issues that funders (foundations, industry, government) determine are important and they may feel they cannot offer critiques that the funder may find irrelevant or contrary to their interests (Stromquist, 2002; Willmott, 1995). In many cases, faculty serve the role of 'consultant' and are paid to provide a report or to confirm specific information – in these cases, faculty give up the intellectual property and often sign confidentiality agreements.

Productivity is defined partly in terms of a faculty member's ability to attract funds and as a result, areas which are controversial or may not produce revenue, such as social justice, may not be supported at the same level. In times of fiscal restraint, faculty who are either attached to funding, or are likely to be successful in funding, may be more sought after (Stromquist, 2002). Many faculty members feel that they have little control in the institution and are no longer part of the decision making process; rather, their teaching loads have increased, and their jobs have increasingly become more administrative (Mount & Belanger, 2001; Willmott, 1995).

Tenure

There is also an increasing tension as corporate efficiency goals subject the notion of tenure to question and challenge (Archer, 2008; Caison, 2003; Delanty, 2002, 2003). Tenure was originally established, and continues to be seen, as the structural protector of academic freedom and thought. Bray and Bray (2000) suggest that

> we must keep a watchful eye on tenure. The corporate model abhors tenure. Tenure fosters independent mind and academic freedom. Although streamlined business management claims no longer to rely upon yes-men, it cannot tolerate fundamental challenge. Alternative models to neoliberalism will need to be conceptualized in the university. This will require the protection provided by tenure (p. 57).

For some faculty, academic freedom and tenure are seen as providing the ability to challenge the status quo, seek the truth no matter how difficult or controversial, and convey their findings. Tenure is the only way to protect "independent and disinterested scholarly inquiry. If you can't be fired for doing controversial research or teaching

contentious ideas, then this will guarantee the unfettered search for truth" (Rubenstein, 2001, p. 6). Shapiro (2005) expands this stating that tenure protects "faculty from inappropriate interference with the freedom to pursue their intellectual and educational agenda" (p. 13).

Finkelstein (2007) reports that "since 1991, more than half of all new full time faculty hired by American colleges and universities has been off the tenure track. In effect, a parallel alternative to the tenure system has developed, under the radar screen of most academic leaders (p. 1). Similarly, in Canada, from "1990-1998, the number of part-time faculty increased from 25,700 to 28,200, about 10 per cent. During this same time period, the number of newly-hired, full-time faculty decreased by eight per cent. By 2005, 31.7 percent of university faculty were contract faculty, with 17.5 per cent working part-time" (Finkelstein, 2007, p. 1).

Increased pressures for efficiency and flexibility are impacting tenure. Critics claim that "the tenure system makes the college or university inflexible and unable to cope with a changing financial environment" (Caison, 2003, p. 16). As the facets of tenure, and the ability of faculty to pursue an 'unfettered search for truth' are challenged, so too is the role and nature of research itself.

Research and its role in the university

Research is an integral part of universities and contributes to prestige, growth, and fiscal stability. In the same way that the university has changed over time, so too has the role and prominence of research. In Europe for example, higher education focused primarily on teaching until the establishment of the Humboldt University in Berlin in the early 1800s which represented a new approach focused on research. Scientific and

scholarly discipline became ‘preeminent’ rather than the application of knowledge. In contrast, with the Morrill Land-Grant College Act (1862) following the Civil War in the US, universities were established in virtually every state. While private universities focused on a variety of topics, these state funded universities and colleges focused on agricultural experimentation and extension, engineering based industries (e.g., mechanical, electrical and chemical engineering), telecommunications, instrumentation, teacher education, home economics, public health, and veterinary medicine (Carlsson, et al., 2009; Graham & Diamond, 1997). Corporate research and development (R&D) labs dotted the landscape in the early 20th century and focused on commercial development of processes and products. It wasn’t until World War II though that the research university as we know it emerged in North America (Carlsson, et al., 2009; Graham & Diamond, 1997), funded primarily by government and with research focused on the war effort.

With the massification of education in the 1960s, research funding was widely distributed and extended beyond a science and engineering focus to include social sciences and humanities. In the 1970s, there was a shift from economic expansion to contraction (Buchbinder & Newson, 1990). As a result, “the shortage of funds led universities to become increasingly preoccupied with obtaining sufficient financial resources to maintain their existing level of activities. By the end of the 1970s the term ‘underfunding’ was part of the vocabulary of members of the university and of most politicians” (Buchbiner & Newson, 1990, p. 359). At the same time, innovation became the means to achieve economic goals, and universities were looked to as the place to develop that ‘innovation’ (Popp Berman, 2012). In the 1980s and 90s, the impact of the

Bayh-Dole act was felt throughout universities (not just in the US) as intellectual property rights (IP) took centre stage and pressures to commercialise rose.

Today, Noble (2000) notes that

> research, an activity formerly pursued in service to scholarship and education, as a contribution to human knowledge and learning, is now directed toward the production of products – marketable inventions – which can be patented and licensed to the highest bidder. Academic research agendas are now determined through myriad proprietary arrangements with industrial partners who seek to socialize the costs and risks of research and privatize the benefits, while faculty are compelled to surrender their patent rights to their employer as a condition of employment (p. 53).

Other research (Rose & Dustin, 2009; Taylor, 2010; Critchley & Nicol, 2009; Tuchman, 2009; Buchbinder & Newson, 1990, 1985) raises similar concerns. Commercialisation of scholarship is evident in the increased prestige that faculty with large research grants enjoy, and in increased pressures to register patents, incubate start-ups, and grow revenue. 'Publish or perish' is a common phrase within the university (Damrosch, 1995). As Folbre (2010) points out, "universities now urge their faculty members to seek corporate sponsorship and privatize the gains from their research. Following money often means abandoning any pretence of objectivity. It deincentivises the pursuit of risky, creative ideas that have little chance of gaining funding" (p. 118). These same pressures to commercialise research and increase what is termed knowledge mobilization and knowledge transfer are felt throughout Canadian universities (Fallis, 2005; Axelrod, 2002). Knowledge transfer (KT), and knowledge mobilization (KM)

include more than just developing a product for market: they include getting the results of research out to the public, so that it can be used to make decisions and guide policy development. Increasingly, research is sought which answers 'real world' issues and questions – environmental sustainability, conflict management, leadership, community and societal sustainability. Thought of in this way, this emphasis on KT and KM is positive; it fulfils the university's mission to make a difference and contribute to society. AUCC (2008) confirms the importance of research and development as a critical contributor to social and economic wellbeing. In the last ~10 years, Canada has seen massive increases in research funding including the Canada Foundation for Innovation (CFI), Canada Research Chairs (CRC), Canada Excellence Research Chairs (CERC), Community-University Research Alliance initiatives (CURA), Network Centres of Excellence (NCEs) and other programs. While these programs cross disciplines – health, science / technology and social sciences and humanities, there is a continued emphasis on the commercialisation of research, and significant portions of new funding have been targeted towards research in areas where commercialisation is more likely (e.g., technology, science). While support has continued for basic/pure research in the social sciences and humanities, growth has not been at the same rate as in the sciences and technology. Developing and building partnerships and relationships between universities, and with the private, public and non-governmental organization (NGO) sectors (Fallis, 2005; Steck, 2003; Polster, 1998) in areas that provide potential economic benefits continues to be emphasized. Some funding programs, such as the CFI, which funds research infrastructure, require partnerships. In cases where proposals are recommended for funding, CFI provides up to 40% of the funding for the project. Provincial

governments generally fund 40%, and industry or other partners must be secured for the remaining 20%. While these programs have helped to fund and advance research, concerns are raised that corporations are increasingly able to determine or dictate the research they sponsor and industry representatives sit on the review panels of the funding agencies (Slaughter & Rhoades, 2004; Giroux, 2003). As a result "the strategic planning efforts of federal agencies have focused monies on fields of work that have potential commercial and economic development payoffs" (Giroux, 2003, p. 185). It is important to note that, while in the USA patents are a source of revenues for some universities, aggregate revenues are small. In 2006 for example, patents through USA universities, hospitals, and research institutions accounted for less than 5% of the total academic research dollars; revenues were highly concentrated at a few successful universities that patented 'blockbuster' inventions (So, et al., 2008). Tuchman (2009) similarly concludes that in spite of the emphasis on the commodification of research, few research universities are earning a significant portion of their budget from patented faculty inventions. In spite of these low returns, there are many who continue to argue for legitimate collaboration between the university and industry (Gaffikin & Perry, 2009; Giamatti, 1982). The Natural Science and Engineering Research Council of Canada (NSERC) has introduced new programs/funding (Engage, Interaction, etc.) aimed specifically at developing those university/industry partnerships. Many suggest that knowledge-based enterprises are recognized as drivers of economic growth, and universities are seen to contribute to the public good when they promote economic development, foster innovation, develop 'start-ups', contribute to expansion, and stimulate an entrepreneurial culture and creative environment (Gaffikin & Perry, 2009;

Glazer & Grimes, 2004; Rasmussen, 2008; Varga, 2000; Branscomb, Kodama & Florida, 1999). AUCC (2008) supports this noting that the commercialisation of university-generated IP is most successful "when universities can accurately assess and communicate the value of the IP, the private sector has the receptor capacity to exploit the IP, and venture capital is available to support the initiatives" (p. 127).

The Government of Canada (2007) has committed to: increasing both the application and commercialisation of research; establishing strategic research priorities; supporting science and technology collaborations and partnerships; securing a talented workforce; and improving accountability for achieving results (p. 33-34). As a result, alternative reward systems have been established which value discovery in relation to its economic viability, assess performance based on the dollar value of grants, provide rewards based on quantifiable outputs (publications, etc.) and view knowledge as a commodity rather than a free good (Slaughter & Rhoades, 2004). Even the Social Sciences and Humanities Research Council (SSHRC) has made a formal shift in how it sees itself. In its report *From Granting Council to Knowledge Council* (2005), SSHRC identified new values which include maximizing knowledge impact and interactive engagement. Partnerships are encouraged outside of the academy and researchers are encouraged to collaborate with "local service organisations and businesses as an extension of curriculum and community development partnerships" (p. 9). This results in research which directly impacts communities, which addresses specific questions within those communities and which show more immediate results. However, there is always a debate between the view that many of the greatest advances/discoveries have been as a result of the 'lone

researcher' plugging away in a back room or lab, and the view that if the discipline has to do with people, academics need to be immersed in the 'outside' world.

Research administration

Areas that provide support for the research enterprise are also experiencing considerable change as a result of the adoption of business processes and models, new public management, and neoliberal ideals. Research endeavours are increasingly required to align with business plans (Newson, 1998) and administrative requirements by funders mean increased administrative staff and new tracking, monitoring and reporting processes. University-industry liaison offices, offices of technology transfer, contract specialists, development coordinators, and research accountants are now commonplace (Rasmussen, 2008). As AUCC (2008) contends, universities now require robust and professional administrative structures to support researchers and provide assistance from the identification of basic problems and developing a research program through to the application of solutions discovered. Critical to the success of the research enterprise, these additional services have expanded in number and scope over the last two decades, further adding to the costs and complexity of the research landscape.

> Professors at research universities take for granted that at the end of every academic year they are supposed to complete forms that quantify their accomplishments: how many undergraduate and graduate students they have taught in which courses, how much scholarship they have completed and how they have disseminated it, how they served the community, the number of committees of which they were a member … although professors debated the

> wording on some items, no one questioned the existence of these forms. They had attained legitimacy (Tuchman, 2009, p. 106).

Recently, there have been added pressures to charge and collect overhead and indirect costs, anticipate and negotiate IP before it happens, have research centres recover their costs, and measure the return on investment and the impact of research, particularly in the social sciences and humanities. At the 2010 national meeting of the Canadian Association of University Research Administrators (CAURA), participants and presenters noted continued pressures to 'do more with less', align research strategies with institutional priorities, increase funding and commercialisation, assess and mitigate risk, develop partnerships with industry, and demonstrate the value of research. In providing the keynote address at the conference, Elizabeth Cannon, president elect at the University of Calgary, noted the importance of innovation for new knowledge, developing highly qualified personnel, and for economic and social benefits. Presenting on science and innovation policy matters, panel members identified that research is more diverse and that the issues are much more complex than in the past. Transdisciplinarity is now the 'norm' along with heterogeneity and organisational diversity. Halliwell (2010) illustrates that research is not innovation, but innovation is what excites government. In a session focused on working with industry, panel members suggested that universities consider the needs of industry which are less discovery type research and more applied. In looking at university-industry partnerships, they suggested that partnerships need to look at 'real' highly qualified personnel [HQP] engagement, commercial importance of the research, economic and societal benefits, follow-on funding, risk, financial leverage, and metrics. In addition to the increased focus on university-industry partnerships, there has been an

increase in community-based research (CBR). Working with a variety of sectors within ‘communities’ including first nations groups, not-for-profits, and small public interest groups, those undertaking CBR are also looking at making the research relevant and at disseminating the knowledge in ways other than traditional peer reviewed journals and publications.

Repeatedly, throughout documentation regarding research, productivity is stressed. Unlike traditional research productivity related to publication in journals, productivity in the documentation is tied to an increase in business innovation and connecting outputs to market demand and input supply. Universities are encouraged to support and advance curiosity based research, build capacity to support research and commercialisation, develop institutional level strategies, and develop partnerships with business and industry. The need to measure the impact of research is increasingly being brought to the forefront of discussions and funding proposals. At the CAURA 2010 conference, Wayne McDonald suggested that SSHRC must provide information on the impact funding has had – what benefits and outcomes are demonstrable at the economic, societal and international level. He stated that it is not enough to simply ‘do’ research anymore. Training students, publishing in refereed journals, and having partners is not enough. Each of these areas must be expanded and there must be consideration of long term impacts and clear demonstration of how research links to quality of life. In an effort to measure impact, formal key performance indicators (KPIs) have been developed for universities, and funding is tied to performance in relation to those indicators (Polster, 2005; Bok, 2003: Axelrod, 2002; Stromquist, 2002; Kachur & Harrison, 1999). KPIs measure a variety of outcomes including: student satisfaction (e.g., whether the degree

contributed to finding a good or better job, whether the student felt the program was of high quality); the amount of research funding as a ratio of total budget; and the amount of research output (publications, presentations, citations, etc.). In an effort to meet specific KPI targets and accurately report activities, internal processes of reviews, appraisals, assessments and audits are commonplace, as is increased surveillance and tracking of work (Chandler, Barry & Clark, 2002; Delanty, 2002; Gagne, 1996). Initiatives have been introduced which attempt to quantify academic work and attach a dollar figure to specific tasks by trying to standardize class size, contact hours, and marking time. There is an acknowledgement that traditional bibliometrics including citations, number of patents, licenses, spin-off firms, revenue generated, etc., are insufficient for actually measuring the impact of research (Butler, 2008; Rasmussen, 2008, Duryea, Hochman & Parfitt, 2007; Donovan, 2005, 2009; Yates, 2005). Rasmussen (2008) in fact, states that the use of quantitative measures is increasingly critiqued in Canada. He further explains that the major channels for technology transfer are actually the transfer of people, in particular, students who have graduated from a program. Donovan (2005) suggests including non-bibliometric indicators such as

> honours and awards, election to and roles within learned societies, journal editing, editorial board membership, editing special issues of journals, special journal editions dedicated to one's research, invited lectures at conferences (particularly keynote addresses), organising conferences or workshops, activities in providing academic advice (e.g., assessing research applications, manuscript refereeing, supervision and examination of PhD theses), contributions to dissemination/ popularization of research in the media, policy

> preparation research, membership of government advisory bodies, membership of a jury for a research award, visiting professorships or fellowships and conferences dedicated to specific research (p. 30).

In addition, measures related to community based impacts beyond simple 'quantitative' are being raised and discussed, but these are difficult to measure. Increasingly, stories are being sought that demonstrate impact. AUCC (2008) concurs, noting that bibliometric data is not able to fully delineate the contribution of research. In the social sciences and humanities, researchers often disseminate their findings to the wider community through means other than journal articles (e.g., books, chapters in books, online magazines), as well as through more public means (e.g., community presentations, media interviews, op ed articles, etc.). There is a marked difference however, between measuring outcomes versus impacts.

Summary

There is little doubt from the literature that the world universities find themselves in is changing. There is a strong belief by universities, provincial and federal governments, funding agencies, and other organisations (e.g., AUCC, Conference Board of Canada, Universities Presidents' Council) that we continue to shift and evolve from a resource-based to a knowledge-based economy (Conference Board of Canada, 2011; Government of BC, 2010; Government of BC – Ministry of Advanced Education and Labour Market Development, 2010; UNBC, 2010; AUCC, 2008, 2011; SFU, 2009; Plant, 2007; UVic, 2007, 2009, 2011; UBC, 2006, 2008, 2011; Government of Canada, 2002, 2007, 2008, 2011). Strategic plans and various reports from universities show this, stating that we are "In the midst of revolutionary economic and social change driven by knowledge and

innovation, whose impact will far exceed that of the industrial revolution" (UBC, 2006, p. 1), and that "major changes are taking place in the environment in which universities operate" (UVic 2009, p. 12). University documents also contend that this is a "new global age: an age in which interdependence transcends national boundaries, information is exchanged instantly, concern for our planet and the environment is international, the global economy and innovation is interlinked, and dreams for a peaceful and prosperous planet are universal" (UBC, 2006, p. 1).

The provincial government of British Columbia (2009) details a changing context for the province where:

- provincial labour market conditions include an aging demographic; …
- structural and global drivers of economic change require sustained, thought out action to efficiently match a shrinking supply of labour with increasing demand; …
- goods production is giving way to a greater emphasis on value-added manufacturing as well as other types of goods and services production; …
- a concerted effort to increase the knowledge and skills of BC's labour force will be critical to improving labour productivity, leading to BCs continued economic prosperity;
- a greater emphasis on knowledge generation, and corresponding investments in research and development and capital, will lead to a culture of innovation that will benefit all British Columbians (Government of BC, 2009, p. 3-4).

The Government of BC's *Strategic Plan 2010/11 – 2012/13* outlines five great goals for the province: 1) to make BC the best educated, most literate jurisdiction on the continent; 2) to lead the way in North America in healthy living and physical fitness; 3) to build the best system of support in Canada for persons with disabilities, those with special needs, children at risk, and seniors; 4) to lead the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none; and 5) to create more jobs per capita than anywhere else in Canada.

Expanding beyond the provincial perspective, the Government of Canada (2011) highlights the knowledge-based economy and stresses the importance of innovation, committing Canada to be among the world's innovation leaders. In its *State of the Nation 2008* report (2009), the government notes "Innovation matters. In a globalised world, creating and retaining jobs for Canadians and improving our living standard will increasingly be linked to our ability to innovate …. our ability to tackle the issues important to Canadians" (p. 1). Their belief is that "countries that succeed in the 21st century will be those with citizens who are creative, adaptable and skilled" (Government of Canada, 2002, p. 1).

These commitments / goals are set against a global outlook which points to an impairment in economic growth as a result of heavy public debt, weakened confidence throughout western Europe in the wake of issues regarding Greece's (and others') economy, natural disasters which hit Japan in 2011, and a series of issues resulting in political 'non-consensus' in the USA (Conference Board of Canada, 2011). Predictions

range from strong growth in emerging markets, to rising inflation, to increasing currency pressures, to the start of another recession.

It is in response to this context that universities are being called on, and as a result, pressures for change are felt. Neoliberal ideas, while being challenged in many sectors, still dominate the western world. The university is increasingly expected to operate as a business and is held to the standards the public expects of private enterprise. The impacts of these changes are the focus of this research, specifically in detailing how corporatisation (defined as increased oversight and control by governments with regard to the direction of the university, both from an educational and research perspective; an emphasis on the fiscal bottom line; increased accountability requirements in complexity and frequency related to funding for educational programs and research; increased demands for, and focus on, demonstrable impacts and quantifiable measures from research; a reduced amount of collegial governance; increased bureaucracy; and pressures to adopt business models, practices, and processes from the private sector) are being felt within the university. The methodology to conduct that research is described in chapter three and the findings are the focus of chapters four, five and six.

Chapter three: Methodology

This chapter begins by outlining the gap in current research and objectives of this dissertation. It provides details of the methodology chosen and processes undertaken to complete the research.

The gap and proposed objectives

While research is being undertaken regarding metrics to measure research impacts in better ways, there is little research on how universities are balancing demand for that demonstrable impact (particularly quick impacts) and research targeted to funder priorities (in particular from government) with the desire and need to continue to conduct traditional, pure, disciplinary research. There is a paucity of research regarding the full impact of university corporatisation on research and research administration, and on the evolving role of research and how it contributes to the strategic direction of universities. While there is research regarding the impact of globalisation and neoliberalism on post-secondary education, the ties to corporatisation and their impact on research, students, and the evolving role of the university have not been made.

This doctoral research focused on those issues with four research-intensive universities in BC: Simon Fraser University – SFU; University of British Columbia – UBC; University of Northern British Columbia – UNBC; and University of Victoria – UVic. The overall question that guided this study was: *In what ways is corporatisation visible in the practices and discourses related to university research in BC and, in turn, what impacts are being felt?* Its objectives were to:

a) determine the current role of research at universities, specifically around its contribution to/impact on strategic directions and if/how this has changed;
b) determine how the adoption of business norms/models has impacted university research and its administration;
c) determine the impact federal and provincial government priorities/directives have had on research conducted;
d) determine how research may evolve and what its role may be in the future; and
e) gather views on the role of the university now and in the future.

My interest in this topic developed in the late 1990s. I was working in the post-secondary system and had been given the task in a small university to raise the profile of research and help develop a research culture/climate. My background was in university administration, with experience in both academic and administrative areas. Moreover, I was involved in research administration when the Canada Foundation for Innovation (CFI) and Canada Research Chairs (CRC) programs were launched and the change to the perceived value and importance of research was immediate and dramatic. At the same time, demand for post-secondary education was increasing, particularly at the graduate level. Society supported the belief that university education was the path to a better job and a better life. I believed that as well, and still do. While I knew there were some people in disciplines like philosophy, I assumed that the majority of students were going to university to get a better job. I could not fathom the idea of going to university strictly to gain knowledge – there should be a more definitive outcome. In my opinion, the popularity of professional programs (nursing, engineering, education, business / commerce, social work) reinforced that view. We didn't tell our children they should go

to university to learn how to think critically – we told them they should go to university to be able to get a ‘good’ job. And by ‘good’, we meant a better paying job, one that could lead to a career, a ‘professional’ position, and prosperity.

As research grew in the late 1990s and into the early 2000s, I also had no real idea that ideologies other than neoliberalism were plausible – neoliberalism was the norm for my world, even though I may not have ever heard the word. I completed an undergraduate degree in business (focused on organisational culture) and studied human resource management, organisational design, and management methods (e.g., Total Quality Management, Management by Objective), and those neoliberal norms were reinforced. As I began to move into senior leadership positions and meet with colleagues around the country, I saw, as well as experienced, increased demands for accountability, tracking and reporting, and was part of discussions regarding outcomes and impacts.

I participated in the ‘transformation’ of SSHRC in the early 2000’s as it shifted from a ‘granting’ council to a ‘knowledge’ council. Demand to deliver impacts, show return on investment, and collect statistics and measures continued to increase. Research continued to explode, commercialisation became a ‘buzz word’ and a critical factor for research, and business incubators sprang up across the country. The mood was jubilant, hopes were high, and the feeling was that ‘we’ would all get rich from the discoveries happening. That didn’t materialize and governments and universities scrambled as they sought to explain why and how we were failing in comparison with other countries. As the world shrank through globalisation, Canadian universities were thrust onto the world stage, competing internationally for students, faculty, and funding. Universities sought prestige at the international level, which was often based on their research success, and

competition intensified. Research administration took on a new complexity and we counted research funding as a percentage of overall revenue and set targets to increase that. Success rates were tracked as was the growth in faculty output including: books authored / edited, papers presented, journal articles published (and in what journals), chapters in books, patents, and start ups. The level of oversight increased with regard to animal care and dangerous goods, and research ethics boards were given more power and responsibility.

I completed a masters' degree in integrated studies in 2004, which included dual specializations in: global change; and work, organisations and leadership, and began to look more closely at the changes that had happened regarding research administration. I also began to seek out research that offered alternatives to neoliberal ideas and that questioned, critiqued, and disputed the management models in place throughout the western world. As economic recessions came and went, and governments cut services and funding, pressures to show impact and value with regard to research continued to grow. In addition, pressures increased to show quick impacts or 'wins' that could demonstrate that governments were getting a 'good' return on the dollars they were investing and that that they were making a difference. My understanding of the world beyond neoliberalism had also increased and as demands to run the university and research as a business continued, the ideas around the impact of this 'corporatisation' resonated. I began discussing these impacts at meetings with colleagues across Canada (e.g., at other universities and funding agencies), and with faculty and senior administration in the university. There was increasing cynicism from a number of faculty regarding the demands being thrust on them and a view that government wanted quick

returns in an effort to get re-elected. ‘Results take time’ was the story I got back time and time again, as well as ‘in research you can’t always quantify what the impact of that research is’.

As this was happening, financial pressures continued, universities increased accountability requirements, and the bottom line was paramount. The idea of a triple bottom line that looked at more than financial was still ‘out there’. Research administration was seen as a draw on resources, and indirect costs of research became a topic of discussion. Overhead policies were developed, and units were told to recover their costs. Regulatory requirements grew as did the number of audits and monitoring visits.

This is the environment of my day-to-day world. In the last eight years, I have sought research that looked specifically at what the impact of this corporatisation (the adoption of business models and principles, etc.) has been on research, research administration and the university as a whole. I found research focused on specific areas such as measures and bibliometrics or the commercialisation of research, and found research focused more broadly on neoliberalism’s impact on society and on education. What I could not find was much research focused on the impact of these changes on the university’s role, on research’s role within the university and on what the university may look like in the future.

Importance of the research

Universities are faced with increasing competition for funding, increasing requirements for collaboration and partnerships, and changing demographics of students, faculty and leadership (see for example Loeffler, 2011; Krychowski & Quelin, 2010; Folbre, 2010;

Newfield, 2008; Wagner, 2004; Giroux, 2006; VanGinkel, 2003; Stromquist & Monkman, 2000). This is borne out in the literature, and was evident during the time this research was undertaken. The results will help universities determine and assess how research contributes to development, growth, prestige, educational quality, and financial stability. It will inform current research on assessing accountability, measures, impacts, and communications. It will be of interest to vice presidents' research, directors of graduate studies, and those in strategic planning positions. It will also be of interest to the general public as it provides an opportunity to have the conversation regarding the role of the university and the expectations for that role in the future.

Methodologies

My methodology can be understood as a multi-institutional ethnographic case study that drew from institutional ethnography and employed discourse analysis and individual interviews with a variety of people from the four universities of this study and the provincial government.

Case study methods are commonly used in qualitative studies. While there may be the view or perspective that all qualitative studies are a type of case study analysis, there are specific factors that are associated with case studies. Case studies take an in-depth and intensive look at a particular program, event, individual, occurrence, or process (Leedy & Ormrod, 2005; Ritchie & Lewis, 2003; Silverman, 1999; Lang & Heiss, 1998). The main defining feature of a case study is that it looks at a multitude of perspectives, which are connected or rooted in a specific context (Ritchie & Lewis, 2003; Lang & Heiss, 1998). Case study methodology is well suited to questions of 'how' and 'why' (Ragin, 2009; Yin, 2003; Feagin, et al., 1991). The role of the researcher is to clearly identify and detail

that context and provide information about the physical environment and any historical, economic, and social factors that have bearing on the situation (Leedy & Ormrod, 2005; Lang & Heiss, 1998). As with other methods of inquiry, case study analysis includes interviews, the study of various texts, and the researcher's own observations.

There are a number of strengths associated with case study methods which include their usefulness for learning about a poorly understood or little known situation and for investigating how a program or individual changes over time (Leedy & Ormrod, 2005). George and Bennett (2004) identify the following additional strengths: "their potential for achieving high conceptual validity; their strong procedures for fostering new hypotheses; their value as a useful means to closely examine the hypothesized role of causal mechanisms in the context of individual cases; and their capacity for addressing causal complexity" (p. 19). Case studies provide a sense of context and a richness of detail that exceeds virtually every other approach to analysis (Merriam, 2009). There are however, a number of weaknesses primarily regarding the ability to generalize case study results and bias in case selection. It is difficult when only one or two cases are involved, to generalize the findings and apply them to the larger society or other situations (Leedy & Ormrod, 2005; Yin, 1994, 2003). In case selection bias, researchers may deliberately choose cases that share a particular outcome thereby skewing the results before they even begin the research (George & Bennett, 2004).

I chose case studies as the overarching method for my dissertation. Using multiple sites allowed each institution to be looked at individually and I was also able to consider how they connected to each other, and to the larger picture of the province. It enabled me to ensure a multitude of perspectives focused around the role of the university, the role of

research and corporatisation. This facilitated my ability to delve into the ‘how’ and ‘why’ of the relationships between the universities as well as between the universities and the provincial government and consider the deeper themes beyond just empirical data. In particular, considering the culture of the universities and looking at aspects of commodification provided a depth to the research that had not been captured in previous studies.

Institutional ethnography

Institutional ethnography (IE) is a method that focuses on the processes of social relations and organisations. It begins by looking at a problematic and considers how we go about our everyday doings (Smith, 1991, 2005, 2006). IE is a “method of inquiry into the social that proposes to enlarge the scope of what becomes visible from that site, mapping the relations that connect one local site to others” (Smith, 2005, p. 29). Institutional ethnography focuses on the actual coordination of activities, and how those activities produce a process.

Institutional ethnography approaches data collection with a more open ended view than some methodologies. As data is collected the scope, range, and focus of the research may shift. For example, within this study, a theme arose around education and corporatisation that was outside the focus on research. The use of institutional ethnography allowed an increase in scope to further explore this with participants and through discourse and document analysis. Analysis of texts are an important aspect of data collection in IE (DeVault & McCoy, 2006; Smith, 2005, 1991; Campbell & Manicom, 1995) as are interviews and the ‘lived’ experience of the researcher. Personal reflection is also imperative to the study. Institutional ethnography’s strengths are that it provides details

on a specific process or processes that shape a particular experience. That experience is set in the 'real world life' of the researcher. One of institutional ethnography's weaknesses is that it does not propose to be an objective account of the experience and thus is difficult to generalize beyond the specific experience.

I chose institutional ethnography in order to consider the social relations within the organisations – between faculty and administration, and between students and the organisation. Institutional ethnography also provided a lens through which to consider issues of power as well as the impacts of changes facing universities. IE allowed me to consider my experience and perspectives, and to look very specifically at processes related to research administration.

Methods

I began this doctoral research by looking backwards, to consider my past experiences in the university and the changes seen. These changes have been couched primarily in terms of demand for increased accountability – from funding agencies, provincial government, private sector, and federal government – but also in terms of increased micro-management, a focus on financial implications, risk management and mitigation, and a general sense of increasing demands for quick and tangible results.

I considered, for example, a research project I was involved in a number of years ago and the level of tracking and scrutiny required. Using IE, I first outlined the process of proposal development – from the initial meeting with the faculty member through various drafts / iterations of the proposal, the approval process, and submission. Once successful, a new set of processes take place including account set up, project management planning, human resource processes, etc. From the funder side there are processes as well. For this

project, quarterly reports were required which included: full financial details (including copies of all receipts, travel claims, and invoices); an explanation of any variances; a detailed cash flow projecting expenses for the upcoming quarter, the full year, and the full project; a narrative which outlined deliverables achieved for the quarter and an explanation regarding why any planned deliverables had not been achieved; a narrative outlining deliverables for the next quarter and how they would be achieved; overall measurable deliverables for the project; and any risks regarding the completion and how those were being mitigated.

More recently, I was involved in a Tri-Agencies monitoring visit. The process began with the university completing two questionnaires which resulted in more than thirty pages of detail along with copies of various university policies (e.g., delegation of signing authority, ethical conduct, travel and expense claims), and detailed line by line financial records for various projects. The monitoring team then requested financial backup (e.g., expense claims, receipts, invoices) for a number of individual transactions, and based on that information, deemed each transaction compliant, non-compliant, or ineligible. The university was given the opportunity to respond to deficiencies. In one instance, for example, a daytimer/calendar was deemed an ineligible expense as the Agencies assumed this would be provided to faculty as part of their position at the university. In reality however, our university uses electronic calendars (Outlook), therefore paper daytimers / calendars are not provided. The faculty member in question does considerable work in the field and is often not able to access an Internet connection / signal in order to be able to log in and check an electronic calendar. A daytimer was purchased (less than $10) and charged to her/his federal grant. Following that level of explanation and justification, the

expense was changed from ineligible to compliant. Accountability and financial ‘order’ was of paramount importance from the Agencies’ perspective. There were no gray areas from the Agencies’ view and no deviations from the rules were accepted. In one case, the university was deemed non-compliant as a faculty member had put parking receipts from two different trips on a single expense claim – there were no other expenses for either trip, and the parking receipts were about $4.00 each. The rules are that every trip must be on a separate claim therefore this was deemed non-compliant and shown as a deficiency. The monitoring visit focused solely on financial aspects and there was no interest in the research accomplished. The university ‘passed’ the visit and I learned that a number of other universities undergoing monitoring visits around the same time had not passed. Failure to pass a monitoring visit can put the university’s eligibility to receive funding at risk if deficiencies are not addressed quickly and appropriately.

As part of my research, I made notes on my reflections of those examples and other various projects. As I reviewed those, I realized that I had never questioned the accountability requirements. It seemed to me that these were normal and valid – it was common sense that we would keep this kind of detail and provide it to the funder. In fact, on the former project noted, I made suggestions to the funding organisation on how to make the tracking and reporting even more robust.

As I reflected, I made notes on specific areas where demands for increased accountability and business methods were evident such as: distribution of requests for proposals (RFPs) from government funders; contracts which require the university and principal investigator (PI) to sign over moral rights to information contained in reports

and to sign over intellectual property (IP); a higher level and increased frequency of reporting on expenditures; and more negotiation on indirect costs and overheads.

I also made notes on my experiences outside of research administration with regard to changes I had seen in academic programs. For example, provincial governments had provided funding targeted towards the expansion of programs in specific professional areas (information technology, health, business), and I had been involved in developing business cases for those new programs that included needs analyses, evidence from employers regarding the potential for graduates to find work, economic benefits, enrolment targets, and specific measures of success. As with the requirements under the research side, I never questioned the level of detail required, nor the type – i.e., the focus on demand in the workplace for the credential.

I also spent time reflecting on various proposals I had helped develop which required estimations of jobs that might be created, training opportunities, direct and indirect economic benefits, estimation of spin-off benefits, and measurable value to the community and to Canada.

I am a member of a number of professional groups as part of my role, including: Canadian Association of Graduate Studies (CAGS); Canadian Association of University Research Administrators (CAURA); Society of Research Administrators (SRA); CAURA-West; Association of Western University Research Directors (AWURD); Western Canadian Deans of Graduate Studies; and the Western Vice Presidents Academic / Vice Presidents Research (WestVac) group. As part of my research, I reviewed my files from those meetings and treated my notes from the meetings, as well as my notes on the reflections over the years, as part of a set of documents.

Case selection

UBC, UNBC, UVic and SFU were chosen based on the following criteria: members of AUCC, members of both CAGS and the Western Canadian Deans of Graduate Studies, designated by the province as 'research-intensive'; and established as universities for at least 20 years. The Ministry of Advanced Education and Labour Market Development, province of British Columbia, was also selected as it was the ministry responsible for post-secondary education. Using multiple settings allowed comparison of the data generated in each context (Denzin, 1984), which in turn allowed me to consider cultural impacts as part of the theoretical framework of institutional theory. By having four universities, I was able to ensure a broader perspective, identify similarities and differences, and consider various complexities unique to each institution and / or common to all four. Using multiple settings also provided the ability to examine the data using commodification theory and provide analyses with regard to both education and research.

Data collection – documents

While reviewing the data related to my experiences, I also began gathering relevant documents for analysis. Over the course of approximately four years I accessed documents and information from each of the universities` websites. I used the internet to gather information that was publicly available to ensure that: 1) given my role and connections that I did not inadvertently analyze information that is confidential; and 2) information was the 'official' view/version of the university for such things as strategic research plans, vision, values, etc. I tried to gather the same documents for each university such as: strategic university plans; reports on the implementation of those plans; strategic research plans; and institutional accountability reports. I gathered general

communication information from each web site that included history, statistics and other details about each university. I gathered presidents` messages from the websites, as well as copies of minutes from Board of Governors` meetings. In some cases I gathered documents that were unique to a specific institution. Over the four years, I was able to access different versions of some strategic research plans and strategic university plans.

I collected government documents from the provincial and federal government, such as service plans and annual reports, accountability frameworks, strategic plans, and budget details (provincial), the *Mobilizing Science and Technology Plan* and *State of the Nation* reports (federal). I gathered documents from AUCC (e.g., news and commentary, *Value of a Degree, Value of University Research, Momentum, Trends,* etc.), The Universities Presidents' Council (e.g., *Campus 2020 Response, Building Capacity*, performance measures, etc.), the Research Universities Council of British Columbia (RUCBC) (e.g., *Promoting a Culture of Innovation,* etc.), the Tri-Agencies (e.g., *Framing our Direction*, annual reports, etc.), and the *Campus 2020* report prepared for the Government of BC (see Appendix A for a full list).

Data collection - interviews

Semi-structured interviews were held with a mixture of individuals from each of the four universities and included vice presidents research / associate vice presidents research, deans of graduate studies / associate deans of graduate studies, directors of offices of research / research services, and directors of offices of community based research (or those that filled the role but had a different title). In addition, interviews were held with deputy minister(s) / assistant deputy minister(s) at BC's Ministry for Advanced

Education and Labour Market Development. A total of eighteen interviews were completed (see Appendix B).

Vice presidents research / associate vice presidents research were selected as they had the strategic view of research, its importance within the university, and the overall view of the university's role and the role of research. Directors of offices of research were selected as they added an administrative 'on the ground' perspective. Deans / associate deans of graduate studies were selected as they added additional depth to views of the demands, attitudes and expectations of students regarding the role of the university and how research contributes to that role. Directors of community based research (CBR) were selected as I felt that given that research and partnerships undertaken through CBR are generally more 'grass roots', focused on community engagement, and driven by a community and that community's needs, they offered insights from that perspective. The view of provincial government representatives added a perspective outside of the university and provided a further layer to the study. The study focused on the perspectives of senior administration and therefore did not include faculty or students. While these views would no doubt be a valuable addition, they would also significantly expand the scope and focus of the study. Quantitative methods would likely have to be included as results could be skewed depending on the discipline faculty and students were from. For example, faculty and students in engineering may feel differently about commercialisation, research funding, etc., than faculty and students in humanities and social sciences.

Each participant was approached by phone, email, or in person depending on timing and circumstance. An overview of the project was provided along with an invitation to

participate. Email was used to confirm participation and a summary of the research objectives and background was provided to each participant via email. Two individuals declined to participate due to time and travel constraints, and one individual referred me to a person s/he felt better situated in the organisation to answer my questions.

Interviews were held in person in the participant's workplace, or via phone. Interviews lasted from sixty to ninety minutes on average, and each interview was digitally recorded (audio) and taped (also audio) as a backup. For each interview I began by thanking the participant for their time and willingness to discuss the subject area and provided a summary of the topic. I provided the ethics protocol for the research, including how anonymity and confidentiality would be maintained, and participants completed the informed consent. Of the eighteen participants, thirteen were male and five were female; and a total of fourteen held PhDs. Thirteen had at some point been faculty members and five had backgrounds solely in administration. All but one individual had been in their present position for at least two years.

Each interview began with the participant providing a summary of their background, education, work history, and how they came to be in their current role. Interview questions were open ended with additional questions asked for clarification and expansion. Interviews sought to gather information on: the role of the university in society (past, present, future); the role of the research and its evolution; impact of business norms/neoliberal principles on the university and research; perception of students and their expectations and attitudes; impact of the pressures for measures, value and return on investment; and the impact of targeted funding and demands for more applied research (see Appendix B for interview details). All interviews were conducted

over a period of four months, and each interview was transcribed within one week of the interview. After each interview I jotted down additional thoughts about the interview and identified areas that I felt were key, critical, or especially insightful. Pseudonyms and apparent gender were randomly assigned to the participants to help ensure anonymity and confidentiality. It is important to note that, in some cases, anonymity was a concern given the high profile of the position participants held. In order to ensure anonymity I agreed, at the request of participants, that I would not make any distinctions among position held (e.g., vice presidents of research, ministry personnel, etc.) or by organization. I was therefore unable to identify the social position of specific respondents. For example, I could not, in the findings, distinguish the perspective of deans of graduate studies from those of vice presidents research, from directors of community based research, or from ministry personnel. In many instances, a reader might assume, or question, whether participants' views on specific subjects such as citizen preparation versus job training, or the commercialisation of research differed. I can neither confirm nor deny those assumptions / questions as that would compromise the confidentiality promised. While those distinctions may have added further depth to the already rich data, not doing so did not change the overall objectives of the research.

Data analysis

As I began the dissertation I knew that reflexivity would be key, particularly given my background in the area of research administration and the fact that I work within the post-secondary system. Tonkiss (1999) suggests that researchers must question their assumptions, and continually review and analyze the processes of data collection. I drew on Ritchie, Spencer, & O`Connor (2003), who remind the researcher that "although there

will be a stage dedicated to analysis, the pathways to forming ideas to pursue, phenomena to capture, theories to test begins right at the start of a research study and ends while writing up the results" (p. 199). I kept this in mind through the analysis and writing phases.

Critical discourse analysis (CDA) was selected as it shows how people communicate through language in a social setting (Walliman, 2005; Ritchie & Lewis, 2003; Wetherall, Taylor & Yates, 2001; Yates & Taylor, 2001; Tonkiss, 1999). CDA focuses on texts and verbal accounts (written documents, media reports, conversations, speeches and interviews) in an attempt to understand the way knowledge is produced. Analysis through CDA also considers distinctive language such as legal or medical discourse and the inclusion of implicit theories such as poverty, gender relations or power in order to explain social action and interaction (Ritchie & Lewis, 2003; van Dijk, 1995). CDA was used to analyze documentation – those produced by each of the universities, as well as those produced by AUCC, provincial and federal governments, Tri-Agencies, Canada Foundation for Innovation (CFI), Conference Board of Canada, etc., the interview transcripts and my personal notes and reflections. In particular, I looked at what the language revealed about power, dominance and inequality. I looked for instances that demonstrated evidence of elitism, attempts to exert influence and opinion, and how that discourse related to corporatisation.

All information (e.g., documents, information, notes, transcripts) was read and analysed at least four times. In addition, along with reading transcripts, I listened to all interviews three to four times to consider tone and voice inflection.

I drew on Charmaz (2000) for the coding stage. Charmaz (2000) outlines the following types of coding: line-by-line coding which helps to sharpen "our use of sensitizing concepts – that is, those background ideas that inform the overall research problem" (p. 515); action codes which facilitate making comparisons; axial coding, which is "aimed at making connections between a category and its subcategories … induc[ing] conditions that give rise to the category, its context, the social interactions through which it is handled, and its consequences" (p. 516); and selective or focused coding which "uses initial codes that reappear frequently to sort large amounts of data" (p. 516). I began by using selective coding and focused on business terminology – documenting incidents of that terminology and looking at changes over time where I had documents that spanned years. This included specific key words such as: accountability, impact, return on investment, products, commercialisation, etc. As I looked for instances of frequency, it became apparent that there was a wealth of information beyond specific 'business terminology' or wording contained within the documents. For example, information regarding how each university saw its role in its community, in the province, in the country, and internationally; identification of challenges each university was facing in current times; changing 'face' of students at each university; importance and contribution of research as well as details regarding commercialisation and the value of research; metrics; and the role of, and balance between, social sciences and humanities research and science and health. I expanded the coding in subsequent reads to include axial coding using overarching themes such as the role of the university, role of research, and role of education, and subthemes such as community engagement. I identified areas that appeared to show some of the tensions between academia and corporatisation as well as

areas related to commodification, institutional theory, and resource dependence theory, both with regard to research and education.

Following the coding, I again assessed the themes that I had started with as well as new ones that had emerged. For instance, issues around tenure arose as a sub category as did issues around stratification in the post-secondary system. During the interviews, there was much more discussion around students and programs in relation to corporatisation than I had imagined there would be and this area became a category on its own. I again read through each section and repositioned many pieces of information and added a new theme during this stage which focused on the future. This category, along with the two regarding role of the university and role of research allowed me to look at the bigger picture and consider possible trends.

Throughout the research, a constant comparative method was used which allowed me to compare different people's views, actions, accounts and experiences, compare incident with incident, data with category, and each category with other categories (Glesne, 2011; Charmaz, 2000). Internal and external validity needed to be ensured – both the coherence and consistency of the research in how it supported the conclusions and whether and how the findings could be generalized to the wider society (Tonkiss, 1999). I tried to question my assumptions throughout the analysis stage, look at the context of statements and publications, and justify why they were placed within specific categories. I also kept in mind the work of Ritchie, Spencer and O'Connor (2003) throughout the analysis, who identify

> three different contexts of interpretation in qualitative analysis: self-understanding where the researcher attempts to formulate in condensed form what the

> participants themselves mean and understand; critical common sense understanding where the researcher uses general knowledge about the context of statements to place them in a wider arena; and theoretical understanding where the interpretation is placed in a broader theoretical perspectives (p. 201).

Writing of the actual dissertation was done using the template provided by the university and structured similarly to other dissertations. I tried to continue to question the assumptions I had made during the data analysis phase in the writing, and to expand ideas or issues that rose to the surface. If a new sub theme or category arose I went back to the data to see how it had been dealt with and made the determination of whether or not to expand the theme / category. After the first draft of the dissertation was complete, I then took six weeks to review and reanalyze transcripts (starting again with 'clean' copies) and documents, with the intent to consider additional themes, draw out additional findings, and delve deeper into the data. I spent a considerable amount of time during this six weeks reflecting on the data and findings.

There is a considerable amount of data that is related to but not critical to the dissertation, however, it is my hope that it can be further analysed and expanded for future research.

Chapter four: Findings I – Corporatisation and research

Having established the theoretical and conceptual lens for this study in chapter two, this chapter begins my discussion of the findings. The three chapters which detail the findings focus, at the overarching level, on corporatisation and: a) research; b) business models, governance, return on investment [ROI]; and c) education and stratification. As the analysis unfolded, these three areas seemed to be the most logical way to organise the results. Each shows examples of the aspects outlined in the definition of corporatisation. For this research, as outlined in chapter two, corporatisation is defined as: increased oversight and control by governments regarding the direction of the university, both from an educational and research perspective; an emphasis on the fiscal bottom line; increased accountability requirements (in complexity and frequency) related to funding for educational programs and research; increased demands for, and focus on, demonstrable impacts and quantifiable measures from research; reduced amount of collegial governance; increased bureaucracy; and pressures to adopt business models, practices and processes from the private sector. One of the study participants, Robert, commented that

> we've become more accountable in ways we didn't used to be, and so that has changed … and so we need to be more business-like in the sense that we need to pay more attention to the bottom line and to the flow of the money and be able to explain where it's come from, where it's going … We also have become more business-like because we need to sell ourselves more. We need to market what we do more, both to those who control the public money, and

> also to the large non-profits and private interests and corporations that we want to get some funding from, and private individuals …Some people call that corporatisation.

Details contained within the chapters also tie to the theoretical frameworks of the study (institutional theory, commodification, and resource dependence theory).

This first findings chapter sets the stage with an analysis of the interviews and the documents in terms of the perceived role(s) of the university, of research, and of community engagement / service. Within the discussion of the perceived role(s) of the university, I place an emphasis on the three pillars (education, research, service) as well as the federal and provincial government context. As the chapter delves into the perceived role(s) of research, I focus specifically on innovation, targeted research and commercialisation. The chapter concludes with the findings of corporatisation as it relates to the community engagement / service pillar. Chapter five then considers the larger manifestation of corporatisation as it relates to the adoption of business models, return on investment, and governance, whilst chapter six provides the findings as they relate to corporatisation's impact on education, and stratification / differentiation.

Differing Perspectives: The Role(s) of the university

As the literature in chapter two noted, we live in challenging and turbulent times and they trigger differing views regarding where the university fits in society, how it should respond, the role or roles it plays, whether these roles are changing or being changed, and if so, how.

UBC's (2006) *Strategic Plan* identifies Canadian universities as "the nation's most valuable resource in a knowledge based economy" (p. 1). UVic (2007) documents

indicate "university scholarship is increasingly recognized as fundamental to the social, cultural and economic development of society" (p. 9). They, like others, contain wording around 'excellence' and stress the importance the university puts on developing and nurturing relationships (with students, industry and the community), as well as a desire to be both innovative and resourceful. For example, UNBC's (n/d b) *University Plan 2010* emphasizes, in particular, a university that is student-centred, research-intensive, and relevant to the region (northern BC) and beyond whilst UBC's (2009) vision is to be a world leader, creating "an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada and the world" (n/p). SFU (2009) focuses similarly, ensuring it provides the highest quality of teaching, research and community service and notes that part of its role is to "innovate rather than replicate, to embrace risk and bold initiative, and to reach out to the wider community" (p. 5). And for UVic (2011b), the university "enriches its students and society by creating knowledge, fostering academic and experiential learning and service for communities in BC, in Canada, and around the world" (p. 6).

In many ways, these documents tell you what you want to hear. If you are a student or potential student, the statements above place you at the centre of the environment. The discourse suggests that your educational experience will be high quality and will provide you with all the skills you need. If you are with business or industry, the statements place you at the centre of the environment. The discourse suggests that a relationship will be nurtured, will be beneficial and that the knowledge gained and research undertaken will be high quality. If you are a potential faculty member, the statements place you at the

centre of the environment. The discourse suggests that this is the place you want to be, that what the university is doing is relevant, 'good' and of high quality, and that as part of the university your research is valued and your career will thrive. The contemporary university is also all about the local, and all about the global. As a result, these documents tell us nothing and everything. They are whatever you want them to be and can provide whatever you need.

In an interview, one of the respondents, Tim, takes this a step further. He argues that

> if you speak to the people who are representatives in government and ask them what is the purpose of universities, and you are perceived as a taxpayer when you ask that question, the answer you will get is to educate our young people. However, I think money talks, and what money has been saying increasingly over the last couple of decades is that Canada needs to be able to compete in the knowledge economy and more and more money has been channelled towards [that] ….and they [governments] are funding research more than they are funding education …. If we're talking about corporate interests, they're interested much more in research. If we're talking about large non-profits, national, international, multi-national non-profits, they're generally more interested in the research.

These interests in research are discussed more thoroughly in this and the next chapter and provide specific examples of corporatisation in the university including the focus on the financial bottom line, accountability, measures, and return on investment; each an aspect of the definition of corporatisation outlined in chapter two. These interests are focused on research that has a quantifiable outcome, that

provides ‘bang for the buck’, and ideally, that can be completed in a short time frame and serve the interests of the funder. Those interests are focused primarily on the financial return of the research, e.g., through commercialisation of the research into a product that becomes marketable, through the development of a process that saves production time and increases efficiency, or through technology that allows automation.

In contrast with the generality of the university documents outlined earlier in this chapter, those within the university see it as having specific rather than vague roles, including, at the top of the list for some respondents, a responsibility for the development of society. Laura, for example, remarked that the university has “the global perspective of wanting to create more informed citizens who will question societal norms, societal ideals and allow them to help lead society in appropriate directions.” Similarly, Ingrid suggested that our mandate is “to develop our citizens through growing their understanding of themselves and their world.” Robert concluded that the university “is a place of reflection and learning and innovation. It offers a critical kind of holistic approach looking at society, how society works, and it hopefully … can produce new ways in the broader society to relate and be part of society.” None of these three statements connect to the specifics of corporatisation. In fact, these statements could be seen in opposition to the aspects of corporatisation being placed on the university. Citizens who consider and question societal norms and ideals, for example, are also more likely to question the role of government with regard to oversight and control of educational programs and research. Furthermore, an holistic approach to society includes much more than a focus on the financial

bottom line. This role in the development of the larger society is part of each of the four universities' culture.

Pillars – teaching, research, service

All four universities in this study, and indeed most if not all publicly funded universities in the country, note three pillars as part of their role – teaching, research, and service. The documents reflect the importance and centrality of the pillars. In every interview, participants confirmed these pillars using language such as: education of citizens, development of new knowledge, service, advancement of knowledge, transmission of knowledge, creation and dissemination of knowledge, educational purpose, learning, teaching, educating students, producing research, and giving back to the community. Participants, in fact, spoke of the pillars directly when they discussed the university. Frank, for example indicated that the university serves the public good

> through educating students and preparing them to live more fulfilling and satisfying and productive and successful lives, through the production of research which is for the benefit of human societies and our planet in general, and through providing service to the communities that interact with, and have relationships with, the university.

Participants were clear that the role encompassed all three pillars – education, research and service – and that social responsibility and responsiveness were included within those pillars. Robert confirmed this as being a shift from traditional views of the university indicating "Years ago, we could sit in the ivory tower and know that we would get enough money to run our operations and not need to look outside so much. Now … we need to have people understand the good work that we're doing here." Alex conveyed a

similar thought stating “The days of the ivory tower are long since gone … we live in an age of accountability, and responsibility, and so it’s important that universities are seen to be responsive.” University strategic plans delve into this further and provide examples of problems in the world – e.g., climate change, environmental degradation, violence, poverty, homelessness – and note the university’s role in helping to address those. Frank pointed out that “the world is so insane right now … there’s just so much upheaval, social upheaval.” Oscar in fact pointed out that “universities have a lot to answer for in terms of mindlessly training people to fit into those systems [health care, education] without really asking where those systems are heading. David Orr’s question ‘what are universities for’ makes the point that most of the crises that modern societies are facing have been created by people who were trained in universities.” Participants expanded this, suggesting a responsibility to undertake research in areas not yet considered issues by society. Peter, in fact, commented that

> When there are issues that arise that are unexpected, society looks to universities for information. It didn’t know that it needed that information, it wasn’t even expecting that the topic would be something to pay attention to, but it has faith that somewhere within universities people are researching these important matters and so that’s where they turn for information and for learning.

Alex noted that the university is the “only body in society that really is dedicated to advance knowledge for the sake of advancing knowledge. You can’t rely on industry to do that, there’s always a bottom line. And industry too often is focused on incremental innovation.” This is important as it keeps the university one step removed from pressures

by government, business and industry, and society to do, and be, certain things. It does however, set a tension in place; of the university being responsive and addressing areas of interest on the one hand, while on the other, developing knowledge that may not have any inherent applicability. For students, governments, and the public, the value of that role as separate from society may not always be understood or accepted, nor does it fall within the components of corporatisation. Having the university at arms' length is in direct contrast to the focus of increased oversight and control by government.

Within the discourse, we are told, at least by one university, that we are in a 'revolution' (UBC, 2006), a word that, on the one hand, draws connotations linked to uncertainty, potential violence, and sudden, radical change. On this side, a revolution paints a picture of protest, governments falling, and systems being overthrown. The message is that in this world of change and uncertainty, we can, and should, turn to the university for guidance, consistency, and stability. Matthew supported this view observing, "with the fact that we're having depletion of our resources and the impacts on the environment and the population shifts that are happening, the demographic shifts, the sea's rise. All of those things are going to suggest, that, I'd like to believe, that university research and education … is going to be even more vital and play a more central role." In reality, what we are dealing with is much tamer than what we imagine a revolution to be – there is not a group of people rising up against oppression and injustice in BC, however, we see seeds of this in small pockets (e.g., students 'living' in the trees at UVic to try to stop them from being cut down for various expansion / building projects (M'Gonigle & Starke, 2006)).

What many of the interviewees like Matthew seemed to indicate is there is little space, if any, for debate on the benefits of the university to society. Enrolments are growing, research productivity is increasing, and the highest levels of government seem to support and recognize the value. So what is the problem? If we look deeper, beyond just at the surface however, the discourse shows that it is not a rosy picture. Newspapers are full of articles regarding student protests aimed at rising tuition, government cutbacks, layoffs, and increased faculty workloads – these tell a different story of how the university is supported or perhaps better said, where its priorities lie – or have to lie – within the framework of neoliberalism. Market-oriented policies of competition enforce struggles for control and power as in turn, universities seek to confirm and even strengthen their role in today's and tomorrow's marketplace. That complex role(s), as detailed by the university texts and in the interviews, is often quite different from what the documents from federal and provincial governments outline.

Provincial and federal context

The BC provincial government acknowledges a rapidly changing world. In considering the discourse in the *Challenges and Opportunities: British Columbia's Labour Market Futures* (2009b) document, the government outlines problems, a solution, and its role in leading that solution:

- we face an aging demographic – the document tells us that there will be a shortage of labour;
- in order to address this shortage of labour, thought out action is required – the implication is that someone, i.e., government, will develop a plan to solve this for us; and

- the skills and knowledge of BC's labour force need to increase – the implication is that we currently are not skilled enough, certainly not for what will be required. Furthermore, there is an implication that if we don't raise those skills and knowledge, we will be left behind in the new economy and risk economic prosperity.

The answer, according to the government, is education and an educational system that: has the capacity to meet the needs of the province; provides access for all citizens and is equitable and affordable; has a sufficient level of quality to meet the needs of students, employers and citizens; is relevant and responsive to the needs of the province; and delivers education programs in a timely and cost effective manner (Government of BC, 2009a). In looking at these objectives, the discourse focuses on the needs of the province as defined and identified by government, not the needs as identified by citizens. Deeper analysis suggests that while education is supported, it is a specific form of *focused* education tied to preparation for the workforce and controlled and directed by government. In its most recent *Service Plan 2010/11 – 2012/13* the province's Ministry of Advanced Education and Labour Market Development (2010b) lays out its responsibility and role as providing "exceptional post-secondary education and training opportunities that enhance the capacity and productivity of our labour market" (p. 7). The focus throughout the texts is on providing "the required number and quality of graduates to meet employers' demands … and respond to BC communities' needs for education and skills training" (Government of BC, 2009, p. 32). Rather than having a well educated population as the foundation which impacts quality of life, the belief is that "having a strong economy is the foundation upon which our quality of life is reliant upon"

(Government of BC, 2010, p. 3). This puts the focus clearly on the bottom line – financial output, financial growth and financial profit are paramount. As a result, plans, measures, and supports are tied to outcomes linked to that financial measure, primarily jobs and what the market identifies as need. The government takes this further noting the need for the post-secondary system to not only provide workers, but also to anticipate future labour markets and create new economic and job opportunities. The province has indicated that it will support universities to produce graduates who:

- adapt to the changing nature of work and apply their knowledge and skills in different contexts;
- possess business and entrepreneurial skills;
- understand how to commercialise research discoveries as industrial products and innovations;
- have positive attitudes toward lifelong learning, a propensity that is highly valued by employers; and
- want to make a difference to their community and their country and possess the necessary thinking and communication skills to make a positive contribution (Government of BC, 2009, p. 33).

The discourse is highly corporatised – while there is a nod to the qualities of a liberal arts education (thinking and communication skills) the focus is on being prepared to fit into the workforce as quickly and seamlessly as possible. In exercising this control over what graduates should have however, the government provides no criteria for how each of these will be measured. For example, what does it mean to be able to adapt to the changing nature of work? Does it mean being able to shift and change jobs as demands

ebb and flow? Or does it mean being able to change roles within an organization as needed? Would growth in the number of new small businesses, or the expansion of existing businesses mean the second point (business and entrepreneurial skills) had been successful? Would an increase in the number of patents filed be considered a sufficient 'pass' for the third point (commercialising research), or would success be tied to the financial impact of those patents? While government notes its support for the development of lifelong learning attitudes, measuring this would also be difficult. While you could track the amount of continuing education or multiple degrees that people obtain, or track the amount of professional development opportunities that staff undertake, in times of restraint one of the first things cut from an organisation is professional development. Measuring the final point, making a difference to community and country, is also difficult if not impossible. There is no information regarding what constitutes making a difference; whether it is the amount of volunteerism that people do and where, or whether it is something else. This whole idea of support for universities who produce graduates with these skills becomes increasingly problematic as there is also no information on how government will provide support if institutions do indeed produce graduates with these traits, nor what will happen if graduates don't gain these traits. In fact, the Ministry hedges its responsibilities noting that while it will make long term plans to develop the workforce, it will also be responsive to the dynamics of the recession (Plant, 2007).

As the body that controls a significant portion of resources that fund post-secondary education, government holds considerable power. On February 21st, 2012, the provincial government tabled the 2012/13 provincial budget noting the theme 'fiscal discipline for a

stable economy' – fiscal prudence and a balanced budget are the focus. For the post-secondary sector, while the budget is increased slightly for 2012/13 ($9 million), it is cut by $20 million in 2013/14 and a further $30 million in 2014/15 – in real terms, $70 million in administrative savings is expected to be found between 2012/13 and 2014/15 (Government of BC, 2012). The Research Universities' Council of British Columbia (RUCBC) (2012) notes that the message regarding cuts to post-secondary education has been carefully developed and reductions are "not aimed at students, education programs, or research" (RUCBC, 2012, p. 5). Rather, reductions are to be made in "non-essential expenses such as travel, executive and administrative overheads and efficiencies from greater shared services" (RUCBC, 2012: p. 5). The document notes that the next budget will be tabled three months before the next election (May 2013) and therefore may be quite different. As RUCBC (2012) implies "by identifying cuts in the out years, the government may have made post-secondary funding an election issue for their next budget" (p. 5).

At the federal level, the discourse is similar. The Canadian government notes its support for education stating that "Canada must be a magnet for the highly skilled people we need to thrive in the modern global economy with the best education, most-skilled, and most flexible workforce in the world in order to create a People Advantage" (Government of Canada, 2007, p. 11). The federal government also outlines its "commitment to train the next generation of researchers and innovators upon whom Canada's future success depends" (Government of Canada, 2007, p. 16). Similar to the view of the province, at the federal level the value of the university is measured in its contribution to the economy, and commercial innovation is seen as the cornerstone to

prosperity. The university's role is tied to: education that develops the workforce; research focused on areas that have the potential for commercialisation and breakthroughs; and the engagement and development of partnerships with business and industry. Again, this language around the university's role is highly corporatised. The pillars of the university are not disputed, but the translation of what they mean is very different among the players. As with the provincial documents, the discourse in the federal documents places the government in the position of power, not only from the perspective of controlling considerable funding for research, but also from the perspective of guidance, authority, and looking after society. This control by governments, and the shift in power regarding who determines educational programs and areas of research, provides an example of resource dependence theory. It is however much more complex as can be seen in a recent example from May 4, 2012, when twenty faculty from visual and performing arts at Keyano College, Alberta, were laid off with little notice. Citing low enrolment and retention rates as the driver for the restructuring, the college noted that it laid faculty off now to allow those impacted to seek alternate employment in time for the fall 2012 semester. Market principles of demand play a key role in the decision, and this is borne out by Kevin Nagel, President and chief executive officer (CEO) of the college, who states that

> When resources are scarce the way they are this year, every decision about delivering one program has implications for not delivering another. So if we left the visual and performing arts (VPA) courses as they were, declining low enrolments would eventually continue to all-time low levels, our theatre and arts related assets would continue to be under-utilized while concurrently, we

> would not be able to deliver the new engineering technology programs or the 4-year business degree program that we are planning to introduce this coming September…We believe that the budget [to be released May 25] is very positive for both Wood Buffalo and Keyano college as it will enable the college, in collaboration with other post-secondary institutions across Alberta, to begin to address the very serious skill shortage that has been identified by the government, region and industry as a threat to Alberta's and our country's economic well-being (Keyano College, 2012, n/p).

Very clearly, the college is focusing on areas driven by government (i.e., addressing skill shortages government has identified), the region and industry, with industry in this case being the oil sands, and targeted towards Canada's economic well-being. We see the impact of corporatisation here with the focus on skills for industry, and with market driven demands – namely engineering and business. In an article in the Edmonton Journal, May 7, 2012, Michelle Boyd, a local blogger and fibre artist and former employee at Keyano, suggested that "the college's decision is part of the larger trend of the province prioritizing trades and industrial programs to accommodate the oil industry" (Yogaretnam, 2012, n/p). Even the rationale behind the short notice speaks to corporatisation – it was done in this way and at this time to allow faculty to seek alternate employment for the fall semester. For the reader this may sound reasonable unless they understand that there is no other post-secondary option for employment in the region and the closest alternative, University of Alberta, is 3.5 hours away. This story also provides evidence of a more corporatised governance rather than a collegial model. There is no information on whether faculty were told of the closure nor given opportunities to

develop solutions; rather the ‘fate’ of the program appeared to be a foregone conclusion in that enrolments would continue to decline to an all time low. There is an added complexity however, with regards to whom holds ‘apparent’ power. Nagel absolves the university administration in some ways by noting: “With respect to decision-making as it relates to program mix, we must remember that it is not the Board of Governors, the President, executive or the faculty that choose what programs will be delivered. It is our students who support programs with their registrations” (Keyano College, 2012, n/p).

Role of research

In their documents, all four universities confirm the importance of research as did study participants. Laura, for example observed that

> the role of the research is to create better informed students and to engage those students in research … The fact is that research’s [role] is also to drive change, and I think that that is one of the bigger elements that we should be looking at. Research should be driving change for the betterment of society and the betterment of people in general. Be it environmental issues, societal issues or even business related issues.

Ingrid suggested that our research has become far more public and can often be tightly tied to discussions around the knowledge economy. In reflecting on this, she identified shifts in the basis of the economic and social wellbeing in Canada as having moved from

> the hewers of wood, and catcher of fishes, and miners of whatever … the recognition in the global economy is that those things are still there, and they’re important. There’s no question that our oil and our gas and uranium

> and so on are important, but now it's about what we are contributing in terms of the knowledge economy.

Perhaps the best summary of the role of research was by Frank who suggested "it gives smart people something to do. It provides a reason for some of the most brilliant minds in the world to be at a particular place, so that they can not only do the research, but be present for the educational purpose of the university as well." Frank also remarked that

> the easy answer is to advance knowledge and discovery, ideally for the public good, but it also has a range of 'capital building' purposes in terms of generating prestige for the university, generating revenue for the university and as a vehicle for collaboration across universities and between the university and communities and other stakeholders.

UVic's *Strategic Plan* (2007) outlines the importance of research and the integration of research with teaching. The plan carves out the critical nature of research, indicating "research, scholarship and creative activity differentiate universities from other educational institutions. The ideas, discoveries and innovations emanating from universities profoundly affect the well-being of society as well as its international competitiveness" (UVic, 2007, p. 30). SFU echoes similar sentiments outlining excellence in research (SFU, 2010) and a goal "to be the most research-intensive comprehensive university in Canada, competing effectively in defined areas with the top tier institutions in the country, and internationally renowned for the excellence of our scholarship" (p. 1). In these statements, both UVic and SFU specifically identify competitiveness as a key part of research. It is not clear why competitiveness is included in this way; however, it may be an attempt by both universities to show their alignment

with the directions of the federal and provincial governments. This was not raised in the interviews. UNBC (n/d b) outlines its commitment to research in its *University Plan 2010*, again focusing on relevance and responsiveness in its region.

The discourse in the interviews and the documents identifies a language of excellence. The universities see themselves as the place where discovery happens and, through the language in the documents, positions the university as containing experts at the 'thought' level as well as containing experts who can then translate those thoughts into innovations that will improve society. It is also, in some ways, a discourse of power and control. The answers to society's problems, contends the universities, are best found through the research undertaken at the university and the university is in the best position to determine what research should be conducted and how. As universities also seek to expand community engagement and partnerships there is a struggle against directives from federal / provincial governments which target research in science and technology and which push for research that can be commercialised. The university also struggles with its traditional image of the ivory tower, and although there has been a significant move towards responsiveness, limited funding from government which focuses on specific targeted areas does not help the university address community needs nor explore pure research. Research with marginalized groups (e.g., First Nations), or on areas of social justice (e.g., poverty, homelessness), for example, is not well funded.

The discourse around research is closely linked to economic impacts and their value to the country. The federal government makes clear that universities are not the only place where research and development happen, rather, government sees innovation as an effort

by the private sector, higher education, and government itself (Government of Canada, 2010).

UBC is currently developing a new research strategy, the draft of which includes the following statements:

> One of the key attributes of research at a university is that it is driven by the researchers themselves, who have complete freedom to choose what they study, within limits imposed by research ethics and the law... Particularly important to a university is research whose principal goal is creativity, discovery or inquiry, without predefined applications. This research, which is conducted almost exclusively at universities, creates the new ideas and understanding that lead to dramatic changes in society, and disruptive new technologies (UBC, 2010, p. 3-5).

If these statements are included in the strategy, UBC will be delivering a very clear statement regarding the importance of unfettered, pure research and academic freedom. Corporatisation emphasises demonstrable impacts and quantifiable measures, not creativity and certainly not research without predefined applications.

Innovation

Innovation is one of the areas most emphasised in the documents and discussed as essential for Canada's economic prosperity. Innovation functions as a powerful term in the discourse of both neoliberalism and corporatisation. Language in government documents points to innovation as essential for our standard of living (Government of Canada, 2009), and it is made clear in the discourse that the 'how' innovation will be

achieved rests with government. From a provincial perspective, the government suggests that there is

> now acknowledgment that a concerted effort to increase the knowledge and skills of BC's labour force will be critical to improving labour productivity, leading to BC's continued economic prosperity. Greater emphasis on knowledge generation, and corresponding investments in research and development and capital, will lead to a culture of innovation that will benefit all British Columbians (Government of BC, 2009a, p. 4).

While this statement would support the universities' view as well, it is the ties to the kind of knowledge, and where investments in research and development will be made that may be at cross purposes. In the Campus 2020 report, Plant (2007) specifies that "it is very important that BC pursue a research and innovation strategy whose success can be measured in terms of commercialisation – such as patents, licence fees and employment" (p. 80). The focus is financial and social innovation is not discussed.

An ambitious plan has been laid out by the federal government that has Canada among the world's innovation leaders. Similar to the Government of BC's perspective, the federal government states (2007) that "Canada must translate knowledge into commercial applications that generate wealth for Canadians and support the quality of life we all want in order to create an Entrepreneurial Advantage" (p. 11). This statement is very directed, connected to neoliberal ideologies, and tied to the market. Again, the discourse focuses on commercial applications that generate wealth. If we take this at face value, applications that change the world for the better (e.g., a model that provides effective 'treatment' for

homeless persons that successfully integrates them back into society) may not count. The statement also assumes that 'the quality of life we all want' is the same across the country. And finally, the statement focuses on the creation of an entrepreneurial advantage; once more, the focus is on the financial bottom line. The plan for innovation is based on a belief that "A well-functioning science, technology and innovation system is built on the foundation of a strong talent pool, excellent research, public and private sector institutions that create value from research and development, strong systemic mechanisms for knowledge transfer and application, and successful commercialisation of innovation within the private sector" (Government of Canada, 2011, p. 1).

In looking at the discourse around the plan, a number of inequities and implications around power are evident. Firstly, the plan focuses on science and technology as the innovation system – it is the *Science and Technology* plan not the *Social Sciences and Humanities* plan. Immediately a hierarchy is put in place that values science and technology disciplines, and by default science and technology programs, over those in the liberal arts, social sciences and humanities. With this focus, we are led to infer that science and technology are superior.

Second, the plan outlines a foundation built on a strong talent pool. Given the focus of the document, this talent pool will be focused on science and technology and we have seen the impact of this in the growth in these programs across Canada. There is however a disconnect; while the government is focused on science and technology programs and to a lesser extent, business programs, the most popular programs at the undergraduate level between 2002 and 2007 were: business and management; liberal arts and sciences;

general studies; and humanities and social sciences. At the masters' level, business, management and public administration; the social and behavioural sciences, and law; and architecture, engineering and related technologies each grew by more than 75 percent from 1992 to 2008. At the doctoral level, in 2008, the most popular areas were in physical and life sciences and technologies areas; social and behavioural sciences, and law; and architecture, engineering and related technologies (AUCC, 2011a). There is clearly a difference between the foci of the government and demands of the marketplace.

Third, the plan's foundation is built on 'excellent research'. Again, the inherent bias is towards science and technology research, and again this has been realized in the growth in funding for NSERC. For example, in 2003-04, the Tri-Agencies funding was as follows: CIHR $727.0 million; SSHRC $242.1 million; NSERC $759.5 million for a total of $1,728.6 million (SSHRC 2004). In 2011-12, total funding was $2,404.2 million with an increase of 38% to CIHR – rising by $282 million for a total of $1,009.8 million (CIHR 2011); an increase of 27% to SSHRC – rising by $64 million for a total of $306 million (SSHRC 2011); and an increase of 43% to NSERC – rising by $328.9 million for a total of $1,088.4 million (NSERC 2011).

In addition however, is the increased push for connection between the university and business / industry. New NSERC programs such as Engage and Interaction require those partnerships. The Canada Foundation for Innovation (CFI) is another example where these connections have been directed. CFI was created to fund research infrastructure in an effort to build Canada's capacity "to undertake world-class research and technology development that benefits Canadians and the global community" (CFI, 2011, p. 3). Ingrid discussed the importance of CFI saying "If there's one thing that has just absolutely been

a social engineering program in Canada for the academic world, it's been the Canada Foundation for Innovation … It has revolutionized what we're doing." CFI funds 40% of a research infrastructure, provincial governments match that, and the remaining 20% is expected to be found, ideally, through industry partnerships. In reality, the 20% is sometimes provided by the university, or made up through discounts on the infrastructure. There have been rumors that, in the future, CFI may not allow equipment discounts as counting towards the 20%, rather a 'real' partnership will be expected.

And finally, the plan's foundation also includes public and private sector institutions that create value from research and development, strong systemic mechanisms for knowledge transfer and application, and successful commercialisation of innovation within the private sector. Along with the emphasis on science and technology, the increased push for commercialisation and integration with business is being felt throughout the university and is discussed more thoroughly later in this chapter.

The government identifies clear drivers of innovation success including "a private sector that has science, technology, and innovation strategies at its core; institutions of education and research that develop, recruit, and retain strong talent pools; and researchers who keep us at the forefront of knowledge and workers who see and act on opportunities to work smarter and more creatively (Government of Canada, 2009, p. 1).

The government (2009) lays out the conditions it believes need to be in place for a healthy innovation system. The government outlines supportive marketplace frameworks as its first condition, specifically policies and practices that create strong, open, competitive domestic markets where ideas can be taken from conception to application. The focus here is on products that have, in the first instance, the potential to be taken up

by the ‘market’. While these may be products that impact health or wellbeing, that is not the priority for development. Furthermore, any focus on a product that may be much more difficult to get to market are not likely to be supported. Secondly, the government outlines the need for engaged citizens, specifically individuals and businesses that demand better quality products and services for themselves and their communities in an effort to drive manufacturers and service providers to become more innovative. This statement is problematic as there is no detail on what ‘more innovative’ means. The demand for better quality does not always lead to more innovation for example. It also confines ‘engagement’ in the context of better products and services. The third condition laid out is highly skilled people who have leading edge research skills and people who know how to put new technology to work. Presumably, this is a role for the university, and while this could be thought of as encouraging, there is no clarification regarding what research skills the government is focused on. Furthermore, the emphasis on people who know how to put new technology to work focuses us on job training, on being able to fit into the market quickly and with as little disruption to productivity as possible. The fifth condition identified is infrastructure, defined as a modern physical and regulatory infrastructure to ensure the free flow of goods, services and ideas. It is telling that while CFI is the vehicle for infrastructure funding for research, this point does not mention research at all other than the point about the free flow of ‘ideas’. Rather, infrastructure is focused on the free flow of goods and on regulatory processes. What we might infer from this is a way to cut through red tape to fast track inventions through patent processes, etc. The discourse outlining a modern physical infrastructure can also be connected to the ideologies of neoliberalism and capitalism specifically around growth and expansion in

the quest for global leadership, power and dominance. The federal government has made clear its desire for Canada to take its place on the international stage. The sixth condition the government outlines is accurate measures of performance, reflected in statistics that better reflect plans, activities, linkages and outcomes of innovation. These statistics are sought in an effort to determine the full impact of innovation on the Canadian economy, and to measure how well we are doing against global competition. There is no indication on what 'full impact' means here and it is interesting to note the focus on global competition and our ability to assess our standing. The discourse throughout the federal documents is very corporatised and linked to neoliberal ideologies. The points / conditions reflect increased control by the government, a focus on accountability and on delivering results, and an emphasis on the monetary return.

The Conference Board of Canada (2011) has also jumped on the innovation bandwagon focusing on commercialisation and economic productivity. Innovation, in their view, involves the creation and diffusion of ideas that become economically viable. What economically viable means is not defined, nor is a timeline – some ideas may take years to become economically viable but there is no detail on how quickly that viability is expected or whether those with longer term potential will be supported. The Conference Board also describes innovation as including the transformation of ideas into value-added products and inventions as well as process innovation. Again, the discourse focuses on financial; there is no mention of innovation that leads to the solution of social problems, such as the alleviation of poverty, child abuse, homelessness, or depression. The implications or recommendations for universities, according to the Conference Board, are

to commercialize to create value, and support innovation in key science and technology areas, which will in turn, support industry innovation and productivity growth.

Within BC there is acknowledgement by the provincial government of the importance of innovation. The universities acknowledge this importance and reflect it in the discourse of their documents. SFU, for example, outlines a commitment to "innovate [and] embrace bold initiatives" (SFU, 2011). In addition, the university points out "not only is SFU research being transferred to the private sector through invention disclosures and the eventual filing of patents, but research is also being commercialised and fostered via business incubators" (SFU, 2011a, n/p). UNBC's documentation suggests that the "new north needs to expand its own capacity for research and innovation" (UNBC, 2009) and notes a commitment to "acting as a catalyst for economic and social development in the region" (UNBC, 2009c, p. 4). Various iterations of UBC's SRP identify goals around leadership in discovery and scholarship that result in scientific, technological, social, cultural and organisational innovation and create innovative ideas and methodologies (UBC, 2006, 2008, 2010). And so, while the universities show their concurrence with the directives from government, they also lay out a larger role beyond the financial focus and which includes social, cultural and environmental considerations.

While many fingers have been pointed at the universities for the lack of commercialisation that has occurred, there is a recognition that there has been a shift in the conversations regarding innovation performance. For example, the province of BC (Government of BC, 2009a) points out that "low business investment in research and development (R&D) is also clearly a barrier to increased productivity in BC" (p. 16). Federally, there are similar views. The government (2011) notes that

> Canadian business has markedly increased the R&D it funds in universities although this is still small ….. less than one tenth of overall R&D spending by business… research and development performed by business in Canada is low by international standards (p. 1).

In fact "as a share of GDP, R&D expenditures in Canada lag behind the G7 average" (Government of Canada, 2011, p. 12) and the country "received a D grade and ranked 13th out of 17 countries in the area of innovation" (p. 5). Gordon commented on this saying that there is the "federal hope that by putting pressure on, we're going to be doing whatever it is faster and better …. [but] recently there's all this talk federally about how low the investment in research on our corporate side is, and suddenly they're the bad guys."

Helen noted that shift as well remarking that

> a number of years ago, there was a feeling that somehow universities were failing. The research effort at universities was failing because Canadian industry wasn't picking up all these wonderful university inventions and making us all more prosperous. ….there's still pressure on universities to do a better job of having relevant research results find application outside the university, and so that level of accountability is there and I don't think that's inappropriate, but I'm sensing a shift in the sort of pressure on universities away from 'you must do stuff that makes us richer'. That's there, and it will always be there, but there's now more of an emphasis on rather than 'why aren't universities doing a better job of pushing their results out into industry?', it's now more of 'why isn't industry picking up on all of this

> research excellence that's going on at the universities?' In other words maybe it's not the university's fault, maybe it's industry's fault.

These pressures around innovation for commercialisation and economic ends versus social innovation are further discussed in chapter seven.

Targeted research funding

In an effort to achieve its plan and vision, the government has increased its control over balance in the type of research conducted through targeted funding. The government makes it clear that its role is to determine opportunities to capitalize on and identify which areas it considers as 'strengths'. In 2007, the federal government outlined its focus on science on technology noting that "Canada's New Government understands how crucial science and technology (S&T) is to building a strong economy that provides good jobs and higher living standards to families and workers" (Government of Canada, 2007). Commitments were made to "enhancing opportunities for S&T graduates; increasing the supply of highly qualified and globally connected S&T graduates that businesses and other organizations need to succeed in today's economy; getting Canadians excited about science and technology" (Government of Canada, 2007, p. 77). It is perhaps this level of control over the direction of research that is of concern. For example, the government notes that the "Minister of Industry will periodically renew research priorities, in consultation with other federal government departments and provincial departments responsible for innovation (Government of Canada, 2007, p. 64). While the government notes its support for basic research, it is focused on that research "across a broad spectrum of science" (p. 11). Furthermore, the government also puts forward the notion of targeted areas stating that "to enhance our success, we will also be more focused and

strategic – targeting more basic and applied research in areas of strength and opportunity" (Government of Canada, 2007, p. 11). Alex suggested that, assuming society continues to say that university research is important, he felt we would continue to see that shift in the balance between "curiosity driven investigator initiated research and targeted goal mission oriented research. I think at the moment we talk about an 80/20 split with curiosity driven research at 80% and 20% targeted. I think that balance is going to change. I could see it being much more like 50/50 in the next 10 years." Frank noted a similar view in that he expected "our times will require it [focus on problem based research], because we face problems on a scale that we've never faced before. And universities I think have their niche, in a way, in being a place of hope for solving problems, and that the public will want to turn to universities for that help." Interestingly Peter took the opposite view, but for the same reasons suggesting

> I think we're going to see a pendulum swing away from the myopic business model and a swing away from targeted research funding. The evidence is just too strong now that the critical issues we're dealing with in the world today were not on anyone's horizon a few years ago, and the only way we could cope is that in some dark office, inside some mysterious universities, they were actually learning about this topic and thank God they did because now it's the most important thing on our agenda. So I think there will be a retrenchment away from the targeted funding and business model type of approach back to more free inquiry.

As part of the science and technology strategy, the federal government identified: 1) environment; 2) natural resources and energy; 3) health and life sciences; and 4)

information and communications technologies (ICT) (Government of Canada, 2007, 2009, 2011) as areas of priority. Each university also has targeted priorities or theme areas for research – these are required as part of strategic research plans in order to be eligible for funding through the CFI and the CRC programs. Along with specific areas, the universities make clear that they will be opportunistic and seek funding and partnerships where future potential exists. During the interviews, participants focused on how the increase in targeted funding was impacting the university, the balance between the disciplines, and whether and how it was changing research being conducted. I believed that this would be an area of great concern for the participants from the perspective of control and academic freedom. What I found however, was that in spite of the discourse and the level of control and direction in terms of targeted funding, ways were found to conduct research that faculty wanted to conduct. Evelyn suggested

> It impacts research of course, but we always had targeted funding. The balance is always changing a bit. … And so the balance between basic and applied, it always has to be there, whether it's 50/50 [split] or whatever … It is, I think, absolutely acceptable and right actually for governments to put their own stamps and their own priorities onto some targeted funding, as long as they don't stifle free research.

Laura pointed out that "over twenty years we've all kind of shaped our research. … we would shape our research so we could qualify for Canadian Institutes of Health Research (CIHR) or Medical Research Council (MRC) funding." Her concerns focused more on the fact that there was less general 'unfettered' money available for curiosity driven research. Peter identified similar concerns suggesting that "it becomes very problematic

for inquiry driven research to cope. When the other funding pots are proportionately declining, the emphasis for support within their own academic institutions is more focused on these revenue generating targeted funding calls, and it makes inquiry driven research more challenging." Tim indicated that

> a certain portion of our researchers will follow the money, and that's also always been the case. …if you talk to the researchers, what you will find is …they figure out how to spin it so that they can get some of that money. If their interest is globalisation and this year there's a lot of money, or this decade there's a lot of money in health, then they'll figure out a way to do that. If it's the economy they'll figure out a way to do it in terms of the economy.

Gordon approached it a bit more cynically stating that

> researchers are, we're complete prostitutes, and we'll do anything for money, and we go after what's there. You only have to come into a room with a brown paper bag of money and jingle it, and everybody in the room's your best friend and will do whatever you want, and 'of course I've always done it that way and I'll continue to do it that way for as long as we both shall live, just give me the dough.' Most of us can't do research without some kind of funding.

Clearly, in spite of the control by government, participants believe that faculty are conducting research they want to conduct. The interviews also reveal that while there are some shifts between basic and applied research, it is not yet an area of real concern.

Helen commented on this view noting that

> There's been a fear expressed, and I'm not sure how real it is, that there's been a shift from so called basic or fundamental research to so called applied research. I'm not completely convinced that that's the case, and if it is I'm not completely convinced that it's a bad thing. … Researchers if they want more and more money to do research, they're going to end up, of necessity, exhausting money available for so called fundamental research, and they'll have to do some applied research. I mean eventually the amount of money for any type of research activity is limited. Nobody tells them they have to do that applied research, they just choose to do it because they would like even more money for their research efforts.

The wider implications of targeted funding are further discussed in chapter seven.

Commercialisation

Over the past ten to twelve years, the commercialisation of research, which is also tied to corporatisation (i.e., through the focus on the financial bottom line, return on investment, and demands for impacts), has become a prominent part of discussions regarding knowledge transfer, knowledge mobilization and research impacts and outcomes – again, evidence of corporatisation is reflected through the discourse. James felt that there is "a perception out there from the public that money that's input into research should be turned into a tangible commercial benefit. I think you see that with elected officials a lot." Alex noted that those pressures for commercialisation have been 'huge'. With regard to traditional commercialisation activities, universities have systems in place for tracking patents, spin-off companies and so forth. In fact, universities have put considerable resources into university-industry liaison offices (UILOs), which

support technology transfer, research partnerships and commercialisation, industry engagement, knowledge mobilization and entrepreneurship. UBC, SFU and UVic also have business incubators to help launch spin-off companies and new business ventures. There is, as shown in the discourse, a continued push for commercialisation, as well as for entrepreneurship and business skills. It is telling that the discourse is focused on commercialisation rather than knowledge transfer (KT) or knowledge mobilization (KM). Commercialisation implies financial outcomes, whereas KT / KM are broader concepts. The Universities President Council (2006) notes that

> the concepts of commercialisation of university research and 'knowledge and transfer' must be broadly understood. For example, knowledge transfer often involves the communication of new ideas of findings to practitioners. Most medical research, for example, does not result in patentable drugs or commercial therapies. But it constantly provides information, insight and analysis that helps family physicians detect and better treat common illnesses (p. 15).

Alex outlined what he felt were three phases of this agenda. The first phase, in his opinion, was from about 1995 through the early 2000s when the "focus was definitely on ROI [Return on Investment] [and] technology transfer, demonstrated number of spin-off companies, royalties and licensing revenue. …And that turned out to be, not the wrong measure, but only one measure of several measures that needed to be in place … I think that that metric failed us." In fact, as he pointed out, "if you look at that [tech transfer, spin-off companies, royalties and licensing revenue] as a pure measure of return on investment it gives you a number of around 1% return on investment and nobody with

half a brain would give you a dollar knowing that in a year's time that you were going to give them back a dollar and one cent. I mean it just doesn't make sense." Ingrid noted similar views suggesting that there was a feeling that "UILO's [University Industry Liaison Offices] were there to provide basic services which were to help faculty members get patents and the model was we're going to protect all our intellectual property and try to flog it and get rich. We want faculty to get rich and we want the university to get rich, well, that didn't go so well." The second phase that Alex pointed to started around 2005 and expanded the "pure tech transfer, spin-off companies, and capturing IP … to be broader." This second phase focussed more on industry partnerships and on turning ideas into products through those partnerships. Again, the discourse in the documents and the interviews reinforces this increased connection with industry partners, not just in the science and technology areas, though that is the most common, but also in the social sciences and humanities through partnership grants. Ingrid similarly noted "it's really about the engagement with government and engagement with industry to bring the expertise we have in our students and in our faculty to assist with whatever those issues are." Alex also commented on a third phase, which he believed we have just begun to focus on and which recognizes "the number of bright young minds that we generate. And what we need to do is an analysis of where our bright young minds go and how they fuel our brightest companies and what that means in terms of economic development." Only too often the HQP [Highly Qualified Personnel] of research projects, and of our educational programs, are nothing more than a number in a report. Alex provided an example of the importance of HQP noting that he knew of a company that had located next door to a research university in Canada. In discussions with the Chief Executive

Officer (CEO), Alex enquired about the amount of intellectual property the company had licenced as a result of being located beside the university. The CEO responded that they hadn't licensed a single piece of technology, but what they did have was what he referred to as "a couple hundred of the smartest people around and many of those came from the university." The CEO relayed that it was the bright young minds, not the technology, that was the "treasure" for the organisation.

Participants also pointed out the difficulty in measuring the non-technology aspects of technology transfer. As Alex stated, "how the heck do you evaluate what that's worth to society? It's very difficult. What's it worth when a public policy has been influenced by research…that means the roads are safer or society is fitter, that is the piece that's still missing."

Commercialisation continues to focus on financial and economic ends and it is difficult to predict how this will evolve. Business incubators continue to spring up on university campuses, commercialisation plans continue to be part of grants, and business and industry partners are looking for the biggest return on their investment. As science and technology areas gain prominence, social sciences and humanities are marginalized. We see results of this in discourse from the Social Sciences and Humanities Research Council (SSHRC) as the Agency increases attempts to show its value to society and connection to innovation. In 2004 for example, SSHRC undertook a full review and looked at rebranding itself moving *From Granting Council to Knowledge Council*. In its report, it noted the importance and value of humanities and social science research stating

- Humanities and social science research contributes in vital ways to wealth creation, forward-looking institutions, civic engagement, sustainability and geopolitical balance.
- Human sciences knowledge is fundamental to creativity, innovation and to developing the skills of the next generation of Canadians—as workers, citizens and leaders, as people who can think critically, communicate effectively, synthesize complex information, and who have the flexibility to adapt to change and implement new ideas.
- The social sciences and humanities provide the missing link between a technologically advanced society and a successful one. (SSHRC, 2007, p. 2).

Five years later, in its annual report *Research for Real Life 2009-10* we see a distinct change in the discourse with much stronger statements regarding the contribution of social sciences and humanities research in the business context. For example, SSHRC "helps move new research knowledge into society, where it is used by businesses, government and communities to address the most pressing issues of our day" (SSHRC, 2010, p. 10). It goes on further to make links between SSH research and economic benefits and quality of life. In 2011, in its *Framing our Direction 2010-12* report, the discourse continues to shift with the report outlining

> Research and training in the social sciences and humanities provide the foundation for a vibrant, healthy and prosperous society. Such research builds knowledge about individuals, groups and societies, past and present – what we think, how we live and how we interact with each other and the world

> around us. In turn, this knowledge fosters understanding about how communities, businesses and governments can develop innovative solutions to critical social, cultural, economic, technological and environmental issues. It also underpins the development of the highly qualified workforce and engaged citizenry Canada needs to succeed in the 21st century (p. 10).

The language is tied as closely as possible to the discourse of innovation and while innovation can be considered from a variety of perspectives, the focus by government, business and industry, tends to be narrow and directed towards commercial innovation. This polarization is discussed in more detail in chapter seven. Within SSHRC's focus, while there is still an emphasis on people, the report talks about a prosperous society, about developing innovative solutions to critical issues (e.g., economic, technological and environmental), and focuses on training a highly qualified workforce. Past emphasis on community engagement and involvement has also shifted under the new partnership grants program. The program continues to be built around partnerships. However, in the past, 'partnerships' focused primarily on community groups / organisations. In the new architecture, 'partnerships' also include business and industry and there is a requirement for 35% funding from the partners (cash or in-kind) for the partnership grants. Alex identified concerns with this commenting that

> if you look at the new SSHRC partnership opportunities there definitely is a need to get matching funding. They say in-kind counts, but there definitely is the sense that you need some cash. So what I worry about is that there's lots of important research that's needed to be done on a community basis. We all know that certain parts of that community can provide matching funding and

> other parts can't. And I'm worried that this new organisation, this new program of partnership research in the SSRHC area, is going to drive towards the areas that do have matching funding available and away from the areas that don't have matching funding.

Role of service / community engagement

The concept of 'service' is an area that has seen a shift in recent years. Robert, Tim and Ian all noted this shift. Twenty years ago, service was more commonly thought of as serving on internal committees, administrative duties, serving on peer review committees and editorial boards of various journals, and maybe giving an occasional speech to a community, school group, or organisation. Ian, for example, suggested that service has been interpreted as "sitting on committees at the university, and I think that's all well and good, we're self-governing institutions and so your responsibility is to participate in that, but I think what has become increasingly important …. [is] the idea of service to society in the broader sense." The expansion of service to include a focus on community engagement and involvement has been a step forward for universities.

While documents such as the provincial *Service Plan Report 2008/09* (2008) note collaboration with communities and other interest groups, it is in the context of supporting economic growth and sustainability. Federally, while 'communities' are included as stakeholders in documentation from the CFI (2011), again the emphasis is in relation to developing or improving new products and services that meet the needs of business. There is little mention of any social aspect with regard to communities by either level of government with the exception of specific references to the gap in aboriginal learning and participation in the economy. It is telling to note the discourse is one of

participation in the economy, not participation in society. Once again, the focus is on the bottom line, on financial outputs and financial impacts.

University documents, on the other hand, show a strong commitment to community engagement. UVic (2007) acknowledges the importance of engaging with community interests and outlines the goal "to establish UVic as a recognized cornerstone of the community, committed to the sustainable social, cultural and economic development of our region and our nation" (p. 35). UVic has an office of community-based research which "supports research, promotes community partnerships, organises public education events, and facilitates projects related to important social issues such as food security, homelessness and housing, climate change and sustainability, community mapping, and Aboriginal health" (UVic, 2011, p. 42). Community engagement is listed in the current UBC Plan (*Place and Promise)* as one of the nine commitments to creating an exceptional learning environment. SFU (2009) also notes its commitment to engagement in and with communities citing its intent to build on active and responsive partnerships, and its campus in Surrey is an example of a step towards this engagement. SFU notes challenges around identifying and measuring impacts of community engagement, in particular the social impacts, and these difficulties hinder each of the universities in being able to show the importance and progress of that engagement. UNBC has been able to do things a bit differently from the other three. It is a young university in comparison, established in 1990. Community engagement has been paramount since the university's establishment and this is seen in the *University Plan 2010* (n/d b) which talks about relevance to the region, includes a focus on projects with northern communities and First Nations, and emphasizes creating knowledge and applying it to the needs of its

communities. While these needs may include economic needs, they are not the only need, or identified as a priority, rather the view is broader and includes well-being, health, sustainability, and society in general. This priority for engagement with the community was also clearly conveyed in the interviews. Interestingly, within its previous *Strategic Research Plan*, UNBC (n/d i) noted that one of the ways it would evaluate success was in terms of community engagement, although no measures / metrics were provided. In its current *Strategic Research Plan 2010-2015* (n/d d) however, there has been a shift in terminology and a focus on relationships with the region's communities, businesses, industrial partners, governmental and non-governmental agencies. The measure related to community engagement is no longer included.

Interviews confirmed the importance of community engagement, with both Tim and Oscar seeing this as part of the accountability picture. Both noted that as universities receive public funding, there should be some attempt towards addressing questions and issues that are of interest to the public. While there was acknowledgement that community engagement had changed for the better, a number of individuals felt that we were still not as effective as we could be. One participant suggested that we are "missing the mark as the university struggles with its traditional role and its desire to be socially responsive." Peter noted that universities have had a "disastrous set of attempts to try to move beyond their walls to engage the community. They're not equipped for this, they don't create structures for this, they haven't made fiscal and time commitments for this. … it demands time towards building a relationship and a set of relationships." Oscar reflected that

> part of the reason why I would say most community based research doesn't work very well [pause]…what I observed [in a project] … is that it started out really trying to get community groups involved and gradually the academics took control of that program and made it tighter and tighter and more and more rigid … the academics essentially strangled that program and it died soon after that.

These examples speak to a one-way transmission of knowledge and expertise and are indicative of a historical culture that dates back to a colonial mentality. UBC (2010) acknowledges this, pointing to the example of the historical practice of research 'on' aboriginal communities rather than 'with' aboriginal communities. As the university struggles to change that deeply ingrained culture, Oscar commented that the "skeptic in me would say it's hopeless. Some days I would say the institution has such long-standing traditions, there's so much hubris there. Now that mandatory retirement has been done away with people are hanging on forever, people who are tired and bored and really shouldn't be there."

As the university becomes more involved with communities, two-way knowledge exchange becomes increasingly important. Helen commented that shifts are happening, and there is a "recognition that there needs to be a partnership, so in areas like mental health and addictions research it's becoming impossible to move forward without dealing with patients. In other words patients aren't just subjects of a research investigation they're actually participants." During the interview process, participants considered ideas regarding how community engagement could be more effective. Helen suggested that research could be approached differently and rather than starting with a problem and then

looking to find "somebody outside the university who is interested in my point of view, more interesting would be I'm a researcher, I don't really understand what the needs are outside the university so I'm going to go and talk to people, see what they would like me to study, and then look for an overlap between my interests and their needs". Robert and Kelly both suggested an expanded role for the university serving as a convening body to help communities realize their plans. Using the example of homelessness, Kelly noted that

> There are organizations that really want to solve the problem … but the deeper you get into that question of why people are on the streets, it can lead in number of different ways. There's the direct absence of homes … but then there's the reasons why people don't choose to be in those situations and that gets into social questions. And there's some quite basic research around mental health that you get into … if you do some research with the community and come up with those answers then some of that may translate into policy.

Oscar took this a step further arguing that there also needs to be the realisation that "in order to address the social, economic, environmental issues the world is facing, we actually need a combination of the academic knowledge and understanding, and public knowledge and understanding or community knowledge and understanding."

Clearly, corporatisation is impacting research and its role in the university and in turn, impacting the wider society.

This chapter showed that while the traditional pillars of universities – research, education, and service – remain intact, they are increasingly being interpreted in different

ways by various stakeholders including provincial governments, federal governments, funders, business and industry, and communities. Balance and negotiation between the various interpretations is critical for the university as it seeks to confirm and implement what it sees as its role in society – that of citizen preparation, a wide variety of research that includes 'lone' researchers and teams, basic / pure research and targeted / applied research, and a full variety of disciplinary and inter- and trans- disciplinary research, and connection with and to communities. These 'communities' include business, industry, public sector, NGOs, First Nations, service groups, etc. The chapter outlined the differences between the role as outlined by the universities, and between directives from the provincial and federal government. From a government perspective, there is increasing focus on job-related training, and on preparing people to fit quickly into the world of work; in essence, focused education tied to job-preparation and controlled and directed by the government. Professional programs, especially those related to science and technology continue to experience strong growth and demand, but are also areas where governments have targeted significant funding, both for student enrolments and for research. Research is strongly supported, by the university and by governments, however, once again, that support is increasingly directed toward research with demonstrable impacts, that results in products that can be commercialised and put into the market, and is focused on science and technology.

Chapter five: Findings II – Corporatisation and business models, governance, and return on investment

This chapter considers the following aspects of corporatisation: a) accountability and the adoption of business methods, models, and principles; b) return on investment (ROI), impacts, and measures; and c) governance and business models.

Accountability and the adoption of business norms, models and principles

In any organisation, norms, models and principles define power and control, formal and informal networks, communication, organisational culture, and hierarchy. These are part of institutional / organisational theory as outlined in chapter two. Universities are no different and as business norms, models and principles are increasingly adopted as part of the exercise of corporatisation, the direction the university takes, the programs offered, how resources are allocated, and who gets hired are all shifting. Power and control impact how the institution is organised, models of management that are adopted, and levels of autonomy.

Participants suggested that there had been an increase in business language and jargon throughout the university; in fact, one participant (Gordon) observed that he didn't even really notice it any more, it was just part of the culture. The use of business language during the interviews was also evident. Evelyn, for example, discussed education as a 'product' that we deliver and Tim spoke of selling ourselves and the need to market what we do. These comments and discourse can be understood in terms of the theories around commodification and corporatisation (Leys, 2001), as outlined in chapter two. Tim's comments regarding marketing and selling ourselves relate to Leys' (2001) second factor

of commodification, that the public must be convinced to want to buy the good or service. The marketing discourse was prevalent in the documents from universities, provincial and federal governments, as well as in documents from other organizations. Reports, publications, and websites attempt to show the university in the best way possible. One way that this is done is through the discourse regarding stature and rankings. If you are ranked first or second by *Macleans,* then it must mean quality is higher than for those ranked lower and we are left with impressions of success and quality. A student trying to determine which university to attend would, of course, want to try to get accepted at one of the top ranked universities. If Re$earch Infosource shows the university as having the most patents and spin-off companies per faculty member, then it must mean that research entrepreneurship is supported more than at other universities and if you are a faculty member looking at a position you would pay attention to these statistics. If student feedback shows a 95% satisfactory rate, then it must mean that students are putting their education to good use – i.e., it has helped them get a 'good' or 'better' job, and the education must have been superior to others (these rankings are discussed in further detail later in this chapter).

The discourse however, is misleading and does not show the full picture. Only those areas that can be tied to numbers are included and therefore we equate a higher number as being a 'better' choice. As a society, we have bought into the rhetoric around statistics. We want to see who ranks first and who is last. We want to compare numbers in order to judge where to send our children or where to work. The discourse of neoliberalism supports and celebrates competition, and decision making is encouraged based on the

results of that competition. The language and numbers are meant to influence the reader to want the 'best' in terms of education.

It is worth noting that there was an acknowledgement in the interviews that some shifts connected to the adoption of business norms, models and principles have been beneficial to the university. Peter pointed out that "If the question is 'do universities have to be fiscally responsible', no one in their right mind would say no. If the question is 'do universities have to be responsible in their management of human resources, of physical infrastructure and plan for the wise use and wise renewal of all those', again no one would quibble with that." Gordon disclosed a similar view stating that the university

> runs pretty well now and it is very business-like … It's unconscionable to think it wouldn't run like a business really. You kind of wonder in the old days how we got away with it, these hundreds of millions of public dollars being run by a bunch of academics who could barely add up their cheque book.

Oscar remarked that there were aspects that he felt should be more accepted in the university, for example

> the whole entrepreneurial spirit of continually asking how can I do this better, faster, with more impact. That attitude should be much more pervasive in the university than it is. It's not that different from the same kind of attitude that spurs genuine scientific curiosity and creativity. It's curious to me that there's so much resistance in the academy to the notion of corporatisation and there's resistance to strategic planning.

This quote in particular raises questions of why there is such a disconnect and whether part of the reason is as a result of the discourse being used. It is possible that the language of entrepreneurism is off putting for some faculty in the social sciences and humanities. If the ideas were framed similarly to the language of curiosity, research, and discovery, they may be more accepted. And while it is not that simple, obviously, discourse definitely impacts the acceptance or rejection of an ideology.

There were concerns raised regarding the rationale behind the application of business models. Peter, in particular, said that he thought "the application of more business style models has been a façade for something more insidious. And that's for a desire to either control or limit the impact of universities or to evade responsibility by senior governments to properly fund them." Tim also commented that the university had become more business-like, however, not as a result of government control, but rather as a natural outgrowth of size noting that

> when we were a much smaller institution we didn't require much bureaucracy because we all knew each other and we were all in regular contact with each other and we could work things out. And when you get to a certain size … you need more infrastructure, you need more bureaucracy, you need more people running offices and you need more forms and all that kind of thing.

Increased bureaucracy can be seen as an aspect of corporatisation for the university as part of the demands for accountability and for the adoption of business models, practices and processes from the private sector. An outcome of growth and the adoption of standard processes, bureaucracy is often intended as a way to increase efficiency – standardisation should mean less questions and effort, and should ensure fair and

equitable treatment for those either within the system, or those dealing with the system from the outside. While the discourse related to bureaucracy adds a layer of formality to the university and outlines rules for various processes, it doesn't necessarily impact issues of power, inequality or the commodification of education and research. In their university plan for 2010, UNBC (n/d b) outlines the importance of being transparent in the operations of the university. Similarly, UBC (2009a) suggests a responsibility to be accountable to the society that supports them. SFU (2009, 2011a) and UVic (2007, 2011b) also make concrete statements regarding their commitment towards public and internal accountability. Evelyn felt that "accountability is one thing that is everywhere in post-secondary education, and I would say rightly so. We are asked to justify what we are doing and accountability is something academics are not used to but better get used to, because we use public money and we are accountable to this."

In terms of the documentation of the universities, the discourse of business is commonplace – terms such as competitive edge, maximize benefits, measure performance, selective investment, optimize use of resources, integrated planning, risk management, and mitigation strategies are found throughout the documents. Outside of the universities, federal and provincial governments also use business terminology – e.g., balanced budgets, efficiency, results based accountability, outcomes based indicators, competitive marketplace, competitive and dynamic business environment. This discourse leads the reader to view the university as a business, and to discern education and research as products of the university, once again, a direct link to commodification. Accepting the discourse of the university as a business shifts our expectations for how the university is run, as well as how it is funded and we question the salaries of professors

and the ‘perks’ that a president or vice president receives. Society questions rising tuition, student debt, and how tax dollars are being spent. The discourse of business also allows a sense of hierarchy that impacts power and governance of the university.

Return on investment, impacts, and measures

Business models, ideologies and principles continue to gain prominence not only in the university but in the public sector in general. Governments are called on to provide greater accountability and transparency and, in turn, they demand it of the organisations that receive public funds. In universities these pressures are evident particularly in regard to research. As outlined, universities have felt increased pressures to commercialise the outputs of research, show value and return on investment, demonstrate the impacts of research, and provide clear quantifiable measures and metrics. Requirements related to ethics and other regulatory bodies have increased as have financial monitoring and reporting requirements. Kelly commented on the increase in administration stating that “We’ve got more accountability and feedback requirements for being given money. People hark back to the day when you were just given money and you could do what you wanted to do and you take it a little bit with a grain of salt, there was always some element of reporting but now it’s hugely increased.”

It was clear through the research that this discourse is firmly rooted in the culture of the university. Most participants were former academics, many of whom continue to conduct research and publish. Even though they acknowledged that faculty and staff workloads had increased, the view from participants echoed Oscar’s:

> people are saying ‘What is the return on investment? What are we getting from the millions of dollars we’re putting into academic research? Where’s

> the benefit to society?' … academics should be accountable to the funding bodies and they should be orienting their research towards questions and issues that will have payoffs for the public.

Similarly, Laura mentioned that "all institutions, all granting agencies, all undergraduate and graduate programs are moving much more into being much more accountable both for the money but also for the type of education they're delivering. In other words, are you achieving the goals?"

Those pressures to show value have resulted in growth in the demand for demonstrable impact, outcomes, and return on investment and how the culture of the university is changing to accept this as normal. Responsiveness is common in the language as is the translation and transfer of knowledge. Underlying this discourse however are questions of what responsiveness means as well as questions around responsiveness to whom. When you tie the discourse of responsiveness to the discourse of corporatisation and consider resource dependence theory, does it mean that those that bring resources (e.g., business and industry) get 'responded' to? Or do projects that potentially impact prestige and reputation rank higher than those that have a lower impact? Are projects that have ties to industry and that bring in considerable resources more likely to be supported than a project with a community with few resources? And finally, who makes the decision to respond and under what criteria?

Pressures for measures and metrics are evident through documents from universities and governments. Each of the universities outlines that it will gather research outputs using a variety of metrics (SFU, n/d b; UNBC, n/d d; UVic 2011a; UBC, 2009a). The documents also outline participation in surveys such as the Times Higher Education

World University rankings, *Maclean's*, *Globe and Mail*, Canadian University Survey Consortium, National Survey of Student Engagement (NSSE), and the Canadian Graduate Professional Student Surveys. The discourse around measures is extensive and reflects corporate and neoliberal discourse. It sets a culture in place that includes competition, rankings, marketing and 'winners' and 'losers'. Tim commented that we have the NSSE rankings and while funding isn't dependent upon the scores, "we do that [take part in the survey], because we want to compete…We do it because it's good for us for our own development. We need to know how we're doing and we want to do better, and it helps us in a competitive market place." From his perspective, competition is healthy and beneficial for the university. Depending on where you rank, your value is judged accordingly by the public, students and prospective students, funders, and government.

The federal government (2007) also focuses on measures and outcomes laying out a series of indicators to assess innovation in three areas as part of the S&T strategy: 1) business innovation; 2) knowledge development and transfer; and 3) talent (Government of Canada, 2007). More recently, in the *State of the Nation 2010* (2011) report, indicators are listed again, but refined and revised. The three areas are still the same, however, the specific indicators now attempt to measure innovation in business strategy through R&D, in the rise of service industries, and through venture capital. Language also focuses on identifying measures related to college and university graduation rates, science and engineering education focussed on growth and prosperity, information and communication technology (ICT) skills, enrolment and graduation in science based doctoral programs, unemployment rates of doctorate holders, returns on obtaining post-

secondary education, education as a lifelong pursuit, human resources in science and technology, business researchers, and making use of highly skilled people to improve productivity growth (Government of Canada, 2011).

Each of the universities track various metrics converting them into statistics. This discourse, which is focused on numbers – dollars and success rates – is used by governments and universities to show value, and considerable time and effort is spent to collect and showcase the results. These statistics form part of the marketing discourse for universities and include their specific ranking in the various surveys (*Maclean's*, Times Higher Education, and Shanghai); the economic impact of the university for the community and beyond; and the success of faculty in research competitions. The statistics are used by the university to convey quality of both education and research. Whether they do or not is debatable. What the statistics do is provide is a level of comparison and the general public, students and prospective students, funders, faculty and prospective faculty, and governments pay attention to the numbers. Statistics also abound with the federal government reports (Government of Canada, 2007).

These statistics contribute to the discourse of corporatisation. Statistical measures can be standardized and show changes and comparisons over time. As identified previously however, underlying this discourse are inferences of the quality of both education and research based solely on the statistics – measures that are suited to private sector business focused on a bottom line but not necessarily suited to the university. The acceptance of these statistics as credible measures reinforces the view of the university as just another business and supports the idea that the statistics provide sufficient information to make decisions about what institution to attend, what program to consider, and what the likely

return on the education will be (e.g., job and salary prospects). All four universities make it very clear in their documentation that these types of 'countable' measures are not sufficient to show impact. These other impacts, which are not easily measured and are a push back against the discourse of corporatisation, include social impacts, the effects from community engagement, and the development of a sustainable economy and community (SFU, 2011a). This sentiment was echoed in the interviews with Peter cautioning that "measures are highly problematic in the social sciences. If you're going to have a contribution into society where there is social change that will arise from it, that can take years if not decades to work its way through. Research into a whole host of social issues will be long in their development and gestation in society." This point illustrates the issues around 'time' in relation to research; the pressures for quick wins and short turn around times from funders and government with the reality that much research may take a considerable length of time before results can be attributed or determined.

Alternative measures

Universities are also looking beyond traditional bibliometrics (SFU, 2011a; UNBC, n/d c), acknowledging that the current measures are not adequate. Whether these new measures will have the ability to show a different type of impact, e.g., social impacts, wellbeing, etc., or whether they will simply be better measures for measuring commercialisation, accountability, etc., is uncertain. SFU, for example, has suggested that it will demonstrate "how university research and knowledge creation are commercialised and employed by the private sector through knowledge spillover, publication output, and development of start-up companies" (SFU, 2011a, p. iii), a clear nod to the corporatised

demand for ROI. In the interviews, however, participants suggested other possibilities for alternative measures and metrics. For example, Peter talked about a

> happy broadening of the venues that are recognized as acceptable for scholarly output. It's not that long ago that many disciplines were buttoned down, not just to peer reviewed journals, but even to a select set of peer reviewed journals that were countenanced as being the leading ones and if you didn't publish there, you weren't getting tenure and you weren't getting promotion.

In reflecting on those venues, he pointed to examples such as

> making scholarship available to lay audiences over the internet, or in magazine and newspaper styles, in report forms to communities, live presentations with community groups and members of the public, industry groups, active dialogues if not specific policy papers with policy audiences, decision making audiences …We have contributions that are now recognized for people who communicate through art and literature, performance and other things, to try to communicate critical learnings and issues in social sciences.

This may in fact be an unintended consequence of corporatisation. In the push to look at the value and impact of research as well as ways to communicate results, the general public, governments, and funders have a much better picture of why research is important and what the discoveries have been. Ingrid reflected on the increased pressures to identify and quantify impacts noting that she thought "all the granting agencies now have added the knowledge transfer, the benefits to Canada, and have said in one way or another they

want to know about that, because they need to demonstrate that to the federal government, or industry Canada."

An alternative discourse around measures is clearly needed. Evelyn commented on this pointing out that what

> is more difficult to measure is what the benefit to society is. One has to always keep in mind that a major function of universities is the creation of new knowledge and the translation of completely new knowledge into society takes longer than the life span of the average politician. And so you can't really expect that within four years or so you'll get a start-up company or a new product or a patent or who knows what out of this or a government policy coming out of the research which changes everything. It may take ten or twenty years and sometimes of course, it doesn't lead to anything - that's the nature of research.

Helen outlined a similar view suggesting "outcomes can be in terms of simply advancing knowledge. I think that you have to be prepared to justify why anybody should care about advancing knowledge in a given field. You have to be prepared to demonstrate that you are actually advancing knowledge and not just claiming to." A discourse that goes beyond numbers, considers value beyond dollars, and provides details on advancing knowledge would allow the reader to draw his/her own conclusions regarding quality and impact. Rather than the funder (e.g., government) telling the public how to interpret the numbers, an alternative discourse would shift that valorization and place it in a different context.

All participants indicated that they felt that the pressures for accountability, return on investment, and impacts would continue, and in fact, some participants felt that the demands would actually increase. For example, Alex explained that he thought "our business will be much more focused on metrics … We're going to be more accountable, we're going to have to demonstrate value." Peter expressed a similar view suggesting that there will be "increasing calls in society for … overt contribution to society. … I think we've only just begun to understand what community based research means. Hardly anyone does it well. I think we're only just beginning to understand what knowledge mobilization means and how far more complicated and nuanced it is than the ridiculous generation and receptor capacity construction that we're focused on today. I think that there will also be some growth and efforts in the plurality of ways by which we mobilize information. I'm not talking about … moving from Internet to tweeting information, but rather how we just completely conceptualize information in a global economy where information is the commodity and circuits of cumulative knowledge contributions occur so rapidly."

Governance and business models

At the level of governance and management in the university, a number of tensions related to corporatisation and the shift of the university to a more 'business' focus can be found. As with most universities, each of the four in this study have a Board of Governors, made up mostly from the citizenry, which is responsible primarily for the financial oversight of the university. Each university also has a Senate, which oversees the academic functioning of the organization. Faculty themselves are seen as an offshoot of the Senate as their role is part of that academic component. One of the participants,

Frank, suggested that increasingly he has seen the role of the Senate as ceremonial rather than governance. He commented on a third group within the organization with a growing amount of power – that of 'professionals' remarking that he had witnessed a "stronger, rising influence in the power of administrative people within the university. That, I do see. The transition from academic governance to administrative governance."

Matthew also commented on the overall structure of universities noting that they are "odd in the sense that its administration comes from within. And so you have a full professor running the show, then after five years, or ten years, they change." In comparison, he pointed out that a VP research in industry doesn't have the same type of 'term' – in industry those positions don't automatically change every five to ten years." In fact, he felt that trying to put that model "into that academic world that changes so much is very, very hard. … You just can't put an industrial model within the university structure." While VPAs, VPRs, and presidents are still, for the most part, coming from the academic ranks, the study showed that this idea is an area that is changing within the university. James suggested that

> the whole idea of an English professor that rises through chair, dean, AVP, VP and eventually president, those days I think are gone, unless that person has exceptional business and fundraising skills. The demands on a president now, particularly a research university president are huge. You're basically first and foremost a fundraiser and you're the public face of the institution.

It is now common for the position of VP finance/chief financial officer to be filled by someone from outside of the post-secondary system, either from the public or private sector, and is someone with a professional designation (CA, CMA, etc.). The idea of a

professor of accounting or economics rising to take that role was thought to be long passé. Some participants felt that the next 'role' that will shift out of academia is that of advancement, alumni affairs, and fundraising, given the increasing need to diversify funding.

A number of participants acknowledged that universities have experienced fiscal constraints, or what Newson (1994, 1998) referred to as 'budgetary rationalization' for the past forty years, and that the push to operate as a business have been evident since that time. While additional funding has been provided, particularly for research through programs like CFI, CRC, etc., business models or the expectation to adopt business models have been embedded as part of those programs. Both CFI and CRC require institutions to have strategic research plans for example, and chairs or infrastructure funding must be tied to those strategic plans.

Using the discourse of business results in us considering the university like any other business in society and we hold it to the same standards as private sector businesses – we expect it to balance its books, to see a return for our tax dollars, and we expect tangible 'deliverables'. We don't see it as the government's fault if the university has a deficit. The assumption is that the university isn't managing its resources properly, not that government isn't funding it adequately. Alex commented that while business models and principles have been adopted, he felt that universities are still not run like corporations nor can they be.

> … in some ways we are becoming more corporatised … we're running a very complex business, there's only so much money available and we need to allocate those resources very carefully … we're seeing a shift towards a more

> business like model, but the fact is the organisational structure of university is not like a business. I mean we do have hierarchies, but our basic unit of productivity is a Researcher PI [Principal Investigator] who doesn't strictly report to anyone in the true sense of the word. I mean, essentially, because a department head or dean does not tell a PI what to do, or what area to research. So we don't have an organisational structure like a business, and we never will have I don't think.

Again, this reflection speaks to organisational / institutional theory and the impacts of corporatisation on the culture of the university. None of the participants felt that business models/practices were going to disappear. If anything, similar to pressures for ROI and impacts, there was the feeling that they will intensify. This means that continued tensions regarding how to apply those models to a structure that, as shown above is unique, are probable.

Impact on Faculty

While the discussions did not focus specifically on the impact of the changes or perceived changes on faculty, it was raised or alluded to by many participants. As noted previously, issues around compliance and increased regulatory requirements have substantially impacted researchers' workloads. Demographics that are impacting student trends are also expected to impact faculties as academics retire. In fact, AUCC (2003) predicted that by 2011, 30,000 to 40,000 new faculty would be needed. In reality, with the abolition of mandatory retirement, these numbers did not come to pass. There is still the potential however, for shortages as faculty retire.

The other area raised regarding the impact of corporatisation on faculty was around tenure. Helen noted that one of the problems currently is that for faculty that want to do "research that's relevant to public policy or to solving environmental problems, or helping out industry … [you] don't get the academic peer recognition if you do that." James presented a similar view suggesting that

> our tenure promotion process is screwed up and I think it's screwed up everywhere. We have scholarship, teaching and service. We should have partnerships, we should have commercialisation, we should have the venture capital aspect of it, we should be evaluating leveraging, we should be evaluating faculty on completely different things.

Robert questioned how we incentivise a different system in the university whereby you don't fall into the trap of everything having to be completely outcome based measures, but that allow the impact of research with the community and the engaged scholarship with the community to 'count'. He noted that "if you don't incentivise the system it won't change."

This is an area where further research is a necessity.

Impact on research administration

One of the impacts of changes discussed as a result of corporatisation is on the administration of research itself. The role of research administration has expanded exponentially over the last twenty years to include technology transfer, grants facilitation, project management, knowledge mobilization, intellectual property, communications, regulatory oversight, financial monitoring and reporting, etc., and in turn, the skill and expertise demands for administrators have also grown. Research administration has

become a profession. Each of the universities in the study acknowledges the increased and expanded role of what is generally termed ‘research services’. This all comes at a cost and while the federal government now provides a level of indirect cost support based on funding received through the Tri-Agencies, it is woefully inadequate. As a result, there has been an increased focus on capturing overhead to help offset those costs with universities developing formal policies and rates. Research is business, and research administration places a layer, or layers of bureaucracy on that.

Each of the universities provides similar support for research services. These include: assistance for researchers who develop large scale initiatives; grants facilitation; seed funding resources; partnership development; university-industry liaison offices (UILO); technology transfer; financial oversight; project management; etc. Research offices are increasingly moving into knowledge mobilization functions and are generally the place where the metrics and measures are gathered. Alex noted that the ‘profession’ of research administration has

> become much more complex because of the plethora of different funding opportunities and these different smaller envelopes, programs that focus on a particular research theme, or programs that focus on infrastructure, or programs that focus on specific types of partnerships. So complexity and variety are two of the big changes … the [regulatory requirements] have driven huge burdens administratively at the university to be able to accommodate and comply with those new terms and conditions. There has been a huge additional administrative burden.

In discussing the demands on administrators, Diane stated that increasingly the university requests statistics around the various competitions, "what was our success rate, how did we do." She further noted that additional information is sought beyond just dollars and number of applications as "we're looking at success from a lot of different points of view." Alex had similar thoughts around the high threshold of compliance that he considered

> thrust on us from the funders, especially the federal and provincial funders [and that] means that researchers are forced to do a lot of administration around applying for ethics certificates and things like that … Researchers now spend much more time putting together research protocols and applying for certificates and doing conflict of interest (COI) disclosures than they ever did before.

This growing discourse around compliance often results in faculty research being delayed. This perpetuates a vicious circle – faculty are pressured to produce results and produce them quickly. Regulatory requirements add time to the process before research can be undertaken however. Similarly, tracking and reporting requirements also take up time that could be spent doing the research. A colleague did a study of this issue as part of his/her role within the university and found that the time involved before a project starts related to regulatory and administrative requirements adds on average, a minimum of one month delay to every research project. Multiply that by even a small number of projects over a year (e.g., 100) and that is the equivalent delay of more than 3,000 days – or approximately 8 years. Norman observed that some faculty members

> see the reporting as sort of a nuisance, and the accountability measures as more of a nuisance rather than an objective of their research. They're certainly more focused on their research and the fewer specific commitments they can make in terms of accountability, the better from their perspective. So it's a bit of a struggle sometimes in the preparation of the research proposals in that [the Office of Research] wants clear objectives and the faculty member wants to have as much flexibility as possible.

What the faculty may not realize however is how serious the funders are about accountability. Norman noted that his university had undergone a couple of audits and they were "surprised in terms of how detailed and how much information they were expecting us to be able to provide to them … the general perception … was that a lot of these rules or regulations weren't really enforced, they were just on the books. But we found when we had our audit, they were serious and they fully expected us to be going right by the letter, and in many cases going beyond the letter."

This is an important point as it sets tensions in place regarding research and illustrates what I would argue is a disconnect between the discourse of accountability – tied to corporatisation; and the discourse of discovery and inquiry – tied to research. For some research, the whole point is discovery, about answering a question where you don't know what the outcomes may be, or, at least the very least, where you don't know the implications of the outcomes. The discourse of accountability on the other hand is about standards, reporting, and demonstrating what will be done and its value. Accountability includes assessing risk, costs and benefits before moving ahead, and these are not always possible to assess when considering research questions. And while some measures such

as publications and HQP are standard, increases in accountability requirements mean more control not less.

This chapter has illuminated the consequences of corporatisation on three critical areas within the university as a whole: accountability; return on investment, impacts and measures; and overall governance of the university. As corporatisation increases, changes felt in these areas then impact the culture of the university overall. These larger impacts are discussed further in chapter seven.

Chapter six: Findings II – Corporatisation and education

This chapter focuses on the impact of corporatisation on education itself. Specifically, it considers the reasons why students seek out post-secondary education and what that may mean for the role of the university The chapter also provides the findings of the research with regard to corporatisation and the stratification / differentiation between universities.

Education

As government pushes for a focus on labour market training, university documents outline the role of preparing students for citizenship as well as contributing to a highly skilled workforce (UVic, 2009; UBC, 2009; SFU, 2010; UNBC, n/d). UVic lays this out in its *Institutional Accountability Plan and Report 2008/09-2010/11* (2009) stating that the university is "committed to the renewal and development of academic and co-curricular programs that will prepare students to take their place in a highly skilled and educated workforce" (p. 27). The use of the terms 'highly skilled and educated' is important to note – a highly skilled and educated workforce needs more than just skills to do a job. Conceivably, it needs the ability to think critically, write, analyze, research, be creative and experimental, take risks, and consider ideas outside the usual paradigms. The use of 'highly skilled and educated' allows the universities to respond to government directives, but to also do more than simply provide training. In the interviews, Ingrid focused on that blended role stating that

> it's about preparing them for being good citizens, and increasingly that's being defined as not simply being civically minded but it means they can get

> jobs, they can contribute in the economy or to the economy, and raise their children in ways that are beneficial, not just to their children, but to the next generation and society.

Helen also noted that importance of the university teaching "new" things, not simply being a provider of training or existing skills. In fact, Helen suggested that part of the university's purpose is to "teach society new things and society can include industry, it can include government, it can include regular citizenry."

Along with pressures by governments for workforce focused education and training, the discourses of corporatisation and neoliberalism have impacted how students and general citizens view the role of the university. Frank commented that for all levels of university education, "credentialism is becoming more and more pronounced in terms of all the rhetoric and discourse about how to get a good job. I mean I think everybody's really bought into the idea that education is the only way to obtain a good job in the knowledge society." Most interview participants noted this growing focus on credentialism and careerism. Alex indicated that in the past, "you went to university because you wanted a broad education and you wanted to widen your horizons … Nowadays I think people are very focused on the bottom line. … I definitely think that there's a much more mercenary reason for going to university than it used to be." Robert suggested that "students want to get in, get out and get a job". Tim noted that he felt students are coming now largely to improve their financial outlook, and while that has

> been a motivator, and I'll say for most students it's always been a motivator, but there used to be I think a larger proportion of students who were trying to find themselves, to mature, to experience the life of the mind; curiosity driven

> education. We talk about curiosity driven research, I think there was a larger proportion of curiosity driven education, just like 'I want to learn, I'm interested, haven't given a thought to career' … I think also every generation has its different set of values and I think the values of this generation are perhaps more practical than some of the previous generations.

Laura further indicated that "They're more concerned about the endgame. 'What is my degree in mathematics going to lead to?' I think perspective before was 'I'm going to math because I like math', and I think students still do that but they are thinking a little bit more about the broader perspective, 'what am I going to do with the credential at the end of the day'?."

In the analysis of various texts, I considered an interview by Galt (2010) in which he discussed this issue with the proponents of Academica Group, an organization that conducts market research regarding post-secondary education in Canada. Galt (2010) reported that "student expectations have changed dramatically, with scholarship taking a back seat to careerism" (n/p). Furthermore, Galt (2010) noted that more and more, the question from students and potential students is 'can it get me a job?' In fact, in asking university applicants what the motivation was for them to attend university, "99% chose either 'career preparation' or 'career advancement' as one of their reasons – 75% noted actually learning something as a motivating factor" (Galt, 2010, n/p). Ingrid remarked that part of the reason why students are coming now is as a result of the massification of university education. She noted that it used to be rare and you didn't really need it, "you could do extremely well and the entrepreneurial class existed and all the rest." She further

outlined that 30 years ago, maybe 10-15% of the population went to university, and 30 years prior to that, maybe 2-3% went.

In the consumer focused society that is part of neoliberalism, education is increasingly seen as a commodity (Leys, 2001). Students pay a tuition fee and expect a return on that investment in terms of a credential. We treat students as 'customers' or 'clients' and then are surprised when they behave that way. Students want 'service' – they want answers and they want them quickly. Being told to take time to reflect and determine their own answer does not always go over well. Christine shared her thoughts on this topic observing that she was

> much more negative, in my opinion, as to why some of the students are coming here. I think across the country the top students still come to learn and engage themselves and to challenge themselves, but I'm less convinced that you can say that about the middle of the pack … I'm more convinced that society believes that you simply need the degree and the degree gets you someplace … and I can't believe the level of entitlement from the students … just the level of 'I'm here so therefore I get' as opposed to having to earn it and to work for it.

In the interview with Christine, she commented further on that shift in attitude suggesting that in the past, post-secondary education was seen as a privilege and that seemed to be changing. As I left the office, the students of the university were protesting the rising costs of education and had unrolled the following banner.

Figure 1

The liberal arts

In ensuring that they do more than simply provide training for the workforce, the universities outline balance in the curriculum ensuring that technical and professional programs (engineering, nursing, commerce, etc.) include the development of skills such as critical thinking, problem solving and communication. The importance and centrality of the liberal arts continues to be brought forward by the universities. All four universities outline that graduates will have: strong analytical, problem-solving and critical thinking skills; research and communication skills; the ability to think creatively, imaginatively and constructively; the ability to engage in dialogue and discussion; and the ability to communicate effectively (UBC, 2011; SFU, 2009; UVic, 2007). The idea of preparation for citizenship was also relayed in the 2011 convocation address at SFU where Andrew Petter, President and Vice-Chancellor said

> we know that as a result of studying at a major research university, you have been exposed to the methods and practice of leading-edge research, so that you can engage in truly independent thinking and creative problem-solving, rather than passively accepting what others preach or teach … [you] learned the value and necessity of 'thinking of the world' … grasped how lucky we are to live in this gateway to Asia where the most momentous changes in history are taking place; that you have sensed the futility in North America of resisting these changes, insisting on a unilateral dominance of the world; and that you have embraced as Canadians our country's historic role in expanding the scope of international law, international peace keeping, and the responsibility to protect those who suffer from the most extreme abrogation of human rights.

This view of more than workforce preparation was reinforced in the interviews with Diane noting that the university "is a great place to grow up in. First of all the university welcomes freedom of speech and freedom of ideas, it's a place for creativity, it's a place for sharing and growing." Betty noted a considerable change in the past 40 years, suggesting that in 60s

> there was a feeling among a lot of people that university was a place to come to disrupt the status quo … the folks honestly who were there to shake up the world and that was their primary agenda, were probably never more than a small percentage. But they certainly set a different tone in those days. I think that happens in ebbs and flows, and in different currents in pop culture. I

> think I see a resurgence of that these days which I haven't seen for I don't know how long.

Clearly, the university's educational role is well beyond simply job preparation, and while the importance and value of professional programs is not disputed, ensuring that liberal arts are included in those programs is paramount. It is perhaps these types of outcomes that need to be focused on more – the broadening of viewpoints, the tolerance and respect for diversity and how those benefit society.

Stratification/Differentiation

Stratification or differentiation within the university system is an idea that is evolving and growing. This stratification is seen between regions, between large and small institutions, and between 'research-intensive' and 'teaching' institutions and is an area where impacts and discourse of corporatisation are evident, particularly with regard to an increased drive towards competition and growth on an international stage, and around research and its potential for commercialisation. Interviews emphasized the importance of balance and connections between research and teaching as did documents analysed. SFU (2009) points out that scholarship unites teaching and research and this is echoed by UVic (2009; 2009b) and UNBC (n/d b). UBC's (2009a, 2010) documents are similar with language that outlines its role as carrying out excellent research that contributes to the educational mission of the university. Outside the university there is a marked increase in the idea of differentiation and of research shifting to the forefront and gaining prominence. James for example pointed out that he wasn't looking so much at how the universities may be changing, but rather at the way they are being changed. Specifically, he suggested that

> over the last 20 years, the Canada Research Chairs fundamentally changed the way universities operate and the way they differentiate between teaching and research. And they really changed the way that not all scholars are created equal; that was a very fundamental one. And you can see there's a subsequent differentiation now with these Research Excellence Chairs. … Now whether you agree with that or not, it signals a fundamental change in how society envisions the research universities. It also really signals kind of a differentiation between your research, your teaching, and your colleges and your institutes.

James further noted that he felt stratification in research would continue, using the example of the National Centres of Excellence (NCE) program as an example of how the governments want to see the universities operate – more partnerships, more think tanks, larger groups of people working on single problems. In many ways, this is reflective of a European model but could also be reflective of the view that some research problems are large and complex and require a multitude of perspectives. This is borne out in the documents as well. In the *Campus 2020* report for example, Plant (2007) comments that "we must ensure that we have, within the province, institutions recognized as global leaders in teaching and in knowledge discovery, creation and application. These research-intensive institutions must continue to be the key incubators of the innovation needed to address our most pressing social and environmental challenges and to develop a strong economy" (p. 11).

Looking at the discourse in this statement, there is again the inference that in order to compete in the global society, and in order to have Canada, and BC, at the leading edge

of innovation and brining in the best and brightest students and faculty, we need universities who will be a cut above the rest. The reader is given the impression that the current system is not adequate and, similar to discourse around neoliberalism, this move is proposed as 'common-sense' – of course we want and support our educational institutions to be the best in the world. In 2008/09 the provincial government implemented the recommendation from the Campus 2020 report to add five new universities to the system (University of the Fraser Valley, Kwantlen Polytechnic University, Vancouver Island University, Capilano University, and Emily Carr University of Art and Design). Their function was clearly defined as 'teaching' and to provide vocational, developmental and university programs. The mandates for these regional universities were laid out as follows:

- The purposes of a regional university are to offer baccalaureate and masters' degree programs, and to offer post-secondary and adult basic education and training
- A regional university must promote teaching excellence
- A regional university may undertake and maintain research and scholarly activities for the purposes of supporting teaching
- In carrying out its purposes, a regional university must serve the educational and training needs in the region specified by the Lieutenant Governor in Council (Plant, 2007, p. 67).

These mandates remove a considerable amount of control from the traditional structure of a university. These new universities are restricted in the programs they can offer, and in not only the research they conduct, but in the reasons for conducting the research. In

looking at the discourse, one notes that teaching excellence must be promoted, but there is no detail on what teaching excellence means, nor on how it is to be promoted, to whom, and how these decisions are made. Research is to be undertaken solely for the purposes of supporting teaching. Whether this impacts the tenents of academic freedom, or whether, similar to the discussion around targeted research, researchers will find ways to do the research they want and couch it in terms of impacting teaching, remains to be seen. The final point above puts the control of the type of education offered in the hands of the government rather than the university by noting that the university must serve the educational and training needs of the region as specified by the Lieutenant Governor in Council. Again, there is no indication of where/how data will be gathered to inform those needs.

In looking at stratification, participants considered how the Canadian system may evolve. Tim stated that

> we [Canadian university system] really need to have a national accreditation body. We need to have a national education strategy. I think it's inevitable that that will come. … There is talk of a certain number of universities being the research intensive institutions and the rest of the universities not. I don't think that's going to happen. … I see the trend being, all of us, all sizes of universities being engaged in some degree of research… There will be a proliferation up to a point, and then there'll be a shake down, or a shake out, where the best will take a larger market share, but there will always be others.

Alex, however felt that there were

> going to be more winners and losers. I think we're seeing that at the moment in the funding arena where the little universities are getting beaten on the success rates at the Tri-Agencies. I think there's going to be more stratification of universities in Canada, and I'm not sure that's a good thing but I think there definitely will be strata. There'll be a very small number of world class universities that rank in the current league tables of *Maclean's*, and *Higher Ed* … Then there's going to be the medium size sort of comprehensive universities that are high quality on a national scale, and I think there's going to be the little guys that are more sort of regionally community oriented. Now you could argue we already have that but I don't think we do in that the transitions between those three strata are fuzzy, but I think they will become much more sharply, sharply relieved, and I think there will be stratified funding.

Evelyn also identified concerns regarding the potential stratification stating that she hoped that we don't get this "G3, 5, or whatever … Their vision initially was 'we essentially do the research, and let the other people and other universities do the training' because again, I think … the university has to do all those things, and it's absolutely essential for the next generation of academics or productive citizens to be directly involved in research activities and with those people who direct research." Christine felt very strongly against the idea of stratification suggesting that

> There's talk about a so called G5 group of 5, or group of 13, whichever group you want to refer to…I think it would be death to the strength of the Canadian system where you can go to just about any university now that's

> comprehensive and find very, very highly skilled students coming out of it. I think if you remove the research component from a lot of the universities and piled the money into a few select universities our system would collapse, and we wouldn't be as strong as a country. And then as a country it would be felt 10 years later.

The discourse around stratification connects with the discourse around corporatisation and neoliberalism, specifically around competition and individualism and also demonstrates a changing culture within the university. With potentially fewer resources, and those resources concentrated in fewer institutions, possibilities for smaller institutions are bleak. While there is competition to some extent in the system now, there is also collaboration and a sense of a single system. These shifts, if they come to pass, could eradicate that. The potential exists for many small institutions to be 'scooped' and absorbed by the larger ones. From a business perspective, this may make sense as it would reduce administrative systems and overlap, allow for standardization of processes across these 'mega' institutions and it could increase enrolments as students would see a single university with multiple campuses. However, it also reduces autonomy, and a personalized experience for students. Stratification would likely result in a significant shift in the balance of power among what are now considered equals. Students would likely perceive the large research-intensive universities as superior to smaller, local and regional institutions. Competition for students, faculty and funding would intensify and differentiation or perceived differentiation based on quality could result.

This chapter provided the findings of the research as they relate to education itself, in particular the increased focus on careerism and credentialism, as well as the impact and potential for stratification as a result of corporatisation. The tensions regarding the role of education in preparing citizens versus workers is expanded further in the next chapter.

Chapter seven: Discussion

Findings from this research showed there is, as would be expected given the roles of the research participants within the education system, strong support for universities. The three pillars: education, research, and service, are strongly supported and continue to be considered a critical element of the institution. This research showed a growing integration or convergence of these pillars, which is seen in the greater integration of research into the curriculum including exposing students at all levels to research, and the expansion of traditional 'service' ideologies to include connections with, and to, the community.

The rhetoric in university and government documents lays out a 'grand vision' for education as the cornerstone of a successful society. Findings confirm that universities are viewed internally and externally as important and that, in turn, research and discovery are paramount. Universities are however, as discovered in this research, also being corporatised. This is visible in: increased oversight and control by governments regarding the direction of the university in regard to both educational programs and research; increased accountability requirements related to enrolments, programs offered, research, and how funds are used; increased demands for demonstrable impacts and quantifiable measures from research; less collegial governance; increased bureaucracy; and pressures to adopt business models, practices, and processes based on the private sector.

It is ironic that while this corporatisation has led to less democracy within the university, some private sector corporations are shifting to a more democratic process for decision making on the grounds that "it offers benefits by creating new vertical lines of

internal communication and movement. Corporate democratisation is justified in functional terms because it liberates entrepreneurs, visionaries and leaders from the confines of the top-down corporate structure" (M'Gonigle & Starke, 2006, p. 195).

Specifically, the key concerns identified in the research include: increased reporting requirements (e.g., increased frequency of reporting and complexity of that reporting); demands to demonstrate return on investment (e.g., pressures to demonstrate value and impact of research; pressures to support research that leads to commercialisation); focus on the financial bottom line including increased risk assessment and cost-benefit analyses of projects and programs; role of the university in society; role of research and the importance of a full variety of research (basic / pure research, targeted / applied research, disciplinary research, inter-, multi-, and transdisciplinary research, team research, etc.); perceived devaluation of social science and humanities research and programs; and stratification / differentiation within the post-secondary system.

In considering the impacts being felt as a result of corporatisation, the research identified a number of areas where there are opposing views / ideologies and which show the various stakeholders at different ends of a continuum. Each of these overarching areas precipitates a series of subtle, and sometimes not so subtle negotiations, and a bit of a 'dance' in addressing multiple stakeholder demands: between the university and government; professors and students; faculty and administration; faculty and external partners; communities and the university, etc. In turn, these impact the culture and role of the university. The areas identified through the research include:

1) Citizen preparation versus job training – at one end, the view of education which includes citizenship, wellbeing and the whole person while at the other end, the view of education as focused on training for jobs:
2) Social innovation versus commercial innovation - a desire by the university to be responsive to the widest variety of stakeholders (students, communities, business, industry, government and society) to address a host of social issues (homelessness, poverty, etc.) versus continued and increasing pressures to partner with business and industry and focus on innovation leading to commercial application for economic benefit;
3) Targeted research – a desire by the university to ensure a balance between the ability to conduct pure/unfettered/basic research and the increasing push for applied research targeted to specific areas determined by external parties, as well as a desire by the university to ensure balance between the increasing push for, and focus on, science/technology research and the importance and value of social sciences/humanities research; and
4) Autonomy – the ability of the university to direct its future and focus versus control imposed by government.

Each of these is discussed in detail below and is followed by a reflection of the research in terms of the theoretical frameworks outlined in chapter two: commodification; institutional / organisational theory; and resource dependence theory. The chapter closes with a discussion around this research and its connection to neoliberal ideologies.

Job preparation vs citizen preparation

Education is at the heart of the university. The university's role, from the perspective of the research participants, was well beyond training for the workforce. Critical to this is citizen preparation which includes reflection, time for thought, social criticism, and disruption of the status quo. From a government perspective however, education is seen as the way to enhance the capacity and productivity of the labour market. In their view, education should be focused first and foremost on job preparation, and while that includes training the next generation of researchers and innovators, it is about preparing a 'good' workforce. From a student perspective, the research showed an increase in credentialism / careerism. There was a perception from research participants that a high number of students want to get in, get done, and get a job – they have bought into the workforce preparation argument. For some participants, their view was that university attendance for many students is not about curiosity or even about learning; rather it's about positioning oneself to get the best job possible after graduation. Students see themselves as consumers, and therefore they are customers or clients of the educational system. Through their tuition they purchase a product; which is their credential.

The university, in responding to and addressing these demands, acknowledges its role in preparing students for the workforce, but also holds to its larger role of preparing students for citizenship with the ability to think, write, analyze, etc., as outlined in chapter six. The university provides a depth and breadth well beyond that of training, and even beyond that of simply 'education'. As the research showed, and as one participant pointed out, although students may come to university primarily with the goal of being able to get a 'good' job afterwards,

> what they don't expect when they come is the way university life changes their world view … I think one of the things university does is complicate the world for you and I think it's easy to be a zealot if you only see one side of a picture and so I think we reflect back a world much more complex than they think when they arrive.

This 'complication' of the world is critical for broadening education and developing students as universities are built on the idea of the quest for knowledge and understanding. Interestingly, Shapiro (2005) suggests, "universities must, therefore, continue to provide programs that the society itself has identified as important as well as raising those questions and issues that society does not want to access. In some ways, universities can meet their responsibilities only by being a nuisance to the existing order of things" (p. 15). This research supports Shapiro's view; however, it also takes it a step further. Beyond just raising questions and issues society doesn't want to access, the university also has a role in actually serving as a critic to society, offering alternatives, and in developing those abilities in students. One of the participants noted this role in universities, musing that

> what you find is when you bring smart people together and you give them a little bit of independence, social criticism is the inevitable result. And of course we see that all over the world when youth start to reject teachings of their society, it's often the university students who are the first, and professors in some cases, who are the leaders in that.

We have seen this in much of the unrest in the world in recent years (e.g., uprising in Egypt), and it is that role in society that should be affirmed and supported. If it is not, and

pressures from governments for job related skills increase, so too do concerns increase regarding the potential for those pressures to change and to impact the culture of the university. As one participant conveyed,

> I always worry about the university as an institution because I think it's an anomaly and you don't have to look very far at totalitarian states where universities exist [and] they don't serve that social critique function, they're not allowed, and we don't live in a totally free society; there are some things that we're not allowed to say … we're not at the far end of the spectrum from those totalitarian states, we're somewhere in between a free society and a totalitarian society.

Unfortunately, a 'corporatised' university is not likely to recognize the value in 'being a nuisance', nor the value of social critique and criticism.

Innovation – commercial vs social

This research showed a distinct polarisation between a belief by universities that their role includes social innovation – conducting research and development that addresses pressing social issues of the world (poverty, homelessness, child exploitation, etc.) – and pressures by government and funders to undertake commercial innovation – conducting research and development with a goal focused on economic prosperity.

From a government perspective, this research showed the focus on research and development connected to industrial products and innovations that generate wealth. Metrics include statistics around patents, licence fees, spin-off companies, jobs, and revenue generated. As such, the government has increased its level of control and

direction with regard to research by focusing funding on specific areas and by increased requirements to partner with industry.

From a university perspective, while commercial innovation is supported, social innovation is also considered paramount. Increased community engagement and projects with marginalized populations (e.g., aboriginal, homeless, elderly) exemplify this. Unfortunately, as shown through the research, little funding is available for this type of research. In fact, it is uncertain whether the general public or funders would see this research as innovative. If you asked the general populace to identify the top five innovations of the last 100 years, it is likely that the list would include science and technology innovations such as personal computers, space exploration, air travel, radio, the internet, communications technologies, etc. There may be some innovations related to health such as antibiotics, however social innovations such as: the UN Declaration of Human Rights; changes in the US (and the wider world) regarding racial discrimination; equal rights for women and for gay and lesbian persons; and the development of unions in response to conditions workers experienced in mining, etc., in the early 20th century are unlikely to make the list.

This research showed that universities believe they have a responsibility to be much more aggressive about their social role and that graduates should leave the university with an ability to defend that social mission. One participant provided the following example:

> I think in engineering it's easy to come out of it and say 'look I have this degree and now I can build a bridge or test your bridge or build your computer'. Those are all valuable things, but I think it's in humanities and

> social sciences and the fine arts where people have said, ‘do you want to build that bridge? Is that really what we should spend your money on?’, whether its bridges, or cloning or whatever.

It is ironic that the federal government draws on Florida’s (2002, 2010) and Hoyman and Falicy’s (2008) work, acknowledging that

> the most successful city regions are the ones that have a social environment that is open to creativity and diversity of all sorts. Communities of creative people active in arts and culture that are open to diverse ethnic, racial and lifestyle groups, provide distinct advantages to regions that generate innovation, growing and attracting high-technology industries and spurring economic growth (Government of Canada, 2009, p. 11).

And yet, support is provided for innovation that focuses primarily on financial gain.

This research demonstrated the importance of social innovation, social improvement, and social critique, but it also challenges the reader to look beyond that. As one participant suggested, “we have a faculty of fine arts and some of the things they do is just create beautiful things, whether it’s music or literature or whatever. So there’s another role universities could play … an inspirational role. And we see it when you hear a great piece of music, see a great play, or read a great short story… we could aspire to that inspiration.”

Targeted research

This research uncovered a variety of views regarding targeted research, specifically the balance between basic / pure versus applied research, and the balance between science and technology research versus social science and humanities research. On a positive

note, there is more money for research, and more research being done than in any time in our history. Research funding in Canada has grown from $2.76 billion in 2000 to $6.46 billion in 2010 (Research Info$ource, 2011). This has been seen through programs such as the Canada Research Chairs, Canada Foundation for Innovation, Genome Canada, etc. In spite of pressures around targeted funding, researchers continue to research their own areas of interest. They explore what one participant referred to as 'boundary edges' allowing them to pursue inquiry driven research even if the targeted calls are narrow and focussed. When discussing how the targeted funding has impacted the balance, one participant shared their view noting that

> undoubtedly, [there has been an impact]. You know, when they asked Dillinger 'why do you rob banks' he said 'that's where the money is'. For the researchers that don't need very much money, there has been little impact .. but if you're wanting to work in an arena where there's some significant expense … not surprisingly that's the growth area.

One participant, Gordon, suggested that researchers will find a way to do the research that intrigues and interests them. "What's in our DNA" he said, "is the excitement about doing research and discovering stuff, and I think that we'll do that any way we can and if the system changes then we'll change too."

The research outlined a number of shifts that have occurred around balance and type of research and it is not certain what the long-term impacts of those shifts may be. While it may be that researchers currently get around the targets, or are able to spin their research to make it fit, there are larger concerns that emerged from the research.

The first is an increase in research teams including cross-/inter-/multi-disciplinary teams. While there is support for research teams and for cross-disciplinary teams in certain instances, concerns are raised regarding what the emphasis on teams mean for independent pure inquiry driven research, in terms of financial support, and perceived value. The second, I would argue, is a tiered system of researchers, with those at the 'top' (external funding, etc.) viewed as better / superior to others. This research pointed to concerns regarding how faculty recruitment will be conducted in the future. Currently universities look for 'generalists', someone who can teach, conduct research, and undertake service. However, increasingly, as we tier the system and there are various levels or classes of researchers (CRCs, CERCs, etc.), and as competition for limited funding continues, the value that we perceive each level to have will be different. In addition, in seeking out faculty, institutions may shift to focus on specialized researchers in the future and there may be implications on tenure practices as a result that have not been explored and may not have been considered.

A third concern is that as universities put an emphasis and resources into certain areas as part of strategic research plans, other areas are marginalized. As above, there can be differing perceptions of the value of the research areas with science and technology being seen as more worthwhile than social sciences and humanities. We see tangible outcomes or products from technology research and equate that with successful research and place a greater value on it.

Fourthly, funding tied to industry or other types of partnerships and funding more focused on 'big' projects. At the Tri-Agencies level, the Canada Excellence Research Chairs (CERC) program was launched recently. This program takes the Canada Research

Chairs (CRC) program one step further. The CRC program was the pinnacle for researchers – the best of the best, both existing and promising new researchers. CRC's were considered the top researchers and it was an honour to be appointed. The CERC program was then launched for researchers who were better than CRC's. The program awards world-renowned researchers and their teams up to $10 million over seven years to establish ambitious research programs at Canadian universities. These awards are among the most prestigious and generous available globally. In the first competition (May 2010), Chairs were focused on the four priority research areas of the federal government's science and technology strategy: environmental sciences and technologies; natural resources and energy; health and related life sciences and technologies; and information and communications technologies. In June 2011, ten new awards were created. Of these new Chairs, at least three were expected to be awarded in areas related to the digital economy (part of the information and communications technologies priority area), at least one Chair was expected to be allocated to each of the remaining three priority areas, and four Chairs were expected to be open to all areas of inquiry. While awarded to an individual, a CERC Chair holder is expected to have a strong team and to be connected with business / industry. That business and industry connection has been evident, as shown through this research, across research as a whole. SSHRC has increased its focus on building partnerships for research through its most recent changes and the establishment of the partnership grants; NSERC has continued its focus on industry connections and partnerships, as well as its focus on large projects under certain envelopes. Additionally, CIHR announced this fall that it would be moving to two 'schemes' for funding: a) a program scheme whereby a researcher could receive $500k

for seven years (renewable) and would be evaluated first on the strength of the applicant; and b) a project scheme whereby projects could be up to five years in duration ($250k/yr) and would be evaluated first on the strength of the project. Concerns abound, particularly from smaller institutions, regarding their ability to compete in these types of programs.

Major projects such as the Canadian Light Source (U Saskatchewan) are generally led by research 'stars', typically located at the largest institutions. They are not likely to be led by small institutions, and there are concerns that research will be further polarised. If that happens, stratification will be the natural result rather than being imposed by government or funders, once more a common sense, or slowly evolving process that, once in place, will be difficult or impossible to reverse. The impacts on smaller institutions with regard to the research funding they receive could start a chain of events that affects the faculty they hire, the students they attract, their rankings in the various surveys, and their longevity within the system. Further complicating this is the fact that allocations for indirect costs of research, Canada Research Chairs, etc., are tied to the amount of funding an institution secures from the Tri-Agencies. As funding decreases, so too do the indirect costs of research and CRC allocations and a downward spiral begins. At the annual meeting of the Canadian Association of Research Administrators (CAURA), in May 2012, results of the SSHRC Insight competition were discussed. While some of the larger universities noted that they were happy with their results, small universities noted unanimously that they had been less successful than in previous competitions with most have success rates of 15% or less.

The fifth area of concern coming through this research regarding targeted funding was summarised by Helen who indicated

> there's a danger of a sort of a vicious cycle that we have to be careful of. In other words, the virtuous cycle for those benefitting is that as you get more targeted funding available you get better at figuring out how to get a hold of that targeted funding, and you sort of climb the ladder. As you see funding shifting away, you, in a sense, see less benefit in doing things that won't lead to increased funding. So if you're in humanities there's a danger that you can just figure 'well the dice are loaded against me and so why should I even bother telling people why they should even care about humanities? I'm not going to get funding anyways'...[but] you can't expect anybody to recognize the intrinsic benefit in your research without providing some reason why they should care about it.

Finally, there is also concern evident through this research around the long-term impact regarding the balance between social science and humanities and science and technology. As universities are more successful in accessing funding in science and technology areas, programs expand; there are more students in science and technology programs, and more research in those areas. This leads to more funding directed towards science and technology, more CRCs and CERCs also in science and technology areas, and more CFI funding for infrastructure. As a result, science and technology areas become much larger and more dominant in the organization and may be seen as more important and valuable. There are inherent dangers with that shift regarding decisions made in the university, balance of power, and the relative importance of areas, again a slippery slope that could be difficult to reverse.

As this research has shown, the role of the liberal arts in the preparation of citizens and in social innovation is critical; if the balance between social science / humanities and science / technology shifts significantly, it is not certain how the liberal arts will remain a focus or priority.

Autonomy

The fourth overarching area to come out of the research is around the notion of autonomy – how much influence government should have over the functioning and direction of the university. While the idea of full privatisation, as noted earlier in this chapter, may be a way to address this, the research did not show a move in that direction, rather the research showed a need for balance and negotiation. Within the interviews, one participant noted that autonomy was critical; "Administrators of this day, what we should be doing is setting the stage for where we're going for the future. To a certain extent we have to be lobbying the government to make sure that we maintain our autonomy to as much of an extent as we possibly can." That autonomy is critical from the research perspective as well. As one participant shared, "the one thing that I hope we would never lose … is the notion that universities really are the place where undirected research goes on, because if we lose that then we lose everything. Then we just become another public government research lab and that would be, I mean, that would then make us basically useless."

The university is fortunate in the uniqueness of its structure and this has helped keep some pressures in check. For example, universities received funding over the last four to six years to increase graduate enrolments in areas that included science and technology, commerce, and the Asia Pacific gateway. While the government laid out specific targets,

at least one university argued that as students are involved in considerable interdisciplinary and individualized study it would be difficult to pick out and count students as part of a target area without seeing what the individual student was working on. Students could be in the history department for example, studying the economic development of China. Similarly, another university noted that even with the 'double the opportunity' program, which was quite restricted and tailored, they determined that a certain percentage of the courses any student takes are in areas outside the targeted areas, therefore resources were spread across the institution.

It is clear from the research that the universities undertake a very subtle negotiation with the government regarding this autonomy, and to date, the government has accepted the way things have been done. Concerns were noted however with regard to increasing government involvement and control. As one participant explained, "when the government tells you to go and double the opportunity … they have an obligation to make sure that the funding continues for a long period of time and they don't. They've got a God damn five year mandate, and that's the risk of that much of a direct involvement."

With regard to research, that autonomy is a bit easier to maintain. Universities will always be restricted by researcher interests. Even if a university decides that a certain area of research is important, it won't go forward unless they have researchers who are focused in that area. Furthermore, the idea of academic freedom continues to be critical with one participant noting that academic freedom means "you can't, and I know this very well, you can't tell faculty and students what they should be interested in. You can

suggest, you can bribe, you can do things to try and encourage people to be interested in certain areas of either study or research, but ultimately you have no direct control."

The university, in its current structure, is to some extent a space removed from ordinary politics and business agendas. There is a need to balance that space removed with promoting what the university does, how it serves society, and how it impacts the general population; otherwise, as the research identified and as one participant noted, "it becomes easier for governments to change the ground work in ways that favour their particular ideology of the time…it's that idea that universities, in order to do their function effectively, require that independence."

Ties to theoretical frameworks

As outlined in chapter two, there were three theoretical frameworks that guided this research: commodification, institutional /organizational theory, and resource dependence. Each is discussed below in terms of the findings of the research.

Commodification of education

There are four requirements of commodification that must be satisfied to transform what has traditionally been a public service into a market (Leys, 2001): 1) the goods or services must be reconfigured in a way which allows them to be priced and sold; 2) people must be convinced to want to buy the good or service; 3) the culture of the workforce involved in providing the good or service must be shifted from one with collective aims focused on service to a culture that produces a profit and which is subject to market discipline; and 4) the capital which is now moving into what was a non-market field needs to have the risk underwritten by the state.

With regard to commodification and education, this research showed a number of important points. Firstly, the reconfiguration of the good or service. In chapter two, the literature provided evidence of this requirement by outlining the development of modules and course packages that include course materials, syllabi, learner/student guides and lecture notes. As noted in chapter two, this results in the course becoming a product separate from the instruction, which has the ability, to some extent, to stand on its own.

What this research has shown however, is that the commodification of education has moved beyond those examples. As technology's use in education continues to grow, the reconfiguration into online courses is common. Blended models of instruction, which include online courses as well as short residencies, are increasing, as is the use of mobile devices and other technologies for the delivery of courses and programs. Through this research there was evidence that the traditional lecture model is expected to change, a further reconfiguration. As one participant noted, "study after study demonstrates that podcasting lectures assists learning because [students] can fast-forward and rewind and play it over and can study more intensively and interactively than sitting through a lecture." This will have significant impact on the interaction between students and professors putting a layer or barrier between them. This research also showed a reconfiguration on the types of programs that may be offered, specifically those that are more career oriented. This is in response to statistics that one participant raised which she said indicate that 70% of students wanting to go into PhD programs do not want to be academics. One participant also suggested that there would be "more directed funding towards forcing institutions to put resources into those areas [science and technology] and

to make sure our students are engaged in those." Key within this quote is the discourse around funding that 'forces' institutions to put resources into science and technology.

Universities, however, must be cautious – while they are considering more career oriented programs, the importance of the social sciences and humanities, particularly the inclusion of the liberal arts, must be considered. The skills students develop through the liberal arts are skills that will prepare them for citizenship and for the work force as opposed to simply a job. Research participants shared the view that the virtual experience is expected to grow and universities must consider not only programs, but interactions between students, as well as interactions between students and instructors / professors and how those will be designed.

Secondly, Leys (2001) identifies the focus on convincing the public to want to buy the good / service as a component of commodification. As was discovered through the literature review and noted in chapter two, this is already happening. What was outlined through the literature was that education is seen as a good return on investment. Statistics show that graduates get better paying jobs, and demand continues to grow. These views were reinforced through this research. However there was more that came through, particularly around issues of careerism and credentialism. It is within this component of commodification that government's influence around job preparation becomes much more evident. Over a long period of time, if society is told repeatedly that a good job means a better life, and a good job requires a university / post-secondary education, then we reason that going to university will result in being able to get a good job, and we would be right. However, we then look at the university's role, place, and value in those terms. We value programs that appear to answer this demand – education, engineering,

medicine, law, etc. But more than that, we also devalue the programs where we don't see the instant connection to the workplace (e.g., social sciences, humanities).

Thirdly, Leys outlines the requirement for a shift around the culture of the workforce involved in providing the good or service to one from collective aims focused on service to one that produces a profit subject to market discipline. In the literature review in chapter two, I suggested that this requirement had not yet taken hold. While the literature acknowledged that there had been an increase in the number of non-tenured and sessional faculty, and in contract teaching staff (and indeed contract and term staff throughout the university), publicly funded post-secondary institutions were not producing profits for shareholders. In Canada, private educational institutions have been allowed to offer programs (e.g., DeVry, Quest University Canada) and throughout North America, private for-profit institutions have set up on-line and distance programs (e.g., U of Phoenix). What this study showed was a bit of a grey area, particularly with regard to an increase in cost recovery programs and an increase in the impact of the market on what types of programs are developed. One participant suggested that the universities would probably become more responsive to market demand for education offering career oriented programs, or developing and offering cost recovery programs to select groups of international cohorts. The feeling, interestingly, from a number of participants, was that perhaps the university should be "giving the people what they want," and respond to those demands. And while to some extent this would seem like common sense and a logical approach, and would serve that function of responsiveness, no one discussed what those demands might be (other than career oriented) nor how those demands have come about. If we look more closely at the idea of career oriented, programs would be tied

much more closely to the outcome of a job at the end. Once again, this becomes a path that, once embarked on, may be difficult to change. One participant, Evelyn suggested that in the past,

> the university would train specialists, highly but narrowly focused specialists, who would become specialists and work in their area for the rest of their life. … we don't do that anymore. Rather we train people to be able to become specialists in whatever function they have to fulfil. … If you go to a community college and you get a degree in car mechanics or something like this, you're good in car mechanics, but you don't necessarily have the skills to analyze and position yourself for a completely different direction. University graduates ideally should be able to be lifelong learners and have a way to structure this to seek additional training and to understand what's going on in society; be forward looking and to adapt, adjust their job opportunities and careers accordingly.

This raises concerns with whether a focus on job training will shift us back to this practice.

It is uncertain whether market driven programs would be able to have that broader view and focus. Similarly, other participants noted a caution regarding responding to the market and identified the need for universities to continue to maintain and defend non-market oriented disciplines. As one participant pointed out, "I think there is an appreciation for just the civil need for arts and humanities."

There are a number of inherent dangers in chasing what the market appears to want. It can take a couple of years or more to develop and 'mount' a new program, and by the

time it's ready, the market may have lost interest in that particular issue. We saw this with computer science degrees in the past 10+ years, where the market showed strong demand as the 'dot com' revolution was underway. Provincial governments provided funding for increased enrolments, programs were developed or expanded, and then the bubble burst. Graduates couldn't find jobs, enrolments plummeted and universities and governments scrambled to come up with alternative plans.

Finally, the last factor outlined by Leys (2001) for commodification is that the state must underwrite some of the investment and risk involved in the shift to for-profit orientations. As was noted in chapter two, in the case of education in Canada, provincial governments have always funded some portion of post-secondary costs through operating funds and infrastructure grants and at the federal government level, funding in terms of research grants and indirect costs help offset costs. What this research showed however, is that the government has incentivised investment by business and industry. What hasn't been thought through with this push is how those relationships develop or work. As one participant, Matthew suggested, "if we're going to partner with industry or if we're trying to be known for doing research for industry we need to have an industry bent, and we don't have that. That's a delicate kind of step for a university to try and get that marriage going – two different personalities trying to better society where one is trying to develop the best widget and the other one is trying to tell you why it's the best widget."

With regard to education, we see this aspect of commodification in large donations and naming rights to buildings on campus. And while universities in BC don't have brand names on lecture halls, there are increasingly buildings being named for people as a result of a donation (e.g., the Beadie School of Business at SFU, and the Gustavson School of

Business at UVic). In reflecting on this, one participant stated that "there was no rebellion against that [naming the business school], there was no resistance to it and ten or fifteen years ago there might have been. But it's named for an individual; it's not named for his business. If it was going to be named for his business, I think we would still get objection to it on this campus." Again, this is a definite shift in the culture of the university and shows how business and industry is increasingly being connected to, and with, the campus.

We also see it in the seats on the governance boards occupied by business leaders, and in the changing role of the president to that of fund raiser and a more public face of the institution. In recent years university capital campaigns have become a major part of the university's role and vice presidents advancement are expected to be drawn from business rather than the academic sector. As one participant, Diane commented, "Absolutely. I think it's [advancement and fundraising] become a focus. When I first started here university advancement was a tiny little part, and now it's a whole department with a huge fundraising campaign."

What this research shows overall is, in fact, post-secondary education in BC is being significantly commodified. It has occurred slowly and over time but we are definitely almost 'there'. Business models are increasingly used in universities, funding from the province as a percentage of total revenue continues to decline, and the reliance on tuition, endowments, and other funds grows. In spite of this, universities have hung onto their identity as public institutions. It may only be a matter of time however, before radical changes occur. In the UK for example, initiatives are underway whereby students are

funded through vouchers rather than institutions being funded, and tuition follows the student. As one participant noted,

> what that does to the institutions is they have to compete with each other and they have to become much more student centered, student oriented. They have to guarantee that if you come out of this program there's going to be a job for you. That's going to change the way universities work.

This possibility, if implemented would have a tremendous impact on post-secondary institutions in Canada with implications for faculty, programs offered, research conducted, partnerships, and governance. The idea that the university would have to guarantee a job for a student is particularly worrisome given that the university has no control over the jobs offered, nor the hiring practices of organizations looking for staff. The concepts around a voucher system, and the further removal of control from the universities show very clearly the impact of corporatisation and commodification.

Commodification of research

In considering what this study has shown regarding the commodification of research, Leys's (2001) four factors can be considered. Firstly, with regard to the reconfiguration of the goods or services. As shown in chapter four, in the section on innovation, increasing pressures have been put in place to commercialise the outputs of research including patents, spin-off companies and moving products from idea to marketplace. Significant resources have been put into technology parks, industry liaison offices, and business accelerators. Even though there have been minimal returns in terms of real dollars, pressures remain and are, in fact, increasing.

Commercialisation continues to focus on financial returns and has also broadened to encompass more than products. The focus on knowledge translation / transfer, for example, while a positive move to convey the results of research to the 'public' is still a reconfiguration and to a certain degree a 'selling' of the research to the public. When research proposals are developed, one of the questions a grants facilitator looks to answer is the 'so what' question – why is this research important, who is going to care about the results, and how will it benefit society. And while there is no dispute with the value in answering that question, nor in trying to convey the results of research, there are certain types of research, projects, and partnerships that may appear to not have any practical applicability, neither now nor in the future. That does not mean, however, that the research should not be conducted. This reconfiguration into products sets an expectation and ideology in place that the value of research is measurable either primarily, or solely, in terms of dollars.

Secondly, Leys (2011) suggests that people must be convinced to want to buy the good / service. When research is commercialised, the products (or services) wind up for sale in the marketplace. Business accelerators usually provide assistance with marketing and communication to help ensure the product is poised to be seen by as many people as possible. Research is also, increasingly, part of selling or marketing the university. Marketing departments have grown significantly in universities and have focused on the 'products' of education. They focus on quality of programs, employability of graduates, and why students (nationally and internationally) should choose the university. Research fits within that marketing function as it points to quality and prestige helping to attract students, faculty and funding.

Thirdly, there is a requirement for the culture of the workforce to shift from one with collective aims to a culture that produces a profit and which is subject to market discipline. There has been increased support for commercialisation and an increased focus on spin off companies, patents, etc. I would argue that the very nature of these activities means a shift from 'we' to 'I'. Intellectual property (IP) policies focus on ownership of ideas (either creator owned or institutional owned) and partnership agreements lay out the rules for commercialisation and technology transfer. One participant commented during the course of this research that s/he felt that if people had the choice to go back and just do basic research or keep doing what they're doing, "a lot of people would want to drive a BMW and keep going this way." S/he noted that for the faculty who have commercialised their research,

> They drive a better car, they've got a bigger house, they've got a house in the Gulf Islands … when I was a young faculty member, it was very negative to do something commercial; it just wasn't what you were here for. Now, it's almost unusual, at least in the engineering and the health sciences and the basic sciences, it's almost unusual to find somebody who still thinks it's a bad thing or that it's not what we're supposed to do. That certainly is a revolution that's occurred.

This is, as s/he notes, a fundamental shift in the climate and culture of the university. One of the ramifications of this shift is the demand for short-term results and a sense of urgency to obtain those results.

Fourthly, Leys (2011) outlines the requirement for capital which is moving into what was a non-market field to have the risk underwritten by the state. Again, there are

numerous examples above of this having occurred in research practices. Research funding is provided by the federal government and the provincial governments, and while there is funding for basic research, this research showed the increase in targeted funding, particularly in areas that address the government's S&T strategy. CFI, for example, is focused on research infrastructure and as such, lends itself much more easily towards science and technology research as social science and humanities research tends not to require large infrastructure. As was noted previously, NSERC`s newer programs, Engage and Interaction, require partnerships with business and industry and SSHRC has set the ground work in place for the inclusion of business in its partnership grants program (formerly CURAs, etc.) in part by requiring a 35% contribution component from partners.

This commodification of both research and education is critical to note, and this research shows how far we've come along that route. One participant questioned whether we are close to a transition

> from public education as a public right to a private good? As you watch operating grants dwindle as a percentage of total revenue, as you watch students come in here with a larger share of the cost, where does that end? Does that end with every public institution at some point divorcing itself from the taxpayer? And then at what point do you really start operating yourself as a true business, as opposed to this social organization that gets forty percent of its revenues guaranteed every year, entitled.

Institutional / organizational theory

This research points to changes in the culture of the university, and a changing role, as a result of corporatisation. Part of this is evident in the shifts from a collective mentality to an individualistic one as noted above. Davies and Bansel (2007), commenting on Foucault (1977), suggest "heightened individualism (which marks neoliberal systems) is registered in terms of individual freedoms, of autonomy and choice. Within this discursive framing the individualized subject of choice finds it difficult to imagine those choices as being shaped by anything other than his/her own naturalized desire or his/her own rational calculations" (p. 251).

As pressures continue for the culture to shift, and corporatisation takes further hold, power and control are being taken from a dispersed collective model and placed centrally in the hands of administrators. In turn, this impacts how decisions are made, whom they are made by, and under what conditions. When administrators such as vice presidents finance / chief financial officers and vice presidents advancement come from outside the academic culture, the criteria for decision making naturally change as well, thus increases the research discovered regarding accountability and the focus on the financial bottom line. Many in the university, particularly younger faculty / staff, have been normalised to this model and have no other frame of reference to consider.

Private sector business models lay out very clearly the role strategic direction will take in an organization and how a plan will unfold. Interestingly, the culture of the university still manages to resist this and this was evident in the interviews. An example was provided by one participant who commented on the development of a strategic plan within his / her university in recent years stating

> I think the language is certainly all around us and in fact it's so hegemonic now that not even those of us who resisted using it or would like to resist it, find ourselves trapped in it. … in the strategic planning exercise we get asked questions, 'please answer these questions that respond to the strategic plan'. The questions are all phrased in … corporateeze, corporate model, and typically speaking we just answer those, fill in the blanks and answer back, and actually our department is preparing its response and one of our responses is 'hey we don't have to respond to these boxes'. If you want a strategic plan, we'll tell the stories we want to tell about how we see ourselves, we don't want to answer your little boxes'.

In many ways, this quote epitomises the tensions regarding the corporatisation of the university and shows resistance to that shift in culture. In the private sector culture, the boxes would be filled out, likely without question; the culture of the university however is different, and faculty and students expect the ability to question and challenge what is put before them. As one participant stated, "Universities evolve out of … a kind of monastic institution … but ended up for reasons that still actually amaze me, [with] quite a high degree of independence from civil society from politics. And it amazes me because, given that one of our roles is social criticism, that over the course of our history, that criticism has been valued enough that those who resent it and resist it have not been able to squash it."

This research also raised issues regarding funding for post-secondary education and research. There was a common view among participants that "we have been in privileged times", and that given the current economic situation, nationally and internationally, it is

unlikely that we can continue to expect funding at the same trajectory. As one participant suggested,

> there's no way, given the expanding cost of so many of our programs (e.g. health care), that there's going to be the money left in the system for post-secondary education. We are probably going to have to continue to utilize public / private partnerships, particularly for facilities and building of the capital and probably for deferred maintenance on many of our buildings. That's a down side, but it's the reality of the situation.

Resource dependence

In terms of resource dependence theory, this research shows very clearly the power that the government has, both federally and provincially, over research and education at the university. In terms of research, the control of resources through the Tri-Agencies (SSHRC, NSERC, and CIHR), has allowed more funds to flow for research, but also more targeted funds for research in specific areas (science / technology), of specific types (applied), and with specific partners (business / industry). In terms of education, block grants to universities have been frozen in some years and new funds tied to enrolments in specific areas (science / technology, etc.), again, a clear showing of the power in the hands of those who hold the resources. Resource dependence theory also connects with the commodification of both research and education as outlined earlier in this chapter through the shift of education and research as a public service dependent on the state for resources to a service driven by the market and dependent on moneyed players within that market (industry, wealthy individuals, etc.).

Neoliberal ideologies

This research showed a continued and growing permeation of neoliberal ideologies throughout the university – these can be seen in student attitudes, governance and decision making, academic freedom, and tenure.

There are those who suggest "it is not, ultimately, possible to resist the pernicious reach of neoliberalism. As subjects, we will always be subjugated to ('played by') the system (whether or not we consciously realise it), as governance is enacted via our hearts and minds and the technologies of neoliberalism close down dissent and the perception of alternatives" (Archer, 2008, p.281).

This dichotomy can be linked to neoliberal ideologies. In each of the points raised throughout this discussion chapter, economic imperatives are a common thread and are supported by the three theoretical frameworks. A focus on training for jobs gets people into the workforce quickly, ensuring they are contributing to the tax base and spending money, thus contributing to the economy overall. Partnerships focused on business and industry, as opposed to communities in general, also connect to the economy through an expanded tax base, business expansion, and the development of more workers. Research focused on the commercial innovation agenda is meant to lead to discoveries that impact Canada's economic prosperity.

While support would appear to be strong into the future, Alex shared that

> we're in a difficult period politically in Canada where there's a lot of fuzziness and mushiness and there's no real kind of leadership on a political level … if you look at the last couple of years we all globally went through this financial crisis. In the US strategic decisions were made that they would innovate themselves out of the struggle, and so, NIH got an extra 20 billion,

> and there was a huge investment in research. In Canada we just spent money on roads and sports arenas and big capital projects. I'm not saying that was wasted money but there wasn't a sense of extra money pumped into research so we clearly made a decision as a country that we weren't going to innovate our way out of this difficult time. I think that's quite negative actually. … I really don't think they [government] believe that university spawned research is a terribly important part of Canada's future prosperity.

This is a key finding of this research and shows a prime example where, in spite of document after document focused on support for education, innovation, commercialisation, etc., the reality is that decisions made did not follow the path laid out. There was speculation about the motivation by government for targeted funding and research support, with the conclusion that the focus by government was on getting re-elected – projects that could be done quickly and that people could see were sought. One participant cautioned that we have to keep in mind that

> a major function of universities is the creation of new knowledge and the translation of completely new knowledge into society takes longer than the life span of the average politician. And so you can't really expect that within four years or so you'll get a start-up company, or a new product, or a patent, or who knows what out of this, or a government policy coming out of the research which changes everything. It may take ten or twenty years and sometimes of course, it doesn't lead to anything that's the nature of research.

Similar views were expressed by others, suggesting that outcomes can be measured in terms of simply advancing knowledge; however, there has to be a way to demonstrate that you are actually advancing knowledge and not just claiming to do so.

Chapter eight: Limitations, future research and conclusion

Limitations of the research and possible future research

There are some limitations to this research. One is around the requirement for anonymity, which was a concern given the high-profile positions participants held. In order to ensure anonymity I agreed not to make any distinctions among positions held (e.g., vice presidents of research, ministry personnel, etc.) or by organization. As a result, I was unable to identify the social position of specific respondents. I was not able, for example, to distinguish the perspective of deans of graduate studies from those of vice presidents research, or from directors of community based research, or from ministry personnel. In many instances, a reader might assume, or question, whether their views on specific subjects such as citizen preparation versus job training, or the commercialisation of research differed. I can neither confirm nor deny those assumptions / questions as that would compromise the confidentiality that I promised. While those distinctions may have added further depth to the already rich data, not doing so did not change the overall objectives of the research, nor did it change the findings.

Another critical limitation of the research is that it did not include the views of faculty. Given the unique nature of a faculty member's role which encompasses teaching, research and service, faculty feel the direct impacts of corporatisation including: accountability pressures; trying to 'fit' their research into targeted funding; marginalisation of programs / disciplines; shifting student attitudes; pressures for commercialisation; and pressures to deliver quick impacts. Three other groups of senior administrator – presidents, vice presidents' academic, and vice

presidents' finance – may also add different perspectives to the results. In addition, students could be included as subjects to further expand the research regarding careerism and the role of the university. I would caution however that the discipline areas of students, and faculty for that matter, may influence the results significantly (e.g., engineering students / faculty versus humanities students / faculty). Looking outside of the university, the study could be expanded to include business and industry, community groups / organisations, and funders.

The study focused on BC and on four research-intensive universities within the province. The study could be extended to remaining universities within the province which would give a more comprehensive picture, and would allow for comparisons between large and small institutions, regional / teaching universities and special purpose institutions and / or research intensive institutions. The study could be expanded to other provinces which would allow comparisons within and across provinces, and eventually, to provide a comprehensive look at the country. In that case, the study could also look at interviews with federal funders (e.g., Tri-Agencies, HRSDC, CFI) and the federal government. There would also be some value in including organisations such as Canadian Universities Faculty Association (CUFA), Canada Association of University Teachers (CAUT), and AUCC.

There were limitations in the scope of this research as well. Eighteen interviews and the time spent in analysis of those interviews and documents were sufficient for the purposes of establishing the overall themes as described. Extending the study would allow sub-themes to be further developed. While this research focused on corporatisation as related to the discourses and practices of research, there were a number of other

themes that arose through the analysis of documents, interviews, and personal notes and reflections that could each be a potential project. In particular, themes around commodification, community engagement, student and faculty demographics, tenure and the role of faculty, and student attitudes/motivations could be further explored.

In a next phase, the addition of focus groups would add more depth, allow a richer discussion of the topics, allow participants to hear what others were saying, consider commonalities, and expand the ideas further. There could be concerns regarding issues of power with this approach and consideration would have to be given to a host of issues including: whether to mix faculty and senior administration in the same group; whether to mix faculty and students; whether views that cross those roles have the potential to add to the discussions in ways that groups of 'like' individuals (just faculty, just students) cannot do; whether to include business, industry, and the community in the focus groups, and if so how; whether to include governments and/or funders; and how to address issues of power in order to get the maximum benefit of a focus group.

In addition to the points noted above, there are a number of areas for future research related to this research. For example:

- As universities consider more career oriented programming, including non thesis-capstone programs as bridging into doctoral programs, research could be undertaken to determine how well students from non-thesis capstone programs perform in doctoral programs.
- Continued research on some of the corporatisation issues raised may include a focus on return on investment as a key metaphor, specifically around what true

ROI looks like (e.g., beyond patents and commercialisation, and in ways that would allow universities to capture social innovation).

- I would also suggest research on new models of governance and structure for the university itself. It is possible that we will see industry being brought more directly into the institution. Research could be undertaken on the various types of models, as well as changes that result to culture / climate / role as a result of the new models.
- I would also suggest a deeper focus on the commodification aspects of research and education, the increasing integration of the three pillars and how that may unfold, the evolving role of research administration, and the impacts of corporatisation on faculty members.

In addition to traditional dissemination of the results through publications and presentations, I am looking at ways to disseminate the results to and through various groups that may be interested including Canadian Association of University Research Administrators, Canadian Association of Graduate Studies, Western Canadian Deans of Graduate Studies, Society of Research Administrators, and the Western VPAs/VPRs group.

Conclusion

This research was intended to explore how corporatisation was visible in practices and discourses related to university research as well as the impacts being felt by universities. By using a multi-institutional case study, drawing on institutional ethnography and employing discourse analysis and individual interviews, I accomplished my objectives of determining the role of research in the university and how it has changed and is changing;

determining how the adoption of business principles, models and practices has impacted university research and its administration; determining the impact of federal and provincial government priorities and directives on university research; determining how the role of research may evolve; and gathering views on the role of the university now and in the future.

Moreover, I discovered a deeper appreciation for the history of the university and a deeper understanding of its evolution. I also gained insight into tensions that are being felt within universities from perspectives beyond my own and gained a broader view on the impacts of those tensions.

Education is key to society's development and demand will continue to grow in one form or another. The research presented here contributes unique insights into the culture of the university and, ultimately, its role, the role of research, and changes and pressures the university is facing. It provides information that can guide discussions around the development of programs, the balance between basic and applied research, the evolving role of research administration, and the changing nature of students.

In closing, one participant wisely managed to convey a radical alternative vision of the university, in which wisdom is paramount, not profit, nor short-term private interests …

> … I think we're knowledge generating institutions. We pump out the knowledge and that has got us a long way but it's also got us a long way into some deep holes like global warming and environmental [and] health issues … we've reached a point where the net gain of knowledge is not improving our lives … what we don't have is wisdom generating institutions … wisdom takes some time … wisdom takes the view that it's not just about the

individual who's doing the research or even a small community, it's about the larger world we live in and interact in. … For the corporate agenda and the political agenda, the time frames are short and wisdom requires time.

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Appendix B
Interview Questions

Let's start with universities as a whole – what do you believe the role of the university is in society and has that changed over time?

- What about research – what do you believe the role of research is and has that changed over time?
- Either here at [university] or in the system as a whole, does research drive the strategic direction of the university or does it follow?
- Let's talk about students for a moment. Why do you think they are coming to university now and has that changed?
- Can you tell me your thoughts on the adoption of business norms, business models, business principles at the University. Have you seen a change in the adoption of those in the university? In research? In graduate studies? And how? [note: specifics to try and bring to the forefront include: positive and negative aspects, examples of impacts, changes over time, etc.]
- Let's focus now on the research side – both research undertaken, and research administration and how you see the impact of business practices there. [note: specifics to ensure are discussed include accountability, measures, value, return on investment, targeted funding, competition for funding, type of research conducted (pure vs applied) and the balance of each]
- In recent years there has been a significant amount of targeted funding from the federal and provincial governments as well as specific directives regarding their focus. How has this impacted research and research admin at

[university]? [note: specific to ensure are discussed include ability to 'cash in on the targeted funding, ability to compete on NCEs, CURAs, etc., impact on community engagement, partnership development, etc.]

- Let's talk a bit about community engagement and community partnerships. Can you tell me what's happening here and if and how that has changed over the years?
- I'd like you to think ahead now, ten, fifteen, twenty years. What do you think the university will look like and what will its role be? How do you see it evolving? And, what do you think research's role will be in the university?

Questions differed slightly for interviews with Ministry personnel as follows:

- Let's start with universities as a whole – what do you believe the role of the university is in society and has that changed over time?
- What about research – what do you believe the role of research is and has that changed over time? Does research drive the strategic direction of the university or does it follow?
- Let's talk about students. Why do you think they are coming to university now and has that changed?
- Can you tell me your thoughts on the adoption of business norms, business models, business principles at the university and on research. Have you seen a change in that?
- In recent years there has been a significant amount of targeted funding from the federal and provincial governments as well as specific directives regarding

their focus. How do you think this impacted research and research admin at BCs research intensive universities?

- Let's talk a bit about community engagement and community partnerships. Can you tell me what's happening here and if and how that has changed over the years?
- I'd like you to think ahead now, ten, fifteen, twenty years. What do you think the university will look like and what will its role be? How do you see it evolving? And, what do you think research's role will be in the university?

Appendix C
List of Acronyms

AUCC – Association of Universities and Colleges of Canada
AWURD – Association of Western University Research Directors
BC – British Columbia
CAGS – Canadian Association of Graduate Studies
CAURA – Canadian Association of Research Administrators
CBR – community based research
CDA – critical discourse analysis
CEO – chief executive officer
CERC – Canada Excellence Research Chair
CFI – Canada Foundation for Innovation
CIHR – Canadian Institutes of Health Research
CMEC – Council of Ministers of Education Canada
COI – conflict of interest
CRC – Canada Research Chair
CURA – Community-University Research Alliance
GPA – grade point average
HQP – highly qualified personnel
HRSDC – Human Resources and Skills Development Canada
ICT – information and communication technologies
IE – institutional ethnography
IP – intellectual property
KM – knowledge mobilisation
KPI – key performance indicators
KT – knowledge transfer
MRC – Medical Research Council
NCE – Network Centres of Excellence
NGO – non-governmental organization
NPM – new public management
NSERC – Natural Sciences and Engineering Research Council
NSSE – National Student Survey on Engagement
PI – principal investigator
R&D – research and development
RDT – resource dependence theory
RFP – request for proposal
ROI – return on investment
RUCBC – Research Universities Council of British Columbia
S&T – science and technology
SSHRC – Social Sciences and Humanities Research Council
SFU – Simon Fraser University
SRA – Society of Research Administrators
UBC – University British Columbia
UILO – university-industry liaison office
UNBC – University of Northern British Columbia

USA – United States of America
UVic – University of Victoria
VPA – visual and performing arts
WestVac – Western Vice Presidents Academic / Vice Presidents Research
WCDGS – Western Canadian Deans of Graduate Studies