

The Social and Educational Implications of University Cooperative Education:  
A Habermasian Perspective

by

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## **Abstract**

This dissertation reports the findings of an ethnographic, multi-case study centred on ten undergraduate co-operative education (co-op) students from different academic disciplines at one Canadian university. In co-op programs, students alternate semesters of academic study with semesters of paid employment. Such programs are viewed as important to the development of human capital. Their economic purpose conflicts with the sociocultural mission that has traditionally sustained academic communities in Canadian universities. They are thus similar to other “corporatist” initiatives in higher education, such as industry-led research. A body of research literature exists on the social and educational implications of these other initiatives. This study contributes an analysis of co-op to that literature, using a conceptual lens developed out of the critical theory of Jürgen Habermas. The researcher used qualitative methods to explore the sociocultural and economic dimensions of the participants’ social action and learning, through one cycle of their co-op program. The findings show participants to be engaged in meaningful processes of human capital formation and cognitive development. They also reveal that a preponderance of strategic action in co-op can interfere with the development of communicative competence, impeding learning that is both socioculturally responsive and economically productive. The findings suggest that developmental processes in co-op and academic programs tend to uncouple, leading to problems with how participants integrate their learning in different contexts. The findings also demonstrate that participation can foster substantial and socially progressive forms of learning, when a complex interplay of factors aligns. The suggestions for educational change are to establish policies and practices that encourage a balance of communicative and strategic action, and that dialogically integrate the parallel developmental processes that exist in academic and co-op programs.

Examiners:

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And to Nicholas, who is always in my heart.

## Chapter One: Introduction to the Study

In the context of delegitimation, universities and institutions of higher learning are called upon to create skills and no longer ideals, [and] to supply the system with players capable of acceptably fulfilling their roles at the pragmatic posts required by its institutions. (Lyotard, 1984, p. 48)

In the economic renewal that must take place in Canada, cooperative education can fill an unique, perhaps indispensable role...It places our universities and colleges firmly side-by-side with industry in grappling with the problems and opportunities of the knowledge-based, brave new world of the 21<sup>st</sup> century. (Gilmour, 1987, p. 5)

Co-op students develop industry-specific skills as part of their practical experience...The attributes of high academic ability, connectedness, discipline-specific experience/human capital resources, and a professional persona are interwoven outcomes of successful co-op education. Taken together these attributes form the signal embedded in the co-op designation. Employers trust the signal in making training and hiring decisions. (Grosjean, 2003, p.1)

### Introduction

In co-operative education (co-op) programs, university students alternate semesters of academic study with semesters of paid employment in positions related to their academic fields and career interests. This study investigates the experiences of participants in such programs.

With the rise of global economic competition and the advent of knowledge societies, university level co-op programs have become increasingly popular in many countries.<sup>1</sup> Co-op is viewed as an important strategy in accelerating the development of human capital and thereby improving the contribution higher education makes to the economy (Blackwell, Bowes, Harvey, Hesketh & Knight, 2001; Ellis, 1987). However,

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<sup>1</sup> There is a World Association for Co-operative Education (WACE), which represents the combined interests of national associations in Australia, Canada, China, Germany, India, New Zealand, the Philippines, South Africa, Sweden, the United Kingdom and United States (World Association for Cooperative Education, 2003).

the strategic purpose of co-op conflicts in a number of ways with the liberal educational values and practices that, in part, sustain university communities, particularly in western societies (see Anderson, 1993; Axelrod, 2002; Kimball, 1995).<sup>2</sup> Co-op is similar to other recent strategic economic initiatives, such as industry-led research, which alter the forms of knowledge developed on campus and the ways participants in higher education relate to that knowledge. While significant effort has been devoted to understanding the implications and potential consequences of many of these strategic developments for higher education and knowledge societies more generally (see Axelrod, 2002; Slaughter & Leslie, 1997; Polster, 2000; Scott, 1990; Tudiver, 1999; Turk, 2000), little attention has been paid to the role of co-op in this regard.

This study addresses the absence of analysis in the literature regarding the implications and consequences of participation in co-op in the context of knowledge societies. It concentrates on the Canadian context, where enrollment in co-op programs has doubled in the last ten years.<sup>3</sup> Using a nested case study approach, this research centres on the experiences of five co-op students from disciplines in the arts (social sciences, humanities and fine arts) and five co-op students in the applied sciences (engineering and computer science), all of whom attend the same Canadian university. The study focuses on how the students understand their experiences in co-op, how they arrive at these understandings, and what effects these understandings have on their learning. It assesses understandings and effects in the context of the unique set of institutional, social and economic forces and relationships that comprise co-op. In particular, the study addresses the social and educational implications co-op has for higher education in the era of knowledge societies.

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<sup>2</sup> There is much contemporary debate as to what constitutes an appropriate form of liberal education, with cultural conservatives on one end arguing for a return to the great canon of western thought and cultural radicals on the other end arguing for a multiplicity of forms of sociocultural knowledge in the curriculum (see Axelrod, 2002; Emberley, 1994; Schneider & Shoenberg, 1998).

<sup>3</sup> 46,482 students in 50 Canadian universities were enrolled in co-op programs in 2000-2001, the academic year in which the present study was conducted (Canadian Association for Cooperative Education, 2003a). For historical interpretations of the development of co-op in Canada, see Grosjean (2000), McCallum & Wilson (1988) and Van Gyn & Grove-White (2002).

### **The Growing Tension between Learning and Earning in Higher Education**

Canadian public universities are suffering an ongoing crisis of identity (Axelrod, 2002; Bercuson, Bothwell & Granatstein, 1997; Neilson & Gaffield, 1985). This crisis manifests, for example, in the widespread uptake of strategic planning processes in higher education that aim to stabilize institutional identities through statements of vision, mission and core values. It also manifests in growing tensions in the fragile balance between the sociocultural mission and economic functions of higher education. In colloquial terms, people are increasingly anxious about the relationship between learning and earning. One aspect of this relationship that concerns people is the long-standing problem of the degree to which public education emphasizes, or should emphasize, job training. In recent times, a vigorous philosophical and policy debate has erupted between those who aim to align higher education more closely to labour markets and those who wish to preserve its relative autonomy, and thus protect its traditional disciplines and cultural values from market forces (Axelrod, 2002; Katz, 1985; Cochrane, 1985). This debate raises the profile of the tension between learning and earning in the universities, a tension that has increased with the advent of Canada as a knowledge society.

Historically, many professors, instructors, administrators and students have largely understood and represented their institutions, first and foremost, as having a social and cultural mission. This is often referred to as the liberal purpose of universities (Axelrod, 2002; Barnett, 2000; Scott, 1984, 1991; Weaver, 1991). It has at least two related aims, both of which are associated with enhancing the public good. First, university communities unearth, develop, store, criticize and disseminate knowledge they deem important to contributing to a vibrant, socially progressive society. Second, university communities socialize students into the habits of mind and attitudes necessary to engage responsibly as citizens in such a society. In addition to this liberal purpose, those who teach in, administer and attend universities have recognized the important role their institutions play in preparing students for the world of work. But they have largely viewed this as a secondary function (Axelrod, Anisef & Lin, 2001).

In the last two decades, however, the legitimacy of this liberal perspective has been widely questioned (Axelrod, 2002; Carnochan, 1993; Emberley, 1994). As a result, members of university communities who adhere to the liberal view have come under intense pressure to restructure their priorities. Presently, many state policy-makers, business lobby groups and think tanks, the popular media, students and parents are calling upon professors, instructors and administrators to dramatically reshape their curricula, teaching practices and organizations to meet the new demands of Canada's increasingly knowledge-based economy (Evers, Rush & Berdrow, 1998; Rush & Evers, 1986). In their view, the economic promise of higher education can only be realized if universities become more "relevant" (Grosjean, 2000). To this end, members of university communities, in particular professors and instructors, should increase their focus on developing and transmitting the knowledge and skills that will accelerate individual, regional and national economic competitiveness, and de-emphasize fields of study and forms of learning that have no immediate commercial utility.<sup>4</sup> Specifically, they should direct their attention and resources towards those knowledge-based areas of the economy that have the greatest potential for generating wealth, such as business and professional services, applied science and technology (Axelrod, 2002). Moreover, university communities need to incorporate more of the "real world" in their curricula, including work experiences such as co-op.

In a number of ways, this economic agenda comes into direct conflict with the long-standing cultural values and educational practices that comprise the liberal approach many members of university communities continue to hold dear. Those who have persevered in advocating a liberal purpose for universities have developed analyses and arguments to counter this economic perspective. Paramount among the arguments is that an economic agenda for higher education supports private interests at the expense of the public good. In so doing, such an agenda takes a short-term view (Axelrod, 2002). More importantly, it puts an important public trust in jeopardy (Katz, 1985). Advocates of the

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<sup>4</sup> Another dimension of this perspective includes the innovation agenda, which calls for an increased emphasis in higher education on producing knowledge for exchange on intellectual property markets.

liberal perspective worry for the future of civil society if that trust is broken. Thus, whereas those who advance an economic agenda for higher education forecast prosperity and general well being as its primary outcomes, liberal critics foresee, instead, a decline in social cohesion, citizenship engagement and sociocultural competence if an economic approach displaces liberal education. In particular, they fear that the ability to conduct social critique will be lost (Livingstone, 1999). As a result, liberal critics argue that private interests must be held in check in order to preserve the integrity of civil society and the legitimacy of its important public institutions, including universities (Habermas, 1989).

To be sure, most articulations of these competing policy agendas, and the various responses to them, are not so clear-cut on the issues.<sup>5</sup> As with any social policy question, there are many nuances. More importantly, while advocates from the different perspectives have been debating, things have been changing on university campuses as various constituents go about their daily business. A number of these changes highlight the contradictory forces that are shaping contemporary university communities at the level of local programs, policies and practices.<sup>6</sup> The widespread adoption of co-operative education is one of these important developments. It provides a bridge between university communities and labour markets. In so doing, it draws together the full complement of people, including students, administrators, faculty, employers and policy makers in the state, who represent differing interests in the contemporary struggle to shape the organization, meaning and effects of higher education. As an educational project that emphasizes the relationship between higher learning and job training, co-op should thus be of interest to anyone wishing to understand more fully the implications for higher education of the current tension between learning and earning.

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<sup>5</sup> See Johnston (1998) for an attempt to balance these interests with respect to education in the humanities.

<sup>6</sup> For instance, professional disciplines and programs with vocational outcomes have proliferated; yet, enrollment remains strong in traditional arts and science disciplines (Axelrod, 2002; Livingstone, 1999).

## **Co-operative Education and the Knowledge Society**

Co-operative education has assumed an increasingly prominent role in Canadian universities as Canada transforms into a knowledge society. In popular imagination, co-op is seen to provide participants with a more relevant and practical education than traditional modes (MacLean's Magazine, 1998). It thus helps to foster the human capital necessary for individuals and the nation to compete on a global scale (Ellis, 1987, Johnston, 1998). This instrumental contribution is posited widely in the literature on co-op. Practitioners promote and largely orient their programs on this basis. Students enrol with this purpose in mind<sup>7</sup>, and many employers participate for this reason.

However, the implications of participation in co-op with respect to a more liberally defined concept of higher education, for instance, one which includes the moral and aesthetic dimensions of human and social experience, remains largely unexamined (Habermas, 1971; Marcuse, 1991; Milley, 1999).<sup>8</sup> This absence in the conceptual and empirical understanding of co-op can be explained, in part, by the historical association of co-op with professional and scientific disciplines, particularly engineering. However, another explanation for this absence is that the concepts and practices that currently sustain co-op are so firmly embedded in the predominant contemporary discourse about the relationship between higher education and work. This discourse has its primary foundation in human capital theory, which in recent times is articulated through the ubiquitous metaphor of the knowledge society.<sup>9</sup>

Heard throughout advanced capitalist nations is the contention that we are living in knowledge societies, and that knowledge plays an increasingly central role in all spheres of social and economic life (de Weert, 1999; Rubenson & Scheutze, 2000). This idea is not new. Daniel Bell (1973), Peter Drucker (1969) and Alain Touraine (1971)

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<sup>7</sup> The views of participants in this study support this perspective. See their narratives in my Chapter Five.

<sup>8</sup> This absence is surprising given the longstanding debate on a similar issue in the adult and experiential education literature (Briton, 1996; Fenwick & Lange, 1998; Hart, 1992; Welton, 1991). Moreover, the North American originator of co-op, Herman Schneider, envisioned it to be a means for social reform (Park, 1943).

<sup>9</sup> See Marginson (1997) for an in-depth discussion of human capital theory and its relationship to public education.

promulgated it, albeit in different ways, in the early 1970s. However, in the last decade the knowledge society has become a central theme in economic, social and educational research, policy and practice, business strategy and the mainstream media.

There are different and opposing takes on what constitutes a knowledge society and the relationship of higher education to such a society (see Gibbons, 1994; Livingstone, 1999; Slaughter, 1998; Stehr, 1994). However, there is a general form to the concept. Knowledge and information have become foundational for the organization of economic and social activity. This is caused by three interrelated factors, which include the rapid introduction of information and communication technologies (ICT), globalization, and international economic competition (de Weert, 1999). As Rubenson & Schuetze (2000) explain,

The significance of ICT in driving the emergence of the knowledge society lies in their ability to codify information and knowledge. They enable knowledge to be manipulated to meet a multitude of needs and to be transmitted instantly the world over....As a result, ICT are an important force behind the intensification of globalization....At the same time, the development and diffusion of ICT and other modern technologies are themselves being driven by the intensification of global competition as firms and nations seek to become leaders in the process of technological change. (p. xi)

This argument continues that ICT profoundly affect the nature of people's work, subsequently increasing the level and types of skill and knowledge--the human capital--required to use them and the knowledge they disseminate (Rubenson & Schuetze, 2000).

The concept of human capital is central to most conceptions of the knowledge society. Economic growth occurs through the application of human capital to codified knowledge and information (or to the information systems themselves) to beget new, value-added knowledge. This process is called innovation. It is the linchpin of economic competitiveness, as Rubenson & Schuetze (2000, p.xxi) point out: "Innovation is increasingly key to growth and comparative advantage is [therefore] related to the quality of human capital." This situation has implications for the meaning of knowledge. For instance, Edquist & Riddell (2000, p. 8) argue, "Knowledge as such is of no great economic and social importance. Only when transformed into innovations does it become significant for economic growth and employment." Through this scenario, the teaching

(i.e., knowledge-transfer and skill development) and research (i.e., knowledge production and innovation) functions of universities have a special place in theories of the knowledge society (Bell, 1973).<sup>10</sup> The first function attends, or ought to attend, to the production of human capital; while the second supplies, or ought to supply, intellectual capital for the economic system (Lyotard, 1984).

Some commentators on the Canadian situation argue there are serious problems with respect to how universities fulfil their obligation to foster human capital (Evers, Rush, Krmpotic & Duncan-Robinson, 1993; Evers, Rush & Berdrow, 1998). In many cases, university curricula and teaching methods do not calibrate with labour market requirements, resulting in chronic mismatches and acute shortages in the knowledge-intensive sectors of those markets. Ultimately, this places certain individuals, industries, regions and the nation itself at risk of falling behind others in how they attract investment and generate wealth. As a result, many of these commentators call upon university communities to place greater emphasis on developing the skills that are crucial for knowledge-based employment (Advisory Council on Science and Technology, 2000; Canter, 2000; Conference Board of Canada, 2001). While the specifics of these vary, they usually consist of some combination of scientific, technical, cognitive, personal management and communication skills.<sup>11</sup>

Given the ubiquity of the knowledge society metaphor and its implications for higher education, it is not difficult to imagine why co-op holds contemporary appeal. Table 1.1 outlines how co-op benefits different participants.<sup>12</sup> These benefits integrate nicely with the knowledge society agenda for higher education in a number of ways. In particular, co-op encourages students to develop employability skills in the context of knowledge-based work settings (Davidge-Johnston, 1996; Gardner, 1996).

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<sup>10</sup> More recently, universities are seen as only one type of institution in an increasing range of organizations that are creating and disseminating knowledge. Other sites include public and private think tanks, knowledge-intensive workplaces and advocacy organizations.

<sup>11</sup> Evers, Rush and Berdrow (1998) list managing self, communicating, managing people and tasks, and mobilizing innovation and change as the four competence requirements of university graduates.

<sup>12</sup> These benefits are based on discussions by Maxwell and Currie (1984), and Ryder and Wilson (1987)

Table 1.1 Benefits reported to accrue to participants in co-operative education programs

| Students                              | University Administrators                        | Employers                                |
|---------------------------------------|--|--|
| - practice/learn skills and knowledge | - influence relevance of curriculum              | - develop human resources                |
| - gain work experience                | - collaborate with business/industry             | - influence relevance of curriculum      |
| - improve transition to employment    | - improve student recruiting and retention       | - make recruiting efficient, inexpensive |
| - earn income                         | - maximize efficient use of facilities/resources | - save on labour costs                   |

Yet, a number of researchers suggest the educational value of co-op remains an open question (Wilson, Stull & Vinsonhaler, 1996; Wilson, 1997; Van Gyn, 1996; Van Gyn, Cutt, Loken & Ricks, 1997). Moreover, far too little is known about how and what students learn as a result of their participation in co-op (Davidge-Johnston, 1996; Grosjean, 2000). These concerns highlight a conspicuous absence in Table 1.1. Missing is a column that represents university faculty. The literature indicates that, on the whole, professors have an ambivalent impression of co-op (Ellis, 1987; Heinemann & DeFalco, 1990; Van de Vorm, 1987). Some are suspicious of it, many are uninformed about it, and others are supportive. Generally, professors view co-op to be outside their realm of responsibility, in part, because in most universities administrative personnel, not teaching staff, run co-op programs. Thus, while professors may encounter co-op students in their classrooms, they really have little to do with the delivery of the programs *per se*.

A recent study suggests that the separation of faculty from the process limits the potential for learning in co-op (Grosjean, 2000). This is particularly the case when the curricular content and pedagogy of the classrooms diverge too far from the knowledge and work processes that students experience in their co-op work sites. There is evidence

that, with conscious intervention on the part of co-op personnel, these gaps can be exploited to encourage metacognitive development, whereby students learn to discern and transfer between different settings the knowledge and skills they have developed elsewhere. However, it is rare in practice for co-op personnel to systematically intervene in this way (Davidge-Johnston, 1996).

Significantly, researchers have paid little attention to the practices of employers and how these affect the learning of co-op students. While co-op personnel pay more attention to employer practices than do researchers,<sup>13</sup> both practitioners and researchers tend to tacitly or explicitly naturalize employer practices and labour market processes more generally. This is understandable because students, co-op personnel and researchers have limited say in how co-op work sites are managed and how labour markets operate. Practitioners thus expend substantial energy preparing students to enter the labour market and assisting with their adjustment to their workplaces, while researchers tend to treat co-op experiences as “black boxes” (Davidge-Johnston, 1996). However, by naturalizing management practices and contemporary labour market processes, researchers and co-op participants create a substantial blind spot in understandings about co-op and its implications for students’ learning. This absence is surprising for two reasons. First, workplace learning is a cornerstone of knowledge societies.<sup>14</sup> To ignore it as an important element in the co-op process delimits knowledge about the economic contribution that participants in the program make, thereby reducing the potential to improve it. Second, it is well known that inequities in the distribution of opportunity exist in many workplaces and in all labour markets. These inequities are particularly acute along lines of gender, race, class, age, disability and sexual orientation (Krahn & Lowe, 1998). To ignore these as an element of the co-op process reduces understandings about the sociocultural effects of participation in the program. It also exacerbates the arbitrary stratification in learning

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<sup>13</sup> The Canadian Association for Co-operative Education (2003b) offers employers some ethical guidelines for recruiting co-op students and specific “Tips and Techniques” for supervising them.

<sup>14</sup> The recent emphasis in research, policy and practice regarding lifelong learning (Canadian Labour Market Productivity Centre, 1990) and the learning organization (Senge, 1990) provide examples of this increased emphasis.

opportunities and processes that some co-op students likely encounter (Simon, Diplo & Schenke, 1991).

These insights suggest that co-op is not making as robust a contribution as it could within the economic sphere of the knowledge society.<sup>15</sup> They also suggest that co-op may be implicated in reproducing inequities in the distribution of work-based learning opportunities.<sup>16</sup> By and large, current conceptions of co-op do not address the sociocultural context in which the relationship between higher education and work is embedded, and the role participants in co-op play, or could play, in that context.<sup>17</sup> Nor do current conceptions explore the relationship between higher education and civil society, and the role of co-op participants in that nexus. These blind spots reflect a similar pattern in how many theories of the knowledge society have construed the role of higher education. However, researchers have begun to criticize how theories of human capital and knowledge societies have conceived higher education. These criticisms are instructive in improving our understanding of co-op.

Some critics of human capital-based versions of the knowledge society claim it focuses too heavily on the supply side of labour markets and not enough on the demand side (Krahn & Lowe, 1998; Livingstone, 1999; Marginson, 1997). As a result, public education is unfairly singled out for reform and the agenda for educational reform is, thus, overstated. These critics argue that there are significant problems with the way work is currently organized and distributed. Throughout the last decade, Canadian workers have witnessed stubbornly high levels of unemployment (Swift, 1997).<sup>18</sup> There are signs that widespread underemployment exists in a job market that is increasingly dichotomized into good jobs (highly skilled, better paid, professional) and bad jobs (unskilled, poorly paid), with the latter assuming a greater proportion over time (Duffy & Glenday, 1997). There are also signs of credential inflation, whereby employers demand educational qualifications that far exceed those required to do the work (Livingstone, 1999). These

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<sup>15</sup> See Rowe (1996).

<sup>16</sup> Grosjean (2000) claims co-op programs produce vocational elites in the university student population.

<sup>17</sup> Exceptions to this are outlined in Chapter Two.

<sup>18</sup> Youth, older workers, women, visible minorities, persons with disabilities and aboriginal persons have shouldered a disproportionate share of this unemployment (Krahn & Lowe, 1998; Marquardt, 1998)

factors lead some commentators to conclude that, in the current context, workers appear to be overeducated and not under-skilled as the competitive view holds.<sup>19</sup> As a result, some commentators maintain that contemporary economic policies and management practices are implicated in the problem of competitiveness, and that these policies and practices need to be reformed if a legitimate approach to sustaining the economies of knowledge societies is to be attained (Krahn & Lowe, 1998).

Other critics of the human capital agenda suggest it too narrowly focuses on developing the forces of production (e.g., technical skills). In so doing, it fails to recognize how social relations (e.g., class, gender, race, cultural values and identity) interact with, contribute to, or delimit these forces of production (Kumar, 1995).<sup>20</sup> As a result, other critics argue the disciplines of the university that foster sociocultural understanding, such as the social sciences, humanities and fine arts, have an important contribution to make in knowledge societies (Allard, Bates, Anstey & Bannis, 2000; Axelrod, 2002; Axelrod, Anisef & Lin, 2001). For example, knowledge from these disciplines can improve the working relationships and thus increase the productive capacity of people and organizations.<sup>21</sup> While this latter perspective operates from within a conventional economic rubric, other critics come to a similar conclusion about the importance of the other disciplines normally located in arts faculties, but do so from within a sociocultural point of view. They argue that more emphasis needs to be placed on understanding how the forces of production influence the character of social relations (Fraser, 1989). In this view, sociocultural knowledge can, for example, be used to unearth the ways in which work is unfairly distributed according to gender, showing how this leads to arbitrary socioeconomic stratification, such as higher poverty levels for women than for men.

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<sup>19</sup> A recent study by a federally appointed task force indicates that in five key hi-tech industries there appears to be an ample supply of skilled workers (Advisory Council on Science and Technology, 2000).

<sup>20</sup> If a businessman's identity includes sexist values, for instance, he may discount the technical skills that his female employees possess. Thus, what may seem to him to be a skill deficit in his firm is actually a problem in cultural values and the social structures those values sustain.

<sup>21</sup> During the period of the study, executives of 30 of the largest technology firms in Canada publicly advocated this perspective, arguing against potential reductions in liberal arts and science programming at Canadian universities (Tapscott, 2000).

The foregoing criticisms of knowledge about co-op and theories of the knowledge society provide guidance for researchers investigating co-op within the context of Canada's emerging knowledge society. First, they suggest that researchers should not limit their inquiry to a single aspect, such as the role participants in co-op play in the relationship between higher education and work. Instead, researchers need to concentrate on a variety of issues and the ways these intersect and interrelate. Nor should inquiry be limited to only one process. Instead, researchers need to focus, for example, on the ways in which the students' experiences in their classrooms relate to their experiences in their work sites, and vice versa. Second, specific emphasis needs to be placed on investigating a number of areas, including the ways in which students' access to work is regulated and how employers organize and distribute that work. The ways in which professors and instructors engage with students (and vice versa) deserves attention. Most importantly, the social relations that constitute and are sustained by participation in co-op deserve as much or more concentration than the ways in which co-op contributes to the development of human capital. This suggests a sustained emphasis on the sociocultural dimensions of participation in co-op.

### **The Questions and Objectives that Guide this Study**

Given the educational dilemma as outlined in the previous section, there are two related questions that guide this inquiry.

- 1) How do undergraduate co-operative education students from differing academic disciplines experience and make meaning of the complex, contemporary relationships between the sociocultural and economic missions of higher education?
- 2) Within the context of the knowledge society, what are the significant social and educational implications of the 'answers' to this first question that can inform policy and practice in co-op programs, universities and workplaces?

There are a number of objectives for this project. Within the scope of the foregoing research questions, it aims to:

- 1) Describe and interpret the lived experiences of select students in co-op;

- 2) Explore how students construct their understandings of their social experience and learning as they participate in and move between different institutions and social spaces (i.e., university, labour markets, and workplaces);
- 3) Identify social conditions and educational practices that advance or hinder learning experiences that are both socially responsive and economically productive;
- 4) Describe how these findings can be used to inform policy and practice in co-op, higher education and workplaces.

### **Overview of Research Design**

This study relies on a nested, multiple case design. I recruited ten co-op students in equal numbers from two co-op programs (arts and engineering) at a single university by posting an invitation notice to the electronic newsgroups in their co-op programs. These students became the central participants in the study. I interviewed them three times over an eight-month period, timing these meetings to correspond with important moments in the sequential development of their co-op programs. I also held two group interviews with the students at the end of the study period. In addition, I encouraged the students to keep reflective journals during their work terms, and I collected from the students the documents they use to transact their co-op experiences.

During the course of the study, I asked the students to identify people who had a significant influence on them in terms of their experiences in co-op and higher education more generally. These significant people included co-op employers, co-op personnel, professors and instructors. By sending these individuals letters of invitation, I recruited 16 of them to participate in the study, interviewing each of them once. I also collected from these individuals documents they referenced in our interviews. Finally, I collected publicly available documents pertaining to the university, the co-op programs under study and co-operative education more generally.

The findings produced through a research methodology such as this cannot be generalized to an overall population because the sample of research subjects is not representative of those populations (Stake, 1995). As a result, the findings cannot support

the development of a grand theory about the phenomena under study (Yin, 1994).<sup>22</sup> If one's sensibilities or interests as a reader of this report require either of these outcomes, then the sampling methods and actual sample used in this study will present a major limitation. However, if one's aim is to develop analytical insights that can increase understanding of complex social phenomena, including the multifaceted contexts in which those phenomena are situated, then the approach used in this study will prove valuable.

### **Organization of the Research Report**

I have arranged the dissertation in nine chapters, including this introductory one. Chapter Two provides a review of the scholarly literature that is pertinent to the study. This review begins with the literature on co-op. Here, I focus on publications that articulate educational philosophies and theories with respect to co-op, and address pedagogical approaches used in co-op. I also provide an overview of what is known about participants' experiences in co-op, particularly with respect to their learning and social development. In addition, I review studies that have focused on the social relations and sociocultural dimensions of co-op. In the second part of Chapter Two, I explore the literature on educational administration and higher education, paying particular attention to philosophical and policy debates regarding the sociocultural and economic objectives of higher education, and the relationships between higher education and labour markets.

Chapter Three articulates the conceptual framework that builds on and challenges the findings from Chapter Two. This framework, which is largely based on Jürgen Habermas's critical social theory, guides the research process as well as the analysis and interpretation of the findings.

Chapter Four details the methodology I followed to conduct the research, while Chapters Five, Six, Seven and Eight present my findings and interpretation of them.

Chapter Five provides contextual information. It describes the university that is the site of the study, and the co-op programs (arts and engineering) from which

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<sup>22</sup> Multiple case studies can provide grounds for negating or supporting a local theory (Yin, 1994) or even multiple (and competing) local theories (Greenfield, 1979).

participants were drawn. This chapter also presents autobiographical narratives from each of the ten co-op students who participated in the study that provide insight into their motivation for enrolling in the co-op program. In addition, Chapter Five also presents the reflections that co-op personnel involved in the study offer regarding the effects their work produces and how their work produces those effects.

In Chapter Six I present four case studies that emphasize the significance of skill development in the students' co-op experiences. My analysis of these cases focuses on the ways in which the students translate their academic knowledge and experiences into skills that will help them succeed in the labour market. I also analyze this process in reverse-- that is, how the students reconfigure the knowledge, skills and experiences from their co-op work terms when they return to their studies on campus. My focus in this chapter is on the effects these transition processes have on the students' perceptions of their knowledge.

In Chapter Seven I describe four more case studies, this time focusing on the tensions and contradictions students experience with respect to their learning, social development and identities as they cycle through the co-op process. In my analysis of these cases I apply the concept of culture to investigate the effects on the students of their immersion in a series of contrasting (and sometimes conflicting) values, discourses and practices as they move from their studies to work and back again.

In Chapter Eight I offer two final case studies that provide insight into how students construct identities through the co-op process, and what the substances of those identities are. Rather than emphasizing tension and contradiction, as in Chapter Seven, this chapter foregrounds connections between academic knowledge and experience, skill development, and seemingly disparate cultures in the co-op process.

In Chapter Nine I draw some final conclusions and make suggestions for policy, practice and further research. I also present a conceptual model for understanding co-op in its current context, which builds on and revises the conceptual framework I used for the study.

## Chapter Two: Analytical Review of the Literature

### Introduction

I limited my review to literature in three fields of education, specifically co-operative education, educational administration, and higher education. I concentrated on two kinds of studies: Those that address 1) the philosophical and policy tension between the sociocultural and economic objectives of education, and 2) relationships between higher education and labour markets.

### Part One: Research about Co-operative Education

Upon review, there is very little in the research literature on co-op that directly addresses the questions I ask in this study. However, the literature on co-op is indirectly useful in framing and informing the study in at least two ways. First, the corpus of this research reflects the history of the development of co-op into its contemporary form. By reading this history through the research literature it is possible to discern how co-op shapes, and is shaped by, the dynamic tension between the sociocultural and economic missions of higher education. Second, there are a limited number of studies that provide conceptual guidance for understanding the social and educational relations that constitute co-op. Both aspects of the literature provide useful initial guidance for my inquiry.

### *Existing research about co-op*

Advocates for co-op have undertaken most of the studies regarding co-op since its inception in 1906 (Grosjean, 2000).<sup>23</sup> The vast majority of findings from these studies have been published in the *Journal of Co-operative Education*, the research organ of the Cooperative Education and Internship Association (CEIA), an American professional organization dedicated to advancing co-op as an educational strategy (Cooperative

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<sup>23</sup> Co-op advocates admit their research base is largely atheoretical (Bartkus & Stull, 1997; Wilson, 1988) and sometimes falls short of the received standards of scholarly inquiry (Grosjean, 2000; Wilson, 1997; Ricks, Cutt, Branton, Loken & Van Gyn, 1993).

Education and Internship Association, 2001).<sup>24</sup> Because most co-op researchers have also been co-op supporters, many of their studies focused on determining and highlighting the beneficial outcomes of co-op programs (Bartkus & Stull, 1997).<sup>25</sup> A number of commentators observe that the existing body of research represents an important element in the struggle on the part of supporters and practitioners to constitute co-op programs as a legitimate part of the academic mainstream (Grosjean, 2000; Wilson, Stull & Vinsonhaler, 1996).

In a recent article, Wilson (1997) describes and categorizes sixty published research reports about co-op which have appeared since 1985. He reports that 38% of these studies sought to answer questions regarding the benefits co-op holds for students. An additional 22% focused on the benefits graduates of co-op received. The remaining 40% asked other questions important to the co-op community, such as factors in program effectiveness. Most of these studies ask the basic question: “Does cooperative education have merit?” (Wilson, 1997, p. 17). The researchers go about answering this question by comparing co-op participants and their non-co-op counterparts in terms of specified variables such as career growth, earnings, job satisfaction, academic achievement and so forth. The findings of these studies are mixed and often contradictory, but “on balance, the research into the merit of cooperative education shows positive results” (Wilson, 1997, p. 19). As a result, Wilson contends that co-op “has [at least] the potential for positive outcomes” and that researchers (and practitioners) should focus their energies on developing and testing “programmatic treatments that will assure or enhance those outcome” (Wilson, 1997, p. 23).

Wilson’s (1997) review of the co-op literature does not include recent theses and dissertations. A search of *Dissertation Abstracts International* reveals that, since the mid-1980s, twenty graduate students have produced theses or dissertations on various aspects

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<sup>24</sup> The Canadian equivalent of the CEIA is the Canadian Association for Cooperative Education (CAFCE), whose executives and members have established close working relationships with their American counterparts through international conferencing.

<sup>25</sup> See Table 1.1 (p. 8) for a summary of findings from these studies.

of co-op.<sup>26</sup> The majority of these studies draw upon concepts and methods from educational psychology to study the effects on students of participation, such as personal growth (Maciowski, Jr., 1996), career development (DeLorenzo, 1998) and organizational socialization (Kirby, 1990).<sup>27</sup> In all cases, these studies reported positive relationships between participation in co-op and the specified variables under investigation. However, a number of the authors found that these effects were not of the magnitude they expected, mirroring a finding Rowe (1996) reported in a review she conducted of the existing co-op literature.

Rowe's (1996) conclusion bolsters Wilson's (1997) view that co-op has the potential to benefit students in many ways, but that greater emphasis needs to be placed on understanding how co-op works, or can be made to work, in order to realize its potential for students. Van Gyn, Cutt, Loken & Ricks (1997) echo this point, but argue that researchers have focused too heavily on investigating and demonstrating the pecuniary and career benefits of participation in co-op and not enough on the educational value that accrues (or does not accrue) through participation. In the same article, Van Gyn et al. (1997) report findings from a large-scale, quasi-experimental study that demonstrate ambiguity with respect to the educational value of participation in co-op. Very few studies focus on the phenomenon of co-op itself, particularly as an educational or sociocultural process (Davidge-Johnston, 1996; Eames, 2000; Simon, Dippo & Schenke, 1991). Even fewer studies concentrate on the social relations that constitute co-op, the social sites in which these relations occur, and the particular meanings these interactions have for participants.

Focusing on the educational dimension of co-op, Ricks (1996) proposes that researchers and practitioners should view co-op as a curricular process instead of a program. Ricks advocates a change in conceptual orientation, from viewing co-op as an

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<sup>26</sup> Grosjean (2000) reported thirty-two doctoral dissertations on the subject from 1982 to 1997; however, his review focused more broadly on vocational higher education.

<sup>27</sup> In addition to studies that concentrate on co-op students, some of the dissertations focus on the perceptions and experiences of other constituents in co-op programs, such as employers (Braunstein, 1999), co-op administrators (Homer, 1981) and faculty (Jones, 1998).

educational instrument to seeing it as a dynamic educational, and therefore sociocultural, process. A number of researchers in recent years have begun this shift. They have, for example, considered co-op from a range of social and educational perspectives, including experiential learning (Demetriou, 1995; Guskin, 1993), situated cognition (Davidge-Johnston, 1996), reflective practice (Canale, 1999; Schaafsma, 1996; Van Gyn, 1996), transformational learning (Ricks, 1996), philosophy of knowledge (Finn, 1997), cultural studies and feminism (Schaafsma, 1996), ethics (Mark, 2001; Wilson, 2001; Weisz, 2001) and critical pedagogy (Ahola-Sidaway, McKinnon, Simser & Spletzer, 1996; Simon, Dippro & Schenke, 1991). While some of these studies are theoretical and others are empirical, in each case they imply that once co-op is viewed as a dynamic process, instead of a reified entity, it can be fashioned to achieve different ends, within certain structural limits. For instance, a critical pedagogy of co-op might encourage students to investigate, map and critique the existing power structures of contemporary work sites in order to see the consequences that an arbitrarily gendered division of labour has for women workers (Simon et al., 1991).<sup>28</sup>

### ***Philosophical and policy orientations towards co-op throughout its history***

The increasing diversity of perspectives in co-op research throughout the 1990s led Van Gyn (1994) and Ricks (1996) to observe that the philosophical orientations researchers (practitioners and participants) assume towards co-op influence the meanings and effects that co-op is perceived to have.<sup>29</sup> Until recently, researchers' philosophical assumptions about co-op have remained tacit. A primary assumption has been that co-op benefits all participants, including students, employers and university administrators (Wilson, 1997).<sup>30</sup> This predominant assumption has its basis in a utilitarian educational

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<sup>28</sup> There is likely a structural limit on such an approach. It would probably have to be undertaken in the context of classrooms and not in work sites, as students and educators might face sanctions from employers for engaging in this activity.

<sup>29</sup> Applied here to co-op, this claim is central to interpretive and critical forms of social (and educational) theory and research (Bredo & Feinberg, 1982a, 1982b; Habermas, 1971; Weber, 1968).

<sup>30</sup> See Table 1.1 (p.8) for a list of reported benefits.

philosophy that emphasizes maximizing utility and pecuniary benefits for the greatest number of participants.<sup>31</sup>

Grosjean (2000) argues that a cultural myth circulates in the communities of co-op research and practice, which diminishes the need for reflexivity on the part of researchers and practitioners regarding their philosophical orientations. This myth asserts co-op is firmly rooted in John Dewey's widely respected pragmatic educational philosophy (Heinemann & De Falco, 1990; Ryder, 1987; Van Gyn, Branton, Cutt, Loken & Ricks, 1996). In his work, Dewey (1939) posited that the dialogical integration of the meaning of workplace (and other) experiences with educational processes could enhance the personal, social and intellectual development of people to serve as thoughtfully engaged citizens and productive workers. Moreover, Dewey (1977) argued that, properly conceived and practiced, vocational education had the potential to reform industrial work processes, making them more amenable to realizing the full scope of human potential. In contemporary parlance, Dewey sided with a liberal view of education. But he included vocational education in this liberal perspective. Grosjean (2000) and Saltmarsh (1992) observe that many co-op researchers and practitioners use Dewey's respected name to legitimize their work; however, central aspects of Dewey's philosophical and educational orientation are largely absent from that work.<sup>32</sup>

Saltmarsh (1992) and Grosjean (2000) claim, instead, that the roots of co-op research and practice grow out of the largely utilitarian and vocational educational philosophy of Herman Schneider, the administrator who 'invented' co-op in 1906 in the faculty of engineering at the University of Cincinnati.<sup>33</sup> Grosjean (2000) argues that Schneider's view is antagonistic to Dewey's:

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<sup>31</sup> Blackburn (1996) defines utilitarian philosophy as an ethical theory that "answers all questions of what to do, what to admire, or how to live, in terms of maximizing utility or happiness" (p. 388). He further explains that this is the view presupposed in most modern sociocultural, political and economic planning processes, where happiness is measured in economic terms.

<sup>32</sup> For example, co-op researchers and practitioners have not investigated or emphasized the potential contribution of vocational education to democracy, and what this might mean for contemporary research and practice in co-op.

<sup>33</sup> Apprenticeship systems were well-established by this time in Europe, as were "sandwich" courses in universities in Britain.

Schneider assumed the schools would accommodate workplace demands, not the reverse [as in Dewey]. The co-operative education plan put the workplace at the centre of learning by moulding students' learning to a set of predetermined standards based on workplace norms. (p. 42)

In this view, co-op was originally designed to adapt students to the existing industrial regime, thereby improving the economic utility of higher education.<sup>34</sup> Such a perspective lives on in current research that concentrates on the pecuniary and career benefits that co-op participants receive in the contemporary postindustrial regime. It also manifests in approaches that investigate how participation in co-op contributes to the development of skills deemed necessary for success in knowledge-based workplaces.

There is some usefulness in tracing and unpacking the lineage of the philosophical orientations in research about co-op. Doing so highlights how co-op researchers, and co-op itself, are located in the enduring philosophical tension between liberal and utilitarian views of higher education. As I outlined in Chapter One, in Canada this tension currently centers on the extent to which publicly funded institutions of higher education exist to develop productive knowledge workers or socially responsive, knowledgeable citizens, with these two missions being largely viewed as incompatible. If Grosjean's (2000) analysis of what he sees as the myths of co-op education philosophy is correct, then contemporary co-op researchers and practitioners may believe they are supporting a liberal education initiative when they are, in fact, affirming a utilitarian one.

However, the location of co-op researchers and practitioners in this philosophical tension seems to be informed more by their commitment to maintaining and growing co-op than by any tacit or explicit philosophical commitment to a substantive educational philosophy. When one compares philosophical orientations across time in the co-op literature *vis á vis* particular economic, political and institutional contexts, an overriding pattern of valuing maintenance and growth for their own sake becomes apparent.<sup>35</sup> The

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<sup>34</sup> There is some evidence that Schneider had industrial reform as a secondary objective for co-op (see Park, 1943, p. 103). However, this was informed by republican values that were dissimilar to Dewey's social democratic ones.

<sup>35</sup> Hodgkinson (1996) claims maintenance and growth are two "metavalues" that are fundamental to the ways most people understand the organizations in which they work and the social or educational movements in which they are involved. As metavalues, maintenance and growth are rarely subject to conscious scrutiny.

philosophical orientation of co-op (and research about it) shifts at both the macro and micro levels as “co-operative education professionals attempt to build a case for the institutional legitimacy of co-operative education” (Wilson, Stull & Vinsonhaler, 1996, p. 156).

Co-op was introduced in Canada in the late 1950s, at what eventually became the University of Waterloo.<sup>36</sup> At the time, advocates aligned co-op with two important features of the contemporary context. First, the region, similar to North America more generally, was experiencing a severe shortage of technically proficient science and technology personnel (McCallum & Wilson, 1988; Sovilla, 1988). Second, “universities and colleges throughout North America and the rest of the world were playing catch-up to the scientific advances in Russia which had sent the first satellite into orbit” (McCallum & Wilson, 1988). Co-op was introduced as a key means to develop technical skills and as a way to accelerate the practical application of theoretical knowledge in support of North America’s efforts to gain ascendancy in the Cold War. Since the inauguration of co-op in Canada, human resource development in support of national security and competitiveness<sup>37</sup> has persisted as its fundamental orientation (Ellis, 1987; Wilson, Stull & Vinsonhaler, 1996). It has resulted in research that focuses on educational achievement (Van Gyn, Cutt, Loken & Ricks, 1997) and skill development (Mann & Gilbert, 1995), with the latter being particularly important in the contemporary context of global economic competition and the emergence of knowledge societies (Blackwell, Bowes, Harvey, Hesketh & Knight, 2001; Gardner, 1996).

In economic downturns, and thus in times of labour surpluses, supporters and policy-makers have also constructed co-op as a key means to reverse the vicious cycle of ‘no experience, no job; no job, no experience.’ In Canada, this labour market adjustment orientation was predominant from the early-1980s to the mid-1990s when the federal

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<sup>36</sup> Detailed histories of the development of co-op in the Canada are described elsewhere (LeBold, Pullin & Wilson, 1990; McCallum & Wilson, 1988; Ryder, 1987; Ryder & Wilson, 1987; Van Gyn & Grove White, 2002). What I provide here is an interpretation of this history in light of the pattern of values suggested above, and the kinds of research undertaken as a result.

<sup>37</sup> Since the diminution of Cold War tensions, issues of national security and economic competitiveness have become ever more intimately entwined.

government, under its Job Entry program of the Canadian Jobs Strategy, made funding available to post-secondary institutions to start co-op programs (Van Gyn & Grove White, 2002).<sup>38</sup> This orientation resulted in research that focused on transition processes between higher education and the workforce (Gardner, 1997; Gardner & Motschenbacher, 1997; Nielson, 1982; Porter, 1982), career development (Pittenger, 1993; Sharma, Mannell & Rowe, 1995; Somers, 1995) and pecuniary benefits accruing to participants (Mann & Gilbert, 1995; Rowe, 1992; Somers, 1995). In general, the literature indicates that participation in co-op helps to match students' backgrounds and interests to workplace requirements. It also assists students to develop career foci, and provides for financial benefits such as higher starting salaries than for regular graduates, and earnings to offset rising tuition costs and student debt.

The Canadian federal government ceased directly funding co-op programs in the mid-1990s (Van Gyn & Grove White, 2002).<sup>39</sup> At the same time, the federal government also dramatically reduced the substantial transfer payments it formerly made to the provinces to support post-secondary education. These cuts in funding have placed considerable financial pressure on university administrators in general and co-op administrators in particular. Those responsible for managing co-op must now regularly justify the value of their programs to university executives and communities in order to receive funding from tightly restrained institutional budgets.<sup>40</sup> In this context, co-op researchers have shifted their focus to the educational value of co-op. They do so in two complementary ways. First, using the language of the academy, researchers investigate co-op, relying in particular on recognized educational theories of cognition and

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<sup>38</sup> To a limited degree, this period also had a social equity orientation, as some co-op programs were started with federal funding to assist targeted groups of students who faced significant barriers to labour market entry. Examples include a program at the University of British Columbia designed to assist women who had been out of the workforce for a long period (McCallum & Wilson, 1988) and a program at the University College of the Fraser Valley designed to assist students with disabilities. The federal government in the United States undertook a substantial social equity approach to co-op, providing funding from 1965 to the mid-1990s to operate co-op programs designed to assist disadvantaged groups of students (Rowe, 1988).

<sup>39</sup> In British Columbia, the provincial government has for a number of years provided a small envelope of funding to post-secondary institutions that run accredited co-op programs (Van Gyn & Grove White, 2002).

<sup>40</sup> Some universities use a cost-recovery model by assessing substantial student fees (e.g., University of Waterloo). Other universities allocate significant funds from general revenues to run co-op programs (e.g., University of Victoria).

curriculum to guide their inquiries (Davidge-Johnston, 1996; Finn, 1997; Grosjean, 2000); Heinemann, DeFalco & Smelkinson, 1992; Van Gyn, 1996, 1994; Van Gyn, Cutt, Loken & Ricks, 1997). Second, using the language of business and labour economics, researchers investigate co-op as a means of developing the skills required for contemporary high performance, knowledge-based workplaces (Davidge-Johnston, 1996; Demetriou, 1995; Gardner, 1996; Wilson, Stull & Vinsonhaler, 1996). Through the first prong of this strategy, researchers aim to assure professors and academic administrators, with whom they compete for scarce resources, that co-op has educational merit. Through the second prong, researchers seek to assure other stakeholders, including state and institutional policy-makers who require accountability, students worried about their economic futures, and employers concerned about skill shortages, that co-op accelerates the development of human capital required for knowledge intensive workplaces (Grosjean, 2000).<sup>41</sup> This second prong of the contemporary research agenda aims to constitute co-op as a ‘win-win’ strategy for each of these constituents.

In the last decade, however, a number of co-op researchers have identified and questioned some of the tacit assumptions upon which previous researchers have relied, proposing new ones. For example, Schaafsma (1996) and Van Gyn, Cutt, Loken and Ricks (1997) point out that most researchers have treated co-op students as an undifferentiated group, thereby assuming students experience the co-op process in similar ways. Such an assumption is problematic, according to these researchers. Schaafsma (1996), for example, argues that well documented inequities exist in labour markets with respect to gender and, thus, women likely experience the co-op process quite differently than men.<sup>42</sup> He calls for a feminist orientation to research on co-op that is openly sensitized to gender differences. In another example, Grosjean (2000) argues researchers have been blind to the ways co-op programs increasingly operate to produce a “vocational elite,” thereby reproducing and exacerbating class differences in higher education and

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<sup>41</sup> For example, “Education in Overdrive” is the title of a guide to implementing co-op programs in Canada (Young & Young, 1995).

<sup>42</sup> A similar observation could be made of other axes of discrimination in labour markets (e.g., race, ethnicity, sexual orientation, age).

society more generally. He suggests a neo-Marxist orientation to research is needed to unearth and explore the social class dimensions of co-op.<sup>43</sup>

The recent questioning of the tacit assumptions in co-op research and practice resemble the difficult philosophical and political questions regarding interests, values, epistemologies and methods that researchers have been asking for decades in other fields of education and the social sciences. These questions include, for example, whose interests are best served by orienting and implementing a study or educational program in one way as opposed to another? That some co-op researchers are beginning to draw from the bodies of knowledge and experience in other disciplines (and fields of educational practice) to ask difficult questions about co-op indicates, ironically, that co-op supporters have been successful in bringing their programs and educational values closer to the academic mainstream. Co-op is now a common presence in most Canadian universities. As such, researchers and practitioners of co-op now find themselves on contested terrain, where the claims to educational validity and institutional legitimacy that they rely upon to justify their inquiries and practices are subject to the processes of scrutiny and debate that constitute the traditional, liberal culture of university communities.

### *Conceptual models for investigating co-op*

As outlined in the previous sections, much of the research conducted regarding co-op relies upon a tacit acceptance of co-op as an undifferentiated and inherently positive entity (Wilson, 1997). Based on this assumption, most previous researchers have treated participation in co-op as an independent variable which they have measured in terms of its possible impacts on certain dependent variables. Their focus has been on whether co-op is positively correlated with anticipated outcomes (Wilson, 1988; Rowe, 1996). Their analytical gaze has focused on both methodological issues in their largely quasi-experimental approaches (e.g., sampling, operationalization and control of variables) and results. They have not directed a similar amount of analytical energy to conceiving the phenomenon itself (Wilson, 1988), making co-op a kind of “black box”

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<sup>43</sup> Grosjean (2000) suggests that Bourdieu and Passeron's (1977) analysis of social reproduction in education would prove useful in this task.

(Davidge-Johnston, 1996). As a result, co-op remains seriously under-theorized, particularly as an educational, and therefore sociocultural, process. Only a handful of attempts have been offered to develop conceptual models for the elaboration of contexts, social relations, practices and meanings associated with co-op.

The most popular model for understanding co-op is as a partnership between students, the university and employers. This is often visually represented by an equilateral triangle, with one of the partners located at each of the angles. While this model adequately describes an ideal structure for a co-op program, it has very little to offer in terms of conceiving what is learned and how learning takes place. More importantly, it does not provide room to consider the broader political, social, cultural and economic contexts of co-op. In addition, with partnership as its overarching metaphor, the model does not allow for consideration of the potentially contradictory character of relationships between participants, who likely have conflicting interests, motives and values.

In 1990, Branton, Van Gyn, Cutt, Loken, Ney and Ricks proposed a model for conceiving how learning takes place in co-op. Their model involves three factors conceived in a triangular relationship. These factors include the condition of the learner (e.g., beliefs, cognitive processes), the state of the learning environment (e.g., curriculum, pedagogy) and the learning outcomes (e.g., skills, knowledge), with each needing to be clearly understood in order to “say anything meaningful about learning” (Van Gyn, Cutt, Loken & Ricks, 1997, p. 72). This model is significant for at least two reasons. First, it proposes a complex, non-linear pattern to the learning process. Second, the model provides for the ability to account for variations that exist in co-op with respect to the characteristics and values of participants, program design, and educational strategies used. A weakness of this model is that it does not encourage researchers to account for the broader economic, political and sociocultural contexts that condition the state of the learner, the learning environment and learning outcomes.

In 1996, Ricks proposed a prescriptive, values-based model for understanding co-op. The central tenet of this view is that if the core principles of co-op are determined then practitioners can “get on with developing an effective educational experience”

(Ricks, 1996, p. 7) using these principles as a scaffold. Visually, this model consists of a series of Chinese boxes with the central box representing “Educational Values and Principles”, the next incorporating the “Players in Educational Partnership”, which include co-op students, employers, co-op staff and faculty, the next depicting the “Educational Institution”, and the largest one representing the “Broader Community.” Such a model is significant for at least two reasons. First, it places the issue of educational philosophy and values in co-op front and centre. Ricks suggests that dialogue needs to take place in a variety of locations, such as the individual co-op programs, the university communities and workplaces, in order to clearly articulate what these ought to be.<sup>44</sup> Second, this model situates co-op in its philosophical, institutional and cultural contexts, encouraging analysis about how co-op is situated *vis á vis* those contexts. A weakness of this model is that it implies that formally articulated and agreed upon values produce correlative forms of social action. In this, the model does not account for the cultural politics and social structures that influence the development of shared values and shape peoples’ interpretations of those values as they apply them in specific contexts (Habermas, 1990; Hodgkinson, 1996; Morgan, 1997).

A number of researchers have used existing theories of experiential learning to inform their inquiries into co-op. They do not use these theories to develop full-scale conceptual models for understanding co-op; instead, they use them as conceptual lenses. As with the models above, each attempt to apply existing learning theories to co-op has certain strengths and weaknesses.<sup>45</sup>

Drawing on theories of reflection-in-action (Argyris & Schon, 1978; Schon, 1983), Van Gyn (1996) argues that, conceptually, the program cycle of co-op (i.e., study-work-study) holds great promise for encouraging the reflective habits of mind required for work in most contemporary professions. Davidge-Johnston (1996) provides empirical evidence for Van Gyn’s claim, showing how participation in co-op can enhance the metacognitive skills that are fundamental to reflective learning. For example, when co-op

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<sup>44</sup> To encourage such a dialogue, Ricks (1996) provides a list of ten guiding principles for co-op.

<sup>45</sup> See Fenwick (2000) for a summary of five prevailing theories of experiential learning, including an examination of the strengths and weaknesses of each theory.

students discover they are unable to solve problems at work simply by applying techniques they have learned at university, they must re-examine how they are thinking about problems. This process of thinking about one's thinking is what Davidge-Johnston means by the term metacognition. However, she finds that metacognitive skill development among co-op participants is only possible if pedagogical interventions are made to encourage them to think deeply about what and how they are learning. In her view, these interventions need to focus on the continuities and discontinuities between their thought processes and skill development in different sites of learning (e.g., classrooms and workplaces).

An important strength of reflective theories is that they can help to describe how participants in co-op construct, refine and deepen their knowledge. They also provide pedagogical guidance for co-op practitioners. However, reflective theories assume that learners are autonomous from their surroundings, even as they are immersed in them. Knowledge and skill, including metacognitive skill, are bounded in learners' heads, moving with learners from one context to the next. This implies that once learners acquire knowledge and skill, it is readily accessible for them to use in subsequent contexts (Fenwick, 2000). However, specific kinds of social relations, cultural politics and pedagogical practices constitute each context, determining what counts as skill and knowledge, and conditioning the processes by which learners acquire and use skills and knowledge. Reflective theories do not adequately theorize these contextual factors and cannot account for how context shapes reflective activity.

To deal with the influence of context on learning, researchers have developed theories of situated cognition, which Grosjean (2000) relies on in a recent dissertation that explores some of the contextual dimensions of co-op. Situational theories emphasize that people learn *in* experience, not *from* experience (Wilson, 1992). Knowing and learning are firmly rooted in changing processes of human activity in particular situations and communities (Fenwick, 2000). The knowledge and skill that help learners to successfully participate in situations (e.g., to adequately solve problems at work) are influenced by the communities of practice in which they participate, the tools they have at their disposal,

and the activities in which they engage (Lave & Wenger, 1991). Using these ideas, Grosjean investigates how the social relations and evaluative practices of university classrooms and workplaces influence the ways students understand learning in co-op. He concludes that co-op students learn most productively when classroom and workplace contexts closely resemble one another. As a result, he recommends reforms in university curricula and pedagogy to make the relationships between classrooms and workplaces more synchronous. Grosjean also suggests that employers need to orient their supervision of students in pedagogical directions, instead of focusing predominantly on the efficient completion of job tasks. In addition, Grosjean finds that, with multiple work experiences, co-op students construct professional identities, coming to view themselves not as students but as emergent professionals. He calls this process of identity formation the “co-op effect,” attributing it to a change in social relations whereby students move from the periphery toward the centre of their respective communities of practice as they progress through the co-op program.

The key strength of theories of situated cognition is that they encourage consideration of how the characteristics of different contexts (e.g., classrooms and workplaces) condition the development of knowledge and identity. However, there are a number of significant drawbacks to situational theories. They do not adequately theorize the dimensions of gender, class, race and other axes of socioeconomic and cultural differentiation that characterize many situations.<sup>46</sup> Situational theories do not encourage an accounting of flows of power, which determine different learners’ ability to participate meaningfully, and to learn, in particular communities of practice (Fenwick, 2000). Nor do situational theories encourage evaluative judgements of the activities, norms and standards of existing communities of practice. As a result, they do not provide a means for understanding fundamental ethical questions with respect to experiential learning, such as: Whose knowledge is afforded the greatest influence among the various participants in a community of practice? How is this privileged knowledge justified, and

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<sup>46</sup> This is apparent in Grosjean’s (2000) situational analysis which does not address how women co-op students, particularly those in male-dominated disciplines such as engineering, likely have different perceptions of their learning than male students

in whose interest is it that its privilege be maintained?<sup>47</sup> Critical perspectives on experiential learning, such as the one I use in this research report, ask these kinds of questions, addressing some of the weaknesses in situational theories.<sup>48</sup>

Simon, Dippo and Schenke (1991) ask critical questions about co-op, and encourage co-op educators and participants to ask similar questions.<sup>49</sup> Their approach to co-op relies on asking the following simple questions: What and with whom do co-op students learn? However, what Simon et al. intend in asking these questions is far from simple. Relying on tenets of critical theory and strategies of critical pedagogy, they interpret their questions with an elaborate array of concepts. Unlike reflective learning theorists who view learning as a predominantly monological cognitive activity, Simon et al. understand learning to be a dialectical sociocultural process characterized by relations of domination and subordination (mainly along dimensions of gender, race and class) that govern what is learned and by whom. Unlike situational theorists, who see learning as a relatively smooth progression of the learner from periphery to centre of a community, Simon et al. conceive learning to be a site of cultural politics, social tension and conflict.

When Simon et al. (1991) ask their questions regarding what and with whom co-op students learn at work, they aim to understand (and to encourage co-op participants to understand), first, what counts as important knowledge and skill in workplaces, second, who gets to determine these, third, who gets to learn them and, fourth, where learners are positioned as a result of this process of sorting and privileging. With these questions, they aim to problematize taken-for-granted understandings of workplaces and the learning that goes on in them, encouraging consideration of how these are socially organized to regulate the production and distribution of knowledge and skill. Simon et al. believe that once co-op students learn to recognize the ways in which work and learning are socially

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<sup>47</sup> Grosjean (2000), in his situational analysis of co-op, for instance, largely accepts the existing view in many professional communities of practice (e.g., the business community) that professors need to alter their curricula and pedagogy to meet the needs of employers and labour markets.

<sup>48</sup> Chapter Three of this study provides a conceptual framework based on critical theory, and Chapter Four provides an explanation of how critical theory informs my research methods.

<sup>49</sup> Simon et. al. (1991) studied co-op in high schools but their work has meaning for the post-secondary context. There are other critical conceptualizations of co-op and workplace education (Ahola Sidaway et al., 1996; Lakes, 1994); however, Simon et. al. provide the most comprehensive one.

organized, they can position themselves *vis á vis* their learning, rather than be positioned. This gives students greater control over their academic and occupational identities and horizons of possibility. With their critical approach, Simon et al. also want to instill in co-op participants the desire to work toward ameliorating deleterious relations of domination and oppression that exist in work sites, occupational structures and labour markets.<sup>50</sup> In addition, Simon et al. view their approach as a way for co-op educators to resist reproducing amongst students the relations of domination and subordination that exist in many workplaces and labour markets, which is something that can occur if co-op educators mediate work experiences onto the student body without critical intervention.

A key strength of critical perspectives, such as the one offered by Simon et al. (1991), is that they allow for consideration of how power operates in contexts of experiential learning to shape what is learned, how it is learned, who gets to learn and the sociocultural consequences of learning. In addition, critical perspectives encourage consideration of the ethical dimensions of experiential learning, providing impetus for making evaluative judgments regarding the activities, norms and social relations in learning environments, including co-op work sites. However, there are a number of substantial problems with critical approaches. Because they view learning as a process of sociocultural conflict, many critical theorists do not readily allow for a conceptualization of co-operation or mutual understanding.<sup>51</sup> Critical theory can lead researchers to assume that where co-operation appears to exist some participants--particularly those whose interests, in the view of critical researchers, do not seem to be adequately served by the co-operative arrangement--suffer from a kind of false consciousness (Fenwick, 2000).<sup>52</sup> In other words, some participants will inadvertently agree to their own subordination in a co-operative learning process. In instances like these, critical theory can also lead researchers to presume that it is their duty to encourage the enlightenment of those who are unable to recognize their oppression, thereby encouraging resistance to unjust, though

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<sup>50</sup> Here, Simon et. al.(1991) echo John Dewey's view that experiential education has the potential to transform industrial regimes to make them socially just and democratic.

<sup>51</sup> The critical social theory outlined by Habermas (1984, 1989) places conflict and co-operation into a dialectical relationship, thereby offering a solution to this weakness.

<sup>52</sup> Many critical theorists have called the false consciousness argument reductionistic (Calhoun, 1995).

seemingly co-operative, educational arrangements. Such an approach raises some troubling questions. What gives critical researchers the epistemological advantage to determine what constitutes false consciousness? On what basis can they claim the moral superiority needed to prescribe how others ought to understand themselves (Lather, 1991)? Where are learners left after their so-called enlightenment (Fenwick, 2000)? And, what obligations do critical researchers have to those they strive to enlighten (Giroux, 1991)?

The conceptual framework that I outline in Chapter Three, which is largely based on Habermas's (1984, 1989) version of critical theory, builds on the strengths, and addresses many of the weaknesses, exhibited in previous conceptual models and lenses of co-op.

## **Part Two: The Sociocultural and Economic Dimensions of Higher Education in the Era of Knowledge Societies**

As I reviewed the literature on co-operative education, it became increasingly evident that most researchers had yet to fully engage with the philosophical question of educational purpose. Instead, the prevailing approach is to tacitly accept a utilitarian educational philosophy in order to investigate and demonstrate the benefits of co-op to the various participants. I found the absence of philosophical reflection in the co-op literature surprising, particularly because every other body of educational literature that I reviewed featured a substantial debate regarding the purposes of education. Moreover, the philosophical debates in the educational literature have become increasingly voluminous and heated in the last two decades as co-op programs became an important presence in most Canadian universities and Canada emerged as a knowledge society. It seems odd this debate has not had more influence on co-op researchers, particularly because co-op programs operate at the nexus of one of the most heated discussions: the degree to which higher education should serve economic objectives or broader social purposes.

In contrast to the literature on co-op, I discovered in other fields of educational literature discussions that are often polarized between those who defend a sociocultural educational mission and those who argue education exists to serve economic needs and

interests (Giroux, 1999; Reich, 1991). For example, in the last twenty years, researchers in educational administration have waged a battle over educational values. Their struggle has focused on whether substantive sociocultural values ought to have more influence in the administrative and policy approaches to education than instrumental, or economic, interests do (Greenfield, 1993; Hodgkinson, 1991, 1996). In the field of adult education, researchers have long struggled over the degree to which their discipline should be oriented to human resource development, as opposed to contributing to personal growth, empowerment and social justice (Briton, 1996; Hart, 1992; Welton, 1995). And, in the research community on higher education, a debate currently rages regarding the degree to which universities should shed their traditional values and alter their educational practices to become more like modern corporations (Axelrod, 2002).

While the tension between the sociocultural and economic in western educational philosophy can be traced to the ancient Greeks, it is not my purpose here to review and interpret that history.<sup>53</sup> Instead, in this chapter, I present what I have learned from the ongoing debates in the fields of educational research that I reviewed. In the subsequent section I describe how these debates are situated in a larger discussion regarding knowledge societies. In both cases, I include this information to illuminate and contextualize the research questions and conceptual approach that guide this study.

***Different readings of the tension between the sociocultural and economic dimensions of higher education***

*Educational administration: substantive versus instrumental rationality and values*

In the literature on co-op I found only two articles that focused on the important role educational values play in co-operative education programs. This finding is in stark contrast to the educational administration literature, where the problem of values, and the forms of rationality associated with them, has been central to inquiry and debate for over three decades.

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<sup>53</sup> For a comprehensive account of western educational philosophy see Axelrod (2002).

Most inquiries regarding values and rationality in educational administration draw from Max Weber's (1968) sociological perspectives on rationality, leadership and bureaucracy from the early twentieth century (Greenfield, 1993; Hodgkinson, 1996; Weber, 1968). Weber (1968) observed that as western societies administered themselves increasingly through formal, bureaucratic organizations, they became obsessed with administrative process as opposed to social purpose. This shift in rationality emphasized calculation of the efficiency and effectiveness of means, and de-emphasized the substantive values, or ends, to which those means were (or ought to have been) oriented. Considerations of these ends were increasingly left up to experts.<sup>54</sup> While Weber saw that bureaucratic organizations were required to administer large scale, modern societies effectively, he was profoundly concerned that this seemingly inexorable shift from considerations of worth or value (*Wertrationalität*) to those of instrumentalities (*Zweckrationalität*) would generate significant social problems. In particular, he worried that citizens would lose their ability to intuit and debate the social purposes to which they believed their society, and its administrative organizations, should be oriented. As a result, people would be caught in the "iron cage" of a totally administered, and likely totalitarian, society. Moreover, he prophesied that organizations and the instrumental logic sustaining and emanating from them would slowly but surely rob citizens of their personal freedom and human spirit.

Researchers in educational administration have taken up Weber's ideas in theoretical and empirical studies that attempt to counter the perceived hegemony of instrumental reason in administrative research and practice. For example, discussing the current state of educational leadership, Foster (1989) describes the Weberian nightmare,

We live in an age of instrumentalities, where people themselves become instruments for the achievement of organizational goals; where people are driven...by economics; and where the individual, rootless and guide-less, strives for a sense of identity and meaning. (p. 59)

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<sup>54</sup> Weber (1968) also observed that these experts came to preside over and tightly control three relatively autonomous spheres of cultural values--science, politics and art.

For a salve, he recommends a conceptual shift, with leaders treating education as a living form of democracy, in which participants engage in dialogue and activity to construct socially and personally meaningful narratives, preferably aimed at understanding and furthering freedom, equality, justice and democracy itself. Bates (1989) echoes this view, as do many others (Harris, 2002; Smyth, 1989). However, Bates (1989), drawing on Habermas (1971, 1987, 1989), argues that education must be viewed and defended as a sociocultural process that is relatively autonomous from the administrative apparatuses of economy and state. This is crucial if education is to be supportive of processes of cultural rationalization (Habermas, 1989), which consists of the ability to partake in public discussion<sup>55</sup> regarding the appropriateness of personal and cultural values, morals and norms, and social practices. Cultural rationality, as both a process and substantive outcome, represents the counterbalance to instrumental rationality and its potentially deleterious effects. It represents the capacity for people to consider personal and social purpose as the ends to which their administrative systems and organizations are (or ought to be) set.

In its application to the questions raised in this study, and the phenomenon of co-op more generally, I have found the educational administrative literature useful in raising a number of important issues to consider. In Part One of this chapter, I discussed how the history of co-op in Canada reveals it to be largely an instrument of administrative rationality, particularly since its growth and development have been so intimately tied to state economic policies. This emphasis is reflected at the program level where, in most Canadian universities, cohorts of educational managers run co-op. Generally, there is little, if any, substantive involvement on the part of professors.<sup>56</sup> Co-op is not really integrated into the mainstream educational milieu. Instead, the primary focus for co-op personnel is (and likely has to be) on establishing close ties with economic actors in workplaces in order to develop jobs for students. These administrative arrangements raise the spectre that, using language from this strand of educational administration outlined

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<sup>55</sup> Critical self-reflection is also an important dimension of cultural rationality (see Schon, 1983).

<sup>56</sup> See Chapter Five for how co-op is structured, staffed and operated at the site of this study.

above, an instrumental, as opposed to a cultural, rationality will likely predominate in co-op programs. Such a conclusion suggests that co-op programs may decrease the relative autonomy of university communities to pursue their primary educational purpose: cultural rationalization. As a result, one might anticipate deleterious effects such as legitimation crises<sup>57</sup> and loss of community within and around universities that offer co-op,<sup>58</sup> although the extent of these problems will likely depend on the relative size, scope and symbolic profile of their co-op offerings. One might also anticipate motivational and identity issues for the students who participate, although this will likely depend on their primary intentions for attending university in the first place.<sup>59</sup>

*Higher education: democratic socialization versus human capitalization*

In the literature on co-op I found researchers, practitioners and advocates made frequent references to its contribution to democratic culture and society, via the Deweyan roots of experiential and vocational learning; however, I found little in their approaches and findings that could support this claim. Instead, I discovered that a widespread, often tacit, utilitarian worldview underpinned most research and practice in the field. That this worldview could go unchallenged is surprising given the vociferous debate in the parallel literature on higher education (and in university communities themselves) between those who view the primary purpose of higher education to be the socialization of thoughtful and engaged citizens and those who prefer to see it as a vehicle for students to gain the skills and attitudes necessary for successful participation in the contemporary economic order. In this section, I canvass both sides of the debate about universities, while attempting to understand how they shed new light on co-operative education and how co-op can be situated relative to them. In addition, because the co-op program is deeply implicated in the vocational function of universities, I examine previous research about the economic contribution of higher education.

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<sup>57</sup> On the delegitimation of higher education, see Lyotard (1984).

<sup>58</sup> On the fragmentation of higher education, see Bauman (1997), Scott (1997) and Smith (1998).

<sup>59</sup> For instance, if one enrolls in university primarily to get a well-paid job upon graduation, one may likely perceive the instrumental rationality of co-op as complementary. However, if one enrolls in university to enhance one's sense of personal and social meaning, one may find the instrumental emphasis of co-op to be problematic.

*The sociocultural mission of higher education: from social democracy to postindustrial performativity and back again*

In the last century, Canadian universities have played a significant role in furthering the principles of a socially just, democratic society through teaching and research, and as respected sources of moral, social and cultural criticism. Simultaneously, they have contributed to the vocational and economic needs of their host society.<sup>60</sup> A dynamic tension between these different roles has existed throughout this time. In the second half of the twentieth century, however, university offerings have become increasingly professionalized, specialized and calibrated to labour markets (Axelrod & Reid, 1989), to the apparent detriment of the liberal arts and sciences (Axelrod, 2002; Grosjean, Atkinson-Grosjean, Rubenson & Fisher, 2000). Over this time, universities have also formed close ties with the business sector (Axelrod, 1985). Some say these alliances are damaging to the fabric of the university, and ultimately to society, as they banish to the periphery forms of knowledge that cannot be readily commercialized (Buchbinder & Newson, 1990; Newson, 1994; Noble, 2001; Scott, 1991; Tudiver, 1999; Polster, 2000). In addition, universities have developed closer ties to the administrative apparatuses of the state, which increasingly situates them as instruments for social and economic policies, rather than critics and important contributors to those policies or as institutions which foster artistic creativity, humanistic appreciation of literature and other cultural forms (Cameron, 1991; Melody, 1997).

This ever-enlarging emphasis on the social and economic utility of higher education has led some to suggest that universities are in a state of profound “moral crisis” (Katz, 1985) and may no longer be able to fulfil their commitment to social democracy. Others suggest universities should accept their fate pragmatically (Lyotard, 1984) and continue further down the utilitarian path (Cochrane, 1985; Gibbons, 1994; Maxwell & Currie, 1984).

A volume of essays about the tension between the social democratic and utilitarian missions of Canadian universities appeared in 1985, during the period in which

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<sup>60</sup> For historical narratives on the development of universities in Canada, see Harris (1976) and Axelrod (2002).

co-op programs were beginning to experience rapid growth and expansion throughout Canada. Entitled *Universities in Crisis: A Mediaeval Institution in the Twenty-First Century* (Neilson & Gaffield, 1985), the book was produced from the proceedings of a conference held a year earlier at the University of Victoria. The book offers a good touchstone for understanding the broader institutional and social context from which co-op emerged to become a ubiquitous feature of Canadian higher education. Each essay offers an individual scholar's view on what universities are and should be. Their prescriptions generally fall onto either end of the continuum between social democracy and utilitarianism. Thus I have chosen to present only two of the essays here, as they are representative of the opposing views offered in the book.

Katz (1985) argued that the dialogical character of teaching, learning and research in universities, along with their role in producing moral and social criticism (in addition to technical knowledge), is a mainstay of socially just, democratic societies. With many economic pressures being placed on Canadian universities at the time,<sup>61</sup> Katz saw their dialogical and critical capacity being eroded. He thus worried both about the future viability of universities as important institutions in society and the democratic future of Canadian society itself. Katz made his argument to counter those, such as Rush and Evers (1986), Maxwell and Currie (1984) and Cochrane (1985), who framed the future legitimacy of universities in terms of their capacity to become more integral to the economy.

In his arguments, Katz reproduced in muted form Herbert Marcuse's trenchant critique from the mid-1960s regarding the one-dimensionality he observed in all aspects of advanced industrial societies, including higher education.<sup>62</sup> Speaking from an American context, Marcuse (1991) argued such societies were characterized by "a non-terroristic economic-technical coordination which operates through the manipulation of needs by vested interests" (p. 3), with contemporary educational institutions serving as

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<sup>61</sup> These pressures included dramatically increasing enrolments without corresponding financial support from provincial or federal governments, heightened emphasis on producing scientific and technological forms of knowledge that could be readily commercialized, and an increased focus on producing and reporting on labour market outcomes for graduates.

<sup>62</sup> For a comprehensive account and analysis of Marcuse's educational philosophy, see Reitz (2000).

conduits of these interests, resulting in graduates who were alienated from their own sense of being and unconscious of the contexts of their lives. Marcuse considered higher education to be qualitatively *higher* only when it fulfilled its “potential to work *against alienation*: as a critique of positivism, conformity and repression, and also as a means of political engagement” (Reitz, 2000, p. 15, italics in original) -- in other words, when it became a site of personal transformation, social critique and democratic values. Marcuse called for the reinstatement of an aesthetic dimension in higher education, in part through increased institutional support to the humanities, as an alternative to the single-minded emphasis on science<sup>63</sup> and technology, and to counter the strictly operational mindset the latter tended to produce.

Katz’s (1985) arguments also echoed those of Jürgen Habermas (1970) who had maintained more than a decade earlier (and in a German context) that there is a mutually reinforcing, virtuous relationship between democratic learning processes in universities and democratic society. Habermas offered an account of the kinds of learning processes that support this virtuous relationship. He argued for the free circulation of knowledge in its manifold scientific, moral and aesthetic forms. And he argued for the right of all members of the university community to speak freely and to put forth reasoned arguments without fear of reprisal, even when their arguments questioned the validity of widely accepted truths, policies and practices, social norms and cultural values. For Habermas, such learning processes foster competencies that support a democratic polity. If forces from inside or outside the university interfere with such learning processes for an extended period--for instance, if state policy-makers or business leaders are successful in their attempts to delimit the types of knowledge produced and circulated in university communities--then those learning processes can become badly distorted, negatively affecting democratic society. For example, if they are unsupported by democratic learning processes, democratic institutions tend to lose their appearance of legitimacy (Habermas,

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<sup>63</sup> Marcuse criticized science in its “positivist” form--that is, scientific epistemology and methods adhered to as ideology--not science in its traditional liberal form.

1975). This can result in full-fledged crises of confidence and lead to the emergence of different, and quite possibly anti-democratic, institutional forms.<sup>64</sup>

While Katz's essay attempts to re-elevate the importance of democratic learning processes in an attempt to stave off a crisis of legitimacy in Canadian universities, Cochrane's (1985) essay in the same volume offers a vision for a different institutional approach. He replaces a focus on democratic citizenship with an emphasis on staying "close to the customer" (Cochrane, 1985, p. 54) in order to generate renewed public confidence in universities. For him, customers fall into three categories: business people who provide money for endowments and research activities; students who pay tuition; and state officials who control the majority of institutional funding. In this view, institutional legitimacy can be re-established through a set of exchange relations that bear close resemblance to those in the market economy. Business people, students and state officials anticipate direct or indirect returns on their investments, whether in the form of commercial advantage, good jobs upon graduation, or educational programming that supports social and economic policy. As long as universities assist customers to realize these returns, their confidence will remain high. This requires universities to continually monitor the needs of customers and to rapidly adapt to them.

For Maxwell and Currie (1984), an effective way of getting close to customers is to forge strategic relationships with them that reposition them as partners in the educational enterprise. Maxwell and Currie enumerate eight types of partnerships in which universities can engage.<sup>65</sup> Co-op programs feature prominently among these, as they link university administrators, employers and students in triangle of mutually beneficial, instrumental relationships.<sup>66</sup>

Cochrane's (1985) essay and Maxwell and Currie's (1984) study reproduce in colloquial and reductionist terms Jean-François Lyotard's (1984) influential philosophical

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<sup>64</sup> Having lived through the institutionalization of the fascist state in Germany in the mid-20<sup>th</sup> century, Habermas has first-hand knowledge of at least one troubling alternative to democratic forms of social and political organization.

<sup>65</sup> These partnerships include joint ventures, interface institutes, contract research, research parks, university-based companies, co-op programs, continuing education and manpower transfer programs.

<sup>66</sup> See Table 1.1 in Chapter One.

treatise on the future of universities in the emerging post-industrial era. Writing under contract as part of the policy-making process regarding the future of higher education in the province of Québec, Lyotard argued universities were indeed suffering a crisis of legitimacy. In his view, people inside and outside the academic community no longer deemed valid the two meta-narratives that had provided justification for the liberal humanist educational philosophy prevalent in western universities over the past three millennia. For him, historical events showed to be myths the twin ideas of speculative unity (the progressive development of knowledge into an ever-increasing, unified whole) and emancipation (the continual development of human wisdom leading to ever-greater forms of human freedom) that supported liberal humanism. Lyotard argues that in post-industrial societies, such as the one Canada has become, information and ideas represent the most crucial, if ephemeral, social and economic resource. As a result, knowledge takes on a more utilitarian meaning, and universities would do well to take what Lyotard calls a performative, as opposed to speculative, stance towards it.<sup>67</sup> This means universities need to more closely align their knowledge production and teaching activities with the immediate needs of the social and economic system.

Moving to contemporary times, some lament that Lyotard's prediction for higher education appears largely to have come true. Referring to the current situation in which citizens, bombarded with information, are looking for "quick fixes" to complex social, economic and political problems, Bauman (1997) argues, "The rules do not privilege the intellectual pursuits that once made the academics famous: The relentless, but slow, search for truth or justice is ill fitted to be conducted under [the current] public gaze" (p. 22). As a result, academic authority is in decline, especially as there are now so many other sites of knowledge production that people deem to be valid, in particular because they are easier to consume and digest. Moreover, according to Bauman, the "flexible" job market does not require skills and habits from university--by which he means those

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<sup>67</sup> Bloland (1995) describes how conceptions of knowledge are affected under a performative regime, where criteria such as " 'is knowledge true', 'is it just', 'is it morally important' are replaced by 'is it efficient', 'is it marketable', 'is it sellable' and 'is it translatable into information quantities'?" (p. 536). Briton (1990) offers a similar analysis.

Habermasian competencies mentioned above. Indeed, such skills are a “hindrance in this environment” (p. 23).

Writing from American and Canadian contexts respectively, Giroux (1999) and Ralston Saul (1997) argue educational administrators have too readily adopted the educational reforms recommended by the business sector and have too willingly taken up corporate culture as a model of educational leadership in their attempts to shore-up the legitimacy of their institutions in the short term.<sup>68</sup> Both authors argue that remaking higher education and its administration in the image of business will have negative consequences for democratic societies in the long run. Giroux outlines how educational administrators operating under a corporate mentality give priority to cost-effectiveness, efficiency<sup>69</sup>, and cost-accounting. Citing numerous examples, Giroux shows how these administrative values translate into preferential treatment and funding of vocational and professional programs of study, and threaten to eliminate or “technicize”<sup>70</sup> programs whose role in the market is deemed ornamental, such as those dealing with social issues from non-corporate perspectives (e.g., feminism, post-colonialism).<sup>71</sup> For Giroux, the increased channelling of learning to vocational ends in universities is anathema to their role as civic institutions whose purpose should rightly be to educate students for “the richest possible participation in public life” (p. 43). He argues political action is required on the part of educators to nourish “the proper balance between democratic public spheres and commercial power, between identities founded on democratic principles and identities steeped in forms of competitive, self-interested individualism” (p. 44). Ralston Saul concurs with Giroux, arguing the current educational regime produces an

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<sup>68</sup> Hodgkinson (1996) argues organizational maintenance and growth are deeply ingrained metavalues that guide the behaviour of educational leaders in the West, and which they rarely but should question.

<sup>69</sup> Hodgkinson (1996) argues effectiveness and efficiency are “metavalues” that universally guide the behaviour of educational leaders, and which they rarely but should question. For an informative discussion of the contemporary definition and social meaning of effectiveness and efficiency, see Gross Stein (2003).

<sup>70</sup> By this Giroux means that knowledge originally constructed to serve, for instance, moral purposes is instead co-opted to serve instrumental ends. An example is the reworking of moral philosophy into a mechanism for improving workplace productivity via the discourse of corporate values.

<sup>71</sup> For a discussion of how the liberal arts are adversely affected by a “culture of management” in higher education, see Cowen (1996).

“unconscious” population, largely incapable of engaging in deep self-reflection, social criticism or political action.

In its application to the questions that guide this study and the phenomenon of co-op more generally, I have found this particular body of literature on higher education useful in raising and framing a number of issues. Covering the two decades of rapid expansion of co-op in higher education, it suggests there has been a narrowing of educational focus to one of serving economic and vocational goals, which has taken place in response to the legitimacy crisis and the political and economic pressures universities have faced over that period. This narrowing of focus has become manifest in new and potentially troubling institutional arrangements (e.g., business models and corporate culture), learning processes (e.g., customer-focused), forms of knowledge production (e.g., performative) and fields of study (e.g., vocational). These particular responses to the legitimation crisis in higher education provided fecund conditions in which vocational programs such as co-op could grow. And it is arguable they also determined the predominantly utilitarian direction in which co-op would grow. That socially democratic impulses should be largely absent from co-op programs that benefited from this context should not be surprising.

However, this body of literature also shows how there may be social costs associated with taking a predominantly utilitarian approach to resolving the legitimation crisis in higher education. In particular, such an approach can distort the learning processes and interfere with the institutional arrangements that help to sustain democratic societies. This raises important questions about the effects contemporary co-op programs have on democratic culture, both on and off campus. How does participation in them affect democratic socialization? In what ways do they affect democratic institutional structures and cultures? If researchers such as Habermas (1970, 1971) are correct, one might expect that participation in co-op programs, as they are currently oriented, impedes the development of competencies and identities necessary for thoughtful engagement in democratic society. One might also anticipate that co-op programs adversely affect administrative and curricular structures as well as cultural values and practices within

universities as they pertain to the democratic dimension of higher education. I take up these questions in Chapter Three, where I outline a conceptual framework for the study that is based on Habermas's work.

*The economic contribution of higher education: labour markets, human capital and educational credentials*

*Labour markets and higher education*

For the last forty years, labour economists have claimed that there is a direct correlation between level of educational attainment, positive employment outcomes and income levels in western societies (Krahn & Lowe, 1998). As a result, many educational researchers, policy makers and the general public have concluded that people with more education secure better jobs and are more productive and happy in their work than those who have less education. The virtuous connection between higher education, good jobs and prosperity is a central theme in educational thinking and popular imagination in the current era of knowledge societies. Higher education is widely viewed as *the* route to individual and national economic security.

In 2001, Human Resources Development Canada (HRDC) released a report that summarizes the findings of over forty research articles that are based on over two decades (i.e., 1982-1997) of information produced through the National Graduates Survey (NGS) administered by Statistics Canada. The primary objectives of the HRDC report are to investigate how graduates from colleges and universities in Canada make the transition from school to work and describe the "returns on their investments in education" (p. 1). The HRDC report contains a wide range of information about the relationships between higher education and labour markets. Here, I present only those aspects of the report that are germane to this study. In particular I concentrate on information that illuminates aspects of the sociocultural and economic dimensions of participation in higher education.

The report analytically distinguishes graduates of liberal studies (liberal arts and sciences, social sciences) from graduates of vocational programs (health, engineering, and

education) and applied arts, sciences and social sciences.<sup>72</sup> Five aspects that stand out in the authors' analysis are presented in Exhibit 2.1. In terms of relevance to this study, the findings presented in Exhibit 2.1 suggest co-op programs provide an equalizing influence in terms of labour market outcomes for students in the liberal arts and sciences relative to those in vocational programs.<sup>73</sup> I anticipated liberal arts students will tell me this is a key reason for their participation in co-op. But one of the things I hoped to learn from them is how this process of equalization takes place, as survey data does not describe the causal social or educational processes.

**Exhibit 2.1: Key findings regarding the labour market outcomes of liberal versus vocational post-secondary graduates in the 1980s and 1990s**

1. The majority of students chose vocational versus liberal studies (e.g., 57% versus 43% in 1995).
2. Vocational graduates had better labour market outcomes than did liberal studies graduates in the years immediately following graduation (e.g., vocational graduates earned 27% more per year).<sup>74</sup>
3. Despite poorer labour market outcomes, 60% of liberal studies graduates would choose the same field of study again.
4. Liberal studies and vocational graduates who participated in co-op programs had better labour market outcomes than did those who did not pursue co-op (e.g., co-op graduates in liberal studies earned 32% per year more than non-co-op graduates in liberal studies).
5. Liberal studies graduates who participated in co-op had labour market outcomes that exceeded those of non-co-op vocational graduates and approached those of co-op vocational graduates.
6. Liberal studies and vocational graduates report similar levels of "employability skills"

<sup>72</sup> The HRDC report does not include law, medicine, dentistry or veterinary medicine in its analysis, as these fields usually require an undergraduate degree for entrance.

<sup>73</sup> Axelrod's (2002) reading of Canadian census data suggests that even without co-op programs liberal studies graduates in the long run eventually attain similar labour market status as vocational graduates. This is because it takes liberal studies graduates longer to construct "career ladders" into long-term occupational positions.

<sup>74</sup> The authors note that over the long term, labour markets favour liberal graduates because of their broad range of flexible, generic skills (Human Resources Development Canada, 2001, p. 12).

*Human capital theory and higher education*

There is a forty-year history behind prevailing notions about the relationship between higher education, labour markets and the economy. Marginson (1997) describes this history as three successive waves of thinking about higher education as an investment in the development of “human capital” (p. 116). The first wave of human capital theory began in the early 1960s, the second in the early 1980s and the third commenced in the early 1990s, continuing to the present day.

In the early 1960s, the recognition of the seemingly direct relationship between education and prosperity led a number of economic researchers to articulate theories of human capital (Denison, 1963; Schultz, 1961). These theories stated that increased investment in education improves levels of knowledge and skill, thereby enhancing productivity and, with it, economic growth and prosperity. These theories further claimed that if investments in education were more equitably distributed across society, then incomes, too, would be more justly distributed.

The complementary social and economic logic in the early theories of human capital appealed to state policy makers who saw in them a comprehensive solution to contemporary economic and social problems (Rubenson, 1992).<sup>75</sup> Early theories of human capital were well suited to the prevailing Keynesian policy orientation, which emphasized state-led social investments to ensure an inclusive distribution of economic rewards, thereby bolstering widespread demand for goods and services. In Canada, as in other western societies, the human capital thesis informed policy decisions to substantially increase public expenditures on higher education throughout the 1960s and into the 1970s. The increased spending on higher education during this period, combined with less restrictive tuition policies, aimed to increase aggregate levels of education and improve access to higher education for larger segments of society (Rubenson, 1992).

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<sup>75</sup> Marginson (1997) traces this policy interest in increasing the skill and knowledge of workers in western societies to the launching of Sputnik by the Soviet regime and the subsequent need for western nations to play technological catch-up in the Cold War. Interestingly, McCallum and Wilson (1988) claim that co-operative education received its start in Canada for similar political and military reasons.

However, in the 1970s, economic problems and social inequality intensified in western societies, despite a significant expansion in the availability of higher education. As a result, researchers began to question the validity of the original human capital thesis. Some researchers developed alternative theories, such as the credentialing hypothesis outlined in the next section. However, those loyal to the human capital idea constructed a second wave of theory throughout the 1980s (Marginson, 1997). These second wave researchers worked at the onset of the information revolution, an era of rapid technological development and change. Their theories reflected this context. Instead of positing direct relationships between level of education, productivity and income, second wave researchers claimed these relationships were indirect, mediated by technological change. In their view, higher education enhanced peoples' capacity to understand and adapt to new technologies, to acquire and decode information, and to reassemble information in innovative ways (Wozniak, 1984). Moreover, the more technologically dynamic the environment, the more education paid off for individuals, employers and the state through technologically-facilitated gains in productivity, including gains in the development of the technologies themselves (Bartel & Lichtenberg, 1985). Unlike early human capital theory, which took an undifferentiated view of higher education, the second wave of human capital theory pointed to the importance of select types of education. In particular, it highlighted cutting edge professional and technical programs such as applied science and management (Marginson, 1997). Educational policy-makers and the general public paid close attention to this shift in thinking about the relationship between higher education and the economy. Professional and technical programs sprang up and flourished in higher education during this period.<sup>76</sup>

However, at least one major problem existed in second wave theories of human capital. While such theories argued that people who participated in higher education were better able to transfer their skills and knowledge to technologically dynamic work settings than were people without higher education, they were unable to explain how this took

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<sup>76</sup> For instance, engineering and business schools were introduced in 1983 and 1990, respectively, at the site of the present study.

place and how it could be more productively facilitated. Of particular concern was the fact that technologies (and the information that constituted and sprang from them) were changing so rapidly that there was no way to plan educational offerings in any traditional sense. These problems gave rise to the third-wave of human capital theories, which remain prevalent today (Marginson, 1997).

Third-wave theories emphasize markets and skills. Markets in higher education are crucial to the efficient production and deployment of human capital, with the latter conceived and expressed largely as skills. Skills are a fundamental currency in the relations between the various participants in the education-economy nexus, serving to coordinate their interactions and exchanges.

From the third-wave human capital perspective, markets are the only mechanisms that allow for the nimble changes in educational programming and educational choices that the contemporary dynamic, information-intensive economy demands. Third-wave theorists base their views in this regard on one significant assumption: that individuals will invest in higher education until the costs of doing so exceed the expected benefits, with anticipated earnings being paramount among these benefits (Marginson, 1997). Thus, university students will always keep one eye on labour markets, making strategic educational choices--or investments in their human capital--to maximize their economic returns. An anticipated outcome of this central assumption is that students will demand from providers of higher education that their programs and curricula are relevant to contemporary labour market conditions. In particular, they will demand educational opportunities that lead to high-income occupations.

The concept of markets in higher education calls for a significant restructuring of the roles and relationships between the state, educational institutions, learners and labour markets. Table 2.1 outlines how these roles have changed during the successive waves of human capital theory. But questions arise as to how these relationships are mediated and what symbolic currencies steer and coordinate them.

Money, either actual or anticipated, is one obvious medium through which the various participants in higher education relate. Students pay tuition fees to universities,

employers pay wages to university graduates and the state provides funding to universities. Human capital perspectives see each of these monetary transactions as investments in the development of human capital.<sup>77</sup> That is, students pay fees anticipating their studies will provide them with the skills that employers need; employers look for certain kinds of skills when hiring and remunerating new graduates; and state policy-makers look to universities to inculcate these skills in return for state funding.

Given this logic, it is not surprising that third-wave theories and educational policies and practices are more focused than their predecessors on the nature and types of skills required in contemporary workplaces and how these can be developed in higher education. Beginning in the early 1990s, industry groups and state officials have repeatedly sought to construct comprehensive lists and categorical schemes of the skills required for successful employment in general and for specific industries and professions (British Columbia Business Council, 2002; Conference Board of Canada, 1992, 2001). Educational researchers and practitioners have sought ways to articulate these skills in higher education generally (Axelrod, 2002; Evers, Rush & Berdrow, 1998; Petch, 1998), as well as co-operative education programs (Cates & Langford, 1999; Marini & Tillman, 1998).

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<sup>77</sup> In first- and second-wave human capital policy approaches the state was encouraged to assume the lion's share of investment in higher education. In third-wave approaches, students are required to contribute a much larger proportion of the investment and are more explicitly encouraged to consider their participation in higher education as an investment. In Canada, for example, tuition fees rose 46% from 1990-1995, increasing student debt levels by 38% in the same period (Human Resources Development Canada, 2001).

Table 2.1 Roles of the state, universities, students and labour market in successive eras of human capital theory

| Era         | Role of State  | Role of Universities  | Role of Students                             | Role of Labour Markets   |
|-------------|--|---|--|--|
| 1960s-1970s | Generally fund mass higher education   | Provide general education (traditional arts & sciences)   | Develop human capital                        | Absorb graduates; Deploy human capital   |
| 1980s       | Selectively fund mass higher education   | Provide general and professional/technical education  | Develop human capital                        | Steer educational funding/programming; Absorb graduates; Deploy human capital                                |
| 1990s       | Reduce funding for mass higher education; De-regulate higher education sector (encourage competition & user-pay); Provide information re: labour markets and educational choices | Provide general and professional/technical education; Produce and deliver educational services that are responsive to students, labour markets and state; Compete for investment (from students, industry, state) | Invest in development of their human capital | Steer student decision-making; Steer educational funding/programming; Absorb graduates; Deploy human capital |

Similar to the first wave of human capital theory, the third wave is well suited to prevailing economic policy orientations and social and educational milieus. The late 1980s and 1990s were a time of sweeping changes in the mindset that governed most

western societies. This period marked a swift retreat from the Keynesianism social welfare perspective and an equally rapid shift to the competitive individualism of neoliberalism (Teeple, 1995). Table 2.2 describes these changes in orientation and their effects on the ways policy and practice are (or ought to be) conceived in higher education.

Table 2.2 Keynesian versus neoliberal policy perspectives and their effects on higher educational policy/practice within a human capital model

| Socioeconomic policy perspective                    | Central tenets  | Higher education policy/practice   |
|---|---|--|
| Keynesian social welfarism<br>1950s-1970s           | State intervention and investment;<br>Social justice and economic redistribution            | Large state expenditures on expanding and funding higher education;<br>Equal opportunity for all to maximize human capital |
| Neoliberal competitive individualism<br>1980s-1990s | Free markets and private investment;<br>Individual property rights and economic competition | Markets in higher education;<br>Individual competition and investment required to maximize human capital                   |

Within the context of this study, it is important for a variety of reasons to understand the history of the development of human capital theory, how it is situated in the larger policy context, and the implications for policy and practice in higher education. First, in official policy and practice co-op is very much an attempt to improve the coordination of relationships between universities, students and employers, and human capital theory offers a compelling lens co-op researchers, practitioners and advocates have picked up: Co-op is a skill development program and not just an employment scheme. Second, human capital theory reworks the sociocultural aspects of education into “skills” as a means of dealing with dynamic tension between sociocultural and economic dimensions of higher education. In so doing, it frames this tension in a market context,

and therefore as a function of individuals' rational choices--rational, that is, from the perspective of the discipline of neoclassical economics to which human capital theory is wedded. Examples of this human capital perspective include the idea that employers will naturally seek the best qualified employees and that job seekers will naturally seek the most economically rewarding positions.<sup>78</sup>

In terms of this study, I anticipated that the discourse of skills would likely be a predominant feature of the participants' experiences. For example, I expected to find students redefining their academic competencies into skills that will speak to the interests of employers. This process would likely cause some tension for the students, particularly for those in fields that have a tenuous relation to occupational categories. I anticipated that as students became more and more familiar with the market in skills, they would begin to make choices about their academic programs that would help them to develop the most marketable and readily definable categories of skill.

*Alternative economic theory to the prevailing human capital approach: The credentialing hypothesis and its implications for higher education*

In the previous section, I described how human capital theory came under close scrutiny in the 1970s when economic problems and social inequality intensified, despite the predictions of educational interventions largely based on the human capital thesis. An alternative group of theories about the relationship between higher education and labour markets arose throughout the 1970s and continue to be relevant in the contemporary context of the third wave of human capital theory. This cluster of alternative theories became known interchangeably as the credentialing or screening hypothesis (Livingstone, 1999).

The credentialing hypothesis asserts that workers acquire most of the knowledge and skill that they need to do their work while actually working, and not in formal education. As a result, employers treat educational credentials largely as a screening and

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<sup>78</sup> The conceptual framework for the study introduced in my Chapter Three, shows that rationality as it appears in human capital theory is but one particular kind: instrumental rationality. However, students are immersed in multiple kinds of rationality at university (some more than others depending on their course of studies) including moral and aesthetic forms of reason, which are more closely aligned with the sociocultural mission of university education than they are with the economic.

sorting tool to gauge personality traits in potential workers, such as trainability, persistence and motivation. Credentials do not directly represent knowledge and skill.

The credentialing thesis pointed out three troubling consequences in the relationship between higher education and labour markets, which helped illuminate why economic malaise and social inequalities worsened in the 1970s despite significant public investment in higher education. These explanations also shed light on why inequalities persist to the present day despite the continued expansion of higher education. First, the credentialing thesis implied that the economic contribution of education is largely limited to that of providing a selection mechanism for employers (Blaugh, 1976). Thus, the contribution of higher education to economic growth was largely limited to how efficiently employers could use educational qualifications as a sorting criterion (Rubenson, 1992).<sup>79</sup>

Second, the credentialing perspective suggested that actual levels of educational attainment were not as important as relative levels. Thus, as educational attainment increased in society, employers simply increased hiring standards *vis à vis* educational qualifications, regardless of their actual skill requirements. But as labour markets have a limited capacity to absorb growing numbers of educated workers, unemployment and underemployment will increase (Marginson, 1997; Osberg, 1981). Third, credentialing theory suggested that systems of higher education were pivotal in reproducing prevailing structures of socioeconomic inequality. Following human capital theory, educational credentials should have provided an ostensibly open and objective mechanism for employers to select individuals for suitable job openings, regardless of the sex, race, ethnicity, class and so forth of individuals with similar credentials. This should have produced greater equity in labour markets. However, if employers were predominantly treating credentials solely as a screening mechanism, their discriminatory hiring and employment practices could remain unaffected (Bowles & Gintis, 1976; Miller, 1981).

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<sup>79</sup> Recently the academic unit from which I conducted this study changed its name from the Department of Educational Administration to the Department of Leadership Studies. The credentialist view would suggest this change is an attempt to endow graduating credentials with greater symbolic currency in a 'new' economy where "leadership" accrues higher exchange value than does "administration."

In contemporary times, the debate continues between those who support a human capital perspective and those who maintain the credentialing thesis (Axelrod, 2002; Livingstone, 1999). Economic contexts likely have a significant influence on the potential validity of each perspective. When economic times are good and labour markets are tight, the human capital perspective likely appears more valid. When times are tough and there is significant unemployment, the credentialing thesis likely makes more sense.

In terms of this study, the credentialing thesis suggests employers may not recognize value in the educational programs in which co-op students are involved, particularly because they do not yet possess credentials. If employers prize knowledge, skills and attitudes gained on-the-job, it is likely students will seek ways to translate their educational backgrounds (and previous work experiences) into language and behaviours employers will recognize and value (see Blackwell, Bowes, Harvey, Hesketh & Knight, 2001). This translation process may have significant consequences for students' academic identities, particularly for those in non-vocational programs such as the humanities. For example, students may find it difficult to turn the forms of thought and values associated with, say, cultural criticism into characteristics that will be of interest to most employers (see Lillie, 1992). Will they have to radically alter or forego their forms of thought and values? I anticipated seeing this to some degree. And what happens to their academic knowledge and values if they begin to identify more with their labour market personae than they do with their academic ones? Will students come to view their academic knowledge, values, experiences and identities as somehow flawed or irrelevant? I expected this too may be the case.

Two other issues the credentialing thesis foregrounds relative to this study are underemployment and unemployment. These issues are of particular concern when considering the experiences of co-op students in fields where the supply of students exceeds labour market demand.<sup>80</sup> In such cases, the students affected may construe their

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<sup>80</sup> Neoclassical economic logic would dictate that in situation of undersupply of students from particular fields of study, those students would find themselves in challenging positions and would be able to negotiate high wages and other pecuniary benefits. However, the credentialing thesis literature does not address this aspect of the supply and demand equation.

current academic disciplines to be deficient. As a result, they may migrate to fields of study that have better labour market prospects. I expected to see both of these reactions in the study.

Finally, the credentialing thesis raises the issue of discrimination in the labour market. This aspect of employer behaviour may adversely affect female co-op students, and those of different races, ethnicities, and sexual orientations than the majority of other labour market participants. Students from lower socioeconomic backgrounds may also experience difficulties. In addition, following the credentialing thesis, the risk of discrimination will likely be higher for students in fields of study where supply significantly exceeds labour market demand.

### *Section Summary*

The debates introduced in this section have raised a number of important issues, inferences and expectations to guide the methodology, reporting and analysis for the study. However, an important problem exists within all of the debates: discussants largely construe the different purposes of higher education as mutually exclusive and antagonistic. This leads them to “either/or” arguments: either university has a social purpose, or it has an economic one. Dualistic thinking such as this can lead to ideological entrenchment.

Those who advocate an economic agenda seem particularly vulnerable to ideological myopia because they draw sustenance from neoclassical economics, a disciplinary knowledge base that is remarkably (though not entirely) undifferentiated and widely accepted by economic researchers, policy makers and the general public alike.<sup>81</sup> People are unlikely to question their understandings when those understandings are shaped from within the pre-eminent discourse in the power-knowledge relations surrounding higher education.

Those on the sociocultural side of the educational debate suffer from a different set of problems. First, their ideas about higher education are not popular in policy circles,

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<sup>81</sup> See Marginson (1997, p. 92-102) for a discussion of neoclassical economic thinking and how it has gained ascendancy in the power-knowledge relations of educational policy-making.

the media, and public opinion. Second, the bases of knowledge and experience from which they draw to argue against the economic agenda are highly differentiated. As a result, proponents of the sociocultural dimension in higher education express vastly different, often inimical, educational perspectives. Unlike economic thinkers, sociocultural advocates seem unable to reach consensus as to the character and mission of higher education (Bauman, 1997). They are thus unable to present a unified front, bolstered by any coherent set of principles, in the debate. One should not construe this inability to come to an agreement as an inherent weakness in and of itself. Indeed, the wide reaching dialogue and debate within the community of sociocultural advocates may be a sign that a relatively healthy sociocultural dynamic exists within this community of researchers in contemporary higher education (Kumar, 1997).

One needs to be aware, however, of at least two potentially troubling issues. First, there is the distinct possibility that sociocultural advocates have become so mired in internal debates that they have failed to fully engage with questions of economic purpose. If this is the case, they are guilty of ideological entrenchment, although the root cause of their short-sightedness is very different from that of the economic researchers. Second, the ongoing process of dialogue and debate within the sociocultural camp has led to highly specialized and increasingly esoteric perspectives (Jacoby, 1997). As Weber (1968) hinted, rationalization processes such as this have a double-edged character. On the one hand, such processes allow for a deeper understanding of sociocultural values, in particular their socially constructed makeup. On the other hand, as cultural rationalization unfolds, experts working in specialized institutions such as universities increasingly become the arbiters of sociocultural knowledge. The understanding that sociocultural values are contingent and mutable leads to opportunities for greater freedom and diversity with respect to personal and group identities and forms of community (Habermas, 1989), which is certainly one possible outcome for higher education of the contemporary debate within the community of sociocultural researchers.

However, unless the sociocultural experts can communicate their knowledge in ways that their public audiences can understand, they risk alienating those audiences who

may come to perceive expert knowledge about the sociocultural value(s) of higher education to be illegitimate or meaningless. It is entirely possible that the general lack of popular support for the sociocultural mission of higher education is, in some measure, attributable to this problem (Jacoby, 1997).

My reaction to these bodies of literature has at least one broad implication for this study. In addition to thinking about the specific questions this literature has raised, I needed to avoid dichotomizing the sociocultural and economic when thinking about higher education. In the next chapter I present a conceptual framework that pays close attention to this problem.

## Chapter Three: Conceptual Framework

### Introduction

In this chapter I provide a conceptual framework for the study. With the understanding that an important step in the initial phase of any social research project is being explicit about how one conceives one's object of study, I first undertook the task of developing a conceptual framework in advance of generating a methodology and collecting data. I based this framework largely on the critical social theory of Jürgen Habermas (Milley, 1999). Then, as a result of my interactions with the research participants during data collection, I revised my thinking about this framework (Milley, 2002a). I became aware that a significant gap existed between the conceptual apparatus I was using to frame and interpret participants' experiences and the concepts participants themselves were using to understand those same experiences. In particular, many of the students were relying on the discourse of human capital to articulate their experiences to me. They understood their attendance at university as an investment in their future, and viewed their co-operative education experiences as a means to improve their return on investment or manage the risk of their investment.<sup>82</sup> In order to account for these subjective perspectives, I needed to adjust my original thinking. The framework I present in this chapter includes those revisions.

At the outset, the process of developing a conceptual framework helped to clarify the research problem and questions, and to develop a suitable methodology. Once data was collected, the framework provided a basis from which to analyze and interpret findings. I offer this framework in order to give the reader a touchstone from which to understand the analytical and methodological stances I have taken in the study, and to

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<sup>82</sup> See Chapter Five (p. 140) for the biographies of the students in which this pattern becomes clear.

assess the validity of the interpretations I make of the findings.<sup>83</sup> I must, however, add a caveat. A conceptual framework should not act as a blinder for either the researcher or reader, who both need to remain open to discovery and alternative possibilities as their acts of research, writing and reading unfold. A conceptual framework should be a useful set of ideas for stimulating understanding between inquirers (Gadamer, 1975). It should not be an ideology that arbitrarily limits interpretation.

In Chapter One I provided an outline of the research problem, and the issues and context that informed the initial development of this research project. I also presented the guiding research questions.<sup>84</sup> In Chapter Two I analyzed multiple bodies of literature that related to those issues, context and questions. My analysis generated a number of insights that serve as important specifications for a conceptual framework. In formulating a framework I needed to emphasize the sociocultural dimension of co-op programs and higher education. At the same time, I tried to find a way to theorize and understand the relationship between the sociocultural dimension and the economic function of co-op programs and higher education that does not reproduce their relationship as dichotomous.<sup>85</sup> I also needed to address weaknesses in the conceptual lenses previous researchers have used to study co-operative education.<sup>86</sup> The framework offered below takes these specifications into account.

### **A Habermasian Conceptual Framework**

In formulating a conceptual lens for this research project, I build on both the strengths and criticisms, offered in Chapter One, of human capital versions of the knowledge society. I do so because contemporary understandings of co-operative education (co-op) are firmly embedded in the discourse of human capital. As a starting

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<sup>83</sup> In methodological terms, the explicit alignment of research questions, conceptual framework, methodological approach and analytical strategies improves the validity of the study as a whole. Yin (1994) refers to this as construct validity.

<sup>84</sup> See Chapter One (p. 13) for these questions.

<sup>85</sup> See the section "Section Summary" in my Chapter Two. Other related dichotomies I discovered in the literature review were substantive versus instrumental values, democratic socialization versus human capitalization, liberal humanist versus performative education.

<sup>86</sup> I describe these weaknesses in the section "Conceptual models for investigating co-op" in Chapter Two (p. 26)

point, it thus behooves me to connect with and explore this discourse. However, as Freire (1970) taught so well, part of learning is the act of naming unfamiliar concepts in the context of one's own personal and cultural experience. For my part, this naming process, like this inquiry itself, is guided primarily by the notion that co-op, similar to most other modes of higher education, can be (and ought to be) conceived as a sociocultural practice, in the first instance (Simon, et al., 1991). As a result, the questions that guide this study focus predominantly on the social relations and cultural effects of co-op and their interactions with the broader social, cultural and economic contexts of higher education. Such an approach inverts and extends beyond the human capital perspective that concentrates predominantly on the economic dimensions and context of higher education. In this way, human capital theory forms a kind of analytical foil to the conceptual lens I outline in this chapter. One of the challenges before me, however, is to retain human capital theory as a useful way to frame this inquiry and not to construct it negatively as a conceptual "straw man."

In developing my conceptual approach, I have chosen to rely heavily on Habermas's (1970, 1971, 1973, 1979, 1984, 1987, 1989, 1997) highly respected critical social theory. I have done so because his body of work can be used to address all of the issues I aim to investigate. While Habermas's oeuvre is admittedly vast, it is internally cohesive, as he has spent four decades developing and elaborating an integrated complex of theoretical ideas. Equally important, his work meets the specifications I have set out for my framework: he conceives the relationship between the sociocultural and the economic spheres of human interaction dialogically, not dichotomously; and he provides a means to conceive of learning in universities and workplaces that takes into account social relations and context.

I feel confident in relying on Habermas's ideas because his work has been productively applied in the service of sociocultural research in education that is critical of instrumental-economic approaches such as human capital theory. Examples of such research include Gibson (1986) and Young (1990) in education, Bates (1989), Foster (1986, 1989) and Sergiovanni (2000) in educational administration, Connelly (1996) and

Welton (1995) in adult education, Hart (1992), Mezirow (1995) and Welton (1991) in experiential and workplace learning, and Barnett (1993), Lakeland (1993) and Ostovich (1995) in higher education.<sup>87</sup> The framework I offer below adds co-operative education to this body of Habermasian educational literature.

***Social progress and the technical, moral and emancipatory dimensions of learning***

Habermas's critical social theory is also a learning theory (Outhwaite, 1994; Young, 1990). He believes that progressive social evolution takes place through learning (Habermas, 1979). For Habermas, progressive social evolution means two things. First, people learn to coordinate their lives together in increasingly reasonable and non-violent ways, despite their often vastly different personal and cultural values, interpretation of needs and interests. Second, people learn to establish and participate productively in economic and administrative systems and institutions that provide infrastructures to sustain diverse, large scale populations. Habermas (1984, 1989) refers to the former process as cultural rationalization and the latter as social modernization. Processes of cultural rationalization are characterized by people communicating with a view to reaching mutual understanding about each other's needs and interests, and making consensual decisions about their social actions. Habermas (1984) calls this mode of communication "communicative action" (p. 285). In contrast, social modernization is achieved largely through the strategic planning and instrumental thinking that configures formal organizations, institutions and systems, and, ideally, aligns these to support culturally rational, social goals. Habermas (1984) calls this mode of interacting "strategic action" (p. 285).

I return shortly to further define communicative and strategic action. Before doing so, however, it is important to explain that not just any type of learning will suffice for Habermas and Habermasian educational theorists and researchers. Indeed, learning must be understood and constituted in certain ways to foster the socially progressive evolution

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<sup>87</sup> See Ewert (1991) for a comprehensive review of the influence of Habermas in the educational literature.

he envisages.<sup>88</sup> Inferring from Habermas (1971, 1997), there are three crucial dimensions of human experience that must be adequately addressed for socially progressive learning to occur. Table 3.1 presents these dimensions.<sup>89</sup>

Table 3.1 Habermasian dimensions of human experience, domains of learning and corresponding cultural spheres

| Dimensions of experience | Domains of learning   | Cultural spheres |
|--------------------------|---|------------------|
| Scientific-technical     | Instrumental reasoning, cognitive growth, and skill development | Science          |
| Moral-practical          | Moral reasoning, ethical judgment, and cultural politics        | Morality         |
| Aesthetic-expressive     | Aesthetic sensibility, self-expression, and identity politics   | Art              |

The scientific-technical dimension of human experience includes all those activities we undertake with a view to controlling or manipulating our natural and social environments. Civil engineering activities such as building dams are one example. Social engineering activities such as marketing and advertising are others. The key domains of learning that support this dimension of experience are instrumental reasoning, which means finding optimal techniques for achieving goals and objectives, and cognition and skill, which mean developing the capacity to conceive and effectively apply techniques.

<sup>88</sup> I assume here that Habermas's definition of social progress constitutes a virtuous idea with which reasonable people could agree. This assumption allows me to use his theory as kind of diagnostic lens (see Barnett, 1993). A Habermasian perspective on learning in support of progressive forms of social evolution does not, however, prescribe the *substantive* content of domains of learning and corresponding cultural spheres; it does not stipulate specific truths, or moral values or aesthetic values (see Braaten, 1991).

<sup>89</sup> This table synthesizes concepts presented in *Knowledge and Human Interests* (Habermas, 1971) and both volumes of *The Theory of Communicative Action* (Habermas, 1984, 1989).

Science represents the primary cultural sphere in which this dimension of human activity occurs. This sphere encompasses a wide range of scientific processes and institutions, such as corporate research departments, state (and non-state) scientific and policy think tanks, and universities.

The moral-practical dimension of human experience includes all those activities we undertake with a view to coordinating our actions with others in just and reasonable ways. Juridical activities are one example, while building social cohesion through community activities is another. The key domains of learning that support this dimension of human experience are moral reasoning, which involves understanding, assessing and living in accordance with cultural values and social norms, ethical judgment, which addresses the problems of applying moral principles in the context of everyday experience, and cultural politics, which involves challenging cultural values and social norms. Morality represents the primary cultural sphere in which this dimension of human activity occurs. This sphere encompasses a wide range of civic processes and institutions, such as political movements and parties, community groups and universities.

The aesthetic-expressive dimension of human experience includes all those activities we undertake to free ourselves from various forms of domination and repression. Cultural criticism is one example, while self-expression through political action or the arts is another. Aesthetics, which involves the development of sensibilities and evaluative capacity regarding the beautiful and the good, and self-expression, which involves the exploration of personal authenticity, are domains of learning that support this dimension of experience (Ingram, 1990). Identity politics, which involves challenging barriers to authentic self-expression and interpretations of need, is also a domain of learning that supports this dimension of experience. The arts represent the primary cultural sphere in which this activity occurs. This sphere encompasses a wide range of cultural processes and institutions, but chiefly includes those that involve the production, reception and criticism of aesthetic and self-expressive forms such as those generated in art communities, culture industries (e.g., radio, cinema, television, newspapers, etc.) and universities.

Following Habermas (1971, 1997), these dimensions of human experience, and the cultural spheres which primarily foster them, are not mutually exclusive. Nor are they entirely independent of one another. However, in modern societies these cultural spheres are relatively autonomous.<sup>90</sup> It is common practice, for instance, for scientists to develop new techniques and cede the responsibility for resolving complex moral issues associated with those techniques to concerned citizens, ethicists, politicians or the judiciary. To be sure, complex, knowledge-intensive, modern societies obviously require specialists in each of the three cultural spheres in order to function properly. For instance, to be effective, a legal system needs competent lawyers and judges. Habermas fully recognizes this. But he also argues that an appropriate balance needs to be struck between specialized learning processes in each of the cultural spheres and integrative learning processes to bridge those spheres.<sup>91</sup> Integrative learning processes offer a system of checks and balances within and between the spheres. For example, communities of scientists who have not learned to reflect on the ethical dimension of their work are perhaps more likely to put their expertise to some troubling ends. On the other hand, a balanced arrangement of learning processes also provides opportunity for innovation within and between each sphere. For example, if concerned citizens, ethicists, politicians and scientists can make themselves mutually understood, the result may likely be scientific practices that are socially progressive, and legislation that encourages rather than prohibits the development and application of new, socially useful scientific techniques.

Habermas (1971, 1997) makes two other important observations about these dimensions of human experience and their relationship to socially progressive learning processes. First, he observes that advanced industrial societies place a great deal of emphasis on the development of science and technology to ensure their economic competitiveness and survival. As a result, they tend to privilege instrumental reason and skill development over other learning domains, generating imbalances in learning

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<sup>90</sup> Habermas is deeply indebted to Weber (1968) for the latter's analytical typing of modern, Western societies into three distinct cultural spheres and the dialogical overlapping of these spheres.

<sup>91</sup> Habermas also advises that experts and laypersons need to establish open channels of communication and reciprocal learning processes so they can translate and draw upon all available knowledge to support the continued rationalization of the cultural spheres.

processes. These imbalances can lead to regressive social situations, where the society begins to lose its capacity for making appropriate moral choices and people become less able to express themselves in authentic ways. Totalitarianism is thus one possible, if extreme, consequence of an imbalance in the tripartite learning processes Habermas describes.<sup>92</sup>

The other important observation Habermas (1971, 1997) makes is that, over time, actors in the cultural spheres of science, morality and art have developed evaluative criteria that are specific to each sphere. For science, truth and effectiveness are key standards by which participants measure the validity of their activities and learning processes.<sup>93</sup> For morality, rightness is the standard. While for the arts, truthfulness and authenticity are touchstones. Habermas observes that a paradox exists here. On the one hand, this situation makes it difficult for specialists to communicate and build understanding between spheres. On the other hand, such a situation helps specialists in each sphere preserve their autonomy from the other spheres, protecting them from the undue application of evaluative criteria for purposes other than establishing greater mutual understanding and cross-cultural learning between actors in each of the spheres. For example, people who are steeped in the cultural milieu of the arts may find it unreasonable for social scientists to construe art in terms of its contribution to moral discourse. As a result, those in the arts may reject potentially important cross-cultural learning processes.<sup>94</sup> Conversely, when social scientists, such as advertising and public relations specialists, construe art solely in terms of its effectiveness in communicating

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<sup>92</sup> On Habermas's views on the relationship between learning process and democracy see the section "Social Democratization versus Human Capitalization" in Chapter Two (p. 86).

<sup>93</sup> In western scientific communities, truth is often conceived in terms of the reliability of scientific knowledge in describing, explaining and predicting the behaviour of phenomena. For Habermas (1984), people arrive at truth through communicative action. In contrast, effectiveness is the result of optimizing means-to-ends relationships. Habermas (1984) contends that people arrive at effectiveness through the use of instrumental (or functional) reasoning, the key form of rationality associated with strategic action. See the next section of this chapter for a discussion of Habermas's distinctions between communicative and strategic action.

<sup>94</sup> For example, Habermas rejects the notion that art be produced solely for art's sake precisely because such art fails to engage with moral questions (Ingram, 1990).

specific messages, they are then able to co-opt art from its emancipatory purpose and use it, instead, for social control (Horkheimer & Adorno, 1993).

Habermas (1979) argues that the inappropriate application of evaluative standards from one cultural sphere to another can distort learning processes within and between the spheres, resulting in regressive social evolution. He observes that effectiveness is the evaluative standard *sine qua non* in advanced industrial societies, whose tendency is to apply effectiveness universally to all cultural spheres. In his view, this tendency does not bode well. It can lead to societies in which the arts are reduced to propaganda, moral reasoning becomes concerned with finding technical loopholes in argumentation as opposed to providing guidance as to what is the correct thing to do, and science becomes focused on the control of nature and society instead of truth.<sup>95</sup> But he also recognizes that the application of evaluative standards across cultural spheres can lead to socially progressive learning processes, if approached with a view to increasing mutual understanding between the social actors in the spheres. For their survival, complex, modern societies require art that has moral content and technical sophistication, moral reasoning that is authentic and supported by effective procedures for developing and adjudicating social norms, and science that has an ethical base and is imbued with a sense of virtue.

The Habermasian model of different dimensions of human experience, corresponding culture spheres and related learning processes helps to frame this research project. It supplies a model for assessing learning processes in the context of advanced industrial societies (i.e., knowledge societies) by suggesting that educational programs which offer specialized learning in a particular domain and manage to address all three dimensions of human experience in a balanced, suitably integrated way are (or would be)

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<sup>95</sup> Although he is by no means a Habermasian, Hodgkinson (1991, 1996) offers a useful way of thinking about this problem of morality. He observes that people can hold moral values at the level of principle, rational calculation or preference. Effectiveness could be used as a criterion for assessing values held at the level of rational calculation, in terms of the efficacy of one's calculations, and at the level of preference, in terms of whether one got one's way (e.g., the path of least resistance). But effectiveness could not assist in assessing principles. To do so would be to subject substantive values to instrumental calculus, thereby radically altering its character. See Milley (2002b) for a conceptual model that integrates the work of Hodgkinson and Habermas.

supportive of progressive forms of social evolution. For example, at the level of universities, one could investigate how fields of knowledge and their corresponding disciplines, departments and faculties are organized. The last two decades have witnessed a great deal of cross-pollination between different fields of knowledge and among their corresponding disciplines, departments and faculties in modern universities.<sup>96</sup> But most universities are still organized, in some fashion, into the cultural spheres that Habermas identifies (i.e., science, social science/humanities, fine arts).<sup>97</sup> The model Habermas provides encourages one to ask questions such as, what knowledge, forms of reason and interests constitute these cultural spheres? What learning processes support them? How are knowledge, forms of reason and interests validated in each sphere? And what relationships and learning processes exist between each sphere? These kinds of questions allow one to explore the socially progressive character of universities and their educational programs, such as cooperative education. Because co-op students work for extended periods on specific tasks, usually (or preferably) in workplace settings<sup>98</sup> and fields of knowledge that are closely related to their academic programs, co-op exists, theoretically at least, to provide opportunities for specialization within the cultural spheres that exist in (and extend beyond) the university. Co-op programs also create opportunities for interaction between cultural spheres, although these opportunities are predominantly informal or *ad hoc*, as, for example, when English majors find co-op jobs as technical writers at engineering firms or Computer Science majors find co-op jobs as database administrators at art museums. Co-op programs also (have the potential to) encourage students to engage with the moral and emancipatory dimensions of human

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<sup>96</sup> Some contemporary authors prefer to think of universities as being postmodern in their design now, in part because of their increasing multidisciplinary (see Smith & Webster, 1997).

<sup>97</sup> The university that was the research site of this project has faculties of science, social science and arts. These faculties correspond with the Habermasian model, representing cultural spheres of science, morality and art. However, the university also hosts a range of professional faculties, such as engineering, education, business and law. Some of these, such as engineering and law, readily fit within specific categories in the Habermasian model (i.e., science and morality respectively). Others, such as education, which addresses technical, moral and emancipatory dimensions, fit into multiple categories.

<sup>98</sup> Lave and Wenger (1991) conceive workplace settings as communities of practice, which highlights the socially constructed character of knowledge, forms of reason and interests that exist within each cultural sphere.

experience, in addition to any technical specialization they provide. The co-op job search process prompts students to reflect on their skills, needs, interests, and identities, encouraging them to become more self-expressive. In addition, co-op students interact with many different people through the job search process and on their work terms. As a result, they are arguably given a broader exposure than non-co-op students to the moral and normative dimensions of formal organizations--in the context of their respective educational programs, that is.

While, in theory, co-op programs would therefore appear to offer opportunities for socially progressive forms of learning, my analysis of the research literature presented in Chapter Two suggests that, in practice, they tend to emphasize the technical dimension of experience and leave unaddressed the moral and emancipatory dimensions. Consistent with their predominantly utilitarian educational purpose (e.g., human capital development), co-op programs highlight instrumental reasoning and skill development as key learning domains, and rely on effectiveness as the fundamental criterion by which knowledge, interests and experience are validated. A Habermasian lens flags this apparent imbalance as a problem area for investigation. While co-op programs may be developing technical expertise, they might not be realizing their socially progressive potential. Indeed, if the imbalance is profound, co-op might even be socially (and educationally) regressive.

The Habermasian theory of three dimensions of human experience, learning domains and cultural spheres offers a diagnostic model to assess the socially progressive character of co-op programs and their constitutive learning processes. As the next section reveals, Habermas's theory of social action and related concepts provides a refined lens for investigating the specific experiences of educational participants.

***Social action, systematic distortions, ideal speech and communicative competence***

I return now to the question of the two types of social action--communicative and strategic--mentioned earlier. These concepts are paramount in Habermas's critical social theory. For Habermas (1984, 1989), social action consists of any human activity to which

the actors involved ascribe meaning.<sup>99</sup> Communicative forms of social action exist when people interact in consensual ways to coordinate their activities. Strategic forms of social action exist when actors calculate their interactions to achieving individual or social objectives. The primary orientation of communicative action is to foster mutual understanding, whereas the primary purpose of strategic activity is to pursue and attain goals.

From the principal distinctions between communicative and strategic action, a number of related characteristics can be derived. Table 3.2 presents these. It is important to note that both kinds of activity are required for people to maintain and reproduce their societies. For example, communicative action produces social cohesion, while strategic activity provides for material necessities.<sup>100</sup> The two types of social action thus exist in a dialogical relationship.

Table 3.2 Characteristics of communicative and strategic action

| Communicative Action             | Strategic Action           |
|----------------------------------|----------------------------|
| - oriented towards understanding | - oriented towards success |
| - dialogical                     | - self-directed            |
| - intersubjective                | - egoistic                 |
| - interpretive                   | - functional               |
| - consensual                     | - controlling              |
| - normatively regulating         | - goal attaining           |
| - expressive                     | - purposive                |
| - open-ended                     | - teleological             |

<sup>99</sup> Habermas is heavily indebted to Weber (1968) for this definition of social action.

<sup>100</sup> Habermas (1989) refers to these functions as social integration and system integration respectively. Hodgkinson (1996) makes a similar point concerning the need for both administrative and managerial action in educational administration. The former emphasizes educational ends--philosophy, values and policy--while the latter concerns educational means--effective methods, practices and systems.

In explaining the dialogical relationship between communicative and strategic action, Habermas (1984) claims that human language exists, at root, to support communicative forms of action.<sup>101</sup> Communicative action is thus an ideal case of “normal” human communication: speech oriented toward creating understanding. In contrast, strategic forms and uses of language are derived from this fundamental purpose.<sup>102</sup> Figure 3.1 presents the different modes of each type of social action.<sup>103</sup>

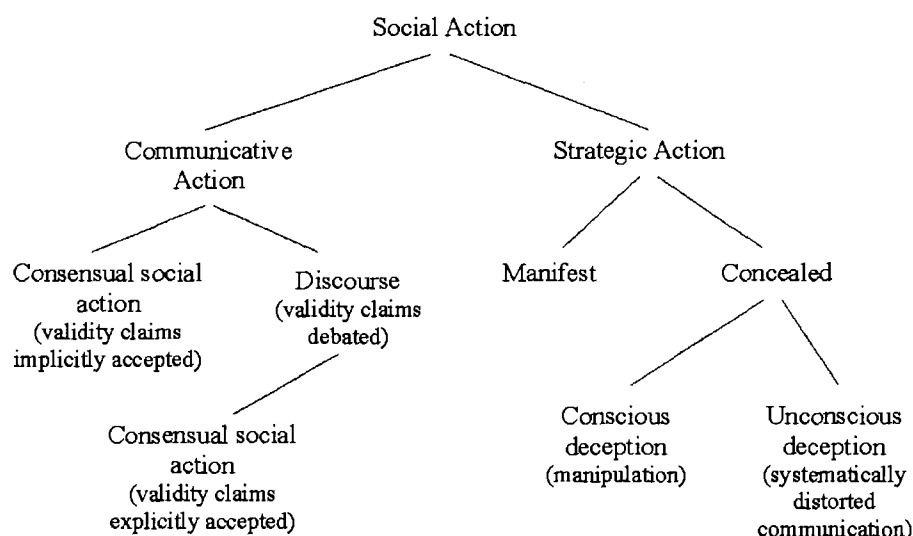


Figure 3.1 Modes of communicative and strategic action

<sup>101</sup> Habermas (1984) states, “What raises us out of nature is the only thing whose nature we can know: language. Through its structure autonomy and responsibility are posited for us. Our first sentence expresses unequivocally the intention of universal and unconstrained consensus” (p. 396). Elsewhere he writes, “If we assume that the human species maintains itself through the socially coordinated activities of its members and that this coordination is established through communication -- and in certain spheres of life, through communication aimed at reaching agreement -- then the reproduction of the species also requires satisfying the conditions of a rationality inherent in communicative action” (Habermas, 1984, p. 397).

<sup>102</sup> Lying is a concrete example of how strategic action is derived from the communicative foundation of human communication. It would not be possible for one person to lie if the other person did not presuppose the interaction was an attempt to establish a genuine mutual understanding (i.e., a truth).

<sup>103</sup> This figure is based on one offered by Habermas (1984, p. 333); however, I have described sub-levels of communicative action not elaborated in the original.

Where a genuine mutual understanding exists, social actors have implicitly reached a “background” consensus with respect to at least four types of validity claims. These validity claims--comprehensibility, truth, rightness and truthfulness--form the backdrop for all speech acts, such that social actors could justify them if requested (Habermas, 1984).<sup>104</sup>

In many cases, even when speech is oriented to mutual understanding, social actors are unable to reach an agreement. At such a juncture, a variety of approaches is possible. One or more social actors can adopt manifest forms of strategic action to deliberately influence or coerce each other. This happens, for example, when someone in a formal role of authority uses her or his power to narrow or shut down discussion. Alternatively, one or more social actors can consciously adopt concealed forms of strategic communication in an attempt to manipulate or deceive. This happens, for instance, when someone acts disingenuously or deliberately harbours important information. Finally, one or more social actors can break off communication altogether and leave the dispute unresolved; however, it is important to note that unresolved disputes oftentimes get resolved through the use of brute force, which supplants the rules and practices of communication with those of war.

In addition to these identifiable forms of strategic action, Habermas (1984) also describes a type that is less readily recognizable, which he calls systematically distorted communication, an unconscious form of deception.<sup>105</sup> This type of strategic action occurs when social actors falsely believe they are interacting with a view to reaching a mutual understanding. False understandings happen when one or more social actors have distorted self-understandings, stemming from their unconscious repression of conflict or

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<sup>104</sup> These validity claims relate closely to the evaluative standards used in the scientific, moral and artistic cultural spheres I introduced earlier in the current chapter. There are intimate links between the importance Habermas places on balancing learning processes with respect to three fundamental dimensions of human experience, communicative action and discourse. Those learning processes sustain communicative action and discourse, encouraging their embodiment in the orders of life and institutions that cluster around and in the cultural spheres (McCarthy, 1984).

<sup>105</sup> In Habermas’s critical social theory, the concept of systematically distorted communication replaces the concept of ideology that existed in the work of Max Horkheimer and Theodor Adorno, his theoretical progenitors in the Frankfurt School (Braaten, 1991). See my discussion on ideology in the section entitled “Considerations” in the current chapter (p. 90).

contradiction. An example of this is a welfare state that provides subsistence funding to recipients who accept this assistance if not thankfully at least largely without question or resistance. On the surface, this may appear to be a communicative arrangement, with both parties freely consenting to their reciprocal actions. However, as this arrangement serves to entrench an unhealthy dependency between both parties (i.e., a perpetual cycle of poverty and a growing welfare bureaucracy), and ultimately undermines the reasons for their relationship--to alleviate poverty, to sustain human potential, and to reduce reliance on the state for financial support--both parties appear to be self-deceived. A number of repressed contradictions exist on both sides of this relationship. On the one hand, the state bureaucracy remains unreflective about its pervasive control over the means by which the needs of welfare recipients are defined and interpreted. As a result, state bureaucrats are unable to design effective programmatic responses. Instead of seeking interpretations of need from recipients, the bureaucracy seeks out more resources in terms of funding, staff and expert advice in an effort to more strategically cope with the perceived problem. On the other hand, conditioned by a cultural context that construes poverty as a predominantly private affair, welfare recipients may view their situation as some kind of personal failure. As a result, they may not be well positioned to connect their situation with contradictions in their culture (i.e., its arbitrary distinction between public and private matters) and economic system (i.e., its crisis tendencies and inequitable distribution of wealth). Without access to a clear understanding of these contradictions, they are not well positioned to question the legitimacy of the control the state exercises over them by virtue of its monopoly over the process by which their needs are defined and interpreted for them (see Fraser, 1989).

Situations of systematically distorted communication are difficult to recognize because they appear in the guise of communicative action. They are difficult to reconstitute into truly communicative acts as they involve both the intra- and interpersonal levels of communication (Habermas, 1984). However, to reconstitute them through communicative discourse is a form of emancipation (i.e., authentic self-

expression).<sup>106</sup> Analyses of situations of systematically distorted communication offer potentially rich sources of insight into the deep conflicts inherent within the cultural, political and economic contexts and institutions in advanced industrial societies. Once a light is shone on these contradictions, people, groups or societies can envisage how they have come to be engaged regularly in practices that are not in their best interest (Braaten, 1991).

The concept of systematically distorted communication is important in the context of this study because stakeholders in co-operative education--students, employers, university administrators, state policy-makers--generally present and understand it as a “win-win” scenario, despite the contradictory stakeholder interests at play in co-op programs.<sup>107</sup> For example, co-op programs are sites of struggle between employers and students over the terms and conditions of work. They are arenas of competition that pit students against each other as they each strive to meet individual goals. And they are fields of conflict between program administrators who are driven to maximize job placements and students and employers who each want the best “fit.” With contradictions such as these constituting co-op programs, it is possible that stakeholder understandings of “win-win” are a product of systematically distorted communication, not mutual understanding. If this is the case, questions arise as to who is self-deceived, what contradictions and conflicts are unconsciously repressed, how this unconscious repression is constituted and sustained, and whose interests are best served by the continuation of the situation of self-deception. These questions inform my analysis and interpretation.

Returning to the issue of strategic action more generally, for Habermas (1984,1990) strategic actions--apart from violence--are necessary parts of human interaction, at appropriate times;<sup>108</sup> however, in his view, an unduly large and increasing reliance on strategic communication characterizes social action in advanced industrial societies. Habermas (2001) suggests this trend needs to be reversed as it could lead to an

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<sup>106</sup> See Table 3.3 and the related discussion on the emancipatory dimension of human experience (p. 63).

<sup>107</sup> See Table 1.1 and the related discussion in Chapter One (p.8).

<sup>108</sup> For example, in an emergency it may be best for someone with authoritative knowledge of the response plan to order others around.

evermore unstable and hostile world as advanced industrial societies, who may not exhibit an orientation towards mutual understanding, nor possess the capacity to build it, interact more frequently through processes of globalization with different societies, cultures and communicative traditions. In addition, strategic communication is a key contributor to the repression of conflicts and contradictions in and between societies; therefore, it often serves to increase levels of systematically distorted communication, the most difficult form of misunderstanding to identify and rectify. As an alternative to the undue and widespread reliance on strategic action to resolve misunderstandings, Habermas suggests that social actors can (or should attempt to) enter into a special mode of communicative action whereby they make (or attempt to make) explicit and debate the problematic validity claims which have up to this time formed the implicit or repressed backdrop to their discussions. Habermas (1984) calls this mode of interaction “discourse” (p. 117).

Historically, discourse has required some very special conditions to work. Habermas (1989, 1990) frames these conditions in his concept of the ideal speech situation. To participate in discourse, social actors presuppose that genuine consensus regarding problematic norms or truth claims only can be achieved through the rational force of the better argument. This means they must mutually hold in abeyance all other forms of force, such as role authority, coercion or manipulation.<sup>109</sup> While such a situation is nearly impossible to achieve in reality, it nonetheless provides social actors with the conceptual means by which to identify the influence of strategic power (other than the power of ideas and the justification of ideas) in their discursive contexts. It also allows social actors to gauge the degree to which such power deleteriously affects the outcomes of their discourse. Table 3.3 outlines the conditions of ideal speech.<sup>110</sup>

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<sup>109</sup> This includes both conscious and unconscious forms of manipulation, which makes the diagnosis of systemic distortions in communicative action particularly important for Habermasian researchers.

<sup>110</sup> Table 3.3 is based on Bernstein’s (1995) reading of Habermas’s (1989) extended discussion of ideal speech.

Table 3.3 Necessary conditions for ideal speech

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1. All those potentially affected by the discussion have an equal opportunity to speak
  2. Each person involved is motivated to reach consensus, and can overcome their inhibitions and strategic motivations
  3. Each participant in the dialogue observes the norms of honesty and sincerity
  4. No participant in the dialogue exercises or invokes role privileges
- 

This concept of ideal speech brings the discussion in this section around to the context of higher education and, more specifically, co-operative education. Habermas (1987) and a number of other scholars (e.g., Barnett, 1993; Campbell Williams & Gunatunge, 2000; Lakeland, 1994; Ostovich, 1994) observe that academic communities and processes of higher education exhibit (or ought to exhibit) many of these ideal speech conditions. In their view, unfettered dialogue, disputation of validity claims and rational-consensual agreement constitute (or should constitute) the social relations of academic freedom, as well as the interactions between university administrators, professors, students and the broader community.<sup>111</sup> As a result, they conclude that universities are (or should be) important sites of communicative action and discourse, in the first instance. Consequently, a major pedagogical role of universities is (or should be) to foster in students an affinity for ideal speech and the ability to participate competently in discourse. Ideal speech, and the qualities it develops in students, is one of the key

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<sup>111</sup> The claim that academic communities are sites of predominantly communicative forms of interaction should not be overstated. Habermas's (1987) view of academic communities is an ideal type against which actual social relations in universities can be assessed. Barnett (1993, p. 43) argues that even if Habermas's ideal type has counter-factual qualities, it is "at least plausible that a story something along these lines can do justice to how academics see themselves" and therefore has a number of "virtuous properties" to guide educational research and practice.

educational supports of the progressive social evolution that was discussed in the previous section of this chapter.

In contrast to universities, labour markets and workplaces, as part of the economic system, are predominantly sites of strategic action (Habermas, 1989).<sup>112</sup> In labour markets, for example, workers attempt to convince employers of their value through manifest strategies, such as using connections to influence hiring decisions, and through concealed strategies, such as exaggerating skills and experiences. And, in workplaces, employers use a range of management strategies, such as human capital development<sup>113</sup>, to encourage greater productivity in their organizations.

From a Habermasian perspective, the strategic orientation of these economic institutions is not of particular concern; in fact, it is necessary. What is of concern, however, is whether the strategic logic and relationships that are established in these institutions become ends in themselves. If strategic means become ends, the nature and scale of strategic action shifts. It now directly or indirectly erodes the capacity of individuals, groups, communities and societies to engage in communicative action and discourse in and around the institutions.<sup>114</sup> As a result, individuals, groups, communities and societies can lose control of their ability to steer their institutions in intended directions. For example, if, due to heightened competition in labour markets, too many workers resort to exaggerating their skills and experience in the job search process, then employers may begin to demand that applicants possess certain educational credentials, as a means to establish objective criterion for selection.<sup>115</sup> To ensure credentials truly represent their requirements, employers may also demand direct influence over the

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<sup>112</sup> Welton (1991) suggests workplaces can exhibit ideal speech conditions and be home to communicative forms of learning, although this takes an educational emphasis on the part of workplace participants that is socially progressive in its orientation. Welton's observation becomes important when one begins to consider the implications of university-level co-operative education in the context of Habermasian educational theories. I address this issue later in the current chapter, in the section entitled "Lifeworld, system, and systematically distorted communication" (p. 82).

<sup>113</sup> The traditional term for this is human resource development, but human resources practitioners are increasingly describing their work in terms of developing and managing human capital (see Pricewaterhousecoopers, 2004; Thomas, Cheese & Benton, 2003).

<sup>114</sup> See Sergiovanni (2000) for a discussion of this problem of means and ends in educational administration, viewed through a Habermasian lens.

<sup>115</sup> This example is drawn from the credentialing thesis, which I discuss in Chapter Two (p. 53).

educational programs that lead to credentials. If state policy makers and educational administrators accommodate these demands by altering funding arrangements to encourage labour market-oriented programs, or by changing governance models to give employers direct influence over curriculum decisions, then employers will have been successful in installing credentialing regimes in educational institutions. In the case of universities, these strategic regimes could erode communicative relations in a number of ways, especially if their reach extends broadly across campuses. With students enrolling (or encouraged to enrol) for predominantly strategic reasons--that is, to achieve favourable labour market outcomes--there could be a relative decline in communicative activity within the student population (Lakeland, 1994). With employer or industry committees largely setting the curricular goals of educational programs, there could be a decline in the scope of communicative relations amongst professors, students and administrators, whose discussions would focus on how to best implement curricula--conversations that would be about efficiency and effectiveness--and not on what should be taught and why. Such an approach would displace the democratic and dialogical tradition of educational governance in Canadian universities, in which, through Senates, groups of elected representatives (and a small number of non-elected administrators) from the university community debate and decide educational matters (Booth, 2001).<sup>116</sup> Thus, through a series of strategic interventions, a communicative failure in labour markets results in the reduced capacity of members of university communities to steer their institutions through communicative processes.

As an educational program that builds bridges between university communities, labour markets and workplaces, co-operative education enters into the Habermasian picture precisely at this point of distinction between the former as sites of communicative action and the latter as sites of strategic action. The distinctions between communicative and strategic action can help to conceive and analyze the relationships between the

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<sup>116</sup> The establishment of TechBC (a new technical university in British Columbia, Canada) offers a case study in how the direct accommodation of employer (and State) interests in university governance dramatically altered traditional governance structures and academic relations (see Canadian Association of University Teachers, 1997).

sociocultural and economic dimensions of co-op education in the context of contemporary higher education.<sup>117</sup> In being oriented to understanding, communicative forms of action relate most closely to the sociocultural dimension of higher education--a point that the related concepts of discourse and ideal speech emphasize. In being oriented to attaining goals, strategic forms of action relate most closely to the economic dimensions of higher education. A Habermasian perspective encourages consideration of the character of the communicative and strategic dimensions of co-op programs. More importantly, it encourages analysis of the nature of the relationship between communicative and strategic action in co-op. Is there a reasonable balance between them? Does strategic action unduly influence the character of communicative action? Is there evidence of systematically distorted communication in co-op? If so, what are the implications for university communities?

In the next section of this chapter I present a model that relies on Habermas's (1989) distinction between lifeworld and system for further considering these questions, focusing in particular on the tendency of economic and administrative systems to colonize and thereby distort communicative processes in the lifeworld. However, it is important to note here that Habermas (1984) specifies the types of competence that are required to participate fully and fairly in communicative and discursive contexts, along with requirements for effective participation in strategic environments. Figure 3.2, essentially a more detailed typology of the basic distinctions between communicative and strategic action, presents my interpretation of these types of competence.<sup>118</sup> This typology provides a framework to interpret and analyze how co-op participants interact (or learn to interact), and what they learn about themselves, others and their social and natural environments through their interactions. In addition, it provides a means to gauge the relative level of each type of competence co-op participants draw upon and develop in the course of their

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<sup>117</sup> This directly addresses the first of two questions that guide this research project. See Chapter One (p. 13)

<sup>118</sup> Figure 3.2 is based on a figure by Habermas (1984) that describes "pure types of linguistically-mediated interaction" (p. 329). The text that accompanies his figure reveals these pure types to be the building blocks of his theory of communicative competence. I have altered the nomenclature of Habermas' types to correspond with the dimensions of human experience discussed earlier in this chapter in the section "Social progress and the technical, moral and emancipatory dimensions of learning" (p. 62).

programs. Given the largely instrumental, utilitarian focus in co-op research and practice that I outlined in my Chapter Two, a key concern this typology helps to address (from an interpretive perspective) is whether participants are unduly focused on the development of strategic and instrumental competence to the relative detriment of communicative forms of competence.<sup>119</sup> Of necessity, the process of gauging the development of different types of competence amongst co-op students implicates others in their learning network, including their professors, co-op program administrators and employers. The character of communication amongst this network of social actors conditions, to a large degree, the forms of competence co-op students draw on and develop in the course of their educational experiences.<sup>120</sup>

The shaded area of Figure 3.2 represents three types of communicative competence. Not surprisingly, these types relate closely to Habermas's (1984) description of communicative action, and are thus supportive of it, both theoretically and practically. These types include scientific competence, whereby social actors are able to represent states of affairs or facts, moral-practical competence, through which they are able to establish legitimate interpersonal relations, posit valid norms, and question or challenge existing norms, and aesthetic-expressive competence, which allows them to present their subjective states expressively and authentically, and to challenge arbitrary barriers to self-expression. These three types of communicative action can be distinguished from strategic or instrumental competence, which form the basis for strategic actions whereby social actors aim to influence, direct or control others or their natural environment in order to achieve goals.

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<sup>119</sup> This model could provide a basis for curriculum planning, delivery and evaluation in co-op. From a planning perspective, it suggests that educational experiences need to address all four forms of competence. From a delivery perspective, it suggests learners should be encouraged to inquire into natural and social phenomena from the standpoint of four distinct but interrelated worldviews. From an evaluation perspective, it suggests learners should be assessed relative to the five formal features of each type of competence, but in particular on their capacity to be subjectively and intersubjectively reflexive with respect their use of each type of competence.

<sup>120</sup> The methodology for the study presented in my Chapter Four takes the importance of the network of social actors. While the study emphasizes the experiences of co-op students, I made every effort to interview professors, employers and program administrators with whom the students interacted.

| Type of competence        | Formal features of competence |   |                          |                        |   |
|---------------------------|-------------------------------|---|--------------------------|------------------------|---|
|                           | Orientation                   | Function  | Attitude to others/world | Conception of world    | Validity claims                           |
| Strategic or instrumental | Success                       | Influencing others, predicting and controlling social/natural environment                             | Objectivating            | Objective: "The" world | Effectiveness, efficiency                 |
| Scientific                | Understanding                 | Representing states of affairs or facts   | Objectivating            | Objective: "The" world | Truth: provide "grounds"                  |
| Moral-practical           | Understanding                 | Establishing legitimate interpersonal relationships, positing valid norms, challenging existing norms | Normative                | Social: "Our" world    | Rightness: provide "justifications"       |
| Aesthetic-expressive      | Understanding                 | Self-presentation, subjective disclosure, challenging barriers to expression                          | Expressive               | Subjective: "My" world | Truthfulness: prove "sincere" "authentic" |

(note: shaded area represents types of communicative competence)

Figure 3.2 Typology of communicative and strategic competence

The typology of communicative and strategic competence described in Figure 3.2 presupposes that social actors are able (or should be able) to assume multiple subject positions *vis à vis* how they conceive and experience reality. The development and exercise of strategic and scientific competence requires social actors to take objective worldviews. Morally regulated competence requires them to assume social worldviews.

Aesthetic competence requires them to adopt subjective worldviews. The ability of social actors to “decenter” themselves relative to how they conceive of their social and natural worlds, to reflect on the implications these different standpoints produce in terms of their knowledge and relationships with self, others and social and natural environments, and to partake in political activism when the results of deliberation call for it, is central to progressive social evolution (Habermas, 1979, 1984).

Finally, an important feature in the development and demonstration of scientific, moral and aesthetic competence is the ability on the part of social actors to ground (and justify) their claims and actions on truth, rightness and truthfulness respectively. Similarly, their ability to evaluate and justify their strategic or instrumental actions on the basis of effectiveness is an important feature of their level of strategic competence. Equally important, social actors need to be able to question others as to the validity of their communicative and strategic actions. In doing so, they need to respect the conditions of ideal speech, in the case of communicative inquiries, and use of non-violent tactics, in the case of strategic inquiries.

The significance of the distinctions and relationship between communicative and strategic action, and their associated forms of competence, for conceiving and researching co-op education becomes even clearer when they are situated within Habermas’s model of the lifeworld and system.

### ***Lifeworld, system, and the processes and effects of colonization***

Habermas (1989) offers a useful schema for understanding the structure of, and relationships between, the sociocultural and economic dimensions of higher education in advanced industrial societies. He conceives society dialogically, as both a lifeworld and a system.<sup>121</sup> He constructs this model upon the distinctions between communicative and strategic action. In the lifeworld, individuals coordinate their private and public activities with others in reciprocal ways through communicative forms of interaction. In the system,

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<sup>121</sup> Following Habermas, the lifeworld and system each have a dual character. On the one hand, they represent action orientations, or perspectives, which correspond with communicative and strategic forms of social action. On the other hand, they designate actual physical domains and infrastructures of social life in advanced industrial societies.

individuals engage in strategic actions that systematically implement decisions to which they consent in the lifeworld. This model suggests that communicative interactions in the lifeworld give rise to personal and civic ends (e.g., personal and cultural values, normative expectations), while the system exists to provide effective means for achieving those ends.<sup>122</sup> Thus, a healthy lifeworld is central to the establishment and maintenance of a functional system; while a functional system offers, in turn, some of the key infrastructures that support a healthy lifeworld.<sup>123</sup> The lifeworld and system relate predominantly through the non-linguistic media of money and power (e.g., the legitimating power of consensus formation, in the case of the lifeworld; and economic and administrative power, in the case of the system) which serve as steering mechanisms of the dialogical relation between them.<sup>124</sup>

Figure 3.3 presents my interpretation of the lifeworld and system as it pertains to co-op education. I draw the reader's attention to two details in this schema. First, I have situated co-op as a mediating element that overlaps each of the perspectives and domains of the system and lifeworld. Co-op constitutes a forum for the exchange of money and power, and therefore serves as a kind of steering mechanism between the system and lifeworld. For instance, as co-op students pay tuition to the University for their academic and co-op semesters, they expect to receive knowledge and skills (e.g., human capital) in return; and, as students then transfer their labour power into the economic system, money returns to their private lifeworlds in the form of wages. But, as an educational program, co-op is meant to do more than transport money and power. It is meant to enrich the lifeworld of students and universities by helping to integrate different domains of

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<sup>122</sup> See Sergiovanni (2000) for theoretical and empirical insights, within the context of educational administration, on the relationship between ends and means in Habermas.

<sup>123</sup> For example, democratic political institutions and non-partisan public bureaucracies provide support to civil society, individuals and families.

<sup>124</sup> Habermas (1989) explains that money and power are non-communicative media. As such, he is wary of their influence on the communicative processes that sustain the lifeworld. For example, if day-care centres are so constrained for financial survival in a market economy that they cease providing environments for appropriate early childhood education, then money oversteps its role as a steering mechanism to displace a communicative task in the lifeworld (Braaten, 1991).

learning,<sup>125</sup> and develop forms of communicative competence.<sup>126</sup> Moreover, it is meant to enhance students' instrumental reasoning and technical skills (i.e., to further develop their human capital) to support the strategic activities of organizations and institutions in the economic and administrative system.<sup>127</sup>

| Lifeworld<br>(communicative action)  | Steering Mechanisms<br>P = Power<br>M = Money   | System<br>(instrumental action)  |
|--|---|--|
| Private life<br>- personal life<br>- family life   | (P) Labour power →<br>← (M) Income from labour<br>(P, M) Consumer demand →<br>← (P) Goods/services  | Economic system<br>- <i>public universities</i><br>(human capital perspective)<br>- <i>labour markets</i><br>- <i>workplaces</i><br>- knowledge-based production |
| ← <i>Co-op Education</i> →   |   |  |
| Civil society<br>- <i>public universities</i><br>(sociocultural perspective)<br>- cultural activity<br>- communities<br>- public discourse<br>- social and cultural, criticism<br>- political activism | (M) Taxes →<br>(P) Political activism →<br>← (P) Political decisions<br>← (P) Administrative acts<br>← (M) Infrastructure<br>(P) Mass loyalty → | Formal/Bureaucratic administrative system<br>- political organizations and institutions<br>- state bureaucracies<br>- legal apparatuses                          |

Figure 3.3 Habermasian model of lifeworld and system as it applies to co-op

<sup>125</sup> On the topic of integrated learning processes, see Table 3.1 and related discussion in the current chapter (p. 63).

<sup>126</sup> On the topic of communicative competence, see Figure 3.2 and related discussion in the current chapter (p. 71).

<sup>127</sup> On the topic of strategic competence, see Figure 3.2 and related discussion in the current chapter.

The second detail to which I draw the reader's attention is that public universities are located in two places: civil society<sup>128</sup> and the economy. The former is part of the lifeworld, while the latter is part of the system. I have located universities in civil society because traditionally they have been conceived as arenas for fostering the personal and sociocultural understandings that support a vibrant civil society (Axelrod, 2002). For Habermasians, universities are (and should be) primarily dedicated to communicative forms of interaction and discourse.<sup>129</sup> I have chosen, however, to locate universities also in the economic system because this is where the human capital perspective, a widespread contemporary logic upon which universities currently operate and by which students choose to attend, places them.<sup>130</sup>

Habermas's (1989) distinctions between communicative action and strategic action, lifeworld and system offer important insight into the steady rise of a human capital perspective within and around universities. He argues that while communicative actions (e.g. discourse) in the lifeworld give initial sustenance to the strategic functions of the system, with time the latter tend to "colonize" (p. 186) the scope and character of interactions in the lifeworld.<sup>131</sup> Human capital theory had its beginnings in the lifeworld of universities as one potential explanation (or interpretation) of the purpose of higher education in advanced industrial societies. But human capital is now firmly embedded in economic and administrative subsystems that affect universities, and in which universities increasingly participate. For example, the logic of human capital theory guides the deregulation and marketization of the higher education sector, student loan programs, and

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<sup>128</sup> Habermas (1989) calls this realm the public sphere, but I have changed it to a more familiar term that is meant to signify the civic nature of communicative action.

<sup>129</sup> Habermas (1989) describes the lifeworld as a linguistically stored stock of interpretive patterns from which social actors draw and to which they contribute in their communicative and discursive acts. The broader and more diversified the stock of interpretive patterns in the lifeworlds of individuals, communities and societies, the better off they are, as they have access to manifold perspectives for understanding social needs and interests and working through problems and issues.

<sup>130</sup> On a human capital perspective on higher education, see Chapter Two (p. 47).

<sup>131</sup> Habermas (1989) describes the lifeworld as a "linguistically organized stock of interpretive patterns" (p. 186), arguing that the lifeworld is, and ought to be, a site of multiple perspectives. Only through pluralism in outlooks can valid directions be established and progressive solutions to social problems found in large scale, complex societies.

funding formulae that target shortages of skills in current and future labour markets.<sup>132</sup>

Two of the questions Habermas's colonization thesis raises, then, are the degree to which a human capital approach may be affecting the scope and character of interactions in higher education, and what the effects are of this. A research project on co-op is a fertile context in which to ask such questions because co-op programs have a strong human capital dimension to them.<sup>133</sup>

Habermas gives substantial guidance as to the possible negative effects of colonization. He argues that colonization causes communicative failures in the lifeworld, deleteriously affecting the important lifeworld processes of social integration, cultural reproduction and socialization.<sup>134</sup> In such moments, social cohesion may begin to unravel as agreed upon norms and values are disturbed.<sup>135</sup> Cultural institutions may suffer a crisis of legitimation and orientation, as people cease to find meaning (e.g., relevance) in them and in contemporary cultural forms more generally.<sup>136</sup> And, individuals may suffer identity crises or other psychosocial problems as a result of disrupted processes of socialization (Habermas, 1989).<sup>137</sup> Because social cohesion, cultural reproduction and socialization are key aspects of the sociocultural mission of universities, Habermas's

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<sup>132</sup> In Canada, the federal government funded the start-up of many co-operative education programs in the early 1990s through its Job Entry program of the Canadian Jobs Strategy.

<sup>133</sup> See Chapter Two (p. 86) for a discussion of the human capital dimension of co-op.

<sup>134</sup> Habermas's concept of colonization is closely related to his concept of systematically distorted communication, which I discuss in the previous section of this chapter (p. 69).

<sup>135</sup> For example, Grosjean (2000) shows how co-operative education programs with restrictive entrance requirements based on academic grades as well as relative levels of cultural capital serve to construct a small, vocationally elite class of students on campus, creating a distinct social division between co-op and non-co-op students.

<sup>136</sup> In the section entitled "The sociocultural mission of higher education" in Chapter Two (p. 38) I describe how universities in Western, advanced industrial societies have been suffering through a crisis of legitimation for two decades as their host societies increasingly deem them ineffectual in terms of their contribution to the economic system, and how co-operative education has become one systematic response to quelling this crisis in Canadian universities. I also argue that the predominantly economic (as opposed to sociocultural) focus of co-op programs may serve to exacerbate this crisis, as they propagate yet more instrumental rationality and strategic forms of interaction on campus. This is an example of how the structures, language and rationality associated with the economic system can affect communicative processes and structures in the lifeworld.

<sup>137</sup> An example of this would be when promising students from low socioeconomic backgrounds are unable to further pursue their academic identities through graduate studies and academic careers because state funding policies cause them to abort their studies and seek non-academic work in order to pay off their substantial student debts.

presentiment deserves further consideration in the context of this research project, in particular because co-op education brings the lifeworld and system, and the sociocultural and economic missions of universities, into close contact. Rich, too, in this context is that co-op has significant potential to support progressive forms of social evolution.<sup>138</sup>

For Habermas (1989), colonization occurs when system goals take priority over lifeworld goals, where the accomplishment of those lifeworld goals is essential, on the one hand, to the maintenance of the lifeworld and, on the other hand, to the maintenance of the system itself.<sup>139</sup>

Habermas observes among formal organizations the tendency to displace obligations to the lifeworld with concerns about organizational efficiency, effectiveness and maintenance. As an example of colonization, he cites the contemporary pressure on educational institutions to “close circuit [themselves] with the employment system” (Habermas, 1989, p. 371). This undermines the maintenance of the lifeworld as it closes down discussion among lifeworld participants about educational purpose, in which they share interpretations of their learning needs, and instead focuses their attention on how to best align educational institutions with the requirements of the system, in this case labour markets.<sup>140</sup> Yet, discussion about educational purpose served some important lifeworld functions. It encouraged social cohesion. It fostered shared educational values and norms. And it allowed participants to express their needs and reflect on their educational identities. In effect, it allowed participants to have a say in what shape the system should take. With these lifeworld processes in disarray, the system faces maintenance problems of its own. Because of structural and cyclical unemployment crises, labour markets cannot live up to their promise as a reliable beacon of educational purpose. While many students and graduates end up in jobs that are aligned with their educational programs, expectations or needs, a goodly number do not, and still others wind up under- or

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<sup>138</sup> For a discussion of the potential of co-operative education in supporting socially progressive learning processes, see the section in this chapter entitled “Social Progress and the Technical, Moral and Emancipatory Dimensions of learning” (p. 62).

<sup>139</sup> See Braaten (1991) for a useful description of Habermas’s concept of colonization.

<sup>140</sup> The alignment of educational means with the employment system leads to situations where educational institutions begin to resemble businesses and not lifeworld institutions (Habermas, 1989).

unemployed. Educational institutions now begin to appear faulty, with participants questioning their legitimacy and, very likely, the legitimacy of markets (and the policy stance of the state). Furthermore, as students have been forced to rely on a technological apparatus for selecting their educational goals and corresponding identities, they are not well equipped to reflect on, or communicatively express, their subjective needs and interests when things do not work out for them in the labour market despite their investment in education. Some may internalize their situations as personal failure, leading to crises of motivation whereby they detach themselves from educational institutions and labour markets. This has the effect of eroding both the infrastructure that supports the lifeworld and the functional capacity of the system.<sup>141</sup>

In Chapter Two I describe how Canadian universities have been suffering through a crisis in legitimacy for close to two decades and how the rapid growth of co-op programs during that time represents one attempt to shore up public (and corporate) support by making higher learning processes more relevant--that is, to better align higher learning with the needs of economic and administrative subsystems. Insofar as this crisis in legitimacy suggests a problem with respect to cultural reproduction, it signals that process of colonization is underway in the higher education sector. In Chapter Two I also describe how an (often tacit) utilitarian philosophy predominates in and around co-op programs, focusing them on improving a range of economic functions in higher education, including the development of human capital. The close connections that co-op programs forge with the system, along with their economic focus, suggest that co-op programs may serve as conduits for colonization in higher education. It is possible that co-op programs directly mediate systemic influences into university communities that are deleterious to their lifeworld. For example, one could envisage co-op students in the arts

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<sup>141</sup> Habermas (1989) acknowledges that there can exist, at least temporarily, subsystems (and formal organizations to support them) that do not interfere with the communicative process of need interpretation and the securing of a genuine consensus (or authentic self-understanding) about social purpose in the lifeworld. Thus, it is not that educational institutions cannot (or should not) connect their programming and pedagogy with labour markets, but that such connections should not be so tight as to effectively shut down the kinds of discussion and reflection that will allow participants to adapt to labour market conditions, on the one hand, and help them learn to advocate for systemic change in labour markets and educational institutions, on the other hand.

steering (or being encouraged to steer<sup>142</sup>) their academic programs in directions that would make them more attractive to employers, by electing courses in computing or business instead of fine arts or philosophy. Such choices could alter their educational lifeworlds by affecting their academic identities and understanding of their chosen disciplines. From a Habermasian perspective, students in this situation are at risk of alienation<sup>143</sup> (a manifestation of colonization) from themselves and their educational values, especially if little opportunity is provided for them to arrive at their educational decisions through communicative, as opposed to strategic, processes. Insofar as arts students select their courses with a view to success in the labour market, effectiveness constitutes the validity claim that grounds their decisions. But, in order to make educational choices that are supportive of their lifeworlds (and to thereby avoid alienation), arts co-op students need to be able to explore their decisions from the perspectives of other validity claims. From the perspective of truth, are they certain that computing or business courses really are the correct choice? How might they find out? From a normative perspective, is it right that employers privilege computing and business courses? If not, what can be done to potentially change this norm? From the perspective of authenticity, does their decision support who they really are (or wish to be)? Is it an accurate expression of their needs and interests? If not, how can they go about altering it, given the circumstances?

A Habermasian perspective foregrounds the importance of considering these kinds of questions and the communicative dimensions of validity that inform them. Questions such as these could assist students in the foregoing example to adapt their lifeworlds to the system, on the one hand, and to influence the system, on the other hand. This would allow them to avoid alienation and to ward off colonization. However, a discursive space

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<sup>142</sup> In the Arts Co-op program that forms one of the cases in this research project, students are required to take courses in specific departments outside of the faculty, including computing. See Chapter Five (p. 132) for a description of the co-op programs in this study.

<sup>143</sup> For Habermas (1984, 1989), alienation is a pathology caused by colonization. It occurs when social relationships, cultural values and self-understandings are determined predominantly through strategic as opposed to communicative means.

would need to be opened in their decision-making processes and educational programs to encourage and allow them to ask such questions.

In the foregoing example, the socialization process of individuals or small groups of arts co-op students was affected. But, if the colonization processes that lead to the alienation of individuals or small groups are deeply ingrained and widespread, they will also affect cultural reproduction and, ultimately, social integration. Following through on the foregoing example, if a significant number of students in a given university participated in a co-op program that did not encourage discursive reflection, one could envisage how many categories and forms of knowledge on campus would begin to appear irrelevant. Ultimately, only knowledge that could withstand scrutiny from the perspective of effectiveness in labour markets would be considered valid. As discussed earlier (see p. in this chapter), such a close circuiting of higher education with the employment system is not only culturally impoverishing for universities (and their host societies), it also undermines the capacity of universities and labour markets to function. Longer term, it damages the integrity of universities (and their host societies) as social actors systematically lose their ability to establish reliable knowledge (e.g., knowledge that is valid from the standpoint of truth instead of effectiveness), valid norms and authentic interpersonal relationships.

Habermas's model of lifeworld and system, along with his concept of colonization, provide useful means of investigating co-operative education in the context of higher education. In particular, they provide a way to connect the learning processes and educational experiences of participants in co-op with the dynamics of cultural rationalization and social modernization, and from there back down to institutional and curricular practices, and administrative and educational policy decisions.<sup>144</sup>

### ***Considerations***

Researchers have criticized Habermas's work from a variety of angles, both from within the critical theory tradition and from without. His work has been accused of

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<sup>144</sup> The Habermasian approach here speaks directly to the two guiding research questions for this study and the relationship between those questions. See Chapter One (p. 13).

watering down the importance of ideology critique in critical social science (Braaten, 1991). It has also been characterized as universalistic (Seidman, 1998), patriarchal (Fraser, 1989) and Eurocentric (Outhwaite, 1994), and therefore insensitive to gender, cultural and other forms of difference (Yeatman, 1994). In addition, Habermas's work has been said to be too abstract to guide empirical research (Blaug, 1997; Ruane & Todd, 1988). Separate doctoral dissertations would need to be written to adequately assess each of these concerns and Habermas's responses to them. However, for my purposes here, these criticisms point out conceptual risks in relying on an interpretive lens that is heavily indebted to Habermas. In this section, I briefly sketch these criticisms and my response to them in the context of this research project.

Throughout its history, critical social theory has held ideology to be one of its core concepts. For critical theorists, ideology is one of the means by which dominant social groups keep other groups subordinated. In this view, the dominant ideas of an age usually serve the interests of the dominant social group to the detriment of subordinate groups. These dominant ideas become ideology proper when subordinated groups come to identify with them as if they truly represent their interests, when, in fact, they do not. Ideology works by concealing or misrepresenting the conflicting interests that inevitably exist between social groups and the social structures that sustain existing patterns of domination and subordination (Bottomore, Harris, Kiernan & Miliband, 1988). Ideology establishes for subordinated groups an imaginary relation to their real social conditions (Althusser, 1984), propagating a kind of false consciousness (Braaten, 1991). Generally, one of the key tasks of critical social theory, working from the standpoint of subordinated groups, has been to identify ideology, diagnose its causes, describe its effects and dissolve its efficacy.

Some critical theorists take issue with Habermas's lack of emphasis on the critique of ideology in his work (Fraser, 1989; Hallin, 1985).<sup>145</sup> Instead of focusing on ideology, Habermas emphasizes the twin concepts of systematic distortions in

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<sup>145</sup> In his early work, Habermas was concerned with ideology critique, in particular the critique of "scientism" in technologically advanced societies (see Habermas, 1973). However, as he developed his theory of communicative action, he moved away from this approach.

communication<sup>146</sup> and processes of colonization.<sup>147</sup> Critics argue this leaves empirical research that relies on his theory unable to account for specific ideologies and their effects on subordinated groups or societies as a whole.<sup>148</sup> However, Braaten (1991) suggests that Habermas's work looks at the question of ideology from a different perspective than traditional critical theory. His work is not so much concerned that "particular hidden ideological agendas be revealed...but that the culturally embodied critique of ideology and values which occurs in a strong public domain be restored. False consciousness is less of a danger than the loss of consciousness" (Braaten, 1991, p. 147). Habermas's work is concerned with defining the conditions under which ideology critique can become a self-sustaining activity in modern societies<sup>149</sup>; it is also concerned with providing diagnostic concepts, such as systematic distortion in communication and colonization, to identify situations in which those conditions are transgressed. Where communication is systematically distorted or lifeworld processes colonized, concrete ideologies are likely in play. A reliance on Habermasian theory does not preclude their identification and critique. However, any critique of ideology needs to be connected to underlying problems related to the communicative processes, capacity and infrastructure of the given social setting.<sup>150</sup>

Another common criticism of Habermas is that his ideas are too abstract to guide empirical social and educational research projects (Ruane & Todd, 1988). Instead, they are better suited to social and cultural criticism, which is the task to which most researchers in the Habermasian tradition have applied them (Forester, 1985a, 1985b). Blaug (1997) notes that most researchers who have used Habermas's work as a guide for empirical studies have tended either to water down complex theoretical concepts or

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<sup>146</sup> For a discussion of systematic distortions in communication see p. 69.

<sup>147</sup> For a discussion of processes of colonization see p. 82.

<sup>148</sup> A related criticism of Habermas's work is that it is not as concerned with class struggle as are previous versions of critical theory (Braaten, 1991).

<sup>149</sup> See the section in the current chapter entitled "Social action, systematic distortions, ideal speech and communicative competence" (p. 69) for a discussion of these conditions.

<sup>150</sup> See Habermas's (1994) discussion of neoconservative intellectual culture for an example of how he constructs a critique of a specific ideology by demonstrating that it is a product of the colonization of the lifeworld.

produce research reports that resemble yet more abstract theory.<sup>151</sup> As I use Habermas's ideas for empirical research purposes, it is thus important to consciously strike a balance somewhere between a reductionist and an abstract use of them in my interpretative and reporting efforts.

Another related criticism of Habermas's work is that it is too universalistic. Some postcolonial theorists argue he presents as universal a Eurocentric understanding of language, rationality and culture (Outhwaite, 1994; Yeatman, 1994). Some feminists argue his work does not sufficiently recognize gender differences in sociocultural, political and economic life (Fraser, 1989). Certain postmodern critics accuse him of constructing a theory so grand in scale and scope that it has little utility in understanding specific social circumstances and settings (Seidman, 1998) and, worse, that it exhibits a kind of interpretive authoritarianism (Blaug, 1997). These criticisms sculpt into relief the importance of listening to research participants with a view to understanding and respecting their perspectives, their reasons for acting in certain ways and believing certain things, and their specific contexts of social action. They suggest it will be important to pay attention to the ways in which gender and other forms of social differentiation affect the participants' experiences. They make it clear that a conceptual lens should serve as an enabling bias (Gadamer, 1975) or, better, a "regulative ideal" that can assert "pressure on intuitions" to guide interpretation (Blaug, 1997, p. 109). These considerations are all the more significant in the context of the use of a sweeping social theory such as the one Habermas has spent a lifetime elaborating.

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<sup>151</sup> According to Blaug (1997), Forester's (1985b) research on urban planning and Carroll's (1993) study of drug dealing in inner cities are exemplary in that they do not fall into these traps.

## Chapter Four: Research Methodology

### Introduction

In this research project, I use a nested, multiple case study approach. In the first section of this chapter, I provide my rationale for selecting such an approach. I outline some of the methodological assumptions involved in it and address some of the philosophical issues to which these assumptions give rise. The details of the study's design, methods, limitations and standards of validity are outlined in the second section. The third section lays out my analytical approach to the findings.

### Part One: Methodological Rationale and Philosophical Assumptions

#### *Methodological rationale*

In this study, I am interested in describing and interpreting concrete experiences and the meaning participants attribute to them. A case study design allows me to explore the everyday experience of specific individuals (Smith, 1987, 1996a), and to pursue inquiry with people in the contexts of their experiences (Stake, 1994, 1995; Yin, 1994). The questions that guide this research concern individuals and their specific social, economic, cultural, institutional and educational contexts. This means there are manifold, complex, interrelated features of experience for which I must account. A case study approach means that I do not have to strip some features out of consideration, in advance, in order to study the potential significance of other features (Guba & Lincoln, 1994, p. 106). Instead, the inquiry proceeds relationally and relativistically, using the reasoning of participants about their experience in their everyday situations (Greenfield, 1979). Moreover, case studies are particularly useful for gaining rich insight in response to what, how and why questions (Denzin & Lincoln, 1998; Yin, 1994, p. 28), all of which I am asking. Finally, case studies provide for evocative and compelling accounts (Stake, 1995), which may encourage individual, organizational or social change (Denzin, 1997). These potential benefits are important for studies, such as this, that aim to have an influence on policy and practice.

***Methodological assumptions and issues***

Habermas (1971) provides a useful schema for unearthing the philosophical assumptions that lie beneath different methodological approaches to social research. This schema applies with equal usefulness to educational research (Bredo & Feinberg, 1982a, 1982b). Table 4.1 provides an adaptation of Habermas's thesis.

Table 4.1 Relationships between knowledge-constitutive interests and methodology

| Knowledge-constitutive interest | Orientation of knowledge                  | Type of rationality | Domains of analysis                          | Methodology  |
|---------------------------------|---|---------------------|--|--------------|
| scientific-technical            | control, objectification                  | instrumental        | technique, method                            | positivist   |
| moral-practical                 | mutual understanding, action coordination | ethical             | language, interaction                        | interpretive |
| aesthetic-expressive            | liberation from domination and repression | self-expressive     | power, discourse, social relations, identity | critical     |

Habermas claims researchers are motivated to ask questions about the social world for three fundamental reasons. We have technical, moral-practical and emancipatory interests. Each of these interests causes us to constitute and orient knowledge in certain ways, rely on certain forms of rationality and focus on certain domains of analysis in the social field. In addition, each interest gives rise to a certain methodological approach. Following this schema, technical research interests are supported through positivist research methods. Oriented to controlling and objectifying social phenomena, positivist methods are guided by instrumental forms of reason. The scientific validity and reliability of methods and techniques is a predominant concern of

technically-interested research. Moral-practical research interests are supported through interpretive methods. Oriented to achieving mutual understanding between researchers and participants, interpretive methods are guided largely by ethical judgment. Interpretive approaches to inquiry are heavily focused on communication and interaction. Aesthetic-expressive research interests are supported through critical research methods. Oriented to liberating researchers and participants from domination and encouraging their self-expression and autonomy, critical methods are guided by a self-expressive attitude. Because critical research projects aim to empower participants to derive interpretations of the social world that truthfully represent their needs, interests and experiences, issues of power, discourse, social relations and identity are central to them.

An important methodological consequence of this Habermasian schema is that it requires researchers to identify the interests that inform their research questions. My primary research interest for this study is largely moral-practical. From a practical perspective, I aim to constitute a mutual understanding with participants about their experiences higher education generally and co-op in particular. I also intend to develop suggestions for policy and practice from this understanding, and this prescriptive element brings into view a moral dimension.<sup>152</sup> Thus, my primary interest requires an interpretive methodology. However, I also have an emancipatory interest that weaves across this interpretive one. I aim to bring to light obstacles that delimit the potential for learning offered to participants in co-op that is both socially responsive and economically productive. I also want to assess implications for higher education of the heightened tension between its sociocultural mission and economic purpose, brought about by the increased emphasis on the development of human capital. This requires a critical methodology. In the two sections that follow, I outline my understanding of the two methodological approaches that guide this research, along with the philosophical and methodological issues that arise from these understandings.

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<sup>152</sup> One might also conduct policy research with a technical interest. Following the Habermasian schema, such research would objectify the experiences of participants in order to control them through instrumental or technological means. As a result, it would be amoral, as it does not attempt to interpret the needs of those under study.

### ***Interpretive inquiry***

Interpretive researchers assume that most human behaviour is purposive. Our actions stem largely from our beliefs, values and expectations (Weber, 1968). In this view, valid explanations of human events and actions must account for the subjective meanings these events and actions have for the people engaged in them (Bredo & Feinberg, 1982a; Greenfield, 1979). Interpretive researchers access the complex world of lived experience by focusing on the accounts people provide of their experiences (Howe, 1998, p. 14). But experiences (and accounts of experiences) often have different meanings for different people. This is why a key term in the lexicon of interpretive inquiry is “understanding” (Pressler & DaSilva, 1996, p. 23-24), or *Verstehen* (Weber, 1968). This term points out the necessity for researchers to think through the various levels of understanding that exist in their studies, and to assess the relationships between these levels (Denzin, 1998).

There are at least three levels of understanding in any social research, including the present study. Figure 4.1 illustrates these levels. First, social actors construct understandings of their experiences. Next, researchers interpret these and represent them in their reports. Finally, readers derive meaning from these reports. To complicate matters, each moment of understanding is situated in broader institutional and social contexts, and informed by the stock of cultural resources actors and interpreters use to constitute their understandings.

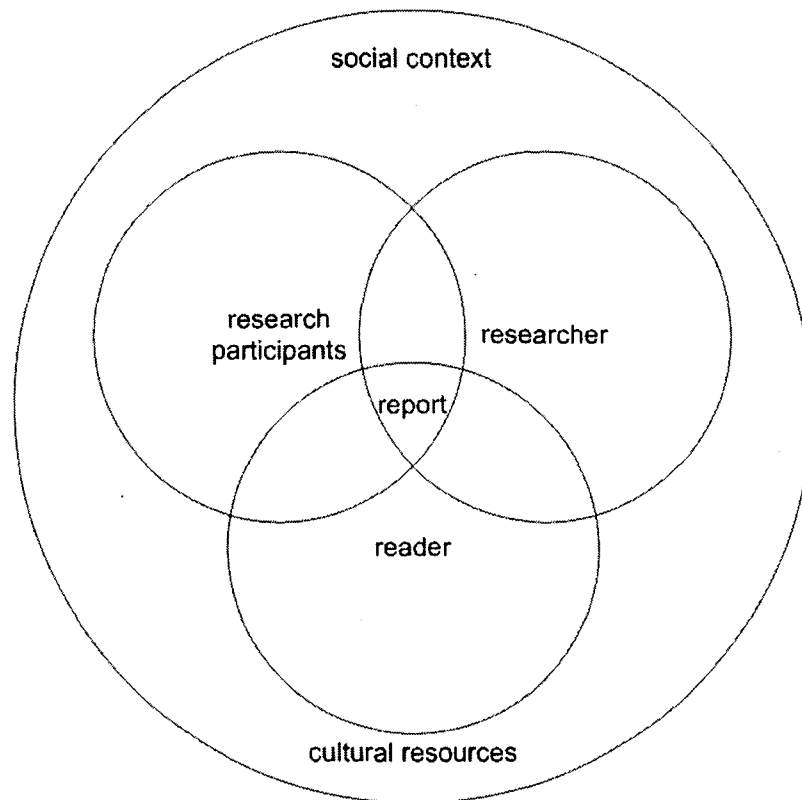


Figure 4.1 Levels of understanding and their relationship in interpretive research

The multifaceted nature of understanding leads many methodological commentators to argue that social and educational research do not (ought not, or cannot) posit overarching truths. Rather, such research offers interpretations (Seidman, 1998; Howe, 1998). Given this inherently ambiguous situation, it is not surprising that interpretive methodologists do not share a common view as to what interpretive approaches can produce legitimate forms of understanding and, with it, valid knowledge of social experience (Denzin, 1998). Moreover, much disagreement exists as to how researchers should represent their interpretations to readers and, further, what criteria readers should use to evaluate the validity and authority of those reports.

There is a continuum of perspectives on these issues. Figure 4.2 presents this continuum.<sup>153</sup> At one end, there are those who take a subjectivist stance. They posit that the meanings we make of our experiences are incontrovertibly subjective in nature. Each of us actively constructs and lives in our own realities; and, while our realities may overlap with others'--particularly if we share similar cultural backgrounds and inhabit comparable locations in the social structure--we will never fully understand each other. In this view, our interactions are always self-referential. We do not transfer thoughts, meanings or knowledge between us in unmediated ways (von Glaserfeld, 1995). Instead, we each produce interpretations of our interactions with others using concepts from within our own subjective field of experience (Arvay, 1998). Researchers who take this stance focus their analyses on their experience as the researcher and interpreter, openly acknowledging their presence in the shaping and interpretation of findings (Denzin, 1997). In their reports, subjectivist researchers rely heavily on a first person narrative style.

In distinct contrast, other researchers assume an objectivist perspective, believing it is possible to gain more or less accurate access to the realities of others through the accounts those others provide of their experiences. Researchers who take this latter approach *vis á vis* their subjects' realities tend to write in the third person and naturalize those realities with explanatory theories (Denzin, 1998; Geertz, 1988).

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<sup>153</sup> This figure integrates typologies provided by Arvay (1998), Guba & Lincoln (1994) and Denzin (1997, 1998). The differences in interpretive approach outlined in this figure are typological, not paradigmatic.

| ← Interpretive approaches →                   |   |  |   |
|---|---|--|---|
| Key elements in chosen approach               | Subjectivist<br>(radical constructivism)              | Intersubjectivist<br>(social constructivism)                                 | Objectivist<br>(postpositivism and realism)               |
| Epistemological view of social experience     | subjectively constructed                              | intersubjectively constituted, culturally encoded, socially structured       | objectively apprehended                                   |
| Stance <i>vis á vis</i> research participants | sites of (deep) reflection on self-as-researcher      | co-constructors/co-narrators   | subject-objects/phenomena                                 |
| Analytical approach                           | (self-)reflexive narrative analysis, phenomenological | dialectical analysis, hermeneutical  | grounded theory, naturalistic                             |
| Narrative voice in research text              | first person, situated                                | multi-vocal, situated  | third person, explanatory                                 |
| Measures of legitimacy of research text       | authenticity (persuasiveness, resonance, coherence)   | trustworthiness (dependability, believability, credibility), transferability | internal/external validity, reliability, generalizability |

Figure 4.2 Continuum of interpretive approaches

The intersubjectivist approach I largely rely upon in this study rests somewhere between these two contrasting perspectives. On the one hand, I do not believe that entirely objective accounts of subjective experiences are possible. Such a view relies too heavily on the assumption that we are each able to gain full and undistorted access to the ways in which we construct and understand our motivations, behaviours and realities. Human consciousness is too decentred (Freud, 1962) and our forms of rationality too diverse for this to be entirely possible (Weber, 1968). Moreover, social structures and cultural values influence our understandings in unseen ways (Horkheimer & Adorno, 1993; Habermas, 1989; Smith, 1996a). On the other hand, I find untenable the consequences of adopting a radically subjectivist perspective. Such a perspective implies that, ultimately, the only reality to which I can possibly gain undistorted access is my own. If that is the case, then some of the problems that I enumerate above with respect to objectivity apply here as well.<sup>154</sup> In addition, if I were to assume a radically subjectivist perspective, I would have to face the consequence that, in the final instance, any research I conduct about and for others winds up being about me. This does not mesh well with my sensibilities (and responsibilities) as a *social* researcher and educator.

The intersubjectivist view resolves some of these ontological and epistemological dilemmas. Such a view implies that social reality is constituted predominantly through the *relationships* we have with each other, and not solely through processes of self-reflection or objectification.<sup>155</sup> We establish these social relationships and realities communicatively and strategically, mediating them via language and other symbolic acts.<sup>156</sup> The centrality of language to the intersubjectivist perspective highlights the importance of culture. If culture is understood, for instance, as an historically developed and linguistically-stored stock of interpretive patterns (Habermas, 1989), then it pre-

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<sup>154</sup> However, concepts of social structure and cultural value lose their significance in a radically subjectivist perspective because they presuppose the possibility of shared realities.

<sup>155</sup> Our interactions with others occur in person, but they also happen as we read and write texts, look at a works of art, reflect on past encounters and anticipate future ones, and so forth.

<sup>156</sup> There are many different takes on what language is and how it effects and coordinates subjects. See, for instance, Foucault's (1973, 1980) "discourse" and Smith's (1990, 1996b) "texts." My interpretation here is largely based on Habermas's (1984, 1989) theory of communicative action.

shapes and delimits the ways we understand each other, thereby influencing the ways we relate and the realities we construct. In addition, the centrality of social relations to the intersubjectivist perspective brings into relief the significance of social structure. If certain people or groups of people are isolated from the social settings in which communicative and strategic acts occur, they may be subjected to social realities that are not of their making (Smith, 1996a). While this example contradicts the intersubjectivist assumption that social reality is predominantly an agreed upon arrangement, such a perspective readily admits that social structures built, for example, around gender, class, race and ethnicity influence the ways we relate and delimit possible scenarios of social reality. John Dewey (1939), one of the early proponents of an intersubjectivist perspective, wrote that social experience is both an *acting with* and a *being acted upon*.

Conceptually, the intersubjectivist perspective is able to account for the ways different agents, such as research participants, researchers and readers construct their understandings of social reality. In addition, its central premises provide the impetus to consider the broader cultural and social contexts within which these understandings are produced. In these ways, such an approach is able to address the different levels of understanding in interpretive research outlined earlier in Figure 4.2. I encourage the reader to consider this study, and the ways I (re)present it, with this intersubjectivist interpretive approach in mind.

### ***Critical inquiry***

Critical approaches to social and educational inquiry incorporate a number of aspects of both interpretive and positivist modes of research (Briton, 1996; Habermas, 1971). But they move one step beyond. For critical researchers, the pursuit of understanding is only the starting point (Bredo & Feinberg, 1982b; Deetz & Kirsten, 1983). Critical research is interested in identifying the ideological distortions and material contradictions that occur in social, cultural and personal understandings, and to assess the forces, factors and conditions that cause them (Blaug, 1997). These distortions in understanding can sometimes lead to a decrease in social cohesion, the delegitimation of culture and psychosocial disorders (Habermas, 1984, 1989).

Critical research is thus interested in developing knowledge that can help to ameliorate sociocultural conditions. It is a form of sociocultural critique. This leads critical inquirers to take up issues of power in order to bring into view the social relations that structure and delimit how people--including researchers and their subjects--understand their situations and actions (Kincheloe & McLaren, 1998). As a result, critical researchers scrutinize the specific social, political, economic and discursive contexts<sup>157</sup> within which understandings are produced. They do so in order to discern the specific effects these contexts have on the formation of those understandings.

There are manifold perspectives regarding what constitutes an appropriate stance in critical research. At least four related assumptions bind together the critical tradition. Table 4.2 presents these.

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<sup>157</sup> Discursive context refers to the relations between the forms of language used in a situation, the rules that govern the forms of language available for use, and the representations of social reality that are constructed as a result (Foucault, 1973).

Table 4.2 Assumptions and methodological implications of critical forms of inquiry

| Assumptions   | Methodological implications  |
|---|--|
| 1. Social reality is a social construction  | - status quo appears to be a reality, but should also be viewed as a contingent social arrangement and not be reified or naturalized               |
| 2. Status quo masks arbitrary social privilege  | - status quo merits continual critique<br>- relations of domination/subordination are not natural, necessary, inevitable and deserve investigation |
| 3. Forms of language (and other symbolic resources) are central to identity formation, cultural understanding, social order       | - place emphasis on forms of symbolic interaction  |
| 4. Social relations and cultural logic of capitalism condition availability and forms of symbolic resources and human experiences | - investigate how mode of production and rituals of consumption impact forms of symbolic interaction   |

The first of these is that social reality is socially constructed (Berger & Luckmann, 1980). As a result, the status quo is not a natural state of affairs; rather, it is an historically and geographically contingent social arrangement and should be methodologically treated as such. This leads to the second assumption, which is the status quo often serves to obfuscate the arbitrary privilege certain groups in any society exercise over others (Bourdieu, 1977). In addition, while the reasons for privilege will vary widely in different times and places, “the oppression that characterizes contemporary societies is most forcefully reproduced when subordinates accept their social status [and corresponding horizons of possibility] as natural, necessary, or inevitable” (Kincheloe & McLaren, 1998, p. 263). As a result, the status quo needs to be methodologically conceived as problematic

and meriting continual critique (Smith, 1987). A third assumption is that the forms of language (and other symbolic resources) to which people have access in given societies and situations are of great interest. Language is central to how people form their identities, cultural understandings and pattern of social relationships, each of which affects their social actions (Habermas, 1989). This leads to a fourth assumption that, in western societies, the social relations and cultural logic of capitalist production and consumption condition the forms of language available in any given context (Jameson, 1995, Smith, 1996a). There is a mutually conditioned, dialectical relation between the material circumstances (or social structures) people find themselves in and the symbolic resources available (or not available) for them to construct (or change) their realities (or social agency) (Jameson, 1991).

## **Part Two: Research Design**

### ***Nested, multiple case design***

The study centres on the experiences of five students from the Arts Co-op program and five students from the Engineering and Computer Science Co-op program at the University of Queensville.<sup>158</sup> The experiences and perspectives of each of these students form relatively autonomous case studies. However, the students and their experiences are embedded in, and influenced by, their respective co-op programs and academic departments, the overall Queensville co-op program, and the University more generally. In addition, their experiences are also rooted in the job sites in which they undergo their co-op work terms, their families and other social relationships. These other elements comprise the variegated structure in which the individual cases are nested. This structure forms the boundaries of the individual cases (Stake, 1995; Yin, 1994). Figure 4.3 illustrates this nested, multi-case design.

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<sup>158</sup> The University of Queensville is a pseudonym.

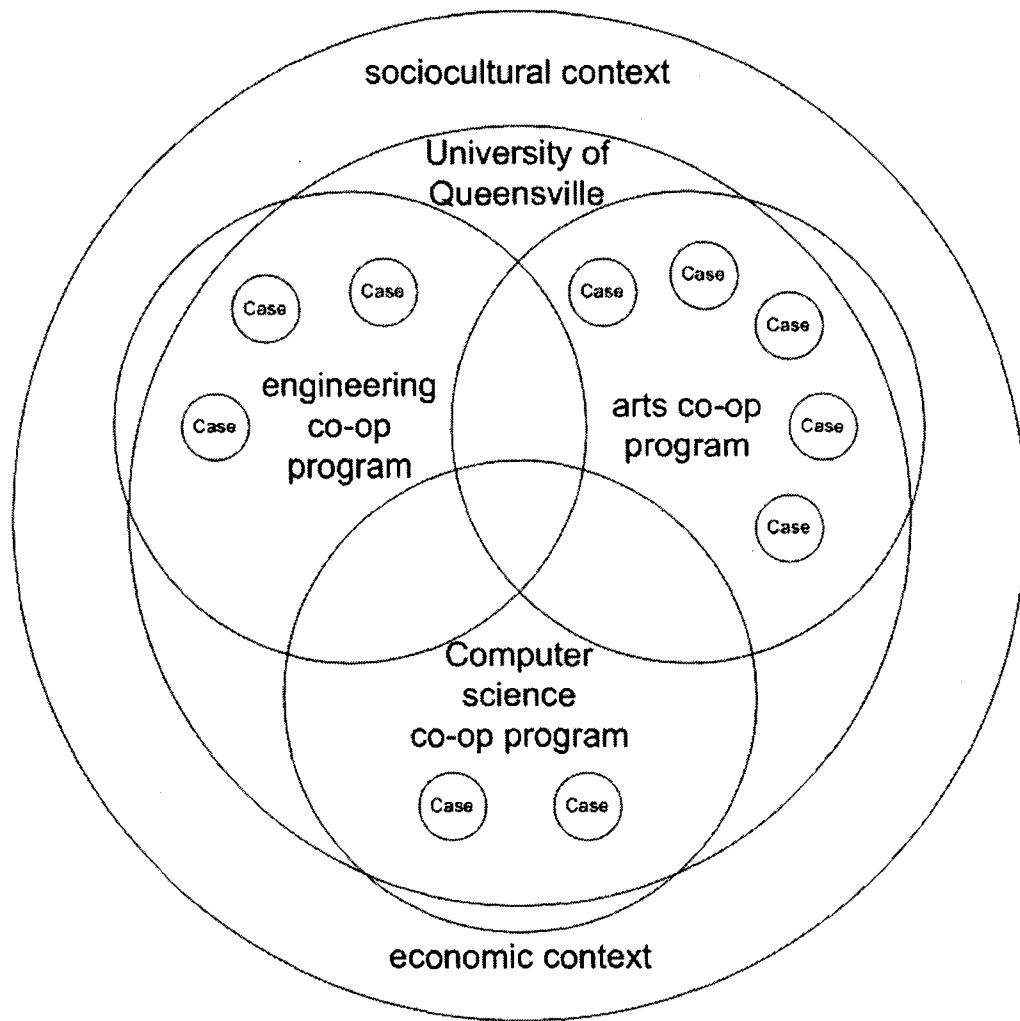


Figure 4.3 Nested, multi-case design for the study

### ***Selecting the university and its co-op programs***

I selected the University of Queensville as the site for the study for three reasons. First, I wanted to ensure that I had a 'best case' scenario for the research. Queensville hosts a large co-operative education program, which has a reputation for leadership in co-op in Canada. Second, the university began as an arts and science institution and has only in the past two decades become host to a cadre of professional programs. I felt that this institutional history might sculpt into relief some of the potential contradictions and tensions between the professional-vocational perspectives that circulate in and around co-op and the liberal values that are often associated with traditional arts and science curricula. Finally, I believed that the study would be welcomed at Queensville because personnel there have a well-established record of involvement in research about co-op.

I elected to study students from the arts and engineering co-op programs because I felt this combination would create the greatest possible contrast, and thus provide for the richest possible insight into the different meanings and experiences that constitute co-operative education. Engineering and Computer Science are disciplines that offer direct routes into well-defined labour markets, while the various disciplines in the arts offer circuitous paths into a heterogeneous labour market. Moreover, the arts curricula focus predominantly on fostering moral and aesthetic sensibilities; while, the applied science programs concentrate mainly on developing technical knowledge and skill. Finally, I reasoned that if there were similarities in the students' experiences and perceptions, these would be significant in light of the contrast in their academic and workplace contexts.

### ***Recruiting and selecting co-op students as the key research participants***

I recruited the ten students who eventually participated in the study by having co-op personnel post an invitation to the electronic newsgroups used by students in their programs.<sup>159</sup> I received fifteen responses to these electronic invitations from students who were either interested in participating or who wanted to find out more about what their participation would entail.

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<sup>159</sup> See Appendix A for the text of this invitation.

In the invitation, I asked potential respondents to provide an e-mail address and contact phone number (optional). By e-mail, I sent the respondents a detailed information package, which described the study's research objectives, data collection methods and estimated timeline.<sup>160</sup> I included a participant consent form, which addressed the topic of informed consent, including issues regarding anonymity, confidentiality, voluntary participation and withdrawal, and treatment of data.<sup>161</sup>

I then contacted respondents to have a brief conversation with them about the project. The purpose of these conversations, from my perspective, was threefold. First, I wanted to answer any questions or concerns the respondents had regarding the study. Second, I wanted to assess the respondents against the criteria I had in mind regarding the sample I wished to have. These sampling criteria included equal numbers of students from both the arts and applied science co-op programs who were scheduled to go out on a co-op work term in the upcoming semester. In addition, I sought a balance of male and female participants. Finally, in the preliminary interviews, I wanted to address the topic of informed consent with the respondents.

As a result of these conversations, ten students agreed to participate in the study.<sup>162</sup> While this cohort did not match precisely the ideal sample I envisioned at the outset, they came close. More importantly, I was convinced that all of them were going to be forthcoming, insightful and committed. They were that, and more. All of the students persisted to the end of the study. All of them gave generously of their time, energy, perceptions and ideas. In hindsight, I am fortunate to have found such an outstanding group of students.<sup>163</sup>

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<sup>160</sup> See Appendix B for the text of this information package.

<sup>161</sup> See Appendix C for the text of this consent form.

<sup>162</sup> Four of the students decided not to participate as a result of my initial conversation with them. The main reason was commitment of time; although two students expressed concern that their employers might not look appreciatively on their participation in such a study. One student agreed to participate, but was subsequently unable to continue in the study as he did not secure a co-op work placement for the period under study.

<sup>163</sup> See the section on "Limitations of the Study" in the current chapter, where I address the possible limitations this sample places on the findings.

### *Profile of the key participants*

Figure 4.4 profiles the key participants. Detailed biographical narratives regarding these participants are provided in Chapter Five.

| Name    | Discipline             | Year of program | Number of completed work terms | Sex    | Age        | Ethnicity/ race                               | Motivation to join study                                |
|---------|------------------------|-----------------|--------------------------------|--------|------------|---|---|
| Lisa    | Writing                | 3               | 3                              | female | early 20's | Euro-Canadian (caucasian)                     | curiosity   |
| Andrew  | Mechanical Engineering | 3               | 2                              | male   | early 20's | Euro-Canadian (caucasian)                     | improve program, contribute to program                  |
| Sarah   | Women's Studies        | 4               | 3                              | female | late 40's  | Euro-Canadian (caucasian)                     | learn research method, contribute to program            |
| Warren  | Computer Science       | 4               | 3                              | male   | early 30's | Euro-Canadian (caucasian)                     | improve program, learn research method                  |
| Edward  | Asian studies          | 4               | 3                              | male   | early 20's | Euro-Canadian (caucasian)                     | curiosity   |
| Arlene  | Computer Engineering   | 3               | 3                              | female | early 20's | Central African (black)                       | curiosity, improve program, contribute to program       |
| Deborah | English, Writing       | 3               | 2                              | female | late 40's  | Euro-Canadian (caucasian)                     | contribute to program, learn research method, curiosity |
| Frank   | Computer Science       | 3               | 3                              | male   | early 20's | Chinese-Canadian (2 <sup>nd</sup> generation) | curiosity, contribute to program, learn research method |
| Valerie | Anthropology, Writing  | 4               | 3                              | female | mid 20's   | Euro-Canadian (caucasian)                     | learn research method, curiosity, collegiality          |
| Linda   | Electrical Engineering | 4               | 3                              | female | early 20's | Euro-Canadian (caucasian)                     | curiosity, improve program                              |

Figure 4.4 Profile of key participants (students) in the study

### *Recruiting and selecting informants from the key participants' educational networks*

In order to contextualize the key participants' experiences, I wanted to speak with people who had significant educational influences on them during their participation in the co-op program. In my first and subsequent interviews I asked key participants to

discuss individuals who had positive or negative educational influences on them. Then I sought their permission to contact these people for an interview. In most cases, the key participants granted permission. With this, I sent letters to these people inviting them to participate in the study. Each invitation included an outline of the study and a participant consent form.<sup>164</sup> As a result, a total of 18 informants in the participants' networks agreed to participate, including five co-op personnel, six professors or instructors and seven employers. These informants became secondary participants in the study. In every case, these secondary participants were people who the key participants held in high regard with respect to their educational influence on them. None of the individuals in the students' networks who had negative educational influences on them responded to the letters of invitation.<sup>165</sup>

*One issue with the design of the study*

The research design resulted in one substantial problem. My consent forms guaranteed the key participants that I would ensure their anonymity and confidentiality. However, the forms also outlined that I would ask for permission to interview secondary participants in their educational networks.<sup>166</sup> Originally, interviews with these secondary participants were to be quite specific, focusing on important details of the key participants' experiences. But I immediately found it was not possible, on the one hand, to be specific and, on the other hand, to protect the confidentiality of key participants. As a result, I decided not to discuss particular details unless I could protect the anonymity of the participants, thus ensuring their confidentiality. But, in a number of cases, I also found that it was not possible to protect the anonymity of participants because they were the only obvious sources of referral for the interviews with particular secondary participants. I took two approaches to solving this dilemma. In some instances, I simply did not contact the referred individuals. In those cases where the referred individuals were crucial to gaining a better understanding of the key participants' experiences, I clearly explained

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<sup>164</sup> See Appendix B for the outline and Appendix D for the consent form.

<sup>165</sup> See the section on "Limitations of the study" for the implications of this sample.

<sup>166</sup> This same problem arose for the group interviews with key participants near the end of the study. See Appendix E for the text of participant consent forms I used for these group interviews.

to the key participants that their anonymity would be compromised if I proceeded, and I once again sought their informed consent to proceed.

### ***Data collection***

Most of the literature on interpretive case studies recommends that researchers tap multiple sources of data by a variety of means (Denzin & Lincoln, 1998; Glesne & Peshkin, 1992; Patton, 1990; Stake, 1995; Yin, 1994). As outlined in the previous section, ten students provided primary sources of information, while five co-op personnel, six professors and instructors and seven employers served as secondary sources. In addition, I collected documents that mediated the students' experiences, such as job descriptions and applications, as well as administrative documents that describe and regulate the co-op programs, such as promotional material and policies. This section addresses the variety of means by which I compiled information and data from this range of sources. Table 4.3 outlines the sources of data, methods of collection and instruments used in the study. It also describes the database that gives rise to the findings.<sup>167</sup>

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<sup>167</sup> Due to the theft of my laptop computer during the study, the data set is missing records of the first interviews with Deborah and Linda as well as the field notes from the first half of the study period.

Table 4.3 Data sources, methods of collection, instruments and database

| Data sources            | Methods of Collection  | Instruments   | Database  |
|-------------------------|--|---|---|
| key participants (n=10) | <ol style="list-style-type: none"> <li>1. three cumulative semi-structured interviews</li> <li>2. reflective journals</li> <li>3. group interviews</li> </ol>            | <ol style="list-style-type: none"> <li>1. interview protocols</li> <li>2. journal guidelines</li> <li>3. focus group protocol</li> <li>4. researcher's field journal</li> </ol> | <ol style="list-style-type: none"> <li>1. audio recordings, transcripts</li> <li>2. journals</li> <li>3. audio-video recordings, transcripts</li> <li>4. researcher's field notes</li> </ol>                              |
| informants (n=18)       | <ol style="list-style-type: none"> <li>1. single, semi-structured interview</li> </ol>   | <ol style="list-style-type: none"> <li>1. interview protocols</li> <li>2. researcher's field journal</li> </ol>   | <ol style="list-style-type: none"> <li>1. audio recording, transcripts</li> <li>2. researcher's field notes</li> </ol>  |
| documents               | <ol style="list-style-type: none"> <li>1. prescribed for in interviews</li> <li>2. identified by participants</li> <li>3. obtained via university or Internet</li> </ol> | <ol style="list-style-type: none"> <li>1. interview protocol</li> <li>2. interview protocol</li> </ol>  | <ol style="list-style-type: none"> <li>1. résumés, letters, job descriptions</li> <li>2. work term reports</li> <li>3. university calendar, program web sites, external review, institutional research reports</li> </ol> |

### *Eliciting narratives and information from the key participants*

To elicit narratives and information from the key participants, I relied predominantly on a series of three semi-structured interviews with each of them. Each interview lasted for at least one hour, in many cases going much longer. I audio recorded each of these interviews and later transcribed them in their entirety.<sup>168</sup> I gave participants

<sup>168</sup> Because the transcripts were to be analyzed for substantive content only, I edited them to read coherently.

a copy of their respective transcripts, asking them to verify the content and to make changes where necessary. These transcripts constituted more than 600 pages of data, single-spaced. The semi-structured format for the interviews allowed me to address specific topics with the participants, but it also provided sufficient latitude for unanticipated trains of thought and perceptions to emerge.<sup>169</sup> I found this latter feature to be important and useful, as many of the participants challenged a number of my preconceptions.

The interviews were scheduled to coincide with the logic of one full cycle of the students' co-op programs. The first took place as the students completed their academic semesters and prepared for the transition to their subsequent co-op work terms. The second were held in the second half of their work terms. The third happened mid-way through the academic semester that followed upon their work terms. I sequenced the interviews in this way for two reasons. First, it allowed the students to reflect upon and narrate their experiences from within the sequential development of their co-op programs. Second, it allowed us to address themes and issues in a cumulative fashion, thereby providing depth and accuracy of information.

Near the end of the study period, I held two group interviews with eight of the students, each of which lasted two hours. Four students attended each. I ensured that each of the groups included students from the arts and from engineering, in order to crosscheck some of the patterns of similarity and difference that had emerged in the individual interview data between those in the arts and those in engineering. I presented the main themes and issues that arose from the individual interviews and asked the students to discuss these. In addition, I asked students to comment on the study's methodology. As with individual interviews, I audio recorded and transcribed these group meetings.

In addition to the individual and group interviews, the students were asked to keep written journals during the work term portion of the study. To direct them in this process,

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<sup>169</sup> See Appendix F for the protocols I used to help structure the interviews.

I provided written guidelines.<sup>170</sup> Eight of the 10 students followed through on this element of the research.

*Interviewing informants from the key participants' educational networks*

I conducted semi-structured interviews with 18 secondary participants from the key participants' educational networks. I developed three different protocols for these interviews, depended on whether the interviewees were co-op personnel, employers, or professors or instructors. However, I also customized aspects of these protocols for each of the interviewees in order to concentrate on the experiences of the students who referred them to me.<sup>171</sup> The length of these interviews ranged from half an hour to 90 minutes. As with the other interviews, these, too, were audio recorded and transcribed.

*Amassing significant documents*

Co-op and higher education are textually mediated processes. These texts are important because they transact, regulate and construct participants' experiences. I thus collected from each of the key participants the main documents they used to transact their experiences in co-op. These include their résumés, letters of application, job descriptions and work term reports. In addition, I gathered together the administrative texts that describe and regulate the academic and co-op programs. These include the University calendar, co-op program web pages and promotional literature, and documents pertaining to a recent external review of the university's co-op programs. I also obtained publicly available institutional research reports that outline important statistical and fiscal information about the university community and its programs.

***Limitations of the research methodology***

All of the engineering students in the study said to me at one time or another, "I'm not a typical engineering student," implying that their perspectives and experiences are not likely representative of the majority of their peers. Their comments highlight a potential limitation in an interpretive case study design. The findings produced through

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<sup>170</sup> See Appendix G for the text of these guidelines.

<sup>171</sup> See Appendix H for the protocols I used to help structure the interviews.

such research cannot be generalized to an overall population because the sample of research subjects is not representative of those populations (Stake, 1995). As a result, the findings cannot support the development of a grand theory about the phenomena under study (Yin, 1994).<sup>172</sup> If one's sensibilities or interests require either of these outcomes, then the sampling methods and actual sample used in this study will present a major limitation. However, if one's aim is to develop analytical insights that can increase understanding of complex social phenomena, including the multifaceted contexts in which those phenomena are situated, then the sample used in this study will pose less of an issue. This study endeavours to achieve the latter. Nonetheless, some caveats do need to be placed around the research site, sampling methods and sample used.

The methods used to recruit participants also raise issues. The key participants self-selected to participate based on invitations posted to newsgroups in their respective co-op programs. They were not actively recruited based on their specific educational experiences or sentiments about their experiences. Figure 4.4 in the previous section outlines the students' motivations for participating. Their reasons are largely positive. They all liked the focus of the study. Some were curious to experience its methodology. Some simply wished to assist a fellow student. More importantly, most of them wanted to contribute to their co-op programs and co-operative education more generally because they think highly of the program. The findings of this study would likely differ if students with negative sentiments about their co-op experiences had participated.

The study's methodology also influenced the sample and thus affects the findings. The students who participated volunteered from the outset knowing that this would entail up to 15 hours of their time over a 6-month period. In addition, they were also aware that they would be asked to reflect deeply upon their experiences, and to discuss and write about them in detail. A number of the students pointed out that the level of commitment required, and the specific methodology used, likely attracted certain types of people and not others. Shy students, or students who are not confident in their command of English,

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<sup>172</sup> Multiple case studies can provide grounds for negating or supporting a local theory (Yin, 1994) or even multiple (and competing) local theories (Greenfield, 1979).

would be unlikely to volunteer for a study that involves interviews. Moreover, students who had negative experiences or sentiments to report would be unlikely to engage in a study that requires a substantial commitment.

The University of Queensville's co-op program is highly regarded in Canada, and the university dedicates substantial resources to it.<sup>173</sup> In addition, most of the co-op personnel are very experienced. These factors suggest that the co-op program is of high quality. The findings of this study would likely differ if they had been derived in a program of lesser quality.

The informants from the students' educational networks were sampled using referrals from the students. All of the informants who agreed to participate were people of whom the students who recommended them thought highly. They were people who had had a significant positive influence on particular students. None of the people who had had a negative influence on particular students agreed to participate. The findings would likely differ if these latter people had participated.

#### ***Issues of trustworthiness and transferability in the study's methodology***

While validity and generalizability are two tests of quality control commonly used in quantitative studies, some methodologists argue that the criteria of trustworthiness and transferability are better suited to qualitative research.<sup>174</sup> Essentially, a study's degree of dependability, believability and credibility are critical to its perceived trustworthiness (Denzin, 1988, 1994, 1998; Guba & Lincoln, 1994). Table 4.4 demonstrates how the methodology for this study is designed to address these important dimensions of trustworthiness.

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<sup>173</sup> A recent external review of the Queensville co-op program found that it expends substantially more per student than its closest competitors, as measured with the ratio of work term placements per co-op personnel.

<sup>174</sup> Patton (1990) and Yin (1994) argue validity and generalizability can be applied with equal justification to qualitative research. Riessman (1993), Denzin (1997, 1998) and Hatch and Wizniewski (1995) claim measures of quality in qualitative research depend on the interpretive approach, interests of the researcher and audience, and can include persuasiveness, resonance, verisimilitude, pragmatic usefulness, degree of care for participants, and so forth.

Table 4.4 Dimensions of trustworthiness in the research design

| Dependability   | Believability & credibility   |
|---|---|
| <ul style="list-style-type: none"> <li>- correspondence between research questions, conceptual framework, methods of data collection and analytical strategy</li> </ul> | <ul style="list-style-type: none"> <li>- triangulation: multi-case, multiple sources of data, multiple means of data collection</li> <li>- interview data vetted by participants<sup>175</sup></li> <li>- key themes ratified with participants<sup>176</sup></li> <li>- methodology validated by participants<sup>177</sup></li> </ul> |

Ultimately, readers will decide whether they believe the findings and interpretations in this study based on their reactions to the evidence itself. Following Habermas (1984), readers have a greater likelihood of accepting an account and integrating it into their own experiences when they can assent to the four types of “validity claims” that are presupposed in every account. Table 4.5 outlines how I have composed the research report to speak to these claims.

Confidence in the trustworthiness of the design of this qualitative case study, along with the ways that the research text addresses validity claims, enhance its potential transferability to similar cases and contexts. But, in the final analysis, transferability depends on the ability of the research report to convey to the audience a rich, textured description and reflexive interpretation of the people, processes and contexts that comprise the cases (Denzin, 1997; Orum, Feagin & Sjoberg, 1991). From this readers will judge the degree to which, from their own interpretive vantages, the findings are

<sup>175</sup> The key participants reviewed their interview transcripts, making alterations where appropriate.

<sup>176</sup> Participants universally assented to the key themes presented to them during the group interviews.

<sup>177</sup> When asked in the group interviews, all of the participants reported that they were able to freely express their views and perceptions.

transferable to other cases, situations and settings in their spheres of experience (Greenfield, 1993; Meek, 1984; Tripp, 1985).

Table 4.5 Composition of the dissertation and the validity claims it addresses

| Comprehensibility  | Truthfulness   | Rightness   | Authenticity  |
|--|--|---|---|
| - vocabulary used that a range of readers can understand | - truth claims backed up with chains of evidence<br>- contradictory evidence included<br>- dimensions of trustworthiness invoked | - normative claims generated or approved by key participants<br>- contexts surrounding normative claims explicated<br>- researcher's normative assumptions made visible | - voices of key participants heard<br>- researcher's voice apparent<br>- reflexive narratives used re: problems with method or interpretation |

### **Part Three: Data Analysis and Reporting**

#### ***Analytical strategy***

Authors of methodological texts note a key problem faced by interpretive researchers, which is how to organize, structure and make sense of the types of information their studies produce. On this topic, however, there are a number of procedural disagreements. Some experts recommend that researchers decide their analytical strategies in advance of data collection, and then rigorously apply these to the data (Glaser & Strauss, 1967; Glesne & Peshkin, 1992; Yin, 1994). Others suggest that analytical strategies must be developed inductively as inquiry proceeds (Denzin, 1994, 1997; Denzin & Lincoln, 1998; Smith, 1987, 1996a). Still others claim that it is possible to select or develop theoretical and analytical constructs in advance and then apply and, if necessary, alter these during and after data collection (Feldman, 1995; Greenfield, 1979;

Miles & Huberman, 1984). The approach I used in this study follows the last of these routes, although this was not the original plan. Only in hindsight am I able to see the analytical path that I pursued.

The analytical strategy I used in this study began well in advance of data collection. It was determined, in large measure, by the development of a conceptual framework and the way that framework subsequently influenced the research questions and methodology. At this early point in the process, I planned on subjecting the data to thematic content analysis, using categories provided by the conceptual framework. However, I had to improvise upon this strategy during data collection, when it quickly became evident that the interpretive categories provided by the original conceptual framework were insufficient for developing an understanding the participants' experiences from their perspectives. In addition, I altered my analytical strategy during the formal analytical and reporting processes, when I realized the data needed to be approached using a combination of narrative and categorical logic (see section on "Reporting strategies" below). In retrospect, I am able to discern five phases in this analytical strategy, which are depicted in Figure 4.5. While I represent these phases in a linear fashion, their actual sequence was, in practice, asynchronic and iterative.

| Phases   | Steps in the analytical and interpretive process   |
|--|--|
| Preliminary phase  | <ol style="list-style-type: none"> <li>1. Research question broadly sketched</li> <li>2. Literature review conducted</li> <li>3. Conceptual framework established</li> <li>4. Research questions refined</li> <li>5. Methodology designed <ul style="list-style-type: none"> <li>- data collection protocols developed</li> </ul> </li> </ol>  |
| Phase I – Individual interviews and related data collection  | <ol style="list-style-type: none"> <li>6. Cumulatively interviewed students and collected related documents from them <ul style="list-style-type: none"> <li>- formatively identified and coded significant themes and issues for each student, and sought clarification and validation in subsequent interviews</li> <li>- formatively identified representative narratives for each student, and elicited greater depth in subsequent interviews</li> <li>- formatively identified common and disparate themes and issues across cases, and sought clarification in subsequent interviews</li> </ul> </li> <li>7. Interviewed informants from students' educational networks to triangulate, clarify and contextualize students' experiences <ul style="list-style-type: none"> <li>- identified representative narratives for each informant</li> <li>- formatively identified cases where the relationship between informant and student was paradigmatic of significant themes or issues</li> </ul> </li> </ol> |
| Phase II – Group interviews                                  | <ol style="list-style-type: none"> <li>8. Sought clarification, contextualization and validation of formative themes and issues arising from individual interviews <ul style="list-style-type: none"> <li>- highlighted differences in interpretation of major themes and issues, particularly along axes of gender, age and academic discipline</li> </ul> </li> </ol>  |
| Phase III – Coding data and selecting significant narratives | <ol style="list-style-type: none"> <li>9. Tabulated and coded thematically all interview and journal data, first, with individual cases, then, across cases <ul style="list-style-type: none"> <li>- identified the most significant themes and issues (held commonly and disparately) relative to the participants, and in light of research questions and conceptual framework</li> </ul> </li> <li>10. Identified narratives, experiences and relationships that were paradigmatic of significant themes and issues</li> </ol>  |
| Phase IV – Interpreting data and narratives                  | <ol style="list-style-type: none"> <li>11. Interpreted the data and narratives regarding significant themes and issues using conceptual framework and other evaluative judgements based on interactions with participants <ul style="list-style-type: none"> <li>- revised conceptual framework and interpretive categories</li> </ul> </li> </ol>   |

Figure 4.5 Phases of data analysis and interpretation

### ***Reporting strategy***

In interpretive and critical research, data analysis is linked, in a mutual relation, to the reporting process. Polkinghorne (1988, 1995) suggests there are two general approaches to these related methodological elements. He says researchers can compose narrative analyses or they can produce analyses of narrative. In the former, researchers view data as co-constructed narratives, recognizing that their interactions with participants shape the stories that unfold. Researchers who follow this approach compose research reports that follow a narrative logic, often writing in the first person and regularly punctuating their analyses with reflective asides regarding the constructed character of their data sets and their analysis of them (Arvay, 1998). Researchers who produce analyses of narrative take a recursive stance towards data, deriving common themes and issues or looking to fit the data to pre-determined categorical schema (Polkinghorne, 1995; Wolcott, 1994). Those who use this approach often organize their analyses and reports around specific categories of data, usually related to pre-established conceptual frameworks, common themes and/or significant issues.

While Polkinghorne's (1995) characterization of interpretive data analysis and reporting implies a dichotomy between narrative analysis and analysis of narrative, following Denzin (1998) I have used both approaches in this study. Despite the fact that this combined approach results in a somewhat "messy text" (Denzin, 1997, p. 224), it conforms best to the research questions asked and the methods used. Those questions and corresponding methods have a double character. On the one hand, my questions and methods focus on educational and social issues that are best understood using categorical reasoning. On the other hand, the longitudinal design of the study and the participants' reporting of their experiences follow the program logic in Co-op. This logic is best captured and understood using narrative reasoning. I thus present the findings of the study--ten cases--predominantly in narrative form in Chapters Six, Seven and Eight. I do this by weaving significant numbers of direct quotes from the participants with a first person narrative that provides insight into my own thinking and experience as the researcher. I then group and analyze these narratives using a categorical schema that is drawn directly from my conceptual framework.

In order for the reader to better relate to these narratives and analyses, it is important to understand the contexts in which the participants were situated and the study conducted. The next chapter describes these institutional, social, economic, political and biographical contexts.

## **Chapter Five: Institutional, Social, Economic, Political and Biographical Contexts**

### **Introduction**

This chapter serves as a background to the findings presented in Chapters Six, Seven and Eight. It provides a description of salient aspects of the university at which this study took place, its overall co-op program, and the specific co-op programs involved in this study. It describes the economic, social and political context during the period that the field work for the study was undertaken. And it provides biographies of the ten students who are the key participants in the study.

### **The University and Its Co-op Program**

#### ***The University of Queensville***

With a student population of close to 17,000 and a contingent of approximately 1,900 faculty and staff, the University of Queensville is considered to be one of Canada's leading universities. As one of the students who participated in this study boasts in reference to an annual review of Canadian universities conducted by a popular newsmagazine, "Queensville consistently ranks near the top of the *MacLean's* rankings."

The university is situated in a scenic metropolitan region, with a population of 350,000. It is one of the largest contributors to the local economy, drawing almost three-quarters of its students from elsewhere in the province, country and, more recently, overseas. The region's economy is largely comprised of small to medium-sized businesses, primarily concentrated in tourism, culture and personal services. There is also a nascent but growing 'high-tech' community, and a sizeable public sector, as the region is home to an array of local, provincial and federal government departments and agencies.

Queensville began as an undergraduate liberal arts and science institution with an education faculty. But in the last three decades it has expanded to include a range of professional schools and graduate programs. Most of this expansion took place in two stages: First, in the mid-to-late 1970s and then again in the late 1980s to early 1990s.

These periods of growth coincided with fiscal conditions and political climates in the province that were amenable to striving for increased access to higher education for potential students. As in most other jurisdictions in Canada, the university has been under significant financial restraint throughout most of the 1990s largely because of cuts in federal government 'transfer payments' to the provincial governments. For the latter half of the 1990s, academic units at Queensville were subject to 3% reductions in their budgets on an annual basis.<sup>178</sup>

### *The University of Queensville's Co-op Program*

The University of Queensville has established a solid reputation for curricular innovation. Its co-operative education program is an oft-cited example. Although many other universities have started co-op programs in the last decade, Queensville is one of the pioneers in the field, having introduced its first co-op offering in the mid-1970s. It is now host to one of the largest and most diversified co-op programs in the country.

The university calendar describes co-operative education as "a process of education which formally integrates students' academic and career studies on campus with relevant and productive work experience in industry, business, and government."

The text continues to describe the benefits that accrue through participation:

The accumulation of up to two years of varied and program related work experience enhances students' intellectual, professional, and personal development, by providing opportunities for applying academic theories and knowledge, evaluating and adjusting career directions, and developing confidence and skills in working with people.

The integral components of co-op are the work terms. These are meant to provide productive and paid, full-time work experience. Students compete for their work terms in a labour market process that includes applying and interviewing for jobs. However, co-op personnel mediate and regulate the job search and placement process.<sup>179</sup> In most cases, co-op personnel solicit positions from employers, although on occasion students find and

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<sup>178</sup> A significant proportion of the financial resources for the University of Queensville's Co-op program came from a special provincial government fund. These resources remained stable throughout the final four years of the decade.

<sup>179</sup> The amount of regulation of this process depends on the individual co-op program and the particular outlook and problem-solving style of the co-op personnel.

secure their own. Co-op personnel review all potential work term positions and evaluate their suitability for work term credit.<sup>180</sup> Depending on the academic unit the co-op program serves, students are required to complete from two to five work terms. Each work term is normally of four months' duration (with 13 weeks as a minimum), but some programs allow students to work up to one year on an exceptional basis. Students begin their work terms in September, January and May, and generally alternate them with full-time academic terms on campus, although more flexible schedules can sometimes be negotiated.

The university prides itself on the size, reach and quality of its co-op program. In the year this study was conducted this study, the university highlighted in its promotional materials that one-third of its student population participates in co-op programs, and that co-op is available in close to 50 academic areas.<sup>181</sup> Most of the participation in co-op is confined to undergraduate students; however, formal graduate co-op programs exist in three departments and graduate students from all academic areas can gain access to co-op through "special arrangement." The growth in co-op participation at the university is remarkable, tripling throughout the 1980s and doubling again during the 1990s.<sup>182</sup> A commitment to growth on the part of senior administration remains unabated in the new millennium. The current five-year strategic plan--still in draft stage at the time of data collection--called for an increase in co-op enrolment and a removal of barriers to student participation in co-op and other forms of work experience.<sup>183</sup>

The expansion of co-op offerings at the university has evolved in a complex manner. There is a significant social history to its development. In different periods, particular senior administrators and individual faculty members have been responsible for

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<sup>180</sup> Academic credit for work terms is awarded as "complete" or "incomplete", not as letter grades, percentages or grade points. Students who receive a designation of incomplete for a work term are usually required to withdraw from the program, subject to review from the particular academic department the program serves.

<sup>181</sup> An external review of the co-op program, conducted in June 1999, calculated the participation rate of students at 26.9%.

<sup>182</sup> Figures for the number of co-op placements per year indicate 338 in 1980/81, 1212 in 1990/91 and 2782 in 1998/99.

<sup>183</sup> This plan also calls for students from all departments and disciplines to have access to experiential learning opportunities, although these may be in forms different than co-op.

instigating co-op as an integral curricular and, eventually, administrative function in specific academic units. This is how co-op was inaugurated at the university in the early 1970s, first in the Chemistry department, and shortly after that in Physics. In the case of these science departments, the university president influenced interested faculty members to make a voluntary commitment to launching and running co-op. These original champions of co-op believed that, to ensure its academic value and integrity, co-op needs to be embedded in both the curriculum of the academic department and in its ongoing administrative operations. One of the immediate signs of this commitment to the integration of co-op was the transformation of the way in which courses were scheduled in these departments. In order to accommodate the pedagogical model of alternating one academic term with one work term, the department began scheduling summer courses and effectively operating year-round.

The early successes of co-op supporters resulted in the expansion of co-op to other departments in the Faculty of Science. It also resulted in the emergence of rationalization processes on the administrative front. The president who had presided over the introduction of co-op in the Faculty of Science recruited a savvy and committed faculty member from the Chemistry department to be a part-time director of co-op programs. This new director's role would be to orchestrate the development of new programs in other faculties and to develop a fiscal, personnel and administrative infrastructure for co-op. By the late 1970s the combination of senior administrative support for co-op and the substantial management skills of the new director resulted in the inauguration of co-op programs in Public Administration, Geography, Writing and Computer Science.

By this time, the new director had arranged the hiring of professional, non-faculty personnel in roles as "Co-op Coordinators", whose responsibilities included soliciting employers, overseeing the process of placing students in jobs, monitoring students on work terms and running the day-to-day operation of the program. With a view to integrating their work as much as possible in the academic and administrative life of the departments, these coordinators were physically located in the academic units they served. In addition, one of the fundamental hiring criteria was that the coordinators

possess, at minimum, a master's degree in, or closely related to, the disciplines they served. In a number of cases, and in particular in departments of the Faculty of Science, the coordinators were allocated teaching or other departmental duties. In some cases, these extra duties were added to offset the fact that planned enrolments in the co-op program did not merit a full-time coordination role. In other cases, they were assigned to more closely integrate the coordinator into the academic milieu.

As co-op programs proliferated on campus throughout the 1980s<sup>184</sup> the director established a central office to provide oversight with respect to policy, budgets, finance and personnel. This office also provided coordination, support and advocacy for both established and nascent co-op programs. At the time of this study, personnel in this office consist of an executive director, assistant director, administrative officer and two support staff. Officially, all co-op coordinators report to the executive director. Functionally, however, many coordinators work very closely with the heads of their academic units, although the significance of this relationship varies considerably between programs.

The expansion of co-op programs on campus did not occur without resistance and conflict, particularly on the part of a small group of faculty in the humanities and social sciences. These professors believed that the vocationalisation of higher education would debase the learning process, the academy and its traditional disciplines. This resistance was particularly acute during the introduction of the Engineering program in 1981 and again with the initiation of the Arts Co-op in 1987. While there is some evidence that this negative view of co-op still resonates on campus,<sup>185</sup> the contentiousness of co-op seems to have largely abated, as there were no overt signs of resistance to the launch of the Social Sciences Co-op in 1998.

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<sup>184</sup> Engineering, Economics and Physical Education commenced in the mid-1980s. Arts and Law started in the late 1980s. Business began in the early 1990s. Earth and Ocean Sciences opened in the mid-1990s. The Social Sciences started in the late 1990s.

<sup>185</sup> After recently soliciting professors to serve on their program advisory committee, the staff in the Arts Co-op received a response that read, "It's ironic that you approached me about this because I am one of the ones who fought vehemently against co-op. I consider it to be a blight on the university because it's based on skills-based learning rather than knowledge for its own sake."

As the individual co-op programs emerged and matured, a variety of curricular and organizational formats arose to meet the predilections of participating departments. On the curricular front, there are “mandatory” and “optional” co-op programs. In the case of the former, students are required to successfully complete a specified number of work terms in order to receive their degrees. In the latter, qualified students can elect to participate in co-op. If they complete a specified number of work terms in an optional program, students receive a “co-op designation” on their graduating transcripts. On the organizational front, each individual program has a different structure.<sup>186</sup>

In co-op circles on campus the emphasis on the integration of the administration of co-op into the academic units, and the patchwork organizational structure and relations that arose as a result, have come to be known as the “Queensville model.” This model contrasts with large-scale co-op programs at other universities, which tend to have centralized administrative structures. The majority of co-op personnel and supporters in the departments at Queensville believe this model provides for a higher quality program than is available at other universities. They argue that it embeds co-op more closely into the fabric of the departments and disciplines, and thus produces greater educational value for the students. However, the actual involvement coordinators have in their departments and faculties vary considerably.<sup>187</sup> Nonetheless, it remains widely held that the Queensville model makes of co-op involves much more than simply “job placement.”

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<sup>186</sup> For instance, the Faculty of Business integrated a career centre--effectively an outplacement agency for graduates from their school--with the co-op program. Both are physically located in the department. This format, plus their large contingent of co-op students, led them to hire a “Program Manager” to oversee four coordinators and four support staff. In contrast, the Social Sciences Co-op, which serves six departments in the Faculty of Social Sciences, consists of three coordinators and two support staff, and is located in a separate location from the departments.

<sup>187</sup> In some departments co-op coordinators regularly attend departmental meetings or participate on curriculum committees. This allows them to potentially influence policy and programming decisions, drawing on feedback they receive from employers and students. In one department, co-op coordinators are responsible for academic advising. This allows co-op coordinators to influence the decisions students make regarding course selection, based on their graduate-level knowledge of the discipline and intimate understanding of the labour market. In one case, this involvement consists solely of reporting on a semi-annual basis to a meeting of faculty representatives.

*A recent external review of the co-op program at Queensville*

Conducted in the same year that data collection started on this study, an external review of Queensville's overall co-op operations comments extensively on the deeply held belief amongst co-op personnel and supporters that they are 'doing the right thing.' This document provides a useful tool to gauge the current state of affairs of co-op at Queensville, particularly from the view of outsiders.<sup>188</sup>

In this document, the reviewers praise the high quality of Queensville's co-op program and the excellent reputation that it enjoys. However, they argue that this reputation has not been earned as a result of having established the proper organizational design and having fostered the best practices on the part of coordinators. Rather, it is the quality of the university's academic programs combined with lofty standards for admission that result in the high calibre of co-op students. The reviewers thus imply that the "Queensville model" is, to some extent, tautological: Select great students and you get great students.

It is difficult to determine whether the reviewers have discovered something of substance here, particularly as they do not supply specific numbers or facts. But it is certainly the case that co-op students at Queensville have well above average grades. Indeed, the admission and ongoing participation requirements for individual co-op programs demand high marks. Moreover, some programs use "selection interviews" as a criterion in the admissions process. These interviews allow coordinators to assess the personal suitability of students for, among other things, work term placement and on-the-job success. But even if the co-op program "creams" high achieving and socially adept students for participation, this does not mean that there is no educational value created for

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<sup>188</sup> Queensville co-op personnel have questioned the objectivity of the external reviewers, who were seasoned co-op administrators from "competing" institutions. My use of this external review document should not be construed as a round-about means for me to insinuate my own evaluation of the university and its co-op program. This study is not evaluative in that sense. It is not a program review or a study in organizational effectiveness. I include information about this document because it helps to triangulate issues, values and beliefs that exist in the community of co-op personnel and supporters at the university. These issues, values and beliefs inform policies and practices, which foster and sustain certain kinds of social action.

(and by) students as they participate.<sup>189</sup> To investigate this aspect of the problem, one needs to look at what goes on in the co-op program that is *educational*.

The review document does not provide any specific reference as to what policies or practices exist, or ought to exist, at Queensville to create educational value. Instead, the reviewers focus on management issues, where they unearth operational inefficiencies and contradictions in the current organizational arrangement. One of the key issues is the apparent lack of productivity on the part of coordinators.<sup>190</sup> The commentators attribute this finding to duplication of effort between programs and the fact that coordinators are engaged too heavily in departmental matters in their academic units. In addition, the reviewers calculate that more students are admitted to co-op programs than are actually placed in work terms, and infer that an unduly large number of students do not get placed in co-op work terms and/or drop out of the co-op program. They attribute this “placement” problem to the productivity issue: Coordinators do not focus enough attention on the primary function of co-op, which is “to provide high quality jobs for students.” Thus, in addition to its reputation for quality, the co-op program appears, overall, to be expensive to run.<sup>191</sup>

The evaluators make thirty-five recommendations for improving the delivery of co-op at Queensville. Most of these flow from their main criticism that the individual programs are too decentralized. Not surprisingly, a key piece of advice is to increase the centralization of personnel, functional roles and resources. A second important recommendation is to place greater emphasis on recruiting employers--and hence soliciting more work placement opportunities--in order to deal with increased competition

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<sup>189</sup> Grosjean (2000) provides empirical evidence, based on a large sample of co-op students from one Canadian university, that lofty admissions standards for co-op produces quality outcomes. He subsequently argues the educational value-added that co-op students receive produces them as a “vocational elite.”

<sup>190</sup> According to the report, the number of placements/term for coordinators at Queensville averages 35, while at another well-known co-op institution that number is 125.

<sup>191</sup> In 1998/99 the co-op budget was approximately \$3.35 million. \$1.75 million of this comes from the base budget of the University, while \$1.6 million comes from a special provincial government allocation. Student fees associated with co-op participation raise approximately \$1 million in revenue for the university. This represents slightly more than 2% of the University’s general operating expenses of \$156 million.

from other institutions, escalating expectations of senior administrators, and increasing demand from students.

Naturally, the review process generated responses on the part of co-op personnel and university administrators. These were apparent during the period of this study, and thus to a certain extent shape the context for its findings. Informally, the co-op coordinators began sharing their views with each other. Their responses were as diverse as the programs in which they worked. Some fretted about the potential loss of autonomy through amalgamation or centralization, and worried about the quality of their jobs, as a result. Others worried for their job security. Still others welcomed many elements of the report, particularly those aspects related to the sharing of administrative resources.

Officially, the executive director solicited written responses from all co-op personnel and senior administrators. This information was tabulated and summarized. Perhaps not surprisingly, it represented a "considerable difference of opinion" amongst those involved. These responses were submitted, along with the executive director's own response to the review, to the Associate Vice President. All co-op personnel received copies of these submissions. Among the executive director's suggestions for change as a result of the review were, indeed, that greater centralization be established. He recommended a "clustering" of related programs, each under the purview of a "Program Manager" who would report to the executive director. He also indicated that, in this new design, the co-op coordinators would be expected to operate as "independent professionals"--or generalists--within their respective clusters and the overall program, and not to identify themselves with one specific discipline or department.

The foregoing provides some insight into the particular context in which front-line co-op personnel find themselves during the period of study, and the ways they interpret and construct this context. They live with concerns regarding the cost of delivery of the overall co-op program. Hence, they worry about potential budget reductions in their individual programs, increased expectations for productivity or even job cuts. Co-op personnel also face potential changes in organizational structure, and with it a shift in the emphasis, scope and perceived quality of their jobs. They are troubled by a perceived shift

in emphasis from an academically embedded model of co-op to one that focuses on placing students in jobs.

### **Specific Co-op Programs Involved in this Study**

The study focuses on the experiences of students from three individual co-op programs at Queensville. These programs include Arts, Computer Science and Engineering.<sup>192</sup> This section provides an overview of these programs, including brief histories and descriptions of their operations.

#### ***The Arts Co-op program***

In its current incarnation, the Arts Co-op is the result of a merger in 1997 of the Professional Writing Co-op and the Arts Co-op. The former was inaugurated in 1978 as the Creative Writing Co-op, while the latter began in 1987. The program serves students from eighteen departments in the faculties of Fine Arts and Humanities.<sup>193</sup> As a result, its office is located in an administrative building, not in an academic department. Two coordinators, Ward and Marilyn, share responsibility for managing the program. A full-time assistant named Rose works closely with them.

For the academic year 1998/99, the program reported 185 students enrolled and 152 work placements. Promotional literature describes the Arts Co-op as “an integrated approach to higher education which enables well-motivated students to follow a program that combines study terms on campus with paid work terms in a variety of job settings.” It promises “to provide students with the analytical expertise and practical knowledge necessary to excel in positions in the public and private sectors.”

The Arts Co-op is an “optional” program, meaning that qualified students elect to pursue it. To be eligible, students must successfully complete prerequisite courses, be registered full-time in the university and achieve a minimum B (75-79%) average. In addition, they have to submit a letter of application, current résumé and, for students in

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<sup>192</sup> A rationale for the selection of these programs is provided in Chapter Four.

<sup>193</sup> Participating departments include Cultural Resource Management, English, French, Germanic Studies, Greek/Roman Studies, History, History in Art, Linguistics, Medieval Studies, Music, Pacific/Asian Studies, Philosophy, Professional Writing, Slavonic Studies, Theatre, Visual Arts and Women’s Studies.

the Writing department, a portfolio of their work. Co-op personnel also conduct selection interviews to assess each applicant. The program encourages applications from students who are in their second year of studies, as this allows them to complete the requisite number of work terms without unduly delaying their graduation. However, students who are further along in their studies are also considered for admission.

Once admitted, the students attend a series of mandatory seminars, which cover how the program works, how to write résumés, cover letters and job applications, how to succeed in job interviews and what to expect when they go to work. They also have access to an on-line curriculum, which provides additional guidance in these matters. Co-op personnel encourage students to pursue a schedule that alternates academic semesters with work terms, although, in practice, other combinations are common. During their participation in the program, students can participate voluntarily in a mentoring program.<sup>194</sup> This program matches “veterans” with newly admitted students. The experienced students help to guide their protégés in effective job search practices, in making the most of their first work term, and in understanding the long-term goals of the co-op process. In order to graduate with a “co-op distinction” on their transcripts, students must successfully complete four work terms. They must also complete at least six courses from a “core set that will serve employers.”<sup>195</sup> These include courses that provide “technical, research, communication and contextual” knowledge and skills.<sup>196</sup>

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<sup>194</sup> This program is unique at Queensville. Richard started the program for two reasons: first, to help new students to compete more effectively for work terms; second, to build community so that new students “stick with the program.” For Ward, the latter is particularly important because students do not realize the learning benefits if they only do one or two work terms. Instead, he observes, “There’s a synergistic thing that happens when you compile all of the experiences.”

<sup>195</sup> According to Ward, this requirement grew out of the recognition that a “large and yawning gap existed between Arts students and Writing students in terms of the skills they possessed that they could take to an employer.” Writing students had journalistic, technical writing and technological skills as a result of their curriculum, while Arts students did not systematically develop equivalent concrete abilities in their programs. The Arts Co-op thus proposed specific course requirements to each of the participating academic units, who unanimously agreed. The influence that the Arts Co-op has had on the formal curriculum is unique in Queensville’s overall co-op program.

<sup>196</sup> For example, “Elementary Computing” or “Introductory Statistics” count as technical courses, “Introductory Sociological Research” or “Theories of Feminism and Activism” count as research courses. The co-op coordinators review and approve each student’s requisite course selection.

The process of securing a co-op job begins four months in advance of the start of the work term. Typically, co-op personnel solicit job opportunities from employers, although students will occasionally find their own positions. Co-op personnel solicit jobs from employers and post them on a password protected web site. Eligible students view the job postings, and apply to those positions for which they feel qualified and in which they are interested. The employers receive the applications and select candidates. Interviews are arranged via co-op personnel. After the interviews, the employers then make offers to their selected candidates, usually via co-op personnel who, as brokers, like to have some knowledge of and control over the matching process. The students have a short window of time within which to accept or reject any offers. To facilitate the matching process, the students are allowed to reject only two job offers in a given recruiting period, after which they must either find their own position or postpone their work term. Much of the communication between all parties in this process is electronically mediated via the Internet or email.

Once they start a work term, there are six key tasks students are required to undertake, in addition to performing their job duties satisfactorily. The first is to set learning objectives and to have their employers agree to them. The second is to pay the “work term fee” to the university. The third is to ensure that their employers complete a mid-term evaluation of their work performance. The fourth is to participate in “site visits” with their co-op coordinators. These take place mid-way through the work term. The fifth is to ensure that their employers conduct a final evaluation of their performance. Finally, they must compose a report that describes their experience. This report is due upon their return to the university. The co-op office provides all of the necessary forms and guidelines for the students and employers to complete these tasks.

### ***The Computer Science Co-op program***

The Computer Science Co-op began in the 1978/79 academic year, with a total of forty-one work placements. Since that time, the program has expanded to accommodate more than four hundred placements per year. Not surprisingly, this growth accelerated

dramatically in the 1990s with the explosion in computing, networking and software development.

The Computer Science Co-op describes itself as “an integrated approach to higher education, which enables bright, highly motivated students to obtain relevant work experience while completing an academic program.” It promises to provide students with “practical knowledge and experience related to their academic interests and [enable] them to test their aptitudes and professional competence through on-the-job training.” Other stated benefits to participation include developing skills in working with people, financial assistance and improved permanent employment opportunities.

Similar to the Arts Co-op, computer science is an optional program. To be eligible, students must achieve a minimum B (75-79%) overall grade average and a B+ (80-84%) in Computer Science and Mathematics courses. Once admitted, they must maintain a B- (70-74%) overall average to remain in the program. In contrast to the Arts Co-op, students are encouraged to enrol in their first year of study and to complete five work terms. However, students who are further along in their studies are also considered for admission.

The orientation and placement processes are largely similar to those in the Arts. One significant difference is that the placement process is divided into two “rounds.” Round one lasts for the first six weeks of the recruiting period. In it, employers interview students and submit a list of rankings to the co-op office and the students, in turn, do the same. Then co-op personnel conduct a “matching” process whereby they correlate each party’s respective choices, with the ideal matches being those in which a student’s first choice corresponds with an employer’s first choice. The next best case is where a student’s first choice matches an employer with whom they ranked second in the interview, and so forth. This matching system was implemented to maximize the number of placements as early as possible in the recruiting period. The second round resembles the more ‘free market’ model of the Arts Co-op. While they are on their work terms, Computer Science students have the same six obligations as Arts students.

At the time of the study, the contingent of personnel in Computer Science Co-op consisted of two Co-op Coordinators, Dorothy and Cynthia, a Placement Coordinator who manages the details of the matching process and two secretaries. Their offices are located in the Computer Science department.

### ***The Engineering Co-op program***

The Engineering Co-op was founded in 1983 as an integral part of the newly established Faculty of Engineering. Beginning with fifty-three placements in its first year of operation, the program has grown to accommodate over six hundred and fifty per year. Because participation in co-op is mandatory for all students in the Faculty of Engineering, it should not be surprising that its growth is intimately linked to a steady increase in overall enrolment in the faculty. Promotional material describes the program thusly:

Cooperative education combines program-related work experience with academic studies and is an integral part of all our degree programs. It is a major strength of our Faculty and of the University of Victoria.

All Canadian faculties of engineering are subject to national accreditation standards. Queensville is no exception. These standards result in curricula that are highly structured and tightly packed. At Queensville, courses are sequenced in lock-step fashion, with limited flexibility in terms of timing or selection. The first co-op work term is scheduled for the summer that follows completion of the second-year of studies. After that, students alternate each semester of study with a work term. In order to graduate, engineering students must successfully complete eight semesters of full-time study and five 13 to 16-week co-op work terms.<sup>197</sup>

Admission to the co-op program in Engineering is automatic with acceptance into the faculty. Students can continue to participate in the program as long as they meet all of the academic requirements to remain enrolled in their program of study. The admission criteria to the faculty include, for first year entrants, a minimum average of a B in Math

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<sup>197</sup> Engineering students have the option of seeking a co-op work term for the summer that follows their first year of studies. Students have greater flexibility by their fourth year of studies with respect to course sequencing. As a result, some students elect to pursue up to eight months consecutively of co-op work.

12 and Physics 12 and an overall average of at least 65%.<sup>198</sup> Students entering in their second year must have a minimum B (75%) average.

The orientation and placement processes are almost identical to those in the Computer Science Co-op. However, there are a few differences in the content of the orientation courses. Specific emphasis is placed on workplace safety issues, as students in certain types of engineering, such as electrical and mechanical, often work in potentially hazardous environments. Co-op personnel also introduce students to independent job search techniques, which are meant to encourage students to take initiative in finding their own placements.

At the time of the study, the cadre in the Engineering Co-op consisted of five coordinators, a program manager and three secretaries.

### **Social, Economic and Political Context**

The field work for this study took place in 2000, shortly after the trumpeted transition to the new millennium. The decade leading up to this pivotal moment had been a time of great social, economic and political change for most Canadians. The 1990s began in economic recession, but ended with widespread optimism that a promising new economic and social order was immanent. In the intervening years, most Canadians experienced a drop in their standard of living (Fortin, 1999). Paradoxically, economic insecurity and increasing socioeconomic polarization were the norm (Canadian Council of Social Development, 2003), even as an inchoate utopian vision took hold of corporate, political and popular imagination.

This hopeful vision stemmed from the conceptual notion and empirical fact that economic life in developed countries was increasingly based on the production, distribution and consumption of knowledge (e.g., information, ideas) as opposed to natural resources (e.g., wood, ore). As a result, this new economic order was dramatically different than its predecessor because ideas and information are both infinite and rapidly renewed, unlike the natural resources upon which the “old economy” was built. In

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<sup>198</sup> Higher minimum grade averages--of 75% or more--are often required, based on the competition for spaces in the program.

addition, advanced information and communication technologies (ICT), particularly personal computers and the Internet, were allowing people to source, recombine, apply and distribute information and ideas, at light speed, in their workplaces and into global markets, the latter being the result of a two-decade (nearly worldwide) political agenda to liberalize world trade. Moreover, the Canadian work force, similar to those in other developed nations, was better educated than in the past, contributing to the vast supply of and demand for ideas and information. Massive and sustainable leaps in productivity and consumption were anticipated as a result of this combination of factors. Good wages paid to knowledge workers were stimulating demand for knowledge-saturated products and services. Corporate profits, too, were at record highs, stimulating massive investment in knowledge infrastructure (e.g., ICT) and knowledge production (i.e., information-rich goods and services).<sup>199</sup> Some experts believed that the infinite availability of ideas as raw material, the proliferation of ICT, the productivity revolution and liberal international trade regimes would forestall recessionary pressures, creating economic opportunity hitherto unseen in the history of western capitalism.

A positive social vision attended this economic one. Perhaps not surprisingly, knowledge, ICT and globalization featured predominantly in it. Central to this social vision was the notion that knowledge had become more accessible and democratized because of the proliferation of ICT and the heightened interaction of people from different societies and cultures. As a result, there was reason to believe that greater mutual understanding and reciprocity would build up between individuals, cultures and societies, thereby alleviating social ills and even geopolitical violence.

Despite the tenacious grip of these optimistic visions leading up to the new millennium, most workers and citizens were actually experiencing something very different. In Canada, real incomes had fallen over the decade. Child poverty rose (Ross, 1998). Job security sank. Youth unemployment rates remained stubbornly high (Marquardt, 1998). The job market became increasingly divided between good jobs and

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<sup>199</sup> A number of high profile accounting scandals, ethical lapses, and proven and alleged criminal acts in the corporate community eventually revealed some of these profits to be fictitious.

bad jobs, with far more of the latter appearing (Duffy & Glenday, 1997; Livingstone, 1999). Not surprisingly, more and more people sought out educational opportunities in order to (re)prepare for the labour market (Statistics Canada, 1999), even as student debt dramatically increased (Allen & Vaillancourt, 2004).

One consistent message people heard throughout this period from business and political leaders alike, was that there were significant skill shortages in Canada, particularly with respect to ICT. Good jobs were going begging for want of skilled workers, and with them the potential future of Canadian competitiveness in the global economy (Betcherman & Lowe, 1997). The push was on for more education in general, but in particular for more technological and applied forms of education (Betcherman, McMullen & Davidman, 1998). Another consistent message people heard, particularly from their governments, was that they had to take more responsibility for own futures. This meant shouldering a greater proportion of the financial burden for social services such as higher education.

The 1990s marked a decade of fiscal restraint, particularly on the part of the federal government, which drastically cut the transfer payments it made to provincial counterparts to support social, educational and health services (Canadian Association of University Teachers, 2001). The provinces were being squeezed from another side as well. They were unable to raise corporate taxes for fear of scaring away investment. They were also unable to raise income taxes for fear of scaring away people, especially the well-paid (and therefore highly mobile) knowledge-workers. In fact, many provincial governments began to lower taxes in order to stimulate corporate investment and inflows of knowledge-workers.

The provinces dealt with these shortfalls in revenues in slightly different ways. For instance, many provincial governments effectively deregulated higher education, allowing institutions to set their own tuition fees to cover freezes or reductions in provincial funding. As a result, tuition fees increased by 34% in the final four years of the decade

(Statistics Canada, 2003).<sup>200</sup> The decade of the 1990s represents the formative period in which the key participants in this study chose to pursue and subsequently embark on their university education. As the participants' narratives below and subsequent findings show, this context flavours their decision-making, actions and perceptions.

### **Biographies of the Key Participants**

As outlined in Chapter Four, this study centres around ten students. In the first interview I asked each participant to tell me about him or herself. With this open-ended question I was seeking biographical and demographic information in order to provide context to their stories. In particular, I was interested in eliciting details regarding their motivation to attend university, to pursue their chosen disciplines and to participate in the co-op program. For most of the participants, responses took the form of a chronological narrative that began somewhere in high school and focused on issues and events with respect to family, education and work. To gain a broader picture, I also found myself asking the students for details regarding their extracurricular interests, activities, passions and dreams. The students' biographies are presented below as they shared them with me *in their own words*.<sup>201</sup>

#### ***Lisa***

Tell me about yourself? That's the kind of question they always ask in our job interviews! Well, I'm just finishing my third year. I won't be graduating for another two years because I have two more co-op terms to do. But that's okay because I'm only twenty-one.

I've lived in Queensville almost all of my life. Both of my parents were in the armed forces. That's where they met. My mom was a radar person and my dad was a weatherman. But now my dad's a math instructor at a local college. He mostly teaches

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<sup>200</sup> During a period when a handful of provincial governments had frozen tuition fees for the final four years of the decade in order to make participation in higher education more accessible for students from lower socioeconomic backgrounds. In some of the latter instances, however, funding to higher education was not increased to keep pace with annual costs, amounting to a cut in funding over time.

<sup>201</sup> I have condensed their narratives to read more fluidly and have integrated relevant passages that arose in subsequent interviews. For those readers whose sensibility demands a more structured listing of biographical information, see Figure 4.4 in Chapter Four.

statistics and calculus. And my mom's a director in the provincial government. I have an older brother who is just finishing a degree in computer science. He's actually the one who introduced me to co-op. I saw that he was getting work experience, getting paid and would probably get a good job when he was finished school. I knew that my writing degree was going to be a problem for some people, so I wanted to be able to say, "I've graduated with four co-op work terms, this is where I worked, this is what I've done, and this is where my degree has been useful."

My family's technical. They're all big computer users. I've always been the black sheep in the family, in that I'm more artsy. I like to draw and paint. I also like going to the theatre. But I'm more technical now. I've had to do lots of computer stuff on my work terms. Besides, it rubs off on me at home.

At first, I was going to do playwriting as my genre stream, but, instead, I'm doing creative non-fiction now. The writing I do is sort of like a personal essay style, where you talk about things that are important to you but you relate them to the outside world. Not many people read that kind of writing though. It's like poetry, where there are more poets than there are readers! But I find the genre really interesting.

I hope I can make a living being a writer, even if I have to do technical writing. You know, people in my family used to ask me a lot if I wanted to be like the next Margaret Atwood. My mom finally stood up and said, "She's not going to be the next Margaret Atwood, she's going to be the first Lisa Walter." She got really tired of people saying, "Well, what's she going to do with a writing degree?" She is just really adamant about me having a degree, any degree, because she doesn't have one and has always felt that's gotten in her way. Fortunately, getting a job is not the main reason I came to university. But you do get tired of that question. It's such a cliché. If people thought about it, they could see the value in any degree. But a lot of people just base their ideas on the types of jobs they see as valid.

**Linda**

I come from a quiet rural area, where there's lots of farming. I'm the oldest of seven kids. We're really fortunate because we have a very close family. We have lots of fun together.

There's no hi-tech in the community I grew up in. My summer jobs were pretty much babysitting and helping out on farms. In my last year of high school I worked part-time at a fast food restaurant. When I graduated I wasn't really sure what I wanted to do. So I ended up going to the local college, where I could do my first two years of sciences and then transfer to university. During the summers I worked in a food packing plant. That was a lot of fun because I worked with kids my age. From that job and from my experience at the restaurant I realized that I enjoyed working with people. But I also realized I did not want to be in the tourism or hospitality industry or in a mindless, repetitive job where I did the same thing over and over again every single day. So I said, "That's it, I'm going off to university to get myself an education where I can do something interesting."

The more I read, heard and talked with people about it, the more I thought engineering looked like a good jumping-off base. From there I could move into anything. Where I'm from we've faced the loggers and miners losing their jobs. The farmers and geologists have also suffered. Some industries have just disappeared altogether. So my greatest fear was graduating with a useless piece of paper. But I was also thinking that if you haven't got any experience behind you with a degree then what does that do for you? The co-op gives you exactly that opportunity. That's why I came here instead of somewhere else: for the co-op. The program gives me maximum exposure to the jobs that are going to be around when I graduate.

I'm now in my fourth year of the electrical engineering program. I went into electrical because it's a good route to go to get into specialized fields later. I could move into aeronautical engineering or underwater engineering. Actually, my secret wish is to work on the Hubble Telescope.

### ***Deborah***

I decided to come to university shortly after I left a marriage of twenty years. I came here to get a focus, to stop me from freaking out about my personal life. But now it's different. I'm in my third year of a degree in English and Professional Writing. I'm moving forward into a new career, and technology is a huge part of that, which is not something I would have said a few years ago.

It isn't easy to make big changes in your life. It takes a lot of courage. Leaving my husband destabilized everything. I mean, here I was alone with two kids in their teens. I felt like my life was falling apart. In some way, school was the only place that made sense at the time. And then I heard about co-op. This may sound maudlin, but co-op has saved my life. It's given me a sense of security and belonging. It also introduced me to Sarah, who is my mentor in the program.<sup>202</sup> Together, we've been battling through all the challenges of being single mothers and students.

University has been great. It's probably just me as a person, but that whole thing of who we are as humans on this planet is my biggest thing. Most people don't want to talk about their problems with being human. You don't bring it up in polite society. But in humanities courses you bring up those things and talk about them in the biggest sense. Those philosophical ideas are now the filters through which I understand others and myself. It's something I have with me everyday whether I'm at work or school.

### ***Warren***

We moved up to Canada from California in the early seventies. I was nine at the time. I became a Canadian Citizen, which was something I requested of my father because I didn't want to have to register for the draft one day. We lived in a small town in the mountains. I loved it there because I could rock climb and hike.

I did fairly well in high school, without having to do much work. So when I first went to university right after graduating my first year was pretty poor. After three years of muddling around the university, I went to a technical college and did a two-year

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<sup>202</sup> Sarah is another participant in this study. See her biography below (p. 148). The Arts Co-op program has a volunteer initiative in which senior co-op students serve as mentors to new participants.

renewable resources diploma, graduating top of the class. I think I did well there because I was very active and the studies incorporated lots of fieldwork. I did my final practicum with the local forest district, where, among other things, I did some cave mapping. I met some people who were starting a business doing cave tours, so I got full-time work with them. And that's where I met my wife. She's a caver too.

There was a lot of work in the recreation field, but it didn't pay very well, so I made the transition into forestry. I got a reasonable job as a technician with a forest company, but after about eight years I was forced out of my position. At the same time, my wife decided she wanted to get her teaching certificate. So, I thought, 'Now's about as good a time as any to make a change.' We sold the house and went for it. That was really hard. It felt like we were giving up our independence.

I was afraid of failure in my first year, so I studied hard. At the same time, I was kind of looking at what had potential. It's nice to get a degree, but if you don't get any work out of it your life can be pretty depressing afterwards. I did some research and decided on computer science. The industry is expanding and there's going to be work there. That's also why I elected to do the co-op: to get my foot in the door. Earth science is what I really wanted to do, in part because of my obsession with caving. But it's a very specialized field. Besides, when the metal prices go up, there's a lot of work, but when prices go down, people are out of work. I wanted to get away from an up and down industry. I've seen too much of that in forestry. So, I'm now in my third year of computer science.

### ***Edward***

I guess I was interested in languages. That's where it started for co-op. I lived in Deep Bay, a smallish city. My dad had been a hand-logger when I was younger, so we lived in lots of remote areas. But we'd settled in Deep Bay by the time I was in elementary school. In grade eleven I went to Switzerland on an exchange program for a year. During that time I learned German and French. I came back really interested in languages, so I took Japanese. I was thinking about my future, and the Japanese was

really interesting but I wasn't sure what I'd do with it. So I thought, "Well, why not do co-op when I go to university?"

At the time, Queensville was the only university that offered co-op in that area. So I decided to come here. I've just finished my third year in Asian Studies. I'm particularly interested in Japanese language and culture, but I get to study other languages and aspects of Asian societies.

It's been pretty good. But for me, I'm getting worried about what I want to do after I graduate. I've done three co-op work terms, which didn't relate to my studies, and I'm sort of rethinking what I want to do. The only thing I can think of is going to Asia to teach English. But do I really want to do that? Trying to get into something that relates to your degree or what you're learning is kind of hard.

### *Arlene*

I'm in my fourth year of computer engineering. I'm originally from the capital city of a large Central African country. My dad has his own civil engineering business there. I came to Canada in 1996. I was going to do engineering at home, but the university there is really political. It's more or less totally controlled by the government. So, if there's any kind of political situation, and it's something that the people are not happy about, a lot of the students will riot. Then the police will come to the university and flush everybody out. They'll beat up the students and do other insane stuff. And then the university will shut down for three or four months. So that was the main reason I came to Canada: at home you'd end up taking five or six years to finish a degree. Unfortunately, most people have to go through that because their families can't afford anything else. I was just lucky that I could come here.

The idea to come wasn't difficult. But actually coming here, that's when I got the shock. When I first arrived, I did an 8-month engineering transfer program at a college in Loupville. That was pretty drastic because it was the worst winter ever, and it was a really small town. After a while, I met a lot of nice people and it got better. One of the nicest people I met was a teacher whose son was in engineering at Queensville doing the co-op program. He told me all about it and encouraged me to go. I was originally planning to go

to a more prestigious university. But when I heard that the co-op program at Queensville was mandatory, I thought that would mean the university did lots to find good jobs for students, so I decided I'd be better off here.

*Valerie*

I grew up on Opal Island, which is just outside of West Metropole, one the richest neighbourhoods per capita in Canada. My family is not rich, but we're very comfortable and definitely very middle class. My high school years were spent at a variety of schools. In grade eight I went to a boarding school. We thought that would be a good academic challenge. But it turned out that it was really a beautifully landscaped prison, more or less. I did really well, but just hated it. Then I went to an all-girls school. I'm glad I did that. I'd never felt like being a woman meant I shouldn't do well at school or pursue certain subjects. But a lot of girls around me obviously felt that way. So it was really interesting to be in a situation where as girls we all felt like we could do everything and do it well. After that, I went to another private school. That was also an interesting experience because I'd take the bus through downtown Metropole everyday, dressed in my school uniform. It was astounding the way people treated you because of the uniform. So that taught me a lot about appearances and how much they mean. In grade eleven I went on an exchange program to France. And in grade twelve I returned to the public high school in West Metropole.

After high school I was diagnosed with chronic fatigue syndrome, so I spent the better part of two years lying around. Eventually, I started to feel better and decided to go to university. I'd planned to do the co-op, with a major in Professional Writing, but then I took an anthropology class with an amazing professor. She made the class so incredible that I decided to major in Anthropology instead. So, I'm going to graduate in four months with a major in Anthropology and a minor in Professional Writing.

I'll probably never use the anthropology when I graduate, though I think anthropology is just a really good way to look at the world. Perhaps the lure of studying for studying's sake will bring me back to it one day. But I can't see ever coming back because I think, "Gee, this is going to be a good career move."

**Frank**

My parents were not originally from Queensville. My mother's from Hong Kong and my father is from the States. But I was born and raised in Queensville. They run a small convenience store and our house is right around the back. When I was growing up, there were always chores to do in the store. There's a supermarket down the street, so we have to compete against that by having better customer service, better displays, a better impression, really. I have 2 brothers, so the work was distributed among us.

For high school I went to Lord Austin's University School, which is a British-style private school. That was a big expense for my parents, so I really wanted to do well. There are two things I think they fostered there. The first is values--honour, if you like. They reinforced the idea that you should always treat others in a manner in which you would wish to be treated. That's become a definite part of me now. Actually, I'm kind of shy to tell you this, but throughout school I always received the Citizenship Award. Evidently I am a nice guy. I know I like people. I like organizing events and I volunteer for things when I can. The other thing the school did was to prepare us well for university. We did calculus, so math wasn't as big of a problem for me as it was for quite a few other students. But English was perhaps the biggest difference. Quite a few of us got invitations from the English department to do the honours program.

When I graduated, I actually wanted to join the military and get sponsored to do pharmacy. But with cutbacks the military did not have any positions open at the time. I knew it was going to be too expensive for me to do five years of pharmacy on my own. So that was not a viable option. Plan B was to take computer science at U of Q. I chose U of Q because I could stay at home. I chose computers because I seem to have a natural ability with them. So now I'm in my third year, and I've been doing the co-op. I chose the co-op because I wanted to see what working in computing is like. Plus, I am trying to avoid the student loans, so the co-op helps with that.

**Andrew**

I'm 22 years old. I was born and raised in Calgary. My dad is a constitutional lawyer and my mom has done a whole bunch of stuff. She used to teach sewing. She ran a

small business for awhile. She does a lot of volunteer work for the hospital. And, of course, she took care of my brother and me.

I really enjoy learning. I picked up reading early and have been crazy about it since. We go through a lot of books in my family--my dad especially--and we get into neat discussions about them. I like sociology stuff--you know, social and cultural issues. I get a lot of that through science fiction because it explores our issues through fictionalized societies. Life is about constantly picking things up and adding to your knowledge base. That's one of the reasons I've gotten involved in the open-source movement on the Internet. Knowledge deserves to be shared.

My decision to go into engineering was pretty straightforward. I've always liked taking things apart and then putting them back together. I liked working on my mountain bike. I spent hours with Lego as a kid. I was also really good at the math. And I wanted to have a decent standard of living. Engineering seemed to fit the bill for all of that. But I also wanted to have work experience before I graduated. So that's one of the reasons I came to Queensville instead of another university--for the co-op program. I'm near the end of my third year of mechanical engineering, and have really enjoyed it, particularly in the last two years.

### ***Sarah***

I'm in my fourth year of a Women's Studies degree. My student number begins with a sixty-nine because that's when I started university. But I went off and did a lot of other things before returning a few years ago.

I grew up in a small town in the fifties and sixties with a single mother who had five kids. We were very poor and on welfare. Back then, if you were poor, you were assumed to be stupid. So your school opportunities were limited. That's why I came to Queensville in the sixties to live with family friends and to attend a different high school. I got in to university, but in my first year I did the typical 'Oh, party-time now.' I got married after one year. That didn't last long. I met someone else and I lived with him for quite a while. We got married eventually, but that didn't last either. I've raised his kids on my own.

After spending twenty years raising kids I decided that it was time for me. So I went to community college on a whim. But after proving to myself that I could do it, I decided to pursue a degree. So I moved to Queensville. It was a big dream to come back and go to university. To be able to get my degree will be such a feather in my cap. I could have gone and cut material or slung hamburgers. I've done those things and a lot more. But I want to find something else. So, I'm going to complete something I started in the sixties, but with a new beginning. It's been the best thing I could ever do.

I decided to join the co-op because I thought, "I can go back to school, and I can get a degree, but can I get a job?" One of the fastest growing groups living in poverty is single women of my age because they've finished raising their kids and suddenly their child support is gone and their co-op housing is gone. Anything that's subsidized while you're raising kids suddenly disappears once they're out of school. So what do women do if they don't have an income to keep a roof over their heads? That for me is pretty scary. I really felt like it was important to try to find something with security.

### **Chapter Summary**

This chapter has provided the institutional, programmatic, economic, social, political and biographical contexts to help situate the cases that are presented in the next three chapters. Economic and administrative rationality form key themes in the descriptive and narrative material presented in this chapter. These themes can be seen in the way the University of Queensville has been transformed from a liberal arts institution to a "multiversity" that is host to a range of professional and niche programs that are closely aligned with the labour market. They are expressed in the development of the university's co-op program, which, once run on a small scale by professors in the context of their educational commitments and disciplines, has now burst the seams of its academic lifeworld. The co-op program is now a big operation run by a cadre of administrators. And with senior administrators wanting the program to grow even larger, increasing productivity is a central goal for the program. Economic and administrative rationality also appear at the level of society, culture and politics, where knowledge and learning are harnessed to economic policy, systems and practices. Finally, for the students

who participated in this study, a deep concern for their economic futures plays a significant role in their academic choices. Participating in co-op allows them to manage the risk associated with their investment in higher education. The stories presented in the next chapter enliven these themes.

## Chapter Six: The Significance of Skills and the Absent-Presence of Communicative Competence

### Introduction

The claim that participation in co-op provides for the development and accumulation of multiple types of skills emerged, without prompting, as a central theme in my interviews with the students.<sup>203</sup> “Co-op complements our degrees,” explains Frank, a fourth-year Computer Science major, capturing the perspective of most of the other applied science students in this study.<sup>204</sup> “It’s an opportunity to get work experience and gain practical skills in the workplace, whether they’re skills relevant to our programs or soft-skills like social interaction.”<sup>205</sup> In an example that sums up the viewpoint of humanities students in the study, Valerie, a double major in Anthropology and Professional Writing, observes: “The co-op has been a way for me to feel like I was going to have somewhere to go as a result of five years at university...It, along with my professional writing, has given me skills and definitely made me more employable.”<sup>206</sup>

Regardless of their academic discipline, every student made repeated reference to skills. They described their job interviewing skills and the skills employers look for. They lamented their lack of skills and lauded the skills they had developed, or hoped to develop, at work. They told me with pride about their programming skills, management skills, web page design and desktop publishing skills, communication skills, accounting skills, and organizational skills. One student bemoaned the “incredible” photocopying skills she learned on one work term, while another regretted the computer gaming skills he developed during a lax work term.

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<sup>203</sup> As this reference to skill was so universal, I carefully reviewed the transcripts to determine whether I had influenced the students to use the term. The closest my influence came was in questions such as, “What have you been learning?” and “How has this experience changed you?”

<sup>204</sup> For the one negation of this claim, see Warren’s story in this chapter (p. 194).

<sup>205</sup> Frank’s observation confirms a number of the benefits outlined in the promotional literature for his co-op program. See Chapter Five (p. 134).

<sup>206</sup> Valerie’s observation confirms the claims made in the promotional literature on her co-op program. See Chapter Five (p. 132).

In the context of securing their co-op jobs, the students unanimously observed they had gained “job search” skills. They increased their effectiveness in the labour market, in large measure, by discovering that skills are key characteristics employers look for in suitable applicants; skills are central to what makes them attractive to employers. As a result, the students all learned how to communicate their skills strategically to employers. And this meant learning how to translate the storehouse of competence in their academic and extracurricular lifeworlds<sup>207</sup> into the language, attitudes and behaviours that employers would value.<sup>208</sup> In other words, they learned how to express themselves in terms of their employability skills.

In contrast to the job search process where the students came to understand skills to be those aspects of their competence that they can *market* and *sell* to employers, at work they learned that skills are forms of competence that prove *useful* and *effective*, given the existing practices, organization of work processes and culture of the workplace.<sup>209</sup>

Through their participation in the co-op program, the students thus developed skills, which they endowed with strategic and instrumental meaning.<sup>210</sup> In the context of securing and working in co-op jobs, some of the skills the students developed were more “relevant” to them than were others. And their criteria for deeming which skills were relevant would shift, depending on whether they interpreted their work experiences from the perspective of their academic interests or career aspirations.<sup>211</sup> In determining the

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<sup>207</sup> For the meaning of lifeworld in the context of this research report, see Chapter Three (p. 82).

<sup>208</sup> For applied science students, this meant highlighting their technical and social skills. For students in the humanities, this generally meant foregrounding their technical abilities.

<sup>209</sup> Those students who were further along than others in the co-op program emphasized their improved ability to “read” job search and workplace contexts for cues as to what skills needed to be highlighted or deployed. For senior students, this improved literacy with respect to skills, viewed as a skill itself, was a significant aspect of their experience in the co-op program.

<sup>210</sup> The students saw their degree of skill development was affected by the quality of the jobs they were able to secure. As many of the stories presented in this and subsequent chapters reveal, co-op jobs are not universally of reasonable quality. See, in particular, the stories of Warren, Edward, Valerie and Frank (p. 194, p. 215, p. 237 and p. 254 respectively).

<sup>211</sup> For instance, from an academic perspective, photocopying skills would not seem relevant as they do not draw on or extend competence in their discipline; whereas, from a career perspective they could be rationalized as a stepping stone to a better job in the future.

relative importance of skills from the perspective of their future careers, the students tended, regardless of discipline, to take their cues from employers.

However, the interpretive terrain was more complex for the students when it came to determining the relevance of skills from the perspective of their academic lifeworlds, where important differences existed in the ways students from the different disciplines viewed their skill development in relation to their academic interests and programs. The applied science students tended to view the learning process in co-op to be complementary to their studies, as Frank's observation above indicates.<sup>212</sup> In particular, the applied scientists saw themselves developing skills directly related to their disciplines and learning how to interact effectively with people in a workplace context. In contrast, the humanities students tended to see themselves developing skills--and, more specifically, technological skills--that would mitigate the financial and career risk associated with their fields of study. Moreover, they tended to find their appetite for learning about "humanity" suppressed during their work terms as a result of this emphasis on technology.<sup>213</sup>

From the standpoint of the conceptual framework guiding this study, the deep-rooted meaning the students place on strategic and instrumental forms of skill development is significant. On the one hand, it foregrounds the process of human capital formation that occurs for students in the program.<sup>214</sup> On the other hand, it signals the possibility that the exercise and development of communicative competence is

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<sup>212</sup> For a paradigmatic case in this regard, see Andrew's story (p. 274). For an exception to this finding, see Warren's story (p. 194).

<sup>213</sup> For poignant examples, see Lisa's and Deborah's stories (p. 156 and p. 184 respectively).

<sup>214</sup> For an explanation of human capital development see Chapter Two (p. 47). In addition to developing human capital through their participation, the students also gain "cultural capital" in that they learn the norms of interaction with employers and develop a network of contacts in the labour market. For important sociological insights on cultural capital formation in education, see Bourdieu and Passeron (1977). For an empirical investigation of the formation of cultural capital in undergraduate co-op programs see Grosjean (2000).

downplayed during participation in the co-op program, suggesting their experiences may not be socially progressive.<sup>215</sup>

Obviously, I had not expected students to tell me they had developed scientific-technical, moral-practical or aesthetic-expressive competence as a result of their participation in co-op, just as I had not expected them to say they had developed the human capital required to compete successfully in the global, knowledge-based economy. But I was surprised by the amount of prompting they needed to discuss their knowledge, as a function of their cognitive abilities in their respective disciplines, in the context of their participation in co-op. Instead, the students more readily discussed their knowledge from the perspective of their academic interests and programs. This was particularly the case for some of the students in the humanities, who often saw little connection between what they learned *about* on campus and what they learned to *do* at work.

To some readers this observation about knowledge and skill might seem quite pedestrian. After all, university is where people acquire knowledge, while work is where they become skilful by applying what they have learned at university to tasks, problems and processes on the job. Indeed, this common sense proposition supports the program logic of co-op.<sup>216</sup> Potential problems exist, however, with the tacit acceptance of the labour market and workplaces as primary sites for the definition and production of skill and the university as the locus of meaning and main source of knowledge. One important problem associated with this proposition is that it constructs a dichotomy that forecloses on opportunities, on the one hand, for skill development to be seen to be taking place on campus and, on the other hand, for knowledge to be seen to be produced in workplaces. It also interferes with understanding how intimately knowledge and skill are linked, in both sites.<sup>217</sup> For example, it took significant prompting for some of the engineering students

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<sup>215</sup> For a definition and explanation of communicative competence in the context of this study, see Chapter Three (p. 69). For an explanation of the relationship between the communicative competence and socially progressive education, see Chapter Three (p. 69).

<sup>216</sup> See the University of Queensville's definition of co-op in Chapter Five (p. 124).

<sup>217</sup> I was surprised by the clear distinction that existed in the students' responses because knowledge and skill are so intimately linked. In this report, I apply the conceptual lens outlined in Chapter Three; however, various theories of tacit knowledge (e.g., Polanyi, 1967; Lave & Wenger, 1991; Sternberg & Horvath, 1999) would provide other useful lenses for considering this pattern of meaning in the students' responses.

to become aware of their use, in the context of their work, of scientific principles and methods, which they had learned and *applied* repeatedly on campus.<sup>218</sup> It also took prompting to have these same students reflect on how their use of these principles and methods at work subsequently affected their understanding of them--that is, how they were engaged in producing new knowledge about principles and methods on-the-job.

If getting students to discuss their knowledge as a function of a cognitive form of communicative competence in the context of their co-op experiences took some effort, it required even more prompting to get them to focus on their use or development of moral-practical or aesthetic-expressive forms of communicative competence. This was particularly the case with some of the applied science students, who also exhibited difficulty in identifying and discussing their learning about these forms of competence from the perspective of the academic interests and programs.<sup>219</sup>

Thus, in contrast to the significant place that skill development in its instrumental and strategic forms assumed in the students' perceptions of their experiences in co-op, communicative competence assumed a minor role. However, once spurred on in our discussions, their communicative interests and abilities emerged. They began to question some of the validity claims underlying their perceptions of experience. They also queried the interpretations others offered of their experiences in the co-op process. And this produced insights that revealed their participation in co-op and, in some cases, their overall educational experiences, to be, at times, profoundly contradictory. For example, applied scientists began to see that co-op was not always complementary to their academic programs<sup>220</sup>; while, humanities students realized their participation in co-op

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<sup>218</sup> See Linda's story below (p. 173) where she realizes that her understanding of principles and methods needs to be revised in order to think like a chemist rather than an engineer. Also see Arlene's story in Chapter Seven (p. 227), where she realizes she is not starting from "scratch" in her current job. See Davidge-Johnston (1996) for a discussion of how the distinctions that are socially constructed between campus and workplace contexts affect the metacognitive development of undergraduate co-op students.

<sup>219</sup> For example, see Arlene's story in Chapter Seven (p. 230), where she is prompted to think about the privacy implications of the electronic snooping software she is helping to develop. In addition, see Professor Brown's confirmation in Chapter Eight (p. 286) that it is difficult to induce ethical reasoning with engineering students.

<sup>220</sup> For a paradigmatic example in this regard, see Warren's story in this chapter (p. 194).

transported unforeseen influences into their lifeworlds that affected their academic, moral and personal development in unanticipated and sometimes deleterious ways.

The contradictions the students came to observe in their experiences, moreover, revealed conflicting interests that exist between the various social actors who participate in the co-op process. They also brought to the fore tensions that exist within and between the sociocultural and economic missions of contemporary higher education.

In this chapter, the reader will find four narrative case studies that document and elaborate the patterns of meaning, issues and problems discussed above. These cases include the experiences of two students from the humanities and two from the applied sciences. They are written descriptively, relying on extended dialogue from the interviews.<sup>221</sup> To provide for a richer understanding of the students' experiences, each case is followed with narratives from some of the social actors in their educational networks. Then, each case is individually analyzed, relying on the conceptual framework that guides the study. A summary rounds out the chapter.

On a final introductory note, it needs to be pointed out that the six other cases presented in Chapters Seven and Eight also elaborate the patterns of meaning, issues and problems discussed in this chapter; however, the analysis in those subsequent chapters focuses on different themes.

### **Lisa's story**

"I can tell somebody that if they've got a 200-page manuscript I can pop it into Page Maker, do the layout and get it printed, no problem," Lisa explains. "But if I explain to them that good non-fiction writing strikes a fine balance between the writer's internal world and the outer world we all share, they're going to be like, 'Oh yeah, that's interesting.' Or if I comment that a certain movie is constructed with a male gaze that objectifies women, they'll think I'm a flake. And then they'll look at me funny and wonder what I'm learning at school."

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<sup>221</sup> Some of the syntax and grammar in these cases has been edited to make them flow more smoothly. In places, I have also reorganized and combined quotes from different segments of the interviews.

This is the last of three interviews that Lisa and I have had over the span of eight months, and we have returned to a familiar theme: The under-valuation of a degree in the humanities in our technological age. We are sitting in the lobby of the campus cinema, savouring rich European coffee. Lisa comes here regularly to see offbeat movies and meet with friends and classmates. This semester, she is doing two courses in film studies--one on theories of popular culture and the other on film noir--so it seems like she is here all the time, which is fine because it is beginning to feel like home.

The cinema lobby combines features of an upscale suburban mall with those of a bohemian student residence. Its furnishings have a postindustrial, food fair sensibility. But the space is compact, the lighting dim, and the dark walls are generously adorned with artsy posters promoting quirky films. This setting reminds me of one of Lisa's ambitions: To find a job after graduation that pays just enough to afford a small artist's live-work studio in the funky, corrugated steel and glass condo that she passes each morning on her way to school. But Lisa worries that if she pursues a career as a creative writer, she will not be able to feed herself, let alone afford a place to live. With each cycle of the co-op process she perceives the gap to be widening between her artistic endeavours and lifestyle ambitions. This is the opposite of what Lisa expected to happen when she joined co-op. In our conversations, we have spent a good deal of effort exploring this contradiction.

"Tell me more about that need for fine balance in your writing," I prompt.

"If you delve into your own little psyche too long you're being self-indulgent. Unless you can relate it to something that the reader will get, they'll just say, 'Whatever, I'm tired of reading this, you're too much into yourself and I'm going to stop reading now.' You'll lose the reader. But if you stay too much on the outside, you're just presenting facts, which is like a newspaper article. That's not bad if you're a reporter, but if you're doing creative non-fiction writing, there has to be a balance between the two. You have to have some sort of emotional connection to the idea and to the outside world."

“So, you see the need for connections between creativity, art and the outside world,” I offer. “But I sense that you continue to feel like there’s often little connection between what you’re learning on campus--in your courses and through your creative writing--and what you experience off campus on your work terms.”

“Sort of. Some of the writing skills transfer to a certain extent, when you realize that they’re transferring over,” Lisa responds. “For instance, I can write concisely. I can proofread and edit. I can follow different style guides.”

“So, some aspects of your writing connect. What about cultural theories, like the one about the male gaze you mentioned earlier?”

“The stuff about the male gaze I can apply to my first job, where it was all male engineers except for the three of us women doing administration in the front office. But I’m only seeing that after the fact, of course. Besides, it’s not really something they would have appreciated knowing about, if you know what I mean.”

Lisa pauses to sip her coffee. “Some of the popular culture theory I’ve learned this semester might transfer if I found work, say, in an advertising company. That’s basically what advertisers use to sell. But they might not know that’s what I’d be drawing from, unless they’ve taken similar courses in popular culture.” Pausing again, Lisa chews her bottom lip, fidgets with her cup, and continues, “I’m not sure I understand cultural theory. In fact, I’m learning to hate it because it’s very dry and psychotic. Take the Frankfurt School. They basically said that anything made in capitalist society was crap. But somehow they were above the system--how can they be above the system and in it at the same time?”

This conversation is reminiscent of others we have had, with each one pointing out the paradoxes and ironies that Lisa perceives as she links her studies to the job market, her co-op jobs and back again to her studies. Through previous interviews and her journals, I have learned that Lisa views skills as bridges that connect her experiences on campus to the job market and, eventually, to workplaces. She divides her skills into two distinct categories: artsy and technical. She says both types of skills are “useful”, but only technical skills are “useable”, as they are the ones she can readily sell to employers.

“You can put technical skills on your résumé and say, ‘See, this is what I can do,’” Lisa told me in a previous interview. “But, there’s no point in listing something like ‘I know how to write a well-balanced non-fiction piece’.”<sup>222</sup>

Lisa is genuinely interested in developing both the artsy and technical dimensions of her identity. Indeed, her perspective on what constitutes good non-fiction writing balances art and technique. To improve her technical abilities early in her degree Lisa took two computing courses, a new media course and a number of technical writing courses in addition to her core creative writing and more traditional courses in the humanities. Over time, however, the contrast between the artsy-ness of her campus experiences and the predominantly technical orientation of the job search process and co-op jobs has led her to consciously compartmentalize the two dimensions. She has come to concentrate on refining her artsy side through courses (e.g., creative writing, film studies) and extracurricular pursuits (e.g., theatre, drawing). She focuses on increasing her technological prowess through the job search process (e.g., creating a personal web site to profile her HTML coding skills to employers) and work terms (e.g., desktop publishing software).

This twofold strategy seems to be working for Lisa.<sup>223</sup> She told me in our last interview that as she gains confidence in her technical abilities through the co-op process, she feels freer to focus more exclusively on her creative interests while on campus. With each increase in the stock of her “useable” skills, Lisa becomes more assured that she will be able to find a well-paying job upon graduation, and this allays some of the trepidation that she has about her future as a graduate with a degree in writing. But with each work experience (and corresponding job search process) Lisa has also become less convinced

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<sup>222</sup> All of the humanities students in the study reported similar experiences with respect to the high value that employers place on technological skill and the low value they impute to other skills and knowledge.

<sup>223</sup> All of the humanities students in the study experienced a similar dynamic as Lisa with respect to the strong emphasis on technical skills in the co-op job search process and on their work terms. However, none of the other humanities students developed a strategy similar to Lisa’s to deal with this dynamic.

that she can make a career out of creative writing. I have noticed that each of the arts students in the study report similar misgivings, regardless of their chosen discipline.<sup>224</sup>

In today's interview, however, Lisa surprises me with an about-face in her strategy. When I ask about her plans for the upcoming semester she tells me, "I'm trying for another work term, but I'm being super-picky. I want an artsy job, in a gallery or museum or something." Then, after a brief reflection, Lisa's resolve seems to fade. She adds, "The job can have technical elements to it, but it has to be an artsy environment."

"Was your job at the publishing house like that in some ways?" I ask, thinking back to her most recent work term when Lisa worked for a small company that publishes books about the natural and social history of British Columbia.<sup>225</sup> During that work term, she was primarily responsible for revising and further developing the company's web site, and for formatting books into publishable form using desktop publishing software. In addition, she did some minor editing, researched photographs and information in the provincial archives, and performed administrative tasks, such as writing rejection letters to authors and processing paperwork for distributors and booksellers.

"Laying out books was artsy in a way," Lisa responds, "but at root it's about not having widows and orphans on the bottoms and tops of pages. It's about fiddling with the spaces between the letters and words. That becomes very technical, and I learned a lot about using the software to make it happen. Doing the web site was also artsy. But, again, it was more about learning to use software in order to code the pages properly. Maybe that's the way it will be in every artsy environment. But it would be nice to work somewhere that is more overtly creative."

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<sup>224</sup> Despite her passion for cultural anthropology, Valerie sees no future in it, unless she takes the "unlikely" route of earning a doctorate. Notwithstanding her interest in the ways women's stories can be creatively narrated to influence social change, as a single mother Sarah fears she will have to seek a secure government job unrelated to her passion in order to support her family. Despite his zest for Japanese language, history and culture, Edward cannot see opportunities to use his knowledge of these in his future, except "To teach Japanese to executives or something like that."

<sup>225</sup> Lisa completed two work terms prior to this one. The first was at an engineering company, where she wrote technical manuals and performed general office duties. The second was at a provincial government ministry where she researched and wrote procedure manuals.

I was anticipating something more in Lisa's response. In a previous interview, I had asked her if, despite the strong technical focus of each of her work terms, she did any vicarious learning at work that could be thought of as artsy.<sup>226</sup> At that time, she provided an example of how she had been intrigued recently by the content and narrative style of an aboriginal oral history book she was desktop publishing. I was hoping that my question today would elicit more examples of artsy-ness in the interstices of the technical. But, even as I'm thinking about these problems, I find myself moving the conversation forward.

"How easy do you think it's going to be to find an opportunity like that?"

"Not easy. That's what I mean by being picky," she continues, "A lot of our thinking as a society has to do with what's saleable in the moment. Right now the hot thing is to learn for an IT career. I don't want to do IT, I want to be the one who creates with it."

"Do you mean the IT industry is posting jobs in the Arts Co-op?" I ask.

"No, but every employer jumps on your computer skills right away. If you tell people you can develop web sites, then all of a sudden you've been notched up a little higher. The dot-com society has gotten out of hand. Web development seems really valuable now, but as people begin to realize that it's easy to do, the importance will be reduced. After that, it's going to be more about what you put on the Internet. It's going to be about substance. At least, I hope it is."

### *Epilogue to Lisa's story*

Despite her ambition to secure an "artsy" job for her final co-op term, Lisa wound up in a job at another small publishing company, this time in Alberta. Similar to a number of her colleagues in the study, her decision to take the job was made out of exigency: either accept the job or have no job. In addition to small editing and layout tasks and

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<sup>226</sup> When conducting work site visits, Lisa's co-op coordinator asks similar questions of the students when they question the relevance of their jobs to their studies and interests. When conducting work site visits, Lisa's program coordinator asks students this type of question when their jobs are technical in nature in order to get students to link their work experiences to their academic interests. While students are usually able to identify connections, the links often quite tenuous. He questions his own motivation in asking this type of question--that is, is it to encourage student learning, or to foster legitimacy for the co-op program?

general office duties, Lisa was primarily responsible for reading through author contracts and producing an electronic “spreadsheet” that listed all the books for which the company had electronic publishing rights. Lisa was less than sanguine about this experience. In her work term report about it, she admits to gaining more insight into all sides of the book publishing industry. At root, she says, “The key to succeeding [at this job] is the ability to switch tasks quickly and a willingness to do things that seem less than interesting at the time.”

*An interview with Richard, Lisa’s co-op coordinator*

Shortly after this final interview with Lisa, I met with Richard, her Co-op Coordinator. I wanted to explore his perceptions of Lisa’s participation in the program, concentrating in particular on the distinction she has constructed between the technical and artistic dimensions of her academic and work experiences. I also wanted to get a sense of how he sees his role in helping Lisa to learn from her participation in the program.

“Lisa tells me that co-op is where she develops her technical skills and school is where she explores her creative side,” I begin. “It helps her to answer all those questions from relatives about what she plans to do with a degree in creative writing.”<sup>227</sup>

“That’s good,” he responds. “Questions like those are all too common.”

I tell Richard that Lisa has become increasingly convinced she will not be able to make a living as a creative writer, and will have to support herself through technical work of some kind, such as technical writing or designing and coding web pages.

“That’s the reality,” responds Richard, himself an author of several published novels and short stories. “Creative art in Canada is nowhere near embraced the way technology is. People assume the economic benefits are just so different between the two—just compare the granting structure and tax benefits the government provides to, say, publishers versus dot-com start-ups.”

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<sup>227</sup> On this latter point, see Lisa’s autobiographical notes in my Chapter Five.

Richard confirms that most creative writing co-op students undergo a “reconciliation with reality” similar to Lisa’s as they learn to align their expectations with the job market. “Even Hemingway had to support himself by doing other kinds of writing,” he observes. “It’s good for the students to learn that lesson early on. It saves them from even greater disillusionment later. They need to learn to write for the pleasure of the act itself.”

I think about how it must be a difficult job sometimes to administer these doses of reality. “So, you’ve reconciled yourself with the fact that you may be moving students on from being creative writers to being technical writers or web page developers?” I ask.

“Yes. But it’s not just technical writing or technology. There are also journalism, other kinds of writing and publishing,” he responds.

I ask how he works with the students to move them into these different roles.

“I try to focus them on the benefits. First, any writing they do is going to improve their ability to write in any genre. They’re going to come back to campus writing cleaner, pared-down prose or poetry. The work terms also expand their life experience, often providing content for their writing. Equally important, co-op allows them to earn a living as a writer.”

“You mean they’ll discover a range of things they can do with their abilities and interests?” I clarify.

“Yes. When students join co-op, they can’t see what the possibilities are. But if they stick with the process, their sense of the writing universe expands, and their sense of place within it starts to become clear. We tell them that it might not seem like much fun at first but that it will lead to something better later on.”

“How does this work?”

“Lisa is a case in point. She just got to learn what publishing is all about. In return, she contributed her web development skills to enhance their Internet presence. Publishing is moving onto the web, so it was perfect for her employer to have her do that. And Lisa felt that she was genuinely contributing to the enterprise and was a valuable member.”

I make a mental note of the mutual benefit Richard implies here and how it does not quite chime with what Lisa has told me: that she craved a more “artsy” experience.

Richard continues, “Now, looking back, her first experience with the engineering firm was pretty routine stuff. She learned some workplace readiness skills. But she also got to dink around on the computers, and that’s been a springboard to where she is now with her journeyman-like HTML skills. Those have been a huge asset. So, if you asked Lisa after her first work term about how the co-op program is, she’d probably say, ‘It’s totally irrelevant.’ But looking at it now, a direct line can be drawn from that first experience to her current success. Three work terms down the road it all works.”

I explain that Lisa articulated similar connections between her development of technical skills through previous experiences and her success in securing and performing well in her most recent co-op job. I also tell Richard that she did not paint as rosy a picture of her recent work experience, precisely because it relied so heavily on her technical prowess. I tell him she is looking for a more creative job for her next work term.

“Fair enough,” Richard responds. “But even if she is not saying, ‘This is what I want to do’, she is saying, ‘I would like to try that.’ She is still exploring options.”

By this, I understand Richard to mean that Lisa’s universe as a writer is still expanding.

### ***An interview with Bob and Joan, Lisa’s supervisors***

After interviewing Richard, I went to visit Lisa’s most recent co-op workplace, a small publishing company that specializes in books about the social and natural history of Canada. I wanted to interview Bob, the owner of the company and a 30-year veteran in the publishing industry, and his production manager, Joan, an experienced layout designer, both of whom worked closely with Lisa. I had great expectations of this visit, as Lisa’s co-op coordinator described Bob and Joan as excellent supervisors who take their role as co-educators seriously.

To begin our conversation, I asked Bob and Joan what challenges they face in their work, and how co-op students like Lisa help them to meet those challenges. Bob deals largely with the creative and commercial aspects of the business, where, he says,

“The real issue is finding interesting or distinctive subject matter and determining whether it’s the right time to publish it.” For Bob, his company is more than a business. It is a personal mission to document the people and natural forces that have helped to shape Canada over the last two centuries. His participation in the co-op program is motivated, in part, by his desire to encourage students to gain a better appreciation for history and the different ways to narrate and document it. As a result, when he recruits students, he looks for an interest in history as one of his selection criteria, in addition to writing, editing, software and web development skills.

In contrast to the predominantly technological bias that Lisa and the other humanities students say co-op employers have, Bob claims, “I’m looking for an historical curiosity and a range of interests that goes beyond the norm. I don’t mind if someone has studied religious philosophy or feminism in 19<sup>th</sup> century Europe, I just want to see a passion for learning.”<sup>228</sup>

However, Bob doesn’t recruit co-op students with these characteristics solely to further inculcate their respect for history. He also believes that students with a good balance of technical skill and liberal arts knowledge are better able to adapt to a publishing environment where job roles and consumer sentiments are rapidly changing. Desktop publishing software allows publishers to “jam together” the editing, design, layout and publishing roles. Traditionally separate, these roles are being integrated, which means that those with a combination of technical, editorial and creative capacities are increasingly valuable to employers. Bob aims to ensure that the students who work with him understand this changing work environment, and how they can better prepare themselves for it. Moreover, he wants students to become sensitive to consumer trends and shifting cultural sensibilities, as abilities in this area are useful in the design and marketing aspects of publishing.

To help students gain a broad understanding of the publishing process, Bob assigns each student a specific publishing project to work on from start to finish during

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<sup>228</sup> Elsewhere in our interview, Bob admitted that, in Lisa’s case, he and Joan were initially attracted to her technical skills (in particular, her experience with web page design) rather than her liberal arts knowledge because their immediate business need was to revamp their web site.

his or her work term. This lets the students become intimate with a book and, in most cases, to interact at some length with the author, editor, and printer. He cites as an example the biography of a First Nations elder that he gave Lisa primary responsibility for managing through the process.

Joan concurs wholeheartedly with Bob about the increasing integration of roles in the industry. She is also supportive of Bob's project-based approach with the students. But, as the immediate supervisor of the students, she knows that they spend most of their time working on a host of specialized technical tasks and mundane administrative duties. There is just so much work to be done and, in such a small company, everyone has to chip in where necessary.

These days Joan's biggest challenge is to keep pace with technological developments. "Even ten years ago a lot of the industry was not computerized. It's gone from pasting up with wax on a table, to everything being done on computers. That's a huge change," she explains. "If you want your books to stand out, you have to use different features embedded in the software. And that puts you on a constant learning curve that doesn't stop."

Joan enjoys working with co-op students such as Lisa, in part because they bring strong computer skills to the job. While they may not come equipped with the knowledge of a particular software package, they are quickly able to adapt to new applications.<sup>229</sup> Because Joan works in close proximity to the students, she finds that they are able to freely exchange ideas and new discoveries about software. As a result, after a brief introductory period, she begins to learn as much from the students as they learn from her.

Joan has happily relinquished in its entirety one area of her domain to the students: the company web site. She and Bob hired Lisa predominantly for her web design skills, as the site needed major revamping. In the recruiting process for the work term, Lisa's application stood out in this regard. Both Joan and Bob worry that they perhaps focused Lisa's work term too much on this particular aspect of their business, and

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<sup>229</sup> Bob and Joan say the students' strong computer skills are largely a function of the fact that they have used computers since they were children.

not enough on the literary side. As Bob admits, “I hope we’re not creating people who will be very good for the technical world but a loss to the publishing industry. I hope that students like Lisa don’t stray too far into the technology, so that they can retain an interest in the writing itself.”

### *Analysis of Lisa’s story*

As Lisa studies cultural artefacts and theories, and learns to write creative non-fiction, she is immersed in a number of learning domains.<sup>230</sup> For example, when she makes the claim that “good non-fiction writing strikes a fine balance between the writer’s internal world and the outer world we all share”, she exercises her aesthetic sensibility (‘good’ writing is well-balanced), ethical reasoning (‘good’ writing should build solidarity among people) and technical knowledge (‘good’ writing requires skilful construction). As a result, she develops both communicative competence and instrumental skill in learning to write creative non-fiction.<sup>231</sup> In striving to balance subjective, social and objective worldviews, Lisa is learning how to foster mutual understanding--the *raison d’être* of communicative action<sup>232</sup>--by practicing how to assume different perspectives and to consider the validity of those perspectives using appropriate standards. And when she justifies her validity claims<sup>233</sup> about good non-fiction writing, she uses aesthetic (the author needs to demonstrate authentic emotional attachment), ethical (self-indulgence is inappropriate behaviour on the part of the author), and strategic arguments (well-balanced writing keeps the readers’ attention).<sup>234</sup>

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<sup>230</sup> The meaning of learning domains in the context of this research report is discussed in Chapter Three (p. 62).

<sup>231</sup> The meaning of strategic and communicative competence in the context of this research report is discussed in Chapter Three (p. 79).

<sup>232</sup> The meaning of communicative action in the context of this research report is discussed in Chapter Three (p. 69).

<sup>233</sup> The significance of validity claims in the context of this research report is discussed in Chapter Three (p.72).

<sup>234</sup> In another example, when she criticizes the work of the “Frankfurt School”, Lisa explores the validity of knowledge claims on the basis of aesthetics (the writing is “dry” and “psychotic”), ethics (cultural theorists should do more than simply label everything as “crap”), and cognitive reasoning (technically, one cannot be simultaneously above the system and in it).

From a Habermasian perspective, the multi-dimensional character of Lisa's academic experience, as represented in the previous paragraph, is an indicator that she is engaged in a socially progressive educational process.<sup>235</sup> However, through our conversations, Lisa has sculpted into relief a number of significant contradictions in terms of her personal, academic and career development as a result of her participation in the co-op program. The issues surrounding these contradictions and the avenues of resolution that Lisa follows with respect to them raise questions about the socially progressive status of her educational experience.

Lisa has discovered that many jobs related to writing are predominantly "technical" in nature, even when they are in a cultural field such as book publishing. And she has observed that employers tend to use technological skills as the primary criteria for screening candidates and selecting employees.<sup>236</sup> From her observations Lisa has concluded that, in recruiting and managing students, employers use definitions of skill that recognize only a subset of the full range of competence developed through a degree program in creative writing.<sup>237</sup> For Lisa, the practices of employers have led to work experiences that have been generally "less than interesting." Yet these practices have helped her to build up technical skills that have been instrumental to her success on-the-job and in her job search.

Lisa has also concluded that it is difficult for creative writers to earn a living unless they are willing to develop and foreground their interest and skill in the technical areas employers are seeking.<sup>238</sup> As a result, she has learned to communicate strategically her interests and skills to employers. For instance, in job interviews she highlights her ability to use desktop publishing software and remains silent about her knowledge of the

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<sup>235</sup> The meaning of socially progressive education in the context of this research report is discussed in Chapter Three (p. 62). In addition, see the literature review on the tensions between the sociocultural and economic missions of higher education in Chapter Two (p. 38).

<sup>236</sup> For example, Bob, Lisa's most recent employer, selected her for her computing skills.

<sup>237</sup> Lisa calls this narrow range of skills "useable" and distinguishes from a wider range of skills that she calls "useful". Bob, one of Lisa's employers, expresses reservations about selecting Lisa based on technological skill and focusing her work on that basis.

<sup>238</sup> This discovery is an informal teaching point in Lisa's co-op program, as attested by Richard, her Co-op Coordinator.

“male gaze.” She has also learned to be strategic about the kinds of competence she demonstrates in the workplace. For example, she knows to focus her skills on administrative tasks and steer clear of using her knowledge of the male gaze to make explicit and, possibly, confront gendered power relations at work.

The contradictions Lisa has faced through her participation in the co-op program are a central, if informal, part of the curriculum. According to her co-op coordinator, these contradictions compel students to “reconcile” their interests and expectations with “reality” as they explore the “universe of writing.” And, according to her most recent boss, when it comes to hiring students in an era where work processes and industries are being revolutionized through the application of new technologies, technological skills tend to trump cultural and aesthetic interests and their related forms of competence.

Lisa has worked out an approach to cope with the contradictions that exist for her in this reality. In her life at and outside of school, she gives priority to cultivating her “artsy” interests, identity and competence. In the labour market and at work, she propagates a “techie” persona and skills to manage the economic and career risks she faces as a creative writer. In Habermasian terms, Lisa has learned that the economic system is not currently designed to directly validate, use, or develop all of the interests and forms of competence associated with artistic activities, such as the ones in which she engages at university and in her extracurricular life. Instead, these interests and activities find their value, meaning and support in the lifeworld, which, for Lisa, consists of her biography, sense of identity, immediate family, close circle of friends and the university, as she writes for personal pleasure, for others who are close to her and as a part of her studies.<sup>239</sup>

Lisa’s strategy of cultivating “artsy” and “techie” selves aims to protect and sustain her lifeworld. In exchange for her (technological) labour power, she hopes to earn a reasonable living. And, as a result of participating in co-op, she will likely be able to do so in environments or roles that are at least tangentially related to her lifeworld interests

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<sup>239</sup> For the meaning of system and lifeworld in the context of this research report, see Chapter Three (p. 82). Not all of Lisa’s lifeworld is supportive of her creative endeavours. See her biography in Chapter Five (p. 140).

and pursuits. However, this solution brings disillusionment in its trail.<sup>240</sup> It leaves her sceptical about the “substance” of her future work life.

Lisa’s solution does not position her to exercise influence in the economic system in such a way as to create meaning and relevance for her. For example, despite having potentially sympathetic employers in Bob and Joan, she was unable to steer that work experience to foster her academic interests.<sup>241</sup> The conceptual and practical divide between “artsy” and “technical” which Lisa uses to demarcate her interests from the economic system, and creative activities from workplaces, makes it difficult for her to realize opportunities in the workplace to cultivate her lifeworld. This divide also makes it difficult for Lisa to reflect on her workplace experiences in ways that contribute substantively to her academic and personal passions. When she returns to campus, for example, she does not use (nor is she apparently encouraged in her courses to use) situations or issues from work as content for creative non-fiction or case material for cultural analysis.<sup>242</sup> The difficulties Lisa experiences in cultivating her lifeworld either at work or on campus are potential signs that it is in a formative stage of colonization by the system.<sup>243</sup>

In facing the contradictions of the reality constituted for and by her in co-op, Lisa finds a solution that is based predominantly in strategic rather than communicative action. As a result, she increasingly finds herself in the position of having to view her lifeworld from the perspective of the system.

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<sup>240</sup> According to Richard, Lisa’s co-op coordinator, “disillusionment” is part of the learning process in the co-op program.

<sup>241</sup> Bob realized during our conversation that, in hindsight, it may not have been in his best interest, or in the interest of the publishing industry, to have focused Lisa’s work so heavily on technology. His main concern in this is economic. He worries that he may not be developing in students the appropriate mix of skills to help them, him and the publishing industry to succeed. But he is also concerned with sustaining the historical lifeworld by fostering in students a respect for history and an understanding of the art and technique of writing history.

<sup>242</sup> For example, as Lisa studied cultural theory about the “male gaze” an opportunity arose for her to reflect on the gendered power relations of the engineering firm she worked at on her first co-op term.

<sup>243</sup> The meaning of colonization in the context of this research report is discussed in Chapter Three (p. 85). The Full-fledged colonization would mean Lisa would be unable to sustain her lifeworld. She would also not be able to function in the system as a result of the loss of her lifeworld.

There are a number of factors that condition Lisa's reliance on strategic rather than communicative action. The first of these is power.<sup>244</sup> The "reality" constructed in the co-op program is that employers determine the kinds of competence that are important. They also control how that competence is applied and developed in the workplace. The potential conflicts with respect to interests and interpretations of need that this arrangement produces are suppressed through strategic action on the part of all parties-- employer, co-op coordinator and student. The (necessary) emphasis in the economic system on competition, success and effectiveness overrides consideration of authentic need. In this reality, the amount of power co-op coordinators and students have to influence the ways in which employers interpret their human resource requirements and manage their work processes varies depends on the relative supply of suitable jobs. The more jobs there are, the greater the ability of coordinators to negotiate the terms of employment and the more selective students can be. In Lisa's program, suitable jobs always seem to be at a premium. Students also have another form of power: they can drop out of the co-op program altogether.<sup>245</sup> This assumes they do not need the immediate wages and/or the mitigation of economic and career risk the program provides longer term.

This latter point foregrounds the second factor: money. Lisa's parents pay for her education. As a result, she was able to enrol in a program of studies that addressed her artistic interests, even though the economic benefits of doing so were ambiguous. As Lisa gets closer to completing her degree, concerns about her economic future begin to shape her interests and interpretation of needs. Participation in the co-op program is double-edged: it partially allays her concerns while simultaneously transporting those concerns into her educational lifeworld.

A third factor is career. Lisa was not intent on developing a career in writing when she began her educational journey. With time, however, it has become a goal that shapes her interpretation of need. This is related, in part, to her economic future and how she can

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<sup>244</sup> The meaning of power in the context of this research report is discussed in Chapter Three (p. 83).

<sup>245</sup> For an example of a student who chose to drop out of co-op, see Warren's story in the current chapter (p. 194).

make her education pay off in financial terms. But it is also related to her desire to sustain interests, competence and “substance” in her lifeworld.

The three preceding factors emanate from the perspective of the economic system. But there are also elements in Lisa’s lifeworld that condition her situation. She derives the understanding that guides her social action and learning from a storehouse of interpretive patterns in her lifeworld. Here we discover that her immediate family has a pronounced “technical” orientation in terms of their interests and competence, and that Lisa views herself as a “black sheep” as a result of her “artsy” interests. Thus, the conceptual dichotomy between art and technology that informs the way Lisa interprets her educational experience pre-existed her participation in the co-op program. Moreover, the technical interests and skills that “rubbed off” in her family context contributed to her success in the co-op labour market and her effectiveness at work. This success has, in many ways, become self-propagating, with Lisa building an impressive résumé built primarily on her technical abilities.

Another important element of Lisa’s lifeworld is the network of sceptics that surround her. She enrolled in the co-op program, in part, to demonstrate to her extended family (and friends of the family) that a degree in creative writing is useful. When these lifeworld members failed to engage with communicative responses--for instance, to sincerely engage with a claim that educational experience can be validated on the grounds of becoming more authentic as a person<sup>246</sup>--Lisa’s strategic response ensued.

Finally, educational practices and interpretive resources provided within the lifeworld of the university have conditioned Lisa’s response. Here she has experienced a disjunction between her academic and co-op programs that reinforces a dichotomy between aesthetic-expressive and technical dimensions of learning. As a result, she is learning more about how to “reconcile” herself with “reality” rather than learning to question or change it.

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<sup>246</sup> See Lisa’s autobiography in Chapter Five (p. 140). When Lisa’s mother responds to sceptics that through creative writing Lisa is going to become “the next Lisa Walter” and not the “next Margaret Atwood”, she is making a communicative argument, asserting the value of Lisa’s pursuits in terms of their contribution to authenticity.

**Linda's story**

Linda hunches over a laptop that is perched precariously on top of several cords that snake their way to other pieces of equipment arranged hodgepodge on either side of her. She is watching voltage and other electrical data stream across the computer screen, courtesy of a test program she recently developed in her “Dilbert-style” cubicle located a few floors up in the same building. Standing with a mixture of pride, confusion and boredom at the battleship grey lab bench, she is a long way from her roots in a small farming community in the interior of British Columbia, having moved to Ottawa for a four-month work term at a company that designs and manufactures telecommunications equipment.

An electrical engineering major, Linda has previously completed three work terms at different industrial plants in rural communities of her home province. Through these previous jobs she learned some of the electrical engineering tasks associated with heavy industry, such as reading and drawing schematics, designing switches and boxes, and wiring. She also gained insight into the mining, forestry and energy sectors. More importantly for Linda, she got along well with her co-workers, found her supervisors inspiring and learned more about people in the community, as she billeted with local families. This term, she opted for a research position in the high profile technology sector. A little more than halfway through her term now, she has gotten both more and less than she bargained for.

The job has been very challenging. Linda is responsible for organizing, running and reporting on lab tests to measure the absorption characteristics of certain proprietary organic substances. To do this, she applies different wavelengths of light to the organic samples, observing and recording a wide range of electrochemical variables. If everything goes well, eventually some of these substances will be used to improve the functional properties of liquid crystal displays (LCD's) and other products.

The theory that guides these experiments was entirely new to Linda when she started. She is still finding her grasp of the chemistry involved to be “sketchy.” This

problem is exacerbated by the fact her supervisor is a chemist. As a result, they sometimes talk at cross-purposes about the electrochemistry involved.<sup>247</sup> Worse, Linda finds her supervisor to be unapproachable and uncommunicative.<sup>248</sup> She has not yet learned from him what the “big picture” is for her work, nor has she had substantial feedback on her design of the experiments and initial test data. Because hers is a stand-alone project, there are no co-workers she can go to for specific advice. Given all of this, Linda is trying to take pride in her accomplishments, but she feels isolated, disconnected and unsure. Her work is beginning to lose its personal significance. It is rapidly becoming “just a job.”

Linda’s current situation stands in contrast to her expectations going into the work term. She had envisioned a dynamic learning environment, fuelled by the rapid exchange of ideas required to keep the company’s research on the leading edge. She took this position in order to push herself to “learn how to learn” more nimbly, having noticed from previous work terms that this seems to be a tacit requirement for success in contemporary workplaces.<sup>249</sup> She sees some irony in her situation. If anything, her previous co-op jobs in “old economy” plants helped her to develop workplace learning skills to a greater degree than this experience in the technology sector. Given everything she had heard about hi-tech, it was supposed to be the other way around.

“At the energy company it was great,” she explains. “I was given clear direction about my project, but then I was given the freedom to decide how to do it. I was able to ask questions early and as I went along. I wasn’t afraid to ask the same question a number of times over a period of time. My supervisor knew that I wouldn’t grasp all the details at once. So, I’m discovering that my learning really depends on who I’m working with as well as what I’m working on.”

“What did you do at the energy company?” I ask.

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<sup>247</sup> Linda explains, “A chemist prefers to think of electron flow. As engineers we think of current flow, which is in the opposite direction.”

<sup>248</sup> I approached Linda’s supervisor to participate in the study. He did not respond to my request.

<sup>249</sup> Linda observes, “In the workforce there’s always this expectation that, yes, you can ask questions and you’re encouraged to, but you need to learn, and you need to learn fast. There’s that pressure to get the project done and to get onto the next one.”

“I was developing some transformer protection. From my drawings a panel was made and the wiring was done for the substation. So that was my own design, and it has been implemented.”

“So is part of the issue here that the project itself is not quite so tangible?” I probe, thinking about a number of comments from other students that going to work often seems more “real” than going to school.

“No. I’m working with real substances and lab equipment. I am collecting data that will be analyzed and used. So it’s not like my work is not useful. It’s just that I don’t feel entirely connected to it, in part because I don’t understand it, but also because I don’t feel like I’m being supported in my struggle to understand it.”

“Are your university studies helping you here in any way?” I inquire.

“The theory is totally new to me,” Linda responds. “Hooking up the lab equipment, designing the computer program, analyzing and validating the data, those are all skills I’ve learned at school.”

“So, how have you gone about learning the theory?” I inquire.

“My supervisor gave me some journal articles, and I was stuck reading those for the first couple of weeks. They were full of chemical formulas that I didn’t know. It was complete information overload,” Linda explains, proceeding to describe how the information didn’t start to sink in until she began experimenting with the lab samples. “It wasn’t until I could watch our samples as I applied different wavelengths that I could even begin figuring out what was happening.”

“Is that the way things work at school too?”

“Sure, but you don’t get stuck with the theory for such a long period of time without getting to its application.<sup>250</sup> Plus, you can ask questions in class and go see your professors during their office hours, although some of them are rarely available.”

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<sup>250</sup> Linda describes: “In our motors course you get the theory, then you draw a schematic that doesn’t look like a motor. Then you go to the lab and you’ve got this big brown turning thing, and you say to yourself, ‘Lovely, now how do I apply those equations to this thing that’s whirring in front of me?’ So you hook up your equipment and you start collecting data. You look at the oscilloscope curves and you say, ‘This is what’s happening here’.”

“I’ve also heard from the other engineering students that informal study groups help a lot at school,” I comment.

“Absolutely,” confirms Linda. “You can’t just sit in class, talk to no one and do homework on your own. It doesn’t work that way. You need to work with people on the labs and assignments. That’s how you get through.” She pauses for a moment, adding, “I mainly study with the girls.”<sup>251</sup>

“Why just the girls?” I ask with mock innocence, having heard from the other female engineering student in the study that she has been subject on occasion to demeaning behaviour from some of the male students and one potential co-op employer. I have found addressing the female engineering students’ experiences in their predominantly male profession to be a delicate issue, both methodologically and analytically. On the one hand, directly asking about their experiences in such an environment can be viewed as leading.<sup>252</sup> Moreover, the fact that I am a male researcher renders problematic the reliability of responses to such questions. On the other hand, by not asking about this issue I run the risk of missing out on what a number of studies have shown to be a significant factor in the female engineering students’ educational and work experiences. The female engineers in this study have offered contradictory observations on the issue of gender in their field. Each of them has been personally dismissive of the issue. However, each of them reports that they know other women who have been affected by it. Moreover, each of them admits they study mainly with other women and prefer to have women as lab partners. And, from time to time in our conversations, they bring the issue of gender into our discussions without prompting, as Linda has today.

“Actually, a lot of the stereotypes that you’ve heard about male engineers are real,” she explains. “Sometimes I think the women are sane and everybody else is crazy.”

“So, how does that affect you and your learning?” I probe.

“I find that with women, we’re not afraid to ask questions of each other or of the teacher, whereas guys sit and nit-pick at it. They want to work it through for themselves,”

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<sup>251</sup> The other female engineering student in the study also told me that she studies predominantly with female students.

<sup>252</sup> Every question, no matter how well formulated, is leading.

Linda clarifies. "Plus, with the other women I'm not afraid to say, 'I think you're wrong and maybe you should approach it differently.' Whereas if I'm working, say, with a male lab partner, to tell him I think he's wrong I'll say something like, 'I didn't get that answer, so how did you work through that?' It's not that I think he's smarter than I am, but I just don't want to start a big confrontation."

Ever since Linda described her troubled relationship with her current supervisor, I have been wondering if there may be some kind of gendered dimension to the situation. I ask her if this is the case.

"Maybe, but I don't think so. It's just the type of person he is, and the type of person I am," she replies. "Plus, he is under a lot of pressure. This is not his only project."

"So, from this experience you've learned something about yourself and about someone else," I offer.

"Definitely. I've learned what types of personalities I can work with, how to work with those types I'd rather not, and how to learn in situations that are not a good learning environment."<sup>253</sup>

"How will that help you?"

"In co-op they stress to us that since everything we do in school is so technical, we sometimes need to take a step back and go the other way," Linda reflects. "Co-op is a chance to learn some people skills. It seems like our age is going more technical, yet within the technical world we need to become more articulate and communicative."

She proceeds to explain how contemporary workplaces are increasingly composed of teams, and that the interpersonal skills and personal insights she is gaining on this term will help her in the future.

"When I'm interviewing for my next co-op job and I'm up against a bunch of other students, all of whom have about the same background and grade point average, I'll rely on my interpersonal and communication skills to convince the employer I'm the right

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<sup>253</sup> Shortly after this interview, Linda confronted her employer with her concerns, convincing him to help her interpret the background theory for the experiment and to provide more guidance and feedback on her work. In the end, she decided that the conflict and problems she had were related to a series of disconnects that existed between the expectations of her supervisor, the knowledge and experience required to do the work, and her own inexperience as a lab researcher.

one for their group,” explains Linda. “But, I’ll also use my experience to screen the employer. So, I’ll ask them, ‘Who will I be working with? What are their backgrounds? How do they manage their people and projects?’”

### ***Epilogue to Linda’s story***

In the focus group that Linda attended near the end of the data collection phase of this research project, she met Sarah, a research participant who was majoring in Women’s Studies.<sup>254</sup> Linda had never met someone who was studying feminist thought, and she showed great enthusiasm to learn more. After the focus group, we all went to the student lounge for a bite to eat. Linda and Sarah had a chance to talk informally for an hour or so, and by the end of our meal, Linda was eager to enrol in an introductory course in Women’s Studies. She subsequently looked into the possibility of taking such a course, but, in the end, her timetable would not accommodate it.

### ***An interview with Kirsten, Linda’s co-op coordinator***

Not long after the focus group, I met with Kristen, her co-op coordinator. I was eager to pursue the issue of gender power dynamics in the experience of female students in her program.

Kirsten has a unique perspective because, having graduated from Queensville in 1995, she has also been a co-op student. After graduation, Kirsten pursued a master’s degree at another university. Although being a co-op coordinator was not in her career plans, when she saw an advertisement for the job she decided it would be an opportunity for her to contribute to the program.

Kirsten has first hand experience with the gender dynamics in engineering, both on campus and off. When she finished her degree at Queensville, she was one of only six women in a total of one hundred and forty graduates.<sup>255</sup> She recalls that it was “very intimidating” to be part of such a “noticeable” minority for the first few terms. But, she says, “That went away, and eventually felt like I was treated as just one of the engineers.”

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<sup>254</sup> See Sarah’s story in Chapter Eight (p. 288).

<sup>255</sup> The student population in the Faculty of Engineering was 85% male and 15% female in the year of this study.

And, in an example that is reminiscent of Linda's experience, she adds, "I remember the guys were always all over the equipment in the labs, touching all the dials. Whereas I was reading the manual and saying, 'Oh god, we're off the initial setting now.' But I just learned to elbow my way in rather than to read the instructions first and everything was okay."

For Kirsten, sexism played a dynamic during the co-op job search process. Recalling some bad job interviews, she says, "They were always gentlemen from the old boys club in engineering. They'd ask me things like how well I make coffee, or if I thought I'd be a distraction to the men in the company. I had this happen several times and so did the other women in my class."<sup>256</sup>

Kirsten says she reported these incidents to her co-op coordinators at the time, but felt they did nothing about her complaints. When I ask her if she thinks things are different these days, she replies, "I'm not sure if it still happens. I hope it doesn't. I sure hope we'd hear about it now."

Unfortunately, it is only many months later when, reading through the transcripts, I realize the significance of the ambiguity in Kirsten's response on this topic. By this time I have observed that some of the students who experience problems with employers in the job search process or at work are reluctant to tell their co-op coordinators about it.<sup>257</sup> This leads me to suspect that sexist practices still occur, but they remain one of the numerous repressed contradictions in the co-op process.<sup>258</sup>

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<sup>256</sup> Jennifer, a co-op coordinator in Computer Science, provided a frank assessment of gender power dynamics in her field, which is similar to engineering. She said, "For women, it's like a test of metal. I always ask women in our program, 'How are things going? How are you being treated?'" I probe around because I have had situations where an employer has said to me, "Well, she's a woman and she's not able to keep up with what our demands are. We're going to ride her until she breaks." But even on campus I am very aware of how the male students treat them. The male students will sometimes ostracize the females for asking a question that the professor thinks is stupid. I don't think this is ultra-sensitivity on the part of the women either. It's very real."

<sup>257</sup> For example, Linda has not contacted Kirsten to discuss her problems in her current work term. Other examples include Warren's and Frank's story (p. 194 and p. 254 respectively). Jennifer, a co-op coordinator in Computer Science confirms that students do not share their problems readily (see p. 263). Jennifer also confirms that sexism is a part of employer practices in the computing industry (see p. 179).

<sup>258</sup> For a case that provides insight into the repression of gendered power dynamics in co-op, see Valerie's story (p. 237).

### *Analysis of Linda's story*

Overall, Linda has found that participation in the co-op program provides important opportunities for learning that complement her studies. There has been a significant amount of cross-over between her learning on campus and at work in terms of scientific knowledge, methods and techniques. At work, she has been exposed to new fields of knowledge and has sharpened her existing understanding. She has practiced familiar techniques and learned new ones. She has created products and seen them put to practical use.

An important contrast Linda has experienced between work and school is that at work there is a less explicit emphasis on learning, yet greater pressure to learn--and, in particular, to learn more rapidly. Working has induced Linda to become more effective and efficient at learning, forcing her to think about how she learns. As a result, she has become more aware of how different patterns of cognition frame problems and constitute knowledge in different ways.<sup>259</sup> To her surprise, she has also discovered that her learning depends, in large measure, on the people with whom she interacts and the nature of her relationships with them. Linda has unearthed a social dimension to learning that affects how her learning occurs and what she learns.<sup>260</sup> Her current challenge of working in a new field of knowledge with an uncommunicative supervisor whose academic background is different than hers has heightened her awareness of the cognitive and social dimensions of learning. It has also prompted her to become more reflective about her personal learning needs and how she might express them differently in the future. She has thus started to become aware of a subjective dimension of experience that also affects her learning.

Linda's recognition of the social dimension of learning at work is an explicit element in the curriculum of her co-op program. Her co-op coordinator regularly emphasizes the importance that "people skills" play in succeeding in the job search

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<sup>259</sup> Davidge-Johnston (1996) identifies the development of this metacognitive ability to be one potential benefit of participation in co-op.

<sup>260</sup> Lave and Wenger (1991) identify the importance of "communities of practice" in encouraging workplace learning.

process and on the job. But when Linda speaks of the importance of becoming more “communicative” as an engineer she tentatively enlarges her coordinator’s definition of “people skills” to include aspects of scientific, moral-practical and aesthetic-expressive competence. For Linda, becoming skilful in the interpersonal domain involves both strategic and communicative forms of competence. Increasing one’s “people skills” is central to succeeding in the job market and effectively accomplishing tasks at work--functions of strategic and instrumental competence respectively. Increasing one’s “communicative” competence is vital to building valid scientific knowledge (e.g., interactions electrical engineering and chemistry), establishing legitimate interpersonal relationships (e.g., interactions between employers and students) and expressing one’s needs and expectations (e.g., in job interviews).

Linda has arrived at a tentative understanding of what it means to be “communicative” largely by chance, not through any explicit educational support from the university. She has developed her emerging competence in this regard informally by working and studying interactively with groups of people--in particular, her colleagues and supervisor in her previous job at the power plant, and the group of female students with whom she studies on campus. With these people, Linda has been able to practice how to derive and question scientific knowledge, build trusting relationships and openly express herself.

Now, building scientific competence is the centerpiece of Lisa’s academic program, and, as such, her course and labs have furthered her cognitive capacity in this regard, while her experiences at work have accelerated the development of this capacity. However, beyond her co-op coordinator’s emphasis on “people skills” she has received no explicit educational support at the university to help her understand the social dimension of her experiences. She has received even less observable support when it comes to the subjective aspects of her academic and work experiences. Not surprisingly, then, an understanding of the relations between each of these dimensions--cognitive, social, subjective--and the affects that experiences in each dimension has on the others is also not well supported.

From a Habermasian perspective, the lack of emphasis on developing communicative competence and the imbalance between cognitive, social and subjective dimensions of learning signal potential problems with respect to the socially progressive status of Linda's educational program. A sign of these problems emerges around the gendered power relations that Linda identifies in her educational experience on campus and how she reacts to them. The sexism found in her field of endeavour poses an important set of contradictions for Linda in terms of her learning. For example, in questioning and establishing the validity of scientific knowledge with female students Linda can be communicative, which means being direct, open and authentic; whereas, with male students she needs to be strategic, which means being artfully demure (both intellectually and socially) in order to avoid "big confrontations." When interacting with male students, her focus shifts from developing scientific knowledge to reducing the potential for interpersonal conflict and the personal risks associated with it. This gendered power dynamic negatively affects Linda's learning. It creates a circuitous, non-communicative route to knowledge that the male students do not have to take. Ultimately, this dynamic leads Linda to study exclusively with other female students, which, in a program that is populated largely by men, effectively limits her access to a large pool of potential knowledge.

In managing the risks associated with negotiating gendered power relations on campus, Linda must overcome barriers to learning that her male counterparts do not have to face. These barriers are unintended consequences of the manifest strategies she pursues to avoid direct conflict with her male counterparts. While Linda's strategies are effective in reducing her personal risk, they do not best serve her learning needs and interests, which would be better served if the communicative learning style she finds amongst the other female students with whom she studies could be emulated more broadly. However, this would require the female students to confront the problem of gendered power relations head-on with their male counterparts. To do so safely and in a communicative

fashion would require discourse<sup>261</sup> about the legitimacy of current norms of behaviour. And, for discourse to occur, something approximating an “ideal speech situation”<sup>262</sup> would need to be established.

Given that female students represent an extremely small minority in the program, both discourse and ideal speech would need institutional backing. But problems with sexism have been a well-known issue in engineering education for a long time, and, if Linda’s experience is any indication, apparently very little has been done on an institutional basis to remedy those problems. For Linda, the absence of institutional support for ideal speech means that, instead of learning how to openly question norms of behaviour with a view to establishing legitimate interpersonal relationships that take into account the full range of needs and interests in a given community, she must accept sexism as the status quo, learn to develop strategies for working around it and cope with the consequences of those strategies.

It is highly likely that the problems Linda encounters with respect to gendered power relations are not restricted to the campus. They are also an aspect of her current experience at work. When I asked her whether the interpersonal issues she is experiencing with her supervisor contain a gendered aspect, she responded first with ambivalence, but then denied the possibility. Yet, she has found herself being more demure with him than she would have wished--certainly more demure than on previous work experiences. It is thus arguable that, in the face of having to negotiate her learning needs with an uncommunicative male supervisor, she has transported her strategy for dealing with gender dynamics from the campus to the workplace. If this is the case, her response has been tacit, stemming from an *unconscious* repression of (potential) conflict with gendered power. It is a pattern of behaviour learned and reinforced on campus that is deeply embedded in her lifeworld. In her current situation, the strategic action (being demure) in which Linda engages as a result of her unconscious repression of conflict with gendered power (a response learned on campus) interferes with her ability to interpret her

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<sup>261</sup> For a discussion of the meaning of discourse in the context of this research report, see Chapter Three (p. 75).

<sup>262</sup> For a discussion of the meaning of ideal speech, see Chapter Three (p. 63).

learning needs (she tacitly accepts the situation, despite the fact it unnecessarily delays her learning at work) and to advocate for them with her employer (she is timid about speaking with him). As a result, Linda is having a less than optimal learning experience, and she is not as productive as she could be.

Moreover, because Linda's response stems from an unconscious drive, her supervisor might not be sexist in any way (and, indeed, may simply be harried by too much work), but the outcome would be the same. Linda's learned response to gendered power relations is so deeply structured into her educational lifeworld that she carries it wherever she goes. With no mechanism for reflection on these relations and her responses to them, other than in the context of this research project, Linda is left to her own initiative in terms of working through them and the affects that they have on her learning and career. Her enthusiasm for learning more about Women's Studies is an expression of interest in expanding her understanding of the social and subjective dimensions of her learning, with a particular focus on remedying the affects of gendered power.

Through this example, we can see the social and subjective domains of competence are not well-addressed in Linda's academic program, even with the addition of co-op. From a Habermasian perspective, the approach to developing "people skills" in Linda's program thus falls short because it supports and propagates (both explicitly and tacitly) strategic as opposed to communicative action in the moral-practical dimension of human experience. From a human capital perspective, the failure of the Linda's academic and co-op programs to foster a full range of communicative competence have resulted in less effective and efficient learning processes in her most recent workplace. It has affected her productivity and the ability of both her and her supervisor to meet their strategic goals.

### **Deborah's story**

Deborah is an eternal optimist. She is also a great juggler. These days, she is taking three courses, working regular shifts as a manager of food services at a regional hospital, raising a teenager, volunteering for two community organizations and serving on an advisory committee to the university's co-op program. Her enthusiasm is infectious.

She is quick to laugh at my jokes and her own witticisms, which are often self-deprecating.

Tonight is our third and final interview. We are lounging in antique chairs in her cramped living room, sipping tea and eating lemon biscuits, having just finished a meal she had prepared with autumnal vegetables from her garden. As I reach down to turn on my recorder, I notice the chintz upholstery is faded and threadbare on the arms of my chair, and the varnish on the wooden portions is sticky and cracked. It is pouring rain outside and the gutters are overflowing, their downspouts plugged with the final leaves of the fall.

“Long ago, before I lapsed, I was a fundraiser for the church. We sold ‘faith bonds’ to the congregation to retire the mortgage,” Deborah begins with a characteristic grin. “I bought this little house a few years ago, after my marriage broke up, by issuing ‘rutabagas bonds’ to my family to raise the down payment.”

“That’s creative,” I respond. “It must be difficult to make ends meet, what with school, single-parenting and all.”

“It is, definitely. Even so, I view school as a luxury. I cherish being there,” Deborah explains. “You know, on campus I’m always hearing about the really crappy financial outcomes for students. It’s kind of sad. But for my little Pollyanna self I have really high hopes. And that is something I didn’t have before I came to school. I know there’s going to be some nifty job out there for me that’s going to involve technology.”

Similar to other humanities students in the study, Deborah is pinning her hopes for a stable financial future predominantly on her burgeoning technical abilities. But, similar again to other students, her thoughts in this regard are often paradoxical and contradictory. Indeed, I have found Deborah to be the most difficult of the students to pin down on this prevalent theme. Each time we talk, she vacillates from being thrilled with technology, to being excited about modernist drama or Milton, to being delighted with her own non-fiction writing. In some moments she envisions technology, literary studies, her non-fiction writing, co-op experiences, motherhood and volunteerism as an

interrelated, complementary whole. In other moments, she sees each of these fields of experience as unconnected and internally deficient.

Deborah is the first to admit that she suffers from both an embarrassment of riches, in terms of her level of intellectual and worldly curiosity, and a chronic lack of self-confidence. On the one hand, she is using the recent upheaval in her personal life as a chance to reinvent herself, to explore uncharted aspects of her identity and ability. It is a time of great opportunity. On the other hand, she feels sometimes as if the ground has been pulled out from beneath her. It is also a time of great threat.

“You are sounding confident tonight,” I observe.

“I am getting more confident. This last co-op job really helped in that regard. I guess it’s an incremental process. If you go to Catholic school and get told for years that you’re stupid, and then you get married and get told the same thing for many more years, that affects the foundation of your being. No matter how modern and liberated you are, and no matter how much stuff you accomplish, you still have this lack of confidence. I see that in other women from my age group at school.”<sup>263</sup>

“Tell me more about the incremental nature of this process for you,” I prompt.

“As a co-op student you get more bang for your buck. You’re not only developing skills, but also confidence. That’s what’s been happening for me at least. A couple of years ago I took a computer science course. They make you do that in co-op. I went through boxes of Kleenex in that course, but what I learned there helped me land my first two work terms. Through those I got some experience doing government writing. Then I went to school and took three courses in technical writing. I learned how to take out the extra words, how to write in plain language. Then, on my last work term, I actually practiced all of that technical writing stuff, and learned more about computers and the Internet at the same time. So everything’s been building bit by bit.”<sup>264</sup>

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<sup>263</sup> Sarah, another participant who is the same age as Deborah, expresses similar thoughts about the relationships between experiences in school, heterosexual marriage, university and confidence.

<sup>264</sup> In her most recent work term, Deborah was teaching personnel at all levels of a provincial ministry how to use the Internet to find valid and reliable sources of information rapidly, and how to disseminate information via the Internet. That she found herself actually teaching others how to use technology allowed Deborah to view her work term as a crucial milestone in her personal quest to master technology.

I notice that Deborah's response focuses on technical skills and co-op work experience. She makes no reference to her literary studies, creative writing or extracurricular endeavours. I have observed that the other humanities students all respond in similar ways to questions about their learning or personal development over the course of their studies. Sometimes I wonder if I have led them to believe that my research interest is exclusively focused on the co-op program, so they necessarily limit their responses to the significance of their job searches and work terms. I've decided this may be a partial explanation.<sup>265</sup> But, in Deborah's case, her emphasis on technical skill development and professional experience is also reflected in choices she has made with respect to her academic program.<sup>266</sup> She has drifted from the general humanities to Women's Studies, to English Literature and, finally, to Professional Writing (currently she is double majoring in the latter two disciplines), settling on the latter because it "translates into marketable skills." During this time, she has also seen her volunteerism drop-off because of the time pressures associated with studying, working, participating in co-op, moonlighting in a food services job (in order to keep her seniority) and parenting. Deborah has been cramming more technical skill development and paid work into her life, so it is not surprising these experiences would flavour her current perceptions. Nonetheless, I decide to check my interpretation of her situation.

"One thing that's been striking me is the tension between going along this technical path you describe--you know, each job leading to the next with technology being the main stepping stones--and the other path that you've talked about, which is the literary, creative writing one. You've been doing both at the same time, but I sometimes get the sense that the paths are not integrated, or that the technological path is the one you are choosing to follow more often now."

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<sup>265</sup> All of the students in this study tend to exclude their coursework and extracurricular experiences from their view of what constitutes their co-op program. Grosjean (2000) made a similar finding, and labeled it the "co-op effect." The lack of integration of these different fields of experience likely affects the overall social and learning experience of students who participate in co-op.

<sup>266</sup> Valerie has also experienced an increasing drift in her studies towards the technological. The other humanities students have not.

“One of the paths is right brain and the other is left, as far as I can tell,” Deborah muses. “But you’re probably right. I’ve been doing mostly technical writing courses for that last while. This term, I’m also taking a literature course, which is a treat. There’s just so much pleasure in reading literature and synthesizing it in essays.”

“What gives you so much pleasure?” I ask.

“We’ve been reading an Ibsen play, which is wonderful in itself. But, through it and the course, I’m learning how the modernist movement worked, and that’s helping me with my own writing. It’s giving me a bit of perspective. It’s saying to me, ‘In the late 1800s this is how writers addressed the issue of who we are as humans.’ I’m always wrestling with who I am as a human, so with that course I have an outlet for that interest.”

“How do Ibsen and modernism help with your own writing?”

“In my non-fiction class we just did a personality profile where we wrote about someone we interviewed. I was able to poach language or concepts from Ibsen. ‘Poach’, that’s a word I learned on my last work term from the librarian. So I’d use words or concepts from the play. I wouldn’t do it verbatim, but I would take things from the play and move them into the writing of the profile. That whole idea of taking things from one and moving them to another makes things very rich.”

“You learned this idea of poaching from your last co-op supervisor?”

“Absolutely. I learned that on my work term. I mean, that’s something I always knew people do, but she gave it in word. ‘Poach it, or lift the language,’ she said. That made me aware that that’s what we often do, and that it’s okay to do it consciously.”

“So, there’s a triangular path from your work term to Ibsen to your own writing,” I observe.

“Actually, it’s more than that,” Deborah reflects. “My essay on Ibsen was far better than what I could have written two years ago. When I wrote it, I kept hearing the technical writing instructor’s voice saying, ‘Pare down those words, take that out, make it more concise’.”

“Sounds like there are all kinds of relationships, once you begin to think about it,” I suggest.

“Yes. I’m sure most students go to school and keep all of their pockets of learning separate, but mine end up getting mashed together sometimes.”

Deborah’s claim resonates for me, both in terms of her experience and in terms of what I’ve heard from other humanities students in the study. But her qualifier “sometimes” gives me pause. I remember a recent focus group where the conversation turned to the recruiting and employment practices of co-op employers and Deborah exclaimed, “The computer is God. It’s what people are mainly looking for now. They might care about my technical writing skills because that’s a technical qualification, but they don’t care that I’m a fabulous humanities student. They don’t really want to know about all of my years in the workforce. They don’t want to know I’ve spent years at developing people skills as a mother and a worker.”<sup>267</sup>

The forcefulness of her claims in the focus group jar with the things that Deborah is telling me tonight. I consider how some contexts are, perhaps, more conducive than others for an integrative strategy like Deborah’s to work. There are likely forces that interfere with the reflection needed to pursue such integration.<sup>268</sup> I ask Deborah to clarify what she meant in the focus group, and she explains, “In the work term before this one they really didn’t give a damn who I was. It was like, ‘Sit down, shut up and do your work.’ Whereas, this last summer I was basically valued for who I am. But, in the end, both jobs were very computer-oriented.”

“So, do you mean that you feel your full spectrum of skills, let alone your person, are not generally valued?” I probe.

“I’m not sure that all of my skills matter much to other people,” she reflects, “but being a mature student must count for something. If nothing else, my advanced life skills should give employers one less thing to worry about.”

“What about you as a person? You imply that some employers are better than others at recognizing your humanity?”

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<sup>267</sup> Sarah, similar to Deborah in age, life experience and circumstance, held a similar view.

<sup>268</sup> Deborah also feels that the full range of her experience is sometimes not welcome in classes at the university. As an example, she cites how students in her non-fiction class reacted negatively to a story she wrote about caring for her dying mother. The students deemed the subject matter as “too in your face.”

“Yes, but I can understand that. There are always tasks to be done at work, often in a pressure cooker. Really, the same goes for school too. So, who we are as human beings gets contained and we have to settle for letting our humanity ooze out here and there.”

### *Epilogue*

Shortly after this interview, Deborah accepted an eight-month work term in the communications department of a federal agency, where she wrote and desktop published newsletters, bulletins, brochures, and press releases. After completing that work term, she returned to university, where she is continuing to take three or four courses a semester, mixing literature with technical writing, while working part-time at the hospital.

Shortly after this interview, I also paid visits to Deborah’s co-op coordinator, Marilyn, and her favourite professor, Dr. Redding. I was interested in gaining their perspectives on the paradoxes in which students such as Deborah can find themselves in when they engage with the technological and power dynamics of the labour market during their humanistic education.

### *An interview with Marilyn, Deborah’s co-op coordinator*

Marilyn is an accomplished mother of three. She has an undergraduate degree in Creative Writing and two post-graduate degrees. In addition to being a co-op coordinator, she has taught introductory courses at the university. When I met with her, she was excited because her first book of poetry had just come off the press.

Marilyn finds there is ambiguity around the educational role she is playing as a co-op coordinator. On the one hand, she says, “I think our work complements the academic classroom, with respect to building skills.”<sup>269</sup> On the other hand, she admits, “I don’t feel like I have much to do with the academic side. I don’t feel like an educator, at least not the way I did when I was a teacher.” She concludes, “Basically, as a coordinator you try to develop good jobs to set the conditions for the students’ learning. And you go

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<sup>269</sup> As an example, she cites how professional writing students pick up skills in class, such as writing press releases, and then practice them at work.

to the work sites to encourage feedback, to try to ensure objectives are being met. We're intermediaries in the process, facilitators."

In her role as an intermediary, Marilyn finds that "the cooperative part with the employers is difficult." This is because employers generally "don't see themselves as educators." While some employers take an educational interest and seek to provide "excellent" experiences, others treat the students as "fodder." However, most employers fall somewhere in the middle of these extremes. For Marilyn, this means "the educational part often depends on the student. In any job there's room to learn."

In addition to the problem of orchestrating educational meaning out of competing--or, at minimum, discontinuous-- interests, expectations and functional roles, Marilyn is also plagued by a sense of guilt. She confesses, "Sometimes I feel like the co-op experience is dictating what the students' academic experience will be."<sup>270</sup> I guess that's just another one of those fine lines that we walk that makes us tired and burned out."

However, Marilyn also believes that the personal connection students make with their co-op personnel and other students in the program provides social support and a sense of community that they would not otherwise have, whether on or off campus. She hopes this mitigates the educational ambiguity the program sometimes creates.

***An interview with Professor Redding, Deborah's favourite professor***

Curious about how Dr. Redding sees her educational role in relation to the co-op program, I ask her about her view on co-op. She responds that some of her colleagues are quite excited about co-op, but admits her knowledge is basically limited to what is contained in the brochures about the program, which she is asked to distribute to her first and second year classes. I probe this ambivalence, asking Professor Redding if she views the co-op program negatively.

She replies, "I know Deborah is very pleased as a mature student with financial concerns to discover that she can do something to advance her education and to help with her finances at the same time. So it's a practical boon for her. She also tells me she gets to

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<sup>270</sup> Marilyn cites the core course requirements in her program as an example of this. These are meant to ensure the students are "suited to a variety of occupations," making them "so much easier to place."

apply some of the skills she is learning here. That's very heartening. But from other things she says, I realize that some of the work she gets to do is just low-cost labour. Nonetheless, she uses the university as a way of measuring the corporate world, rather than the reverse."

After a pensive moment, she continues, "You know, students nowadays are very practical minded. They're quite concerned about whether they'll find employment when they leave university. That's understandable. So, with co-op one is not introducing into their minds mercenary ideas that were not there to begin with. I don't think this is the sort of input from the corporate world that influences the kinds of things taught in the classroom or the direction of research. That's the kind of influence about which I have a growing concern."

As I leave Dr. Redding, I reflect on the how she understands Deborah's interpretation of her experience. The university is, indeed, a lifeworld for Deborah, against which she evaluates behaviours and practices at work. Dr. Redding has obviously spent time and energy communing with Deborah on this topic. But her perspective on the influence of "mercenary ideas" does not chime with the reality represented in Deborah's story. It is true that Deborah's participation in co-op has not affected what Dr. Redding teaches or researches. Deborah's participation, however, has affected the specific courses she has elected to pursue. Dr. Redding seems unaware of the increased emphasis Deborah has placed on technical coursework. While Dr. Redding's scholarly lifeworld thus remains intact, students with and without "mercenary ideas" are making educational choices that speak to their interests and needs, which, with issues such as increased student debt weighing on their minds, are increasingly strategic.<sup>271</sup> And their choices do affect what is taught in classrooms around her, to which the growing number of technical courses and professional programs attests.

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<sup>271</sup> See Chapter Five for background on the University of Queensville (p. 123) and a discussion of the current context of higher education in Canada (p. 137).

### *Analysis of Deborah's story*

In “always wrestling” with who she is “as a human”, Deborah demonstrates a passionate interest in the aesthetic-expressive dimension of her experience, an interest that extends to the social and cultural conditions of humanity more generally. She finds expression for this interest through literary studies and creative writing, elements in her formal education in which she takes great pleasure, but to which she has dedicated less and less time and energy as she has progressed through her program.

Through her participation in the co-op program, Deborah has also become keenly interested in a number of technical domains. She finds expression for these interests in her co-op jobs, where various technologies feature prominently in terms of how she does her work and, in her most recent experience, in terms of the content of the work itself. Deborah also finds expression for her technical interests on campus, where, over time, she dedicates an ever-increasing proportion of her time and energy to coursework in technical fields.

Deborah struggles to balance and make connections between her aesthetic-expressive learning and technical skill development. She has identified an important direct relationship between her sense of self-confidence and level technical skill. The more Deborah boosts her stock of technical skill, the more confident she becomes. The more she is able to use her technical skills to improve her self-expression--for instance, through writing more efficiently using “plain language”--the greater becomes her belief in herself. And the more assured she becomes of securing a “nifty job” in technology upon graduation, the more her self-confidence grows.

Yet the connection Deborah makes between technical skill development and increased self-confidence turns out to be profoundly contradictory. The more she pursues technical skill development to build her self-confidence, the more she must “contain” who she is by only letting her humanity “ooze out here and there.” In order to become more self-confident, she must become less expressive of her “self.”

The contradictory logic of her experience, which came to light for Deborah through her participation in this study, holds particularly true when it comes to her participation in the co-op program. Similar to Lisa, she has found that employers place

great value on technical skills and not on other forms of competence. Until she realized this, Deborah's emphasis on building self-confidence through technical skill development was an unconscious repression of the central contradiction that employers hold a significant amount of power in defining what constitutes valid forms of competence and legitimate ways of being in the workplace. Her emphasis on technical skill development thus stemmed from a systematically distorted interpretation of her learning needs. As an unintended consequence of enrolling in the co-op program to help pay for the "luxury" of studying in the humanities, to the detriment of her own interests Deborah had come to identify with the interests of employers. As her story shows, the co-op program mediated these interests into her educational lifeworld, affecting not just her course selection but also the interpretive resources that she had at hand to give meaning to her experience and sense of identity.

### **Warren's story**

"I'm ready to finish school and to get on with my life," says Warren. Only a few weeks into an academic semester in his last year of a degree in computer science, he is frustrated and uninspired. "Once upon a time, there was a challenge to being here, but that doesn't seem to be the case anymore. I feel like I'm jumping through hoops, especially this term. The courses are not that difficult and there's a lot of rehashing of old material. I was hoping for more, especially after my last work term."

Warren's most recent co-op work experience, his third, was a "washout" in terms of his learning and skill development. He knew that working in user-support for the IT department of a federal agency in Yellowknife was not going to be a perfect fit. The job consisted of installing, configuring and troubleshooting hardware and software, and helping employees to use their computers. In Warren's view, working in user-support doesn't really draw on the depth and breadth of knowledge that students in computer science are exposed to in their studies, even though many students end up doing this kind of work on co-op terms, especially in the early stages of their program. For Warren, the fit was particularly bad because his intellectual passion lies in designing data structures and

working out the mathematics associated with those designs.<sup>272</sup> Similar to his previous two work terms, the job in Yellowknife held no promise in this regard. He accepted the job in order to live near his wife, who had just accepted a one-year teaching contract in a remote arctic community a few hundred kilometres away. He wanted to be able to visit her regularly to offer support as she adjusted to her new community. In addition, as an avid outdoorsman Warren wanted to experience the arctic environment and culture.<sup>273</sup>

While Warren did not have great expectations for his work in Yellowknife, he never anticipated that a large portion of most days would be spent playing games on the computer network with his coworkers and bosses. In a previous interview, Warren described how he slowly succumbed to the organizational pressure around gaming.

“I tried to be productive at first and not to play the games,” he told me, “but it kind of makes you stand out too much. They think you’re being superior and that makes for bad feelings all round. So I play.”

“How does that make you feel?” I had asked.

“Most of my work experience is in forestry, which is very production-oriented and bottom-line. So it was a big shock at first. But I guess I’m an extrinsically motivated person. If I have a task, I’ll do it as best and fast as I can, but I’m not very good at making tasks for myself, and no one here is setting tasks.”

I remember being puzzled that Warren should characterize his motivation in this way because it jarred with the impression I was forming of him. By contrast, earlier in the same interview, Warren described how he looked forward to every second weekend, when he would fly into the remote Dene village where his wife worked. During these weekends Warren deliberately set out to learn about aspects of Dene life. Most Saturdays, he would go caribou hunting with men from the village. On these expeditions, he learned about the significance of caribou and other wildlife to the subsistence and social life of the village. He observed how the prevalence of technologies like snowmobiles and

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<sup>272</sup> For Warren, this area of computing has a striking metaphorical resemblance to his extracurricular passion for exploring caves.

<sup>273</sup> Warren also accepted his previous two work terms for personal lifestyle reasons. Preferring to live in rural settings, he took positions in small, remote communities even though doing so limited his opportunity to work in a database-related job.

modern weaponry muddied his romantic preconceptions of aboriginal hunting rituals. During these trips he was privy to inside information about community politics and issues. And through his hunting connections, Warren was invited to participate in healing ceremonies, a sweat lodge and other community events, through which he tallied a complex, initial understanding of village life.

Warren's learning on those weekends was more than anthropological. During his first few visits, he discovered that the computing resources of the village were in dire need of repair. As a result, he spent a portion of each visit troubleshooting and repairing various computers and computer networks. His pet project was setting up the computer network in the school so that it was stable and readily administered by non-technical personnel. In Warren's view, these voluntary computing initiatives mitigated, in some ways, the relative dearth of learning he was experiencing at work in Yellowknife.

Warren's involvement in village life and volunteer efforts were, to me, two objective signs that contradicted his claim that he is not intrinsically motivated.<sup>274</sup> At the time, I recall attributing this contradictory self-image to the fact that his skills, knowledge and work ethic were clearly not being valued or used at work in Yellowknife. But I'm now worried to hear him once again uninspired, this time at school. I ask him to elaborate upon his current situation.

He continues, "What I'm finding even at the fourth-year level is that we're not doing a lot of what I'd consider real science. It's all very instructional. It's still about trying to get an overview of the field."

"What's the difference between science and instruction?" I inquire.

"For me, science is about looking at a problem, developing a theory about it and testing to see if the theory works."

"And you don't do that in computer science?"

"We've only had one assignment like that," he explains. "They spend all of their time instructing, you know, giving us knowledge about the field. But the problem is the

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<sup>274</sup> In addition to these signs, from the beginning of the research, Warren stood out as someone who was interested in helping to improve the research project itself. In particular, he freely offered insightful suggestions on methodology.

field is huge and getting bigger all the time. Plus, everything keeps changing. What's big now will be outdated tomorrow."

For Warren, "instruction" is the *transmission* of extant knowledge, whereas "science" is a *method* for creating knowledge. As I ponder the problem of trying to keep up with the constant change in his field, Warren continues, as if reading my thoughts, "You know, there's just too much for any one person to know. But that's one of the reasons I want to get out of school and just start working. All the stuff we're learning here is old. Once you start working, then you'll start getting the new stuff, which will help you get an edge on your competitors."

"So you want to go out to do something cutting edge?" I probe.

"Not necessarily cutting edge, but something that's actually leading somewhere," Warren counters. "You know, not days of working and then throwing it away, kind of thing."

Warren's ambivalence on his desire to work on the leading edge doesn't quite square with his previous remarks. His ambivalence on this point diverges from the other, younger engineering and computing students in the study, who are more bedazzled by the promises of new technologies. But I let Warren's ambivalence go, attributing it to the fact that he is a seasoned worker and has probably developed an understandable scepticism about the 'new'. However, Warren's emphasis on the importance of his work and learning leading to tangible results rings true with what I've heard from all of the participants, regardless of discipline.

"Do you mean that your experiences at university feel like they are not leading somewhere?" I ask.

"I learn more when I'm at work than when I'm at school," he responds. "At least that's the way it was with forestry. It has been that way with computer science too, to some degree, at least in my first two work terms."

Warren pauses for a moment, reconsidering his last remark. "You know, co-op jobs are really just like summer jobs," he continues. "Working at McDonald's would give someone a more realistic impression of what it means to work than working in the job I

had in Yellowknife. At least at McDonald's a student would be exposed to production pressures. That would transfer better to other work settings. In a lot of these positions you learn IT stuff, not computer science. So, it doesn't really matter where you work."<sup>275</sup>

"Could you give me an example of what you mean by IT stuff as opposed to real computer science?" I ask, trying once more to sort out the distinction Warren continues to make between his experience of computing and his ideal understanding of science.

"Sure, I wrote my last work term report on one. I chose to write on computer management because, despite everything else, they actually had a really good system in Yellowknife for managing the computers. It boiled down to keeping things as simple as possible. Everybody gets essentially the same computer, and you make a disk image of those computers so that when a new computer comes in you just quickly download a disk image and it's set up."

"So, that's a management issue in IT. What about more technical aspects of IT?" I probe further.

"One of the only things I learned about up North was the Windows registry, which I hadn't worked on before. The registry tells programs where files are located, where the values for variables are, and so on. You should always use the "add/remove" commands in the control panel. But, if you delete some custom software, you have to get into the registry and clean it up. If you make a mistake doing this, the computer won't run again until you re-image it. Really, all this is pretty straightforward. It doesn't require any university training, that's for sure."

"So, what would you prefer to see in a work term?"

"There's got to be a certain amount of difficulty associated with the work. Work is hard to do if it's just about going through the motions. I prefer to be dumped into challenging a problem that has an actual application, and to be given the freedom to work on it."

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<sup>275</sup> Elsewhere Warren recognizes that some students are assigned challenging programming jobs in their workplaces, but that this, in his view, is relatively rare. Jobs like this usually require that students move to urban centres such as Vancouver or Toronto.

At this point I am wondering if we are approaching Warren's definition of science. So I ask him straight out, "Is this what you mean by science?"

"What I mean by science is this," he explains. "When I worked in forestry I was confronted by questions like 'That tree should be bigger, I wonder why it's not?' or 'Those trees are really big, why is that?' In the forest, nothing is as you expect it because you're dealing with a multitude of known and unknown variables. So, you have to come up with some theories and then test them empirically. The same goes for caving, in many ways. But with computers, it's all man-made so every variable is potentially verifiable."

"So, you haven't done anything like that on your work terms. What about at school?" I inquire.

"Perhaps once" responds Warren. "But, in my spare time I try to do some proofs on a pet problem, just to keep me sane. Right now there are usually two sides to a circuit board. But they're also getting some boards that have three surfaces. To design that, you've got to have an algorithm. For two surfaces it's pretty straightforward, but not for three or more. So I'm working out the math to try to make a representation of what would be on the board and how many surfaces you would need to take a certain graph and put it on a flat surface."

I ask Warren what got him interested in taking on this project. In characteristic fashion, he grounds the significance of his learning in his extracurricular interests.

"I've always enjoyed spatial problems," he says. "When you're in a cave you live out spatial problems. You survey the caves and try to make sense of them and their hydrology. You have to rig the pits to get a free hanging rope. That means that you have to consider the forces on the top end, determine how they're going to react together, and put a load equalizing anchor system in. I've expanded my ability to deal with problems like these at university, but it's something I've always done."

### *Epilogue to Warren's story*

Warren decided not to seek a final co-op work term. Instead, he elected to stay on campus for two more semesters in order to graduate as quickly as possible. After graduation, Warren found a permanent job as a computer programmer with a company

that manufactures high-tech milling equipment. His workplace is located in a small, rural community nestled in a coastal forest between the ocean and a range of spectacular mountains. His wife is substitute teaching, but hopes to find a regular position soon. Not surprisingly, they spend their weekends hiking and caving together in the mountains.

*An interview with Dorothy, Warren's co-op coordinator*

Shortly after my final interview with Warren, I visited Dorothy, his co-op coordinator. I wanted to get a sense from her about how common alienating experiences such as Warren's are in the program.

Dorothy has administered the Computer Science Co-op program for many years. She came to the job after earning a graduate degree in the field and teaching in the department for a short period. She has a profound commitment to the program and to the students, and finds her work to be deeply satisfying. She tells me, "I love seeing the students grow seeing their development, seeing them catch fire, seeing them mature. I am just so thrilled to see that and to know that I had a little piece in it." It is obviously very disappointing for Dorothy when the results are not so positive for students. Fortunately, according to Dorothy, this does not happen with great regularity.

Nonetheless, of late, Dorothy is finding it more difficult to personally connect with the students for a variety of reasons. She explains, "In the past, we were located somewhere else and the physical set up of the office was more amenable to congregating. Co-op was a home in many ways. The program was smaller too, so there was a lot of contact. And just today we started the e-mail interview sign-up system. We will not have hoards of students milling around to sign-up any more. That will be a big change."

She worries that as she becomes less able to interact with the students, she will lose her ability to influence their progress in the program. In Warren's case, she was unable to do so, as he never received a call or visit during his recent work term--and, for his part, he did not reach out and ask for assistance.

Wondering what assistance Warren might have received had he connected with the co-op office, I ask Dorothy how she works with the students. She says she uses her formal and informal encounters with them to emphasize important lessons to draw from

their work experiences. She tells me, “I state over and over that the most important things they are getting out of their work terms are not whether they learn Visual Basic or C++. Rather, it’s the soft skills that they’re learning that are important. They’ll be the ones that will make a difference for them five years from now. So I ask them things like, ‘Did you gain confidence in your work? What did you learn about interacting with people in the workplace? How is it different from interacting with people at school? What did you learn about yourself?’”

If he had been asked questions like these, Warren’s responses, as a minimum, would have flagged a significant problem in his workplace. So the next logical question is: would co-op personnel have intervened? Dorothy often finds herself mediating relationships between employers and students. Employers are generally not comfortable providing or receiving feedback and many students do not want to speak up about problems for fear of jeopardizing their jobs. It may thus be difficult for some students to develop the “soft” skills Dorothy speaks about when their employers are sometimes not able to teach or model them.

In the specific case at hand, however, the possibility of mediation or influence is moot. And, as Dorothy administers a rapidly growing program using an increasingly technological infrastructure, such possibilities may very well remain so, but on a larger scale.

### *Analysis of Warren’s story*

Of all the cases in this study, Warren’s experience provides the starkest perspective on the contradictions and problems that co-op students can face when their education and participation in co-op become purely strategic or instrumental, as opposed to communicative. And he takes radical action to cope with these contradictions. Warren’s decisions to study Computer Science and pursue co-op were entirely strategic. Faced with an unreliable and dead-end employment situation, he needed to reinvest in his human capital in order to change careers. Computer Science offered a potentially impressive return on investment. But, at the time of our final interview, he is at a loss to describe redeeming aspects of the formal educational process that is helping him to reach

this goal. In fact, he sees his academic and co-op programs as administrative processes—or, “hoops to jump through”—lacking in educational substance or meaning.

Yet Warren has found meaning in the vicarious and extracurricular learning that he is able to do, particularly during co-op work terms when his evenings and weekends are not primarily dedicated to homework, as they are during academic semesters. For example, this is when he has time to tinker with “pet” scientific problems, participate in cultural activities in the Dene community, explore nature with his partner, and volunteer in this research project that encourages him to discuss and reflect on his experience. These cognitive, social and subjective domains of learning are more expressive of his lifeworld interests than those he experiences in his formal coursework or on-the-job. They represent sites for the exercise and development of communicative competence that do not exist for him in the context of his official educational program. But they are an important side benefit of his participation in co-op.

Warren’s communicative competence manifests in the questions he poses about the legitimacy of his studies and work experiences. He queries the nature of scientific truths that he is taught, as they are presented as a series of facts (and related techniques and skills) to be memorized (and practiced); however, these truths are rapidly outmoded and thereby falsified. He therefore believes that a more valid educational approach would be to focus on developing the cognitive reasoning associated with generating scientific knowledge, including facts, techniques and related skills—in other words, to privilege the development of cognitive competence in science over specific technical knowledge and skill. He also questions the validity of placing Computer Science students in co-op jobs that emphasize information technology (IT) skills. This represents a mismatch between what students learn on campus and what many of them are required to do at work. Given his co-op experiences, and in particular his most recent experience, he also questions the way employers organize work processes and manage skill development and working relationships in their organizations. In co-op, Warren perceives that his knowledge, skills, and work ethic are often devalued.

A key problem for Warren is that he has not had any other venue during his educational experience, other than in the context of this research project, to raise validity claims such as these and to thereby render an authentic expression of his interests and learning needs. During our interview, this problem presented itself in his perceived lack of motivation, which was an unconscious repression of the contradictions he faced with respect to expressing and pursuing his educational interests on campus and at work. He had interpreted the meaninglessness of his experiences on campus and at work as a personal failure, a lack of personal motivation. But, upon reflection, it became clearer to him that his coursework, co-op program and employers had failed to meet him at least half-way. Subsequently, Warren decided to express his interests and power the only way he saw possible in the circumstances. Choosing to jump through the minimum number of hoops possible on his way to graduation and a full-time job that would support his extracurricular interests, he quit the co-op program and completed his coursework with utmost efficiency.

It turns out that Warren expected more from his time at university than just a good job at the end. While he came to campus with a predominantly strategic focus (to retrain for a new career), he also had a communicative orientation, particularly with respect to developing his cognitive capacity as a scientist. The economic and career crises he was facing at the outset of his educational journey caused him to misinterpret his educational interests and needs. Deep down he wanted to study natural science, which, to him, represented a more genuine expression of his identity as an avid outdoorsman than the “man-made” science he opted for. Warren achieved his primary goal in the end, finding a job in computing that, as a significant benefit, allows him to live in a rural setting where he can sustain his passion for the outdoors. But he achieved this goal after suffering through a significant motivational crisis that eventually led him to question the legitimacy of his educational program, career choice, co-op program and the university. For Warren, finding a job that allows him to sustain his lifeworld out of work hours is a salve. Still, motivation may remain a problem for him in his new field. For the Computer Science

department, its co-op program and the university more generally, the problem of legitimacy will definitely persist, at least from Warren's perspective.

From a Habermasian perspective, Warren's experience at university helped him to protect his lifeworld, but fell short in assisting him to elaborate that lifeworld in new and meaningful directions--something for which, beneath the distortions of strategic action, Warren clearly yearned. From a human capital perspective, Warren's experience reveals how some workplaces are clearly not conducive to learning. This suggests that the power employers wield in their relationship with the university can be, and ought to be, questioned to ensure their practices and requests are legitimate. More active monitoring and intervention on the part of the university is required--even if, as Dorothy observes, the future of co-op at Queensville is to do more with less.<sup>276</sup>

### **Chapter Summary**

These stories provide insight into the processes of human capital formation in which students become immersed as they participate in co-op. In the case of applied science students, these processes can be complementary to their academic interests and programs. They can also be a way for them to further their economic and career interests. In the case of humanities students, these processes are not so much complementary as they are a way to manage the economic and career risks associated with studying in fields that do not have clear-cut pathways into the labour market.

But these stories also show how processes of human capital formation in co-op are not straightforward. For example, as a result of a particularly bad job, a mismatch between what he learned in computer science courses and what employers tended to hire him to do, and a host of issues in his academic and private lifeworlds, Warren's experience in co-op did not complement his studies. While, in other examples, both Lisa and Deborah find their academic interests and identities are threatened as an unanticipated consequence of their participation in co-op. And, Linda is grappling with

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<sup>276</sup> Dorothy's observation is corroborated by the findings in, and administrative response to, a recent external review of the Queensville co-op program, which emphasize the need for co-op staff to become more productive at developing job opportunities and helping students to secure jobs. See Chapter Five (p. 129).

the gendered power dynamics in her academic program and profession and the effects these have on her learning.

These stories also demonstrate how skills are a central focus in the processes of human capital formation in co-op. The students find significant meaning in, and attribute great importance to, the skills they can market to employers and use and develop at work. They also show how learning that emphasizes success in the labour market and effectiveness on the job is also central to their participation in co-op. To be sure, most of the students came to university with these “mercenary ideas”, as Dr. Redding calls them, firmly established in their lifeworlds. However, for all of the students, their participation in co-op has served to foster and elaborate these patterns of meaning, as well as the concrete skills associated with them.

While strategic and instrumental forms of skill development are important for the students, their significance is not all-encompassing of the meaning they give to, and derive from, their experiences in co-op. Nor are their interpretations related to skill development homogeneous. Depending on their biographies, academic interests and disciplines, practices of their co-op coordinators, relationships with their professors, relationships with their employers and co-workers, and overall quality of work experiences, the students make and derive different interpretations of their experiences. The meanings they construct and derive can also shift depending on the perspective(s) they assume (or are encouraged to assume) with respect to their experiences. The students’ interpretations are thus highly dependant on the contexts in which they formulate them, as these contexts condition the interpretive resources the students are able to draw upon.

The contexts in which these students find themselves during co-op are predominantly sites of strategic, rather than communicative, action. The evaluative standards of success and effectiveness thus serve as filters on how the students can produce meaning. Prompted by the conceptual and methodological approach guiding this study, however, the students took advantage of the research context to engage in dialogic reflection on their experiences. In so doing, they brought to the fore their communicative

competence, both in terms of *how* the conversations unfolded, but also in terms of the *content* of those conversations. They considered what and how they were learning, both on campus and off, from the perspective of their academic and personal lifeworlds, in addition to looking at their learning from the standpoint of their economic and career interests. Their efforts in this regard revealed communicative competence to be an absent-presence during their participation in co-op.

In being encouraged to view their experiences in co-op with a dialogical lens, the students made visible some of the conflicting interests that exist in the co-op process. For example, from the perspectives of Lisa, Deborah and Warren, the ways some employers sift and sort candidates arbitrarily discount their stores of competence. The tasks some employers want them to do, and the skills employers want them to use and develop, do not necessarily correspond with their interests and expectations. The ways some employers organize and manage work processes can deskill them or suppress their “humanity.”

The conflicting interests some of the students faced were not confined to their participation in the labour market and workplaces. Instead, some conflicts arose from within their academic and personal lifeworlds. Linda’s immersion in an academic program that leaves unchecked sexist behaviour and the gendered power dynamics that ensue from it is one example. Lisa’s upbringing in an immediate family with predominantly technological interests, and the utilitarian educational values impressed upon her by her extended family, are others.

In using a dialogical lens to write and analyze the students’ stories, numerous other conflicts and contradictions became evident, particularly once the perspectives of some of their employers, co-op coordinators and professors were taken into account. But, as the researcher, I have adduced these contradictions in hindsight, and they thus remain, in large part, invisible to the students.<sup>277</sup> For the humanities students, for instance, disillusionment with their academic interests and identities is an important subtext in co-

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<sup>277</sup> The students did not have access during the study to the perspectives provided by some of their employers, co-op coordinators and professors. If a similar study were to be undertaken in the future, it could be very productive to use a methodology that brings all of the stakeholders in co-op into a dialogue.

op, which the emphasis on skill development and career success masks. Deborah's story shows how this subtext can influence humanities students to drift towards more technical or instrumental courses on campus. Lisa's story shows how it can also affect how humanities students form their academic identities. In another example, Linda's story shows how the focus in co-op on "people skills" and in her academic program on efficiency, can mask gendered power dynamics that arbitrarily fetter learning processes for female students.

These types of situations, whereby important conflicts and contradictions are suppressed through a pervasive focus on effectiveness and success, demonstrate a lack of support for the exercise of communicative competence in the co-op process. There does not appear to be sufficient dialogical space in the program to, first, (safely) raise validity claims that would bring these conflicts to light and, second, derive appropriate solutions to them in ways that would be amenable to all stakeholders.<sup>278</sup> Thus, as these stories indicate, admittedly to different degrees, the students' opportunities to increase their cognitive capacity, ability to establish legitimate interpersonal relations or to posit or deconstruct social norms, and propensity for authentic and imaginative self-expression are unduly limited in co-op and, for some, in their academic and personal lifeworlds.

Yet, these sites of conflicts and contradiction represented remarkable opportunities for the exercise and development of communicative competence, on the one hand, and human capital, on the other hand. For example, if Lisa's work experience with Bob had been more communicative they may have been better able to question the validity claims that grounded their actions and reached a better mutual understanding about their respective interests and needs. As a result, Lisa might have been able to expand the aesthetic interests of her lifeworld, in addition to contributing her technological skills, and Bob might have struck a better balance for his industry in terms of the mix of human capital he was developing in Lisa. In another example, if Linda's experience on campus had been more communicative--for instance, through taking a Women's Studies course that allowed her to become more competent in the moral-

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<sup>278</sup> This sentence refers to Habermasian conditions of discourse. See Chapter Three (p. 75).

practical domain of her experience and thus more aware of the nature and effects of gendered power--she might have been able to find ways to confront, rather than shy away from, such power. Furthermore, this communicative process would involve Linda becoming more politically *effective*, a strategic skill that would likely have translated into human capital that could make her more productive at work.

These stories suggest that a tenacious (or ideological) fixation on skill development as the centrepiece of human capital formation can not only interfere with the development of communicative competence in co-op, but it may very well limit its own anticipated results.

## Chapter 7: Problems with Integration

### Introduction

The previous chapter described how the development of strategic and instrumental skills formed an important means by which many of the students in this study built conceptual and practical connections between their academic lifeworlds and the economic system as they participated in co-op. It discussed how their reliance on skills as a crucial source of meaning served, at times, to mask important conflicts and contradictions in the co-op process that, on the one hand, impeded the development of various forms of communicative competence and, on the other hand, fettered processes of human capital formation. It also observed that these contradictions and conflicts sometimes remained lost opportunities for learning in co-op, where various forms of communicative competence and strategic skills could be developed. Finally, it argued the masking of these opportunities can have the effect of reducing progressive sociocultural and economic outcomes in co-op.

This chapter offers a different, but complementary, approach to understanding the students' experiences. It starts from the explicit problems that the students had in integrating their experiences at school and work.

With some regularity, most of the students described and interpreted their academic and co-op experiences as if these represented autonomous spheres of social action and learning. They often had difficulty integrating their learning between each sphere in meaningful ways. At least two important problems arose from these situations. The students sometimes had difficulty furthering their academic competence, interests and identities. They also perceived themselves to be less productive at, or committed to, work than they wanted to be.

Students in engineering experienced fewer issues with integrating their social action and learning in their academic and co-op programs than did students in the other disciplines. This should not be surprising, as their program is accredited by their

profession and it connects to a statutory labour market. When they did experience disconnections in their social action and learning between school and work, they tended to perceive these from the perspective of their co-op workplaces. They saw gaps between what they needed to know in order to be successful at work and what they learned on campus. They found the technical knowledge (and related technologies) they used in their workplaces was specialized and often leading edge, which contrasted with the foundational knowledge they were exposed to on campus. They also noticed gaps between how they needed to learn at work and how they were taught on campus. The tasks and problems they faced at work were open-ended. There was no one right answer or best solution for them. This contrasted with how they learned in their courses and labs, where, in most cases, the problems they faced were closed loops, and answer keys could be applied.<sup>279</sup>

Students in the humanities experienced a significant amount of difficulty in integrating their social action and learning in the co-op process. They tended to perceive these disconnections from the perspective of their academic interests. They perceived gaps between what they were learning at school and what they needed to know and be able to do at work. They saw the supply of jobs to be relatively tight and the content of available jobs to be more about technology and less about “humanity” than they had anticipated or desired. They also perceived gaps between who they were in the context of their academic interests and who they needed to be at work. These gaps hinged on the differences the students perceived between the sociocultural orientation of their learning and identities on campus, and the technologically specialized and instrumental focus of their work terms.

The students in computer science also experienced a significant amount of difficulty integrating their social action and learning. They experienced discontinuities from the perspective of their academic program and from the perspective of their workplaces. They noticed disparities between what they learned in their courses and what

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<sup>279</sup> Professor Brown’s perspective on engineering education confirms the students’ views. See Chapter Eight (p. 283).

employers generally required them to do. In particular, they observed a significant mismatch between the applied science they learned on campus and the technical support and systems administration jobs that formed the backbone of the co-op job market. They also saw gaps between the up-to-date technologies they used at work and the less recent ones they were exposed to on campus.

Regardless of their academic disciplines, and in almost all cases in this study, the students expressed concerns about the quality of some of their co-op jobs. With some regularity, they reported experiences where they were underutilized or poorly managed at work. When they worked in such environments, the students tended to perceive more and larger gaps in their learning than when they had jobs of higher quality.

In a limited number of cases, the students expressed concerns about the quality of their academic programs. This was particularly true of the two students in computer science, who perceived their technical preparation to be wanting, even as they neared graduation. Low quality academic experiences also tended to increase the scale and number of gaps the students perceived in their learning in the co-op process.

These problems with integration can be interpreted, in part, as a manifestation of contradictions between the various cultural practices and attributes--biographies, beliefs, expectations, values, norms, recognized forms of competence, and so forth--that the students encountered in different sites of learning (i.e., on campus, in the labour market and at work) and their preferred or engrained practices and attributes. From a Habermasian perspective, the ways in which the students respond to, reflect on and navigate through differences with respect to cultural practices and attributes are known as processes of cultural rationalization.<sup>280</sup> These processes guide the development of their lifeworlds, affecting how they are enculturated, socialized and thereby *socially integrated*. The mode of social action and learning that leads processes of cultural rationalization is (or ought, ideally, to be) communicative.

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<sup>280</sup> For a definition of cultural rationalization within the context of this research report see Chapter Three (p. 36).

Following the Habermasian conceptual framework detailed in Chapter Three, modern universities are important sites for cultural rationalization in the lifeworld of advanced industrial societies.<sup>281</sup> They provide one mechanism for the ongoing production and reproduction of culture, and for the socialization of citizens. As discussed in that chapter, processes of cultural rationalization in universities ideally take place, on the one hand, through specialization in disciplines (and sub-specialties) of the three main spheres of cultural value (science, morality, art) and, on the other hand, through more generalized learning experiences that cross over the boundaries between these spheres and explore the differences between them in terms of the standards of value that are operative (and deemed legitimate) within them. From a Habermasian perspective, those educational programs and practices that simultaneously allow for the greatest degree of specialization and substantial cross-cultural learning opportunities are considered to be the most highly culturally rationalized. Co-op programs have (or can have) important educational roles to play in processes of cultural rationalization.<sup>282</sup> Positioning students in specialized communities of practice, they (can) provide opportunities for specialization in fields of knowledge. Immersing students in the hurly burly of everyday practice in organizations, co-op (can) also offer opportunities for students to encounter domains of learning that prompt them to draw on and reflect upon the knowledge, standards of value and practices in other cultural spheres.<sup>283</sup> A potentially fruitful way of looking at the students' problems with integrating social action and learning is thus through the lens of cultural rationalization, and in particular the processes of specialization (or lack thereof) and cross-cultural learning (or lack thereof) they engage in, along with the contradictions they face in those processes within and between the university and their workplaces.

The problems with integration the students encountered can also be interpreted, in part, as manifestations of misalignments between their cognitive-instrumental capabilities and the functional status and requirements of the systems of management and production

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<sup>281</sup> On the role of universities in terms of cultural rationalization see Chapter Three (p. 37).

<sup>282</sup> See Hart (1992) and Welton (1991) for observations on how workplaces provide sites for regressive and progressive forms of cultural rationalization.

<sup>283</sup> See the discussion on co-op and cross-cultural learning in Chapter Three (p. 67).

in which they are immersed through co-op. From a Habermasian perspective, the ways in which the students respond to, reflect on and negotiate contradictions in these systems are known as processes of social modernization.<sup>284</sup> These processes guide the development of their cognitive-instrumental capabilities, affecting how they *integrate functionally* into *systems* of management and production. The modes of social action and learning that constitute processes of social modernization are (or ought, ideally, to be) strategic or instrumental.

Another angle from which to consider the students' problems with integration is to consider the processes of social modernization in which they were engaged, and the degree to which these appear dysfunctional. The issue of functionality here is twofold. It involves efficiency--that is, how well the systems they encountered were working. It also involves effectiveness--that is, how well those systems were doing what they were intended to do. Intent is a cultural concern, as it involves questions about social or organizational goals. So the issue of functionality in the system leads us to the important topic of the relationship between processes of cultural rationalization and social modernization.

From a Habermasian perspective, the extent to which the students perceive themselves to be acting and learning in two autonomous spheres in co-op can be viewed as the *degree of uncoupling* between the developmental processes of cultural rationalization and social modernization in which they were engaged. Their problems with integration are also, in part, manifestations of contradictions in the nature of the interrelationship between these two developmental processes.

Habermas (1989) observed that one of the central features of advanced industrial societies is the tendency in them for processes of cultural rationalization and social modernization to "uncouple" (p. 153), with each achieving autonomy to follow its own developmental logic. This allowed for greater efficiencies to be achieved in systems of administration and production than would otherwise be possible. It also increased

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<sup>284</sup> For a definition of social modernization within the context of this research report, see Chapter Three (p. 62).

opportunities for greater cultural rationalization by freeing up people from tasks and concerns related to their material reproduction, allowing them to concentrate on their personal and social growth. But he also saw crucial problems arising from the increasingly autonomous relationship between these developmental processes. In particular, he worried about the tendency for processes of social modernization to “colonize” (Habermas, 1989, p. 186) processes of cultural rationalization.<sup>285</sup> Another concern is that processes of social modernization become problematically out of touch with processes of cultural rationalization.<sup>286</sup> Despite their tendency to uncouple, and the benefits associated with their uncoupling, the parallel processes of development thus require re-coupling--or *(re)integration*--from time to time.

Following Habermas (1989), decision making about whether to uncouple or *(re)integrate* processes of cultural rationalization and social modernization properly rests under the purview of the former. Administrative and economic systems are meant to support and further the goals, values, practices and interests of a society, assuming social actors have developed these through a process of mutual consent that ensures their legitimacy. Communicative action provides the basis for this. However, the relationship between processes of social modernization and cultural rationalization are steered, and thus changed, through the media of money and power (Habermas, 1989). Here, criticisms of the system (derived communicatively from scientific-technical and/or moral and/or aesthetic-expressive points of view) are advanced, for instance, through political activism (a strategic form of social action) against formal role authority, and the official and unofficial administrative actions that stem from it. This means processes of uncoupling and reintegration also require a significant amount of strategic action and related forms of competence, in particular, political skill.

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<sup>285</sup> See the discussion in Chapter Three on the processes and effects of colonization (p. 85).

<sup>286</sup> This can happen, for example, when a system becomes so complex that it exceeds the communicative competence (in terms of cognitive capacity) of those who are supposed to administer and control it, or when the sociocultural consequences associated with new systems exceed the communicative competence (in terms of moral-practical or aesthetic-expressive capacity) of their designers or host society (see Chiles, 2002).

The unique location of co-op programs places students at the heart of dynamic relationships between developmental processes that allow for their integration, both socially and systemically.<sup>287</sup> A potentially fruitful way to understand the problems students experience with integration is to pay close attention not only to the processes of cultural rationalization and social modernization with which they engage, but also to the nature of the social action (and learning) they undertake within and between these processes.

In this chapter, these Habermasian concepts are used as an interpretive lens to better understand the problems the students face with respect to integrating their perceptions of learning and experience as they participate in co-op, and the social and educational implications stemming from these problems. In using these concepts, it has been necessary to translate them from the level of the wider advanced industrial society to that of the University and workplaces.

The reader will find four narrative case studies that document and elaborate the issues and problems discussed above. Similar to Chapter Six, these cases are written descriptively, relying on dialogue from the interviews.<sup>288</sup> Then, each case is individually analyzed, relying on the conceptual framework that guides the study. A summary rounds out the chapter.

It should be noted that the six other cases presented in Chapters Six and Eight also elaborate some of the issues and problems discussed in this chapter. The analysis in those chapters, however, focuses on different themes.

### **Edward's Story**

"I've been back for a month now and it's like life has started again," says Edward. "That work term up there was just such a hiatus from everything else. I was in limbo."

It's late September, and this is our final interview. We're sitting on a small knoll of grass outside the student union building, enjoying the fragile warmth of the mid-

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<sup>287</sup> See Figure 3.3 (p. 84).

<sup>288</sup> Some of the syntax and grammar in these cases has been edited to make them flow more smoothly. In places, I have also reorganized and combined quotes from different segments of the interviews.

afternoon sun. Edward is obviously relieved to be back on campus after a working for a year in Whistler, a resort community in British Columbia that caters to affluent leisure seekers from around the world.

During his yearlong co-op experience, Edward managed a gallery that sells First Nations art. In a previous era at the university, undertaking a co-op work term for a full year would have been out of the question. While still unusual, such arrangements are now open to negotiation between students, employers and program coordinators. Employers in particular are interested in longer work experiences in order to avoid the perceived costs associated with training new students every four months. This was the case with Edward's employer. Fortunately for Edward, a year at work played to his advantage because he needed to save enough money to pay for his final two semesters of school. He already owes thousands of dollars in student loans and does not want to go any further in debt, particularly because he is nervous about his employment situation upon graduation. If he lands a part-time job soon, he will have enough money to pay for the remainder of his degree without having to borrow again. Edward is proud of this accomplishment, which he achieved by bussing dishes at a restaurant in the evenings while working all day at his co-op job.

Working at two fulltime jobs for a year did not take a large physical toll on Edward. But, on the educational front, he felt very isolated. Apart from working a cash register and using a computer, everything about the job was new to him. Nonetheless, he was left almost entirely on his own to learn about the art and how to run the gallery. The owner of the gallery lived in the United States and was not a specialist in First Nations art. He tended to contact Edward only when there was business to discuss. At the beginning of his work term, there was a curator for the gallery, who shared some of her knowledge about First Nations art with Edward and gave him a variety of books. But due to a dispute with the owner, the curator's contract was terminated shortly after Edward started. Finally, apart from the requisite transactions to complete for the co-op office and registrar, Edward had no communication with his co-op coordinator or any other educational personnel at the university during his year away.

“It was surreal up there,” he tells me. “It was like Disneyland. My entire existence was circumscribed in that little town. All these rich people surrounded me and most of the other young workers were there to party. So I wasn’t a part of either scene. I was always looking out from inside my little fishbowl.”

When I visited Edward at the gallery for our first interview, I was impressed by its serenity. It had cream walls, a glossy fir floor, and floor-to-ceiling windows that look out to the street through an arcade of log pillars supported on a low wall of smooth river stones. On the walls inside the gallery different kinds and styles of First Nations art were neatly arranged, singly and in groups, with halogen beams of light drawing attention to their vivid colours and striking designs. Interspersed throughout the room were podiums that displayed masks and other artefacts. When I arrived, Edward was playing new age music at a discrete volume, which added to the calm. I find in Edward’s metaphor of the gallery-as-fishbowl a muted, floating quality that expresses part of the image I had formed in my mind about his workplace, but the pejorative sense in which he is using the metaphor simultaneously shatters this image. Instead, I begin to think about how the gallery looked from the outside, where little distinguished it from neighbouring shops, apart from what was displayed in its windows. To its left was an upscale fashion boutique; while, to its right was a franchise specializing in expensive chocolates. An image of the resort as an architecturally enhanced strip mall congeals in my mind, and I begin to understand Edward’s comments.

“It sounds like you can breathe again, now that you’re out of your fishbowl,” I prompt.

“I feel alive,” he says. “I have a social life. In my apartment I’ve got a window that opens to the outside.<sup>289</sup> And I’ve got school. I’m really enjoying it.”

“What about school makes you feel alive?”

“Japanese literature, for one thing, especially pre-1900,” exudes Edward. “You know, the *Tales of Genji* and the *Tales of Heiki*. But I like other stuff too. This term, I’m

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<sup>289</sup> Because of high rents at Whistler, Edward lived in a basement room with no windows.

learning about how Japanese people were affected by rapid industrialization. But I'm learning about this through reading literary works of the period."

"Anything else?"

"Well, my area is Japanese, but this term I'm also getting to learn about Indonesia, mostly about the colonialism in its history. I'm enjoying that, even if it is disturbing. It's good to look outside of what your focus is."

Edward's mention of colonialism transports me back to a previous conversation we had about some of the issues he faced in selling First Nations art to affluent North Americans and Europeans. At that time, Edward was ruminating over the idea that he was involved in a colonizing activity. He had no background in First Nations art, culture or history. To make up for this, he was reading about these subjects during slow periods in the gallery. Still, he did not feel entirely comfortable in his knowledge about the art and sensibilities towards it. His reading allowed him to tell stories about the art to customers, and to make a sales pitch. But he felt vaguely troubled that he did not have a deeper cultural understanding of the art. He felt equally troubled by the reactions of customers. Some appeared interested in his stories about the art. Most were more interested in the value of different pieces. Edward learned to divide his customers into two groups. There were those who wandered in to experience the art. But they were usually quick to scurry away or purchase a small print or greeting card when they learned how expensive the art was. Then there were the collectors. These were customers who came in seeking works by certain artists. Sometimes they expressed a profound appreciation of the art. More often, they were looking for an investment.

From time to time, Edward wondered if the intersection he worked in between affluence, art market and historical and cultural ignorance was a problem for First Nations peoples. He had only limited contact with the artists whose works were the subject of this interpretive and financial speculation. And the contact he did have with them usually occurred when he called on behalf of a customer to see if they had additional works to sell. He never had the nerve in these conversations to discuss his reservations. Besides, the artists were usually pleased to field such calls and oblige

customers, leading Edward to conclude that his misgivings about making a business in First Nations art were likely inflated.

“In our last conversation you seemed a little troubled by your role in selling First Nations art,” I find myself saying, “Are your studies about colonialism this term helping to shed any light on that problem for you?”

“In previous courses we talked about ethnicity, development and colonialism, so I probably wouldn’t even have had the thoughts I did at work without those courses,” responds Edward. “What I learned on my work term was that, even though I’m in Asian studies, some of the concepts I learned in the context of Asian cultures also tie into the North American situation with the First Nations people. Now that I’m back at school, that’s reversed. I’m finding I can use some of the things I learned about First Nations cultural issues in my course on Indonesia.”

Of all the students in the study, Edward faces the greatest challenge in terms of constructing coherent relationships between and within his academic and work experiences. So I find it interesting when he is able to describe linkages as he has just done.<sup>290</sup> While his chosen major at the university offers a broad selection of courses about Asia-Pacific, because of scheduling issues Edward has had to take a hodgepodge of offerings. This mixture has been intriguing, but it has limited his ability to systematically pursue his interests in Japanese literature and language. Added to this varied academic background is the fact co-op jobs directly related to Asia-Pacific studies have been virtually impossible to find.<sup>291</sup> In addition to his recent art gallery experience, Edward spent his other work terms doing identity checks and minor investigations on welfare claimants in the compliance division of a provincial social services ministry.

I recall a previous interview where Edward was excited because he had come across a book written by a First Nations artist travelling in Japan. The book described aesthetic connections between the different cultures. Edward had decided to explore this

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<sup>290</sup> Unfortunately, I did not probe Edward further for concrete details about the specific links he is able to make with respect to colonialism, art and culture in different parts of the world.

<sup>291</sup> In his three years in co-op, Edward has seen only one such position--teaching English in Japan--but it came up after he had already accepted his job at Whistler.

topic of connections between First Nations and Japanese art in his work term report, as part of his continuing struggle to integrate his academic and work experiences. Before the interview today I'd made a note to myself to find out if writing the report helped him to connect some of the dots.

"How did your report about the links between Japanese and First Nations art turn out?" I ask.

"It didn't happen," he replies. "I really wanted to look further into that, but the co-op office wanted me to do a report on what I did on the job. So I wrote about what I did with the website and with Internet commerce."

"So, what did you write?"

"I just explained what I did. For example, I talked about targeted emails. If you have customers' interests recorded then you can mail them about new pieces and say things like, 'You're the first to know about this because we like you. You can buy it before we let anyone else know.' I didn't have to do any research for the report because all this stuff was already in my head. I just wrote it down, inserted a few examples, and that was that."

Within the space of a few seconds our conversation has drifted from art to e-mail, and I am again reminded how difficult it must be for Edward to bind and connect his experiences. But I'm also aware that none of this really seems to faze him.

"Maybe you could pursue your interest in Japanese and First Nations art in a paper this term?" I suggest.

"I don't have any courses in which that would make sense this semester," he replies. "But that's okay. I've got lots of other things to be interested in."

I ponder the equivocal nature of Edward's responses today, and realize they are not out of character. I have the sense that he identifies mostly with his life on campus, which is where he appears to be most fulfilled. But he also has an upbeat attitude about his work experiences, with his outlook on the year at Whistler being negative only insofar as lifestyle was concerned. I tell him what has been going on in my mind as we have spoken, and remark that I'm having trouble bringing coherence to his story.

“My ideas about what I want to do with my life are always shifting and moving, but I love learning,” he confides. “As bad as being at Whistler was, I gained lots of management and computer skills. I also learned a lot about retail too. Most importantly, I learned about First Nations art. It’s not going to be my life’s work, but I found some of it fascinating. In fact, I’m even thinking about going to art school after I graduate.”

“So what happens with your knowledge of Japanese language and culture,” I ask, surprised by Edward’s revelation about art school.

“I think it will just become a hobby,” he admits, continuing with a soft laugh, “I mean, there’s no perfect job to fit everything I’ve learned and done, right? How do you fit First Nations art into Japan with some government work?”

Unsure as to whether I should respond to these rhetorical questions, I opt for silence.

“Sometimes I think it might be easier to be an engineer,” Edward continues, “They know what they have to know, and it’s clear what they can do. But for us, it’s very different.”

“In what ways?” I probe.

“We have to package ourselves up and sell little bits to get certain jobs. It’s almost like employers downplay everything on your résumé except for that one technical thing they need.”

“Does it have to be that way?”

“Oh, I’m sure somewhere down the line some of what I’ve learned will come in handy,” Edward continues, “At least I hope so, because I don’t want to be working at Starbucks<sup>292</sup> after I get my degree.”

### ***Epilogue to Edward’s story***

Almost a year after our final interview, I ran into Edward by chance in a café downtown. We briefly chatted as he served my latté. He told me he had graduated a few months earlier. I congratulated him as he gave me my change. He said he was still

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<sup>292</sup> Starbucks is the registered trade mark of a multinational chain of coffee shops.

deciding whether to go to art school or get a “real job.” I wished him luck as I dropped some coins into the tip jar.

### *Analysis of Edward's story*

Edward's experience in the co-op program is similar in many ways to Lisa's and Linda's, other humanities students whose experiences are described in the previous chapter.<sup>293</sup> Similar to them, he perceives himself to have been subject to employers' highly selective focus on skills. He has also faced significant challenges in connecting the interests he pursues on campus and the competence he develops there with the content, tasks and character of his co-op work experiences. He finds great pleasure in his varied academic pursuits, and faces his future work life with trepidation, as his experience in co-op suggests that his interests, passions and abilities, as fostered through his studies, may not integrate well into the labour market upon graduation.

Unlike Lisa and Linda, Edward has not created an explicit framework for interpreting and understanding his experience, and for guiding his approach to learning in his co-op program and academic programs. The one area about which he has been explicit is his need for money to pay for his studies. Similar to Lisa, Edward treats his co-op work terms largely as sources of revenue to support his academic interests. Through co-op he aims to sustain the feeling of “being alive” that he experiences on campus, where, similar to the other humanities students in the study, he can explore, express and pursue what it means to *be*.

Viewed in this light, one might have expected Edward to have a more positive view of his most recent co-op work experience. He had a job that allowed him to work with art. In theory he should have been able to practice and develop aesthetic-expressive competence that could complement his educational lifeworld. There is evidence in his story that this did happen. He read books on the First Nations art and culture. He shared interpretations of the art with customers. He observed the standards of cultural value customers expressed and reflected on his own. These experiences planted a seed in his

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<sup>293</sup> See Chapter Six for the stories of Lisa and Linda (p. 156 and p. 173 respectively).

mind about going to art school after graduation. Branching into a moral-practical form of learning, Edward used his pre-existing and new-found knowledge about history, culture and imperialism, to query formatively the implications of First Nations art becoming a culture industry. Moving into scientific-cognitive forms of learning, he speculated on the formal connections between First Nations and Japanese art, history and culture. Despite these (nascent) contributions to his educational lifeworld, he describes his work experience in pejorative terms that signify disconnection, such as living “in limbo” and “surreal.”

Edward was in limbo during his recent work experience. He was left largely on his own to learn about the art and how to run the gallery. The conversations he had about art, whether with customers or, on occasion, artists, were predominantly strategic. They were focused on selling and buying. In these interactions, aesthetic value was construed largely in terms of price and return on investment. The interactions he had with personnel from the university were predominantly transactional, serving to focus him on administrative tasks. The emphasis on strategic and instrumental action during his work term meant Edward was limited in his ability to explore the aesthetic-expressive, moral-practical and scientific-cognitive dimensions of his experience in the gallery. Without communicative forms of educational support during his work experience, he was unable to integrate (or perceive himself to be integrating) into his lifeworld as much of the competence he had gained in the gallery as he could have.

In contrast to the issues Edward faced with respect to the development of communicative competence on his work term, he had less trouble building skills in managing a retail store and developing its commercial strategy and tools, despite having to learn these skills largely on his own as well. The tasks associated with these skills consumed the vast majority of his time, giving him ample opportunity to learn them through reading, asking questions of the owner and others, and practice.<sup>294</sup>

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<sup>294</sup> This conclusion is supported by the fact that Edward chose to write about these technical elements of his experience when requested by his co-op program to report on what he “did” on the job.

When Edward returned to the lifeworld of the campus, the problems with integration of communicative competence continued. He had learned quite a bit about the iconography in First Nations art, and wanted to expand his cognitive capacity in this regard by writing a co-op work term report that explored historical connections in the iconography of First Nations and Japanese art. But his co-op coordinator did not approve this topic. Edward was instead required to write about his experience with Internet commerce.

Edward was able in some of his courses to engage with themes that emerged in the interstices of his work experience, such as colonialism. But there was no place for him to explore these themes further and deeper in the context of specific fields of knowledge (e.g., First Nations iconography) or substantive issues (e.g., First Nations culture as an industry) that he was exposed to at work. This problem with continuity and depth is mirrored in the hodgepodge pattern of Edward's overall course selection. This pattern, which his co-op schedule and his need for revenue helped to determine, has not encouraged him to sustain, deepen or differentiate his learning in specific fields of knowledge and on substantive issues in those fields. As a result, Edward finds great pleasure in his education, but he remains unclear as to its meaning or value in strategic and communicative terms.

Edward's educational lifeworld is not highly culturally rationalized. The educational practices and support systems in his academic and co-op programs and co-op workplaces have not helped him to become adequately specialized in, and socialized into, a particular cultural sphere. As a result, his academic identity remains amorphous, and his storehouse of communicative competence and instrumental skill remains abstract, undefined. This puts him at a disadvantage when it comes to his participation in the economic system, as he has difficulty identifying his place or potential in a labour market that is highly differentiated and specialized. His educational lifeworld is uncoupled from the system, from which he is unable to wrest communicative control. He does not experience the increased economic power that some of the other humanities students in this study experience as a result of their academic programs and participation in co-op.

### **Arlene's Story**

It is seven-thirty in the evening and the software-testing lab is nearly empty. Only three people remain at their terminals in the capacious, brightly lit room. Arlene is one of them. Even though she started work at nine that morning, Arlene is perched on her familiar steel-blue office chair, totally absorbed. Hunched forward, she scans the continuous flow of data and computer codes that cascade in different windows on the oversized computer screen in front of her. Occasionally, Arlene shifts her gaze away to jot some notes on the printouts she has organized on the lab bench to her right. Her work is as painstaking as it is important. She is testing for bugs in the software that law enforcement agencies such as Interpol and the Federal Bureau of Investigation will eventually use to intercept cellular phone calls and locate and track cellular phone users. At present, she is looking for problems in a simulation program that she developed to test a particular aspect of the 'lawful intercept' software.<sup>295</sup>

Despite another long day--and there have been many such days on this her final co-op work term--Arlene is very content. It is the new millennium, a golden age of wireless information and communication technologies, and she is working for the mobile phone division of one of the world's leading consumer electronic companies. This job has clear potential to launch her onto a financially and professionally rewarding career path. But more important for Arlene is that she finds her work challenging and engaging. This is a welcome change from her previous co-op terms, particularly her last one, where, she lamented in a previous interview, "I was losing brain cells basically. I was doing nothing. I wasn't required to think. Nothing was expected of me." For Arlene, this work term has changed everything.

"On the other terms I felt like 'I'm a co-op and this is a co-op, so I'll just bear with it to get the credit'," says Arlene. "I don't feel like that anymore at all. I feel like I've actually graduated and this is my job. I love it."

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<sup>295</sup> Earlier in this work term, Arlene was responsible for testing software that measured customers' cellular phone usage in order to establish billing information. For that project, Arlene was responsible for running the tests and analyzing the test results. This experience laid the foundation for her to be involved in designing the tests for her current project.

“You mean you feel like an engineer?” I ask.

“Yeah, something like that,” she responds with a soft laugh.

I am intrigued by this development. In a previous interview, Arlene had been notably ambivalent about her decision to pursue computer engineering as a field of study and profession. On the one hand, she knows that the field has good job prospects. On the other hand, she has not found it particularly inspiring or fulfilling. Some days she wishes that she could be getting a broader education by taking courses in the humanities and social sciences.

“Is the difference in this position largely about the learning, the challenge of the learning?” I inquire.

“I’m constantly learning, every day,” she attests. “I’ve never experienced that before. This area of technology is always changing. Even if I get to learn this stuff well, it will soon change and I’ll have to learn something else. I like that.”

Arlene looks around the lab for a few seconds and continues, “Plus, it’s the atmosphere here. They give co-ops a lot of responsibility. I’ve never had this level of responsibility. And they give you a lot of freedom to decide how to go about your work. If I have to come in at one o’clock, then I just need to send an email and it’s no big deal, as long as it’s not a critical time.”

“So this experience is obviously very different from your previous work terms,” I paraphrase. “How does it compare to your experiences at school?”

“What I’m working on is real. It’s current. It’s important to the company. Plus, I can see immediate results from my work,” explains Arlene. “In school I’m learning the same stuff they were teaching thirty years ago. I often think, ‘yeah, yeah, I’ll just learn this stuff to pass the exam.’ Then I forget what I’ve learned. Most classes just have no long-term implications for me.”

I am somewhat taken aback by the stark contrast Arlene paints between her learning at work and school. Surely more should transfer from an applied professional degree to professional work settings than she is suggesting. I ask her what she draws upon from her studies to successfully accomplish her work.

“Actually, I’m starting from scratch a lot,” she responds. “I’m definitely not using anything I learned from engineering, and nothing from the labs. Maybe I’m using some of my computer science because this job requires a lot of programming skill.”

“How has that been for you?”

“My programming skills have improved dramatically. We programmed a lot in first year, and I did really well. But we didn’t do it at all in second year, so by third year when we went back to programming I’d forgotten most of it. That was really hard, so I learned to hate programming. But now that I’ve had to program with a purpose, I’ve gotten into it. It’s especially good when you get really complex programs to run and to do exactly what you want them to do.”

Returning to the prior discussion, I ask, “What about the foundational science in engineering? Do you draw on that in your work?”

“Basically what we learn is classical physics and math. I do use those, sort of,” responds Arlene. “But we should learn more practical stuff because industry is changing so fast. School is a good foundation, but it does not seem relevant to what is happening in industry. They should try to keep courses up to date with current technology.”

I think about the implications of trying to do a job like the one Arlene is doing without having any seemingly related previous knowledge or experience, and I comment, “It must be challenging for you.”

“It is,” she answers. “But there’s lots of training and there’s lots of documentation to read. It’s just like school. If you have a textbook and can read, then you can read and understand. So that’s what I do. It doesn’t matter that I haven’t been taught a certain subject before. I can sit down and read about it.”

Hold on, I think, it is ‘just like school’? Isn’t Arlene contradicting what she just said, that nothing about school relates to the job? I ask her to clarify this contradiction.

“Well, the learning process is similar,” she concedes. “But the difference here at work is that I have a more useful system for learning something. I can sit down and read, gain some basic understanding, and then go to the computer and see everything work because all the hardware and software are here. Then I can go back to the book or the

Internet or whatever I was reading with a better grasp. So, I can see it practically and I can see it in the book as well. That makes starting from scratch not too hard to do.”

“But you have labs in engineering. Don’t you experience the same kind of iterative process between practical and book learning in those?” I query.

“It’s not the same,” she emphasizes. “In the labs we share the equipment with one, two, sometimes three other students. The equipment is old and out of date. Plus, lab assignments are designed so that you can arrive at a right answer. At work, the tasks are much more open-ended.”

Arlene said something similar about labs in a previous interview. At that time, she also remarked that the sheer volume of coursework in engineering turns her into a ‘machine’ during her academic semesters. She has developed four principles to guide her approach: never skip classes, study seven days per week, ask others for help and divide the labour. I have found that Arlene’s last two principles are universally held by all five of the engineering students in the study. To some degree, engineering students learn these latter principles formally through their lab assignments, where their instructors have them work in pairs. But these principles are more firmly established through the spontaneous study groups that engineering students form to cope with the workload in their courses.<sup>296</sup>

While informal group work constitutes a crucial learning strategy for engineering students, it also provides important social support during their academic terms. In Arlene’s case, the closest alliances she has formed at school have been with three other female students with whom she regularly studies. Because of their tendency to rely upon others at school, I have been wondering what, if any, learning and social supports exist for engineering students during their work terms. So I ask Arlene, “Do you have anyone at work that you can go to when you have questions or need help?”

“Sure, I have my team leader,” Arlene offers. “He’s at the other end of the building, mind you, but he’s there to give me ideas and support. Sometimes when I’m

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<sup>296</sup> All of the engineering students in this study mentioned that the architecture of the engineering building encourages their congregation into study groups. The main lobby of the building is a vast space furnished with large tables and comfortable seating.

testing I run into problems that I can't even explain. I just say to him 'come down and see this' and he comes to help."

"Anyone else?" I ask.

"Yeah, there's the inspection meetings," responds Arlene. "When somebody sets out a test procedure for software, a bunch of senior engineers get together to review it. At first, I just listened at these meetings because all of them seemed so smart and I didn't know anything. But for this project I had to outline all of my tests and defend them to the group. I now have a 400-page testing document, outlining 200 test cases, each testing the software from different angles. It was intimidating to go to those meetings, but in the end it was a great experience. As a result, some of my work is going to be used at company facilities in Germany and China."

"That must feel good."

"It feels great to know your work is taken seriously and will be used."

"What was so intimidating about those inspection meetings?"

"They'd catch mistakes where I'd have cut and pasted things and not properly altered them. They'd also ask lots of questions about my coding, like, 'Why did you do it this way?' Often, I couldn't remember. When you code it makes sense to you, but to another programmer it might not. They might do it a different way, but achieve the same result. I probably should have commented more in my coding, and that would have clarified a lot of things. It was hard getting those questions because that's your brain on the page they are criticizing."<sup>297</sup>

Arlene's formal relationships with others at work are chiefly oriented towards the effective and efficient completion of tasks and projects. In some ways, this mirrors the mechanistic relationships she has learned to establish with professors, instructors, lab partners and colleagues when she is on campus.<sup>298</sup> However, she has formed some

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<sup>297</sup> These inspection meetings encouraged Arlene's emerging sense of professional identity. Grosjean (2000) refers to this change in perception of identity (in this case, from student to engineer) as the "co-op effect." Relying on situational learning theory, Grosjean attributes this shift in identity to co-op students' increased acceptance within professional communities of practice over the course of their program.

<sup>298</sup> Arlene reports that her professors and instructors have far less interaction with her than her team leader does on this work term.

supportive acquaintances at university, particularly amongst the small group of women in her class<sup>299</sup>, and I wonder about the number and quality of her informal relationships in her workplace. So I ask Arlene if she has made any friends at work.

“I mostly hang around with the other co-ops here,” she responds, repeating what a number of the other students in the study have also mentioned. Arlene explains this is because co-op students share a common experience. As temporary workers, they are sometimes treated as outsiders. Moreover, they are sometimes assigned roles or projects that keep them out of the mainstream operations of the workplace. Concerned that Arlene might be feeling socially isolated, I ask her if she has met any friends outside of work. She responds that she’s simply been too busy with work to meet anyone. Then she tells me a story about a previous work term where the work itself was not interesting but life outside of work definitely was.

“On that work term, the company was located in an industrial park next to the local university. So I stayed in the student residences and got to meet different people, people who are not engineers, people who were studying arts and education. I became friends with this one girl in particular. She was so passionate about Marxism. We’d stay up late talking about it. That was the first time in my academic life I was able to have conversations about other stuff. By the end of that term I wished I could have written my work term report on Marxism rather than circuitry.”

I ponder Arlene’s chance discovery and I ask sardonically, “I guess you don’t get to discuss Marxism too much at work, eh?”

“No, definitely not,” she laughs.

“What about social issues related to the technology you are working on, such as privacy?” I inquire with some earnestness, using her story as a bridge to investigate something else: the ability of the students to situate their work experiences, learning and identities in a social context.

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<sup>299</sup> Similar to Linda, the other female engineering student in this study, Arlene has gravitated to studying exclusively with female students in order to cope with the gendered power dynamics in her academic program, although she has done so less consciously than Linda. For more on this issue, see the presentation and analysis of Linda’s experience in Chapter Six, (p. 180)

“No, people don’t talk about stuff like that. They just talk about the latest stuff, like, ‘In Japan they have this technology already.’ I’ve never considered the impact of wireless technologies on society, although it would be interesting to think about.”

I am a bit perplexed at how Arlene could be working on something like the lawful intercept project without considering its potential social implications, privacy in particular. Similar to all senior engineering students at Queensville, Arlene has by now taken a mandatory course called “Technology in Society.” This course aims to help the students understand some of the direct social implications and side effects of the decisions they are going to have to make as designers of technology. I know from interviewing the instructor that privacy is a key issue that gets discussed.<sup>300</sup> I ask her why she thinks there is little appetite for discussion about these kinds of things in workplaces and amongst engineers.

She says, “We’re basically there to make technology work, not to philosophize about it. Unfortunately, we have to leave that to the arts students.”

I cannot help thinking that if Arlene had been living amongst arts students again this term she would be more receptive to thinking about her work in its social context.

“Do you think you’ll do some arts courses in the future?” I ask.

“I’d really like to, but there’s only one elective course in fourth year. I’ll probably choose to do an optional course in communications technology. That’ll make me more marketable in this field.”<sup>301</sup>

“I guess that’s what employers are looking for,” I offer.

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<sup>300</sup> To demonstrate a privacy issue in this course, the instructor shows the students how he painstakingly tracks the ways in which different organizations exchange his personal information. When providing personal information to organizations who request it, he alters specific items in that information, such as his middle initial, and then keeps track of what information he has given to whom. That way he can tell which organizations are selling or otherwise misusing his personal information. In another example, the instructor discusses how the original design and use of tollbooths have been readily adopted to a different use: The tracking and monitoring of specific vehicles and motorists.

<sup>301</sup> Contrary to her comments here, Arlene enrolled in an introductory psychology course in her final academic semester. She found the course to be a welcome respite from engineering courses. In particular, she enjoyed the instructor who talked about how studying and teaching psychology affected her as a person. For Arlene this brought more humanity to the classroom and to her learning in the course.

“For sure. They want technical skills. They want us to do programming. They also want some experience with hardware.” Arlene continues, “But employers also want to know how you work in a team. They want to know what role you take in a team, and how you react to team members who are not doing enough work.”

Arlene’s description of what counts as skill in her field resonates with what the other engineering students have been telling me. It also squares with official labour market information. The profession requires technical mastery and, increasingly, strong interpersonal ability, particularly with respect to cooperating in project teams. By way of concluding our interview, I ask Arlene to describe how her experience in the co-op program contributes to her technical and personal development.

On the technical front she relates, “From doing this project, I understand so much more about programming. Before, I’d try to solve the whole problem at once, which is impossible. Now I know how to break it down into small parts, get those working and then put them all back together. I know my computer science course next term will make so much more sense to me because I’ve already applied concepts from it in my programs here. That’s going to help me get my assignments done a lot faster when I return to school.”

On the personal front she observes, “This work term has made me more assertive. I’m more willing to take responsibility, to expect more and to demand more. I’m not going to take a job and sit there doing nothing. On my other work terms that’s exactly what I was willing to do. I was just thankful to have a job. Now I know telecom is where I want to be.”

### *Epilogue to Arlene’s story*

A year later I am browsing the business pages of the newspaper over my breakfast, when I spot a headline about the company Arlene had worked for. Reading further I learn it is closing its Canadian operations and laying-off thousands of employees, amidst an unprecedented downturn in the high technology sector. I reflect nostalgically on Arlene’s enthusiasm for her work, and I ponder how she is now faring.

### *Analysis of Arlene's story*

Arlene's team leader, engineers in her work group and the organization in which she worked placed greater emphasis on learning than she had experienced in previous co-op jobs. They presented her with challenging projects that she could realistically complete during the work term. They helped her to see how her work fit into the overall direction of the company, gave her autonomy in deciding how to approach her work and learning, and provided supports in the form of a community of practice that included regular coaching, readily accessible knowledge resources, and important events such as "inspection meetings." She was also able to see the results of her work put to use in sites around the world. As a result, Arlene was more motivated to learn. She perceived herself to be learning much more than on previous jobs. She also found the experience to be more stimulating than anything she had experienced on campus. The quality and character of her learning affected Arlene's sense of identity. Instead of being a disillusioned student working efficiently but without passion towards the completion of a degree, she became a budding computer engineer with renewed interest in her studies. Instead of dreading the seemingly real possibility of an uninteresting career upon graduation, she developed great expectations for a bright future in the telecommunications industry.

The moments of community Arlene discovered on her work term contributed to her communicative competence, improving her cognitive capacity. They also furthered her technical skills in programming computers. She had conversations with her team leader and senior engineers in "inspection meetings" that, over time, allowed her to query and be queried about the validity of cognitive and technical claims embedded in her computer programs. These moments of community did not closely approximate ideal speech situations<sup>302</sup>, in that the dialogue in them was limited to cognitive and instrumental claims. But they nonetheless taught Arlene a great deal about the rigour and intellectual capacity required in her future profession. She discovered, for instance, that seeking the greatest efficiency in programming a computer through "cut-and-paste"

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<sup>302</sup> For the meaning of ideal speech in the context of this research report, see Table 3.3 in Chapter Three (p. 63).

techniques may not pass scrutiny in a community of professionals who are more interested in the program achieving objective standards of performance under specified conditions--an interest that is validated more through debate about facts and truths (cognitive claims) and effectiveness (an instrumental claim), and less about efficiency (a different type of instrumental claim).

The way Arlene spoke about these moments of community at work made them sound as if they represented the first time she had experienced a communicative form of learning in her degree program. She found this form of learning inspiring. When I probed around this, she admitted to regularly studying with a group of female engineers, implying that her experience with these women was similar to her experience at work. Yet, at root, she understood the study group to be largely about improving efficiency in completing coursework, and not about building a greater understanding of, or appreciation for, applied science or her profession.<sup>303</sup>

Arlene valued and identified more with the learning processes, orientation to learning and related field of learning that she experienced on her current work term than those she had experienced on campus. Leading up to her recent work experience, Arlene viewed most of what she learned on campus (and on previous work terms) as largely irrelevant. With prompting, however, Arlene recognized that through her studies she had learned how to learn about science and technology. She also recognized that some of the “thirty-year old” knowledge she had learned on campus about science (e.g., math and physics) was foundational to her ability to develop leading-edge technologies and interact with the community of engineers at work.

These contributions from her studies notwithstanding, Arlene was adamant that her academic program should emphasize new technologies. One venue in the Engineering program that regularly emphasizes current technologies is the mandatory “Technology in Society” course. But the ideas explored in that course, such as the privacy implications of

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<sup>303</sup> When I asked Arlene about why she studied only with women, her response was also instrumental in its justification: “It’s just easier,” she said. When I probed further, she mentioned that some of the male students behaved badly towards females; however, she said she had never been directly affected by such behaviour. For an exploration of the effects on female engineering students of gendered power dynamics in their academic and co-op programs, see Linda’s story in Chapter Six (p. 173).

advanced technologies, did not enter into Arlene's frame of reference during her work experience. When I brought them up, she observed that the communities in which she is immersed at work do not value a sociocultural viewpoint on science and technology. She also lamented this situation, viewing it as unfortunate that her role as an engineer is "to make technology work, not to philosophize about it."

From the standpoint of the economic system, Arlene's educational experience is a relative success, albeit one that emerged only in the final stages of her degree. She has learned to innovate, creating (part of) a new technology that was put to use in the global economy. She has developed the necessary people skills and identity to participate productively in an existing community of practice in a high-tech workplace. And she has found her intellectual and professional niche. Arlene did, however, experience some difficulty connecting her cognitive competence from campus with what she needed at work. And this negatively affected her productivity. In Habermasian terms, this signifies a minor problem with her *integration* into the *system*. This process of integration could have been improved through educational practices that emphasized her metacognitive development--that is, thinking about her thinking (or learning about her learning).<sup>304</sup>

From the perspective of her lifeworld, Arlene's overall educational experience has been increasingly delimited within a specialized field of applied science. Her communicative competence and technical skill thus largely confined to a subculture in one cultural sphere. The processes by which she has learned have been largely non-communicative, emphasizing successful completion of assignments and tasks. In Habermasian terms, her lifeworld is not highly culturally rationalized. The standards of cultural value into which she has been socialized have emphasized the importance of objective truths and facts, and, above all, effectiveness and efficiency. Beyond one mandatory course<sup>305</sup>, she has not been encouraged within her academic studies, co-op program or workplaces to explore and reflect on the content, process and human

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<sup>304</sup> See Davidge-Johnston (1996) for an empirical study of the importance of metacognition in the experiences of applied science co-op students.

<sup>305</sup> In addition to the mandatory "Technology in Society" course, all engineers at the University of Queensville are introduced through a short course to the code of ethics that governs their profession.

relationships that constitute her educational experience from moral-practical or aesthetic-expressive vantage points. Her initiation to these other domains of learning has occurred largely by chance, in the interstices of her formal studies and work experiences. Yet there is evidence that Arlene desires this to be different.

The state of cultural rationalization in Arlene's educational lifeworld has an impact on her *social integration*. In terms of her moral development, for example, she found herself unable to question how the software she was helping to design could affect individuals or society more generally. Prompted about this, Arlene concluded she was not mandated to think about the potential social consequences of her work. She has been socialized to believe that her professional role is to design the most effective and efficient means (e.g., technologies) to achieve goals set out by her bosses or clients. According to the broader community of engineers of which Arlene will soon be a part, this is only a partially correct understanding. In the province in which Arlene was working at the time, the preamble to the statutory code of ethics for her profession reads:

Professional Engineers...shall at all times act with fairness, courtesy and good faith to their associates, employers, employees and clients, and *with fidelity to the public needs*. They shall uphold the values of truth, honesty and trustworthiness, and *safeguard human life and welfare*, as well as the environment. (Association of Professional Engineers and Geoscientists of British Columbia, 2004, p. 1 italics added).

On the one hand, engineers have social contracts with their clients. These provide for the reciprocal understanding that is necessary for them to coordinate their actions in the economic system.<sup>306</sup> On the other hand, engineers have an obligation to consider the direct and indirect consequences of their work in regards to human welfare. They are required to give equal consideration to private and public needs and interests. In the context of knowledge societies where technological advances have the tendency to outstrip the capacity of people to understand their consequences, engineers must be competent in viewing their actions dialogically, from the perspectives of both the system

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<sup>306</sup> For example, when political decisions interfere with engineering designs, boondoggles and, worse, disasters can happen.

and the lifeworld. They need to see their work from technical, ethical and aesthetic points of view (Moriarty, 2001).

In Arlene's case, a substantial learning opportunity for her to expand her sociocultural repertoire went unobserved and unattended, both in her workplace and upon her return to campus. Along with this lost opportunity went the potential for Arlene to develop a deeper understanding of her obligations as a professional and a more robust professional identity.

### **Valerie's Story**

Valerie's current work term, her last, started with great promise, but it has rapidly deteriorated. The job seemed almost perfect when she accepted it, apart from the fact it paid just above minimum wage. At the outset she was hired as the "Author Relations Representative" for a new company that uses the latest in hi-tech equipment to help writers publish their own books. Her role was to guide authors through the publishing process, ensuring that their needs were met, questions answered and concerns addressed. Valerie felt fulfilled during those early days. The work was fast-paced, creative and involved a lot of personal interaction. It closely related to her studies in professional writing, drew on her technological skills<sup>307</sup>, and represented a useful capstone to her degree.<sup>308</sup> Equally important, Valerie saw two meaningful sociocultural dimensions in her work. She was helping people to realize their dreams of self-expression. And, she was working with new technologies and an innovative business model to democratize the publishing industry.

Two-thirds of the way through her work term, a series of experiences has soured Valerie's initial optimism. She has lost patience with the way the general manager treats

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<sup>307</sup> Valerie learned to use desktop publishing software through a professional writing course and on a previous work term where she published newsletters for a government department. Because her fiancé is a computer science student, she also "plays" with computers a lot at home, where she has learned to administer a small network, design web pages, and troubleshoot hardware and printer problems.

<sup>308</sup> Valerie completed her degree requirements with this final work term, and did not return to campus for further study afterwards. While the official regulations governing co-op at the university stipulate that students must not end their degrees on a work term, in practice this sequence is becoming increasingly common, according to Valerie's program coordinators.

female employees in the office. On a number of occasions she has witnessed him berate them to the point of tears, only to storm off without an apology. Valerie has not yet been a direct recipient of his anger. But she believes it is only a matter of time until she will be, particularly because his choice of victim seems arbitrary.

When Valerie started she was hoping to get into a permanent job with the company. Now she takes solace in the fact she only has a few weeks left. Still, she is concerned about the negative effect this manager's behaviour is having on the other women in the office, particularly for those who feel "stuck" because they need the work to support their families.

Unfortunately, this is not Valerie's first exposure to a troubled work environment. She endured a similar situation on her first work term, which she spent writing training manuals for a local engineering firm. During that term a senior partner in the firm continuously patrolled the office to inspect people's work and ensure that they were not wasting time. "In itself, that wouldn't necessarily be a bad thing," Valerie told me in a previous interview, "but this manager's approach was just so negative. He seemed to spend his whole life looking for people doing things wrong or trying to rip him off." While this manager's scrutiny was directed at all employees, the women who worked in the front office with Valerie seemed most affected. "He made each of us cry at some point," Valerie confided. When I asked Valerie what effect that first work experience had on her, I was troubled at her response. "Actually, it kind of sucked the life out of me," she told me, "I started drinking more than usual. I'd come home at the end of the day and either smoke a joint or drink some wine."

"It sounds like that change in your behaviour bothered you," I had said, stating the obvious.

"It did," she had told me. "But once I'd finished that term, it stopped. I no longer came home at the end of the day feeling like, 'Gee, I'd like to obliterate everything I did today.' I wasn't becoming an alcoholic or anything. I just needed to come home and de-stress."

Memories of our previous conversations come back to me as Valerie and I talk about her current work term over a cup of tea. It's a blustery Thursday evening at the cusp of winter. Valerie arrived late, rushing in slightly out of breath from another minor crisis at work. She is nonetheless her usual upbeat and energetic self. I enjoy meeting with Valerie. She often serves her words in a light sauce of irony, garnished with soft laughter. I find it easy to talk with her because we share a similar knowledge base. Valerie's favourite courses at university have been with an anthropology professor who teaches from within the critical theory tradition, the same tradition that informs the conceptual framework for this research. As she pointed out early on in the study, this mutual academic interest and background allows us to talk in code.

"It sounds like there's some sexism going on this term," I offer, after Valerie describes her recent experiences to me.

"There's definitely a lot of gender stuff going on at work," she responds. "The general manager is one thing, but there's also a little boys' club that makes all the decisions."

"Do you mean an official boys' club or an unofficial one?" I ask.

"Oh it's official, alright. The positions are totally segregated. There's the receptionist, the publicist, the girls who work in author services and the bookkeeper. They're all women. But it's the guys who are the managers. They sit in the boardroom and discuss what's going to happen."<sup>309</sup>

"And where do you fit in this picture?"

"Last month the boys in the boardroom decided to move me from author services to technical support. So now I'm in with the guys who do the technical work."

I remember reading in Valerie's journal how this change in job duties has been another disappointment. Instead of working closely with the authors, she is now responsible for ensuring that the layout of their books is compatible with the publishing software and hardware. As a result, her time is spent mostly solving technical glitches,

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<sup>309</sup> The four managers in the company are men, while the twelve administrative personnel are women. Valerie observes that the general manager's anger is directed most often, though not exclusively, at the women.

such as “postscript errors.” While she sees value in this work, and recognizes that she has become the in-house expert at it, she longs for the job to be more creative and less technical. “The thinking I do at work has little to do with what I’ve learned to do at university,” she wrote in her journal. “It’s a linear, troubleshooting approach: Go back to where the system worked and figure out why it stopped working afterwards. In anthropology, I’ve been taught to think more holistically.” I make a mental note to return to this topic.

“How is the sexism at work affecting you?” I ask.

“It’s kind of weird because I don’t feel it affects me as much as I see it affecting other women. There are some pretty clear distinctions and the lines are drawn,” Valerie muses. “But I’m pretty good at ignoring it.”

Similar to some of the other women in the study, Valerie provides an ambivalent view on her experience of sexism, whether at work or university. I decide to push her further.<sup>310</sup> “How specifically does it affect you?” I ask.

“You mean apart from my fear and loathing of the GM?” she responds with a giggle.

“Sure.”

“Well, in some situations it’s clear that I’m not being taken seriously simply because I’m female. But I’m getting beyond that now because I’ve proven to them that I’m good at the technical stuff.”<sup>311</sup>

“So, that’s your way of dealing with the gender politics at work: To show them you’re as good as or better than they?”

“Not consciously. In fact, when I come up against sexist attitudes it’s usually way after the fact that I notice them. It’s only in retrospect that I think, ‘Oh, maybe that’s why he wasn’t taking me seriously’.”

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<sup>310</sup> See the stories of Linda and Sarah (p. 173 and p. 288 respectively).

<sup>311</sup> Valerie’s fiancé with whom she lives is a computer science major. She says she has learned most of her technological skills by tinkering alongside him on a small network of computers and other hardware they have installed at their home.

I ponder Valerie's responses, comparing the ambivalence I hear in them with my knowledge that she has taken two women's studies courses at the university. "Has university done anything to help you to deal with these kinds of issues at work?" I inquire.

"I know that I've become somewhat more sensitive to them over the last couple of years," she responds. "Some courses have raised my awareness."

"Do you think it would do any good to approach this issue head-on at work?" I push.

"I don't think so. To tell someone they're being sexist is just going to make them more so. It will just polarize things and make gender the central issue. I don't think it should be a central issue. It's really just something we should be able to get past fairly quickly."

Sensing that this topic of conversation has run its course, I steer us in a different direction. "How do you feel about your new duties?"

"I'm not happy with the fact they didn't consult me on it," she says. "But, it was a good time to change because management had made our jobs in Author Services miserable by altering--unilaterally, I must add--the agreements we had with our authors. This resulted in higher costs and fewer royalties for the authors. So we had some profoundly angry clients to deal with."

"What induced the company to do that?" I react.

"I don't know for sure, but I think they're in a financial crunch. I do know that what they did seems unethical and I was happy to have the excuse not to take part in it."

"So, what about the content of the new job, the learning involved?" I move us along.

"It's okay. It's work, really." Valerie muses.

"What do you mean by 'It's work'?"

"Well, I've never been as stimulated intellectually at work as I have been at school," Valerie explains, then adds with a characteristic laugh, "I mean, learning how to

use a computer or a certain piece of software is not on the same plane as trying to figure out why humanity is the way it is!”

Valerie’s comments remind me of a passage I recently read in her journal, where events at work prompted her to reflect on her education. She wrote, “I find myself with a liberal arts education in a society that places increasingly less value on such a thing. At the same time, I have learned so many things that will be, and already are, sources of value as I negotiate my way through life.” I recall how redolent this passage was of the experiences of the other humanities students in the study, and I begin to ponder how Valerie’s liberal education can help her to negotiate her way through her current work term. So I ask if the humanities can help her to better understand her experiences at work.

“It’s weird you should ask that question,” she responds enthusiastically. “Just the other night my fiancé and I were talking about this. So I have a good example for you.”

“Great!”

“In the last month they installed some software at work that requires each of us to track and record exactly what we do and how long it takes us to do it. I was describing to him how I was feeling about this, and I got to thinking about a great book we read in Dr. Smith’s course. It was by Ursula Franklin.<sup>312</sup> In the book, Franklin describes how there are prescriptive and holistic ways in which you can approach work and technology. The latter is craft-like, where workers retain control over the work process and end result. The former is like an assembly line. Franklin argues that the prescriptive approach is dehumanizing and, in many instances, unproductive. Having experienced this approach at work lately, I agree with her. It’s like having someone looking over your shoulder all day long. Besides, we’re spending so much time tracking and worrying about our work that we’re not actually doing our work.”

“Interesting. Can this observation help you at work?” I prompt.

“Do you mean should I share these ideas with my boss?” she asks with rhetorical flourish. “Not likely. I’m just going to buckle down and get through it. I don’t think anything could be gained by confronting him.”

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<sup>312</sup> See Franklin (1999).

Valerie sips the last of her tea, collects her thoughts and continues, “I think in cases like this one--you know, bad work experiences--most co-op students would take a similar approach. Maybe that’s a hidden part of co-op: To teach you to be like that in the workplace, to teach you to be a good worker.

“What do you mean by ‘good worker’?”

“Well, like, ‘Sit down, shut up and do your work’,” Valerie laughs. “The whole thing is built around that really. To wit, my main goal now is to leave on good terms and get a nice reference letter.”

I think about the different ways Valerie is talking about her experience. Her enthusiasm for what she has learned at university stands in stark contrast to her jadedness about work. I share this insight with her.

“The way I look at almost any weighty question is really informed by what I’ve learned in anthropology,” she elaborates. “The lessons that it taught me are really important things for me to know for my life<sup>313</sup>; whereas, at work, I’m basically just a cheap source of labour. I don’t think it has to be like that, but co-op students know that many employers use them that way.”<sup>314</sup>

“So, does that mean you can’t learn anything at work?”

“No. You can always teach yourself if you’re into what you’re doing.”

“But you’re not into it?”

“Obviously not at this point.”

I wonder if Valerie has thought about making a living out of anthropology in addition to having anthropology guide her life. “What about a future doing something anthropological?” I ask.

“I don’t see myself actually pursuing anything that you would think of as anthropological as a career,” she responds without hesitation, revealing that she has

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<sup>313</sup> Valerie qualifies her respect for anthropology, saying, “I don’t mean to hold it up as the end-all-and-be-all. There are a lot of problems with anthropology, especially with colonialism in its history.”

<sup>314</sup> Every student in the study who had completed more than one work term said that they or one of their peers in the program had experienced the feeling of being cheap labour. Three of the professors who participated reported they hear this complaint from co-op students. See the interviews with Dr. Redding, Dr. Smith and Dr. Brown (p. 191, p. 245 and p. 283 respectively).

already considered this possibility. “That’s not really a viable option, unless you have a PhD, which is not very appealing from a financial perspective. I’m already in considerable debt as it is.”

While our conversation has retained a jocular tone, I’m beginning to feel like it has led us into a vaguely depressing cul-de-sac. Groping for a way out, I ask if there’s anything people at the university, such as her co-op coordinator, can do to help her to remedy the current situation.

“Believe me, I’ve thought long and hard about that,” she responds. “But I’ve come to the conclusion that there is a troubling conflict in the co-op coordinator’s position between needing to make the employer happy and working in the best interest of the students. In practice, the two things are kind of mutually exclusive.”

“So you fear that if push comes to shove your coordinator will side with your employer?”

“Sure. He has to. There are a limited number of employers, often not enough for the number of students. So he can’t agitate my boss for fear of losing a future placement opportunity.”

“Is there anything else that could be done?”

“The university could spend some time teaching us what our rights are as employees, and how we can advocate for those in difficult situations at work,” Valerie suggests, adding the co-op program could bring students together after their work terms to discuss difficult workplace issues and how to handle them. Then, with a characteristic laugh, she adds, “But, from a marketing perspective, do you really want to create a bunch of students who are much less malleable than students from another university?”

“Good point!” I chuckle. Then, becoming more serious as I realize our final interview is nearing its end, I share with Valerie the metaphor of the cul-de-sac that has coalesced in my mind as we’ve been talking.

“I don’t see it that way,” she retorts. “Look. The co-op has been a way for me to feel like I was going to have somewhere to go as a result of five years at university. It has done that. It, along with my professional writing, has given me skills and definitely made

me more employable.<sup>315</sup> Now, has it made me a better person? I don't think so. But, anthropology has done that for me instead. The dilemma I have to confront now is that what I've learned in anthropology, and the things I've learned to value through anthropology, have made me not want to go work in the corporate world, at least as I've experienced it so far!"

### *Epilogue to Valerie's story*

Valerie successfully completed her work term. She did not return to campus afterwards, as she had fulfilled all of her academic requirements for graduation before entering the work term. She attended her convocation four months later. In the intervening period she read a lot, tinkered on her computer, planned her wedding and worked part-time as a bartender.

### *An interview with Dr. Smith, Valerie's favourite professor*

In interviewing Dr. Smith I was interested learning more about her educational approach with undergraduate students. I wanted to hear about her teaching on the topics of work and technology. I also wished to learn about her interactions with co-op students.

Dr. Smith is a third generation anthropologist with a keen interest in cultural anthropology. However, unlike her parents and grandfather who held permanent professorial posts, Dr. Smith ekes out a relatively precarious living teaching from contract to contract in the university's small department of anthropology.

Dr. Smith finds the tenuousness of her employment, along with ever increasing class sizes, draining.<sup>316</sup> Surprisingly, she has not lost any of her enthusiasm for teaching in the university context. "I am energized by teaching," she tells me. "The thrill of the unknown is what excites me--you know, what is a student going to say, what is going to come out of my mouth once we get into a dialogue, how is this information going to be interpreted? I like that kind of participatory approach, even in large classes."

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<sup>315</sup> Valerie writes in her journal, "I realized the other day that I actually have all of the skills necessary to produce a newspaper or magazine. My education provided the writing and editing skills, and co-op has given me the layout, printing and publishing skills."

<sup>316</sup> Dr. Smith explains that the university administration uses first and second year anthropology courses as "cash cows."

Nor has Dr. Smith seen her love of anthropology fade. “I teach anthropology as a perspective, almost as a life-way,” she explains. “I don’t claim that it offers all the answers, but I do try to show that once you’re immersed in it you can begin to connect very disparate kinds of things together. So you can talk about the WTO protests and look at cutbacks in health funding. Then you can look at what’s happening with people who live on a garbage dump in the Philippines, and you can see all these things as being connected. You can get the historical framework. You can get the political bit. And you can get the cultural attitudes that connect them. Then you can say, ‘Okay, now what does all of this mean for me?’”

When I tell Dr. Smith that it sounds like she tries to get students thinking in holistic and socially critical ways, she agrees: “Sure, I want to be a little subversive. I want to destabilize and to shake up their comfort that all is well with the world, because all is not well.” But she adds an important caveat to this approach: “Obviously I can’t prescribe to students what or how they should think. That’s not on. However, I can talk about the impact anthropology’s had on my life. So, I describe the passion I feel for it. And I also tell them about assumptions that I’ve made in my own work that led me into deep trouble.”

For Dr. Smith, teaching and learning is an intensely personal activity. As she says, “It isn’t about the presentation of facts. I want students to critically engage with a body of knowledge, to be transformed by it and ultimately, I guess, to transform their world with it.”

Dr. Smith’s vision for undergraduate education is quite ambitious, but it is clearly something that Valerie has taken to heart. Indeed, Valerie’s dilemma rests in the gap between being transformed by her educational experience and acting in concert with this transformed sense of being in the world.

When I ask Dr. Smith what gets in the way of her educational agenda, she responds, “I have a really hard time with this emphasis on skill training and on reducing learning to whatever can be put on an overhead, loaded on a web page or described on a

résumé. It's not that there aren't identifiable skills in anthropology. There are lots.<sup>317</sup> But with what I want to teach, well, what kinds of skills? I want them to question their worlds. I want them to be engaged fully in this life. And I want them to make a difference in whatever it is they decide to do. Now how do I reduce that to skills?<sup>318</sup> How can that be put on a résumé?"

For her, the contemporary fixation on skills and facts has become a prescriptive technology that conditions students to focus on the economic as opposed to the social or cultural contribution their education can help them to make. She continues, "What troubles me with the emphasis on skills and the ever-closer connection between knowledge and economy is both focus on taking a complexity, breaking it down into little tiny bits and then reassembling it so that it becomes more profitable or more manageable." In contrast, Dr. Smith tries to convey to students, "Hey, the world is complex, you better get used to it. Complexity is part of the human condition."

I tell Dr. Smith that Valerie and some of her peers in the study have picked up on this and similar messages in their experience with the humanities. I also tell her how they worry for their financial futures if they do not focus on building personae around skills, in particular technological ones. And I tell her how they struggle to preserve their love of the humanities in the face of a labour market and pervasive sociocultural scene that devalues their passions. At this point, she jumps in, "I'm sorry to hear that, but I'm not surprised. In fact, I've heard some of this too. Most of the co-op students I know have said their work terms were basically an opportunity for employers to get some work done at a minimal cost, and that they didn't learn very much as a result."<sup>319</sup> I ask how her again how her teaching fits into this rather dim scenario we have just devised. She responds with candour that she doesn't know. Then she adds, "Students ask me all the time, 'What can I do with anthropology.' I have to tell them there's really not that much they can do

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<sup>317</sup> Dr. Smith cites the lab skills associated with osteology as one example and archaeological excavation skills as another.

<sup>318</sup> Dr. Smith says that, to some degree, she can describe her teaching as developing critical thinking skills, which she identifies as "uncovering assumptions, contextualizing material in its historical context, that sort of thing."

<sup>319</sup> Dr. Smith observed in our interview that her view of co-op rests on a very small sample of students.

directly as an undergrad.” Pausing to reflect on the implications of this, Dr. Smith continues dryly, “I hate to say it, but a lot of students are going to be marginalized in their work. A lot are going to find that they are working in service jobs--not just data entry, but driving people, carrying people, cleaning up after people, those kinds of service jobs. That’s one of the central contradictions of the so-called knowledge economy.” I ruminate that, while possibly true, this sounds somewhat elitist, on the one hand, and defeatist, on the other. So I ask Dr. Smith if she shares this stark view of reality with her students.

“Sure, but I try to frame it differently,” she responds. “I try to get them thinking that maybe the problem is not with the education they’re getting, but with the way work itself is organized.” Again after some reflection, she continues, “Look, I’m not a pessimist about this at all. I’m not saying that skills and jobs are unimportant, but I hope that my students come away with the message that a whole lot more is needed in society than that.” It is at this point that Dr. Smith tells me she has concerns about the rapid rise of co-op programs. “I don’t want universities to basically become production sites for the labour market,” she confides. “I think that encourages complacency. It provides a means for some students to just go, ‘Well, okay, I can’t use all this stuff I’ve learned. I can’t use critical thinking, so what I need is to get skills.’” But, she adds, “If just one of them says after a co-op term, ‘We need to change the way work is organized,’ then I guess I’d see that as a real accomplishment.”

Staying true to Dr. Smith’s tutelage, Valerie has asked such a critical question. The dilemma she now faces is how to take a critical insight and use it to deconstruct and transform actual practices in workplaces.

***An interview with Richard, Valerie’s co-op coordinator***

In interviewing Richard, I was interested to learn more about he works with students who are having difficult experiences at work.

In contrast to the approach Dr. Smith encourages, Valerie’s co-op coordinator, Richard, promulgates a “pragmatic” mindset to guide students such as Valerie through problems and dilemmas they face at work. Richard candidly admits that Valerie’s final work term is a dud. “She’s ended up in a growing company that’s just not ready to tap her

considerable skills and creativity,” he observes. “That’s a shame because she’s a very creative person.”

When I ask him what he does to help students in situations such as Valerie’s, he reports that his main strategy is to get students to focus on the positive aspects of the experience. “I’m an optimist,” he says. “So I try to get them to look at what they can take pride in and what benefits they might secure in the rest of the term.” But, Richard also wants the students to learn something from the negative aspects of their experiences. “I want them to know that in work, as in life, it’s not always going to be sweetness and light,” he explains. “So, I encourage them to create a survival plan to navigate through the darkness of office politics or other issues they face.”

I find it interesting that Richard makes reference to the murky human complexity to which Dr. Smith refers, but he offers a very different approach to navigating it. He emphasizes acceptance of these conditions and survival in them, whereas Dr. Smith encourages critical examination with a view to generating strategies to transform them. However, Dr. Smith does not actually have to deal with situations such as Valerie’s. She doesn’t have to counsel Valerie, nor does she have to potentially confront Valerie’s employer if the situation worsens. While her transformative approach is action oriented, it thus remains a predominantly academic exercise, in that it is limited to interactions on campus. In contrast, Richard actually has to help students wade through mucky situations like Valerie’s in workplaces.

I briefly share with Richard my observations on Valerie’s dilemma, the role that Dr. Smith’s tutelage has evidently played in it, and the stark contrast of his approach. He responds with a grin, “The University is a place that champions the ideal and many students take courses that are based on ideals. So in co-op sometimes the ivory tower metaphor clashes with the hard reality. There’s definitely a tension there.” I ask Richard if the tension he describes between ivory tower and hard reality creates contradictions for him in his work. “It’s not an idealistic process,” he explains. “We’re talking about human beings here, so it can’t be. There are compromises required. I just accept that and go from

there. I don't worry that I'm compromising some precious value or other. I don't believe that's what's going on."

Certainly, Valerie's decision to ride out her current work experience coincides with the route of compromise Richard champions. But there is a key difference: Valerie feels like she is betraying deeply held personal and academic values. There is a gap in the personal and intellectual support system at the university to help Valerie through her current dilemma. Her primary contact during work terms does not engage at the level of deeply held values; while her most admired contact during academic terms does not engage with the practical problems associated with actualizing personal and academic values.

I tell Richard that a number of the students in the study feel they cannot, or should not, rely on their coordinators for help in resolving workplace dilemmas.<sup>320</sup> I relate to him how some of the students, including Valerie, fear that any attempt to redress problems with their employers may jeopardize positive employment references for them. Careful to speak more generically, I recount how some of the students feel that their coordinators' interests are more closely aligned with those of employers than of students, because there is a limited supply of willing employers.<sup>321</sup> And I ask him if these concerns are legitimate. "Sure, they're all real concerns," he responds. "But, look, it's going to be different in every case. I prefer to look at the overall package." I ask him what he means by this and he explains, "Say we do 150 placements and of those 90% are win-win and 10% are, like, win-okay or win-fail. That's pretty good. I bet we only see one blowout a year where it's fail-fail."

### *Analysis of Valerie's story*

One of the most striking features of Valerie's story lies in the dilemma she articulates at the close of the interview. Being employable at the end of her educational

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<sup>320</sup> Linda and Arlene reported they felt their coordinators were neither equipped to do this kind of work, nor interested in doing it. Warren told me that his coordinators never contacted him during his work terms, making the issue of their ability to help him moot. Sarah and Deborah appreciated that their coordinator listened to their concerns, but they did not consider it part of the coordinator's job to resolve them.

<sup>321</sup> Valerie, Edward, Linda and Arlene observed this.

odyssey is not enough. She does not want to resign herself to fitting into the existing system of economic production. Such a role does not appear to be intellectually or personally fulfilling, particularly because of its technological bias. Nor does Valerie want to slot herself into the existing social relations of production. Such a role does not chime with her ethical sensibilities and expressive interests, as it implies she must tacitly accept cultural values and practices that are based in and sustain arbitrary and illegitimate forms of gendered power. But she views her capacity to resist the pull of these roles to be limited. She cannot envision pursuing her passion for anthropology via graduate school. She has difficulty imagining how the values and competence she has developed through her studies in anthropology will complement her working life in the future. She feels her academic background may even interfere, keeping her from employers seeing her as a “good worker.”

Valerie is not alone in the contradictions she faces. Her story is similar to tales told by other humanities students in the study.<sup>322</sup> It differs mainly in that it elaborates more starkly the problems all of the humanities have in integrating their academic and work experiences, and the implications these problems have for their academic and work lives.

Valerie’s optimism at the beginning of the work term stemmed from the potentially multi-dimensional character of the learning that she was undertaking. She was going to work in a setting that brought together self-expression, culture and technology. True to form, she had framed the work term from an anthropological perspective. She expected it to be a field experience where she could test and apply in a holistic way the competence, values and identity she had developed through her studies. Her subsequent disillusionment was as deep as her optimism had been high. Instead of experiencing her ideal, she encountered troubling cultural values, gendered power dynamics, questionable ethics, competitive business pressures, an emphasis on technology instead of culture, and limited opportunity for self-expression. She deemed her workplace illegitimate as a result.

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<sup>322</sup> Sarah’s story in Chapter Eight (p. 288) offers an exception to this pattern.

And this interpretation negatively affected her motivation to participate longer term in the economic system. From a human capital standpoint, it was not an optimal experience.

The problems Valerie encountered at work, however, offered an even greater multi-dimensional learning opportunity than she had anticipated, only of a dramatically different kind. To have seized this opportunity, her learning at work would have had to have been socially critical. Valerie was capable of framing most of the troubling aspects of her experience using socially critical concepts from her coursework. For example, before entering the work term she had learned that sexism and prescriptive technologies are prevalent in contemporary work life. Issues such as these had fueled her anthropological imagination, particularly in Dr. Smith's courses. But Valerie was not well equipped to learn in a practical sense about these issues by taking them up and working through them on-the-job. To do so would have required her have become activist in the workplace, a role she recognized would have carried significant personal risk.<sup>323</sup> If Valerie had been able to successfully intervene in the workplace, it would have improved her motivation, and likely her performance, at work. It also may have helped improve management practices and, with this, the overall performance of the company.

Valerie's story demonstrates it is one thing for co-op students to conceive and analyze difficult sociocultural issues on campus, but it may be a different matter for them to apply their emerging sociocultural competence when they are subject to, or confronted with, similar issues at work. Compared to most of the other students in the study, Valerie had a head start on these issues. She had been exposed to socially critical concepts, values and analyses about them in her courses. But she was not well positioned at work to test these out, let alone put them into practice. To do so, Valerie would have needed personnel at the university to intervene in strategic or communicative ways, as appropriate, to help foster a workplace context that was safer for her to practice socially critical forms of competence. Valerie's story reveals how support such as this is not readily put in place in co-op.

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<sup>323</sup> Valerie also suggests the university would be at risk of losing the support of employers if it were seen to be encouraging students to be activist at work.

Valerie's problems with integration on her recent work term occur in her academic lifeworld, at the border where it meets the economic and administrative systems. From the perspective of her lifeworld, which is highly rationalized,<sup>324</sup> Valerie experiences a high-tech workplace that needs substantial modernization in terms of its management practices and the division of labour they engender. She recognizes that the problems in her workplace are, at root, sociocultural. They concern norms, values and social practices. But these problems also have systemic dimension. They have become a function of the system of management in the company. Following a Habermasian model, problems such as these ultimately require communicative solutions. Valerie would therefore have to discover how to pursue a discourse<sup>325</sup> with her bosses and co-workers that explores the legitimacy of existing workplace norms and the validity of the cultural values and practices associated with them. But her workplace is not conducive to ideal speech.<sup>326</sup> Her academic experiences and participation in co-op have not helped her to adequately develop the "practical" side of the moral-practical form of communicative competence, which involves learning how to be politically effective. Valerie intuits this. She wishes she had learned through co-op more about her rights as an employee and how to advocate for them. This would have allowed her to rationalize her lifeworld even further. It would also have allowed her to participate more effectively in the system.

From a Habermasian perspective, border disputes such as the one Valerie faced represent important sites of learning (Habermas, 1989; Braaten, 1991). They are where activism takes place, and where social progress can be forged through a dialogical process. These disputes require and develop a mixture of communicative and strategic

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<sup>324</sup> Her courses in cultural anthropology have prompted her to develop and express a reflective attitude towards different worldviews and standards of value (including her own), emphasizing how these frame interpretations of experience and social action. This meta-cultural competence enables her to readily interact in and adapt to different cultural spheres and contexts, including co-op work sites. Valerie has also taken a keen interest in socially critical approaches to cultural anthropology. She has developed a degree of competence in a specialized subculture that emphasizes critical reflection on worldviews and cultural values in terms of the negative implications these have, when expressed in practice, for specific groups of social actors. Valerie has been socialized to see that her current work context could use her specialized competence.

<sup>325</sup> For the meaning of discourse in the context of this research report, see Chapter Three (p. 75).

<sup>326</sup> For the meaning of ideal speech in the context of this research report see Table 3.3. (p. 63).

competence. At different moments, they call upon idealism and pragmatism, cultural reflexivity and political effectiveness. As Richard, Valerie's coordinator says, "It's not all goodness and light" in workplaces. In Valerie's case, her most recent experience represented an opportunity to turn a "win-fail" situation into a "win-win", paradoxically, through negative, socially critical means. At the same time, it also risked creating a "blow-out."

### **Frank's story**

For his final work term, Frank accepted an 8-month job with a growing software company located in an affluent suburb of Vancouver. He works in one of those low, reflective glass and brushed-metal buildings that are *de rigueur* in the high-tech industrial parks that have sprung up on the periphery of most North American cities. Frank's building, similar to those around it, is remarkable in its anonymity. The front door is like any other rubric in the façade. Open the door and a young woman greets you from behind a stylish reception counter. A small microphone hovers in front of her mouth, held there by a tiny bar that connects to an earpiece. She signs you in, gives you a visitor's pass, alerts your host and provides directions, while simultaneously transferring other clients on the phone.

Frank's floor is divided into four quadrants, each populated with cubicles for approximately forty employees. At the center of the floor is a fully enclosed circular structure, containing four pie-shaped offices. This is where the Directors sit. Their offices have solid inside walls. Floor to ceiling windows make up their curved edges, providing each director with a vista on his<sup>327</sup> respective quadrant of the floor.

Frank sits in a sea of chest-high cubicles in the programming quadrant. An array of photos and Dilbert cartoons are tacked in slightly chaotic clusters on the stunted, impermanent walls. Frank's desk forms an L-shape along two sides of his little space. His computer perches diagonally in the corner, with sticky notes bearing cryptic reminders adorning the monitor. A short bookshelf stands against one wall, laden with software

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<sup>327</sup> All the directors on this floor are male.

manuals, binders, a few computing textbooks and, incongruously, French, German and Spanish dictionaries. Besides an ergonomically correct chair, there is no other place to sit. Frank calls this space his gopher hole. If he pops up his head for too long, his Director invariably shoots a severe glance his way.

Frank found it difficult to adjust to this work site. When he described it to me in our second interview, I could immediately understand why. By that time, I'd already come to think of Frank as a kind of postindustrial Renaissance man. During his academic terms, he makes an effort to take courses from a diverse range of disciplines, such as philosophy, literature, fine art and biology, in addition to his mandatory studies in computer science. He plays competitive rugby and participates on a range of intramural sports teams. He enjoys doing graphic design on his computer, plays the trumpet and volunteers as a first aid attendant at community events. He works part-time in the computer lab in the fine arts faculty and helps out on weekends at his parent's corner store. Despite this intense and varied schedule, Frank always finds time to go out with friends on Thursday nights, which are reserved for foosball and beer at a local pub.

Frank has an important and stressful job. He is responsible for assembling the French, German and Spanish versions of the company's flagship software product. These versions are crucial to the sales strategy for Europe, and Frank has been given eight months to put them together. His work involves contracting and managing translators, programming translated material into the software, coordinating software testing for use in the context of European systems, and resolving technical problems. This is a big challenge, and Frank is pulling long hours to live up to it. Many nights he goes home for a quick dinner and then returns to work for two or three more hours. He is rarely alone on these nights. Many of his co-workers also work late, and his director is invariably there.

Frank doesn't really mind these long hours, even if he regularly misses rugby practice on account of them. He sees this hard work as an investment in his future. But he hopes that his life won't be like this forever. He would appreciate it if there were greater social interaction in his quadrant. Not only would this help him to solve some of his

technical problems more quickly, but it would also make the days more pleasant and meaningful.

Frank yearns to get to know his co-workers better, as many of them come from elsewhere in the world--Romania, China, Germany, South Africa, and England. Having left his lifelong home in Queensville for this work term, he sees the experience as a chance to get to know more about the world and his place in it. Working on a project that allows him to learn about different languages has heightened this interest. He sometimes finds himself daydreaming about moving to Europe and immersing himself in a new linguistic and cultural milieu. He would love to ask his co-workers about their lives. But, everyone just seems so busy.

The gravity of this workplace and the amount of time he spends in it has clarified a number of issues for Frank. During co-op terms he relinquishes the variety he enjoys at school. His previous work terms made up for this problem by allowing him to meet lots of new people with whom to do things after work and on weekends. But this term has neither the variety nor the sociality he craves. In addition, he is still coming to grips with his impending career in computing. It was not his preferred field of endeavour, but he is pursuing it for its promising job prospects. Based on his courses and work terms so far, Frank is not sold on the idea of building a life in computing. On the one hand, he finds the studying and work to be too solitary and technical. On the other hand, he worries that when he graduates he will be missing many of the skills required to be successful in the field, despite completing four co-op work terms.

Frank cites three factors that have conspired to produce his sense of incompetence. First, in order to pursue a broad range of intellectual interests, he has only taken the minimum number of computing courses required to graduate with a major. Second, in his view, the quality of instruction in the computer science department has been below par. He blames this on the large proportion of courses he has taken that were taught by graduate students rather than professors.<sup>328</sup> This situation was created, in part,

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<sup>328</sup> Frank reported that in the last four academic semesters only one of his courses in computing was taught by a professor, and that not all graduate students are poor teachers, just as not all professors are good ones.

by his co-op schedule, which caused him to be on campus in the summer time.<sup>329</sup> Finally, Frank feels that his co-op jobs have not pushed him far enough in terms of technical skill development.

In the first two terms he worked in user support.<sup>330</sup> In the last work term he helped to develop databases as a member of a large team, but the project he was working on was shelved near the end of the work term for business reasons, and this made Frank feel like his work was not well regarded. His current term is definitely more challenging than the others, although this is more a function of the sheer volume of work than it is about technical content. In fact, the company changed Frank's job when he arrived from one that was going to have him do extensive programming in the latest operating system environment, to one that is largely about translating existing content and altering the user-interface. This change was a big disappointment for Frank, as he took the position in order to improve his programming skills and get leading edge experience. In addition, he was told he would receive at least a month of formal training. But that hasn't materialized either. His work has instead been "a trial by fire."

Frank is now in the last month of his work term. In approaching our final interview I am interested in exploring how spending long hours in a "gopher hole" has affected his learning and social development.

"You mentioned in our last conversation that you had given up a lot of your life for this job. Has there been any improvement there for you?" I begin.

"Not really. I'm actually working even more now," Frank replies. "Doing anything else seems a long time ago, far away."

"How is that affecting you?"

"I'm okay, mainly because it's almost over," says Frank. "But I wonder about the others here who are working just as hard, with no end in sight. That's a little disturbing. Most of them are already kind of anti-social, and that's only going to get worse if all they

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<sup>329</sup> University of Queensville is not on a trimester system. A limited range of courses are offered in the summer, usually taught by contract instructors such as graduate students or recently minted PhDs.

<sup>330</sup> Similar to Warren (see p. 194), Frank believes that work in user support does not draw on or relate well to studies in computer science, although it may represent a useful experience for those who are new to the workforce.

do is work. Or, are they going to burn out? Either way, if this is how high tech work is going, we're headed for some social and economic problems."

"Have you become anti-social this term?" I ask, wondering if part of Frank's concern for others stems changes in his own state of being.

"In relative terms, yes. But, I took a chance and started organizing social events around here."

"Oh, yeah?"

"The company recently bought a foosball and pool table for the staff lounge, so I started a tournament. It makes lunchtime more fun and gets people out of their cubicles," Frank explains. "Then, I progressed to bowling, the climbing gym and a pub crawl after work."

"How has the response been?" I inquire.

"You pretty much have to drag people out kicking and screaming," he says. "But it's getting better."

"What does your Director think about all of this?" I probe.

"As I've told you, he's sort of a business only type of guy who's producing a hundred and ten percent all the time. He even speaks and types fast. Basically, if there is anyone you should not mess around in front of, this is the guy," Frank responds. "That said, I've managed to talk him into playing laser tag with us next Wednesday. So, maybe he does have a fun side. We'll see."

It does not surprise me that Frank has managed to safely extract himself and others from their respective gopher holes. Given everything I've learned about him, I didn't really expect anything less. But I wonder what his efforts in this regard have taught him about himself and his learning.

"How has this whole experience played into your personal and intellectual development?" I prompt.

"It's been a test to be surrounded by such a different culture than I'm used to," he responds. "But shortly after our last interview, I asked myself what kind of lemonade I was going to make with the lemons I'd been given."

“So how does that lemonade taste to you now--bitter or sweet?” I ask, playing along with the metaphor.

“A little of both,” says Frank. “I’ve reinforced my organization skills by seeing what a balancing act it is to manage a major project. I’ve also developed my social skills-- I mean, loosening up this place was a real coup. And I also had to influence external contractors and people inside the company to do things for me in order to get my project done.”

“So, that’s the sweet part,” I comment.

“Sure, but I didn’t really develop my technical skills. That’s the sour part, especially because I’ve spent so much extra time here.”

“In hindsight, was all that time necessary?” I ask.

“No. Basically, I had to learn everything on my own. If I’d had someone with more experience to bounce ideas off of, I could have worked smarter, not harder. But the place is not set up that way.”

I wonder how the lack of technical challenge and collegial support has affected him. When I ask him about this, he responds, “In some ways, it’s made me rethink the whole technology related industry. I’m not sure the work content is interesting enough to keep me in it, especially if I have to give up all the other things I enjoy doing for it.”

This is not the first time I’ve heard reservations from Frank about the technical dimension of his chosen field. On his previous work terms he has made up for this issue by enjoying an active social life with co-workers. And when he’s on campus he makes up for it by taking courses from a wide range of disciplines. But his experience on this work term has distilled the issue.

“So, what would you prefer to do?” I ask.

“If money was not an issue and, therefore, if work was not an issue, I could probably spend my entire life at a university, getting one degree after another,” replies Frank.

“Why’s that?”

“At school you’re able to use your mind to creatively do things, to explore things. You just let the wheels turn over in your head and crank something out. Whereas at work everything is about what your employer dictates, and you just go through with it precisely, step-by-step.”

“Is the contrast between school and work as stark as that?” I ask skeptically, thinking Frank is romanticizing the university because he’s been away from it for so long.

“Probably not,” he admits. “You are sort of restricted by what the assignment dictates, especially in computer science. I guess I’m talking about courses in philosophy, literature, or fine art.”

### ***Epilogue to Frank’s story***

Frank successfully completed his projects and returned to campus for a final semester of coursework. He then returned to work at the software company on a fulltime, permanent basis.

### ***An interview with Jennifer, Frank’s co-op coordinator***

After my final interview with Frank, I went to see Jennifer, his co-op coordinator. I was curious to know if his recent work experience was typical in terms of the management practices and overall climate of the workplace. I was interested to know what coordinators are able to do in instances where students are experiencing issues and problems in their workplaces. I wanted to hear what she thought of Frank’s concern that, on the one hand, he is not technically competent as a result of his studies and co-op experiences, and, on the other hand, his work terms have generally not been intellectually challenging from a technical perspective.

Unlike the other co-op coordinators that participated in this study, Jennifer came to her work in co-op by design. After completing a degree in psychology and discovering how difficult it was to find a good job, she pursued a master’s degree in counselling psychology with a view to becoming a co-op practitioner.<sup>331</sup> She eventually realized her career goal. Most days Jennifer loves her job. She feels that her values and education are

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<sup>331</sup> A related master’s degree is a basic qualification to work as a co-op coordinator at the University.

aligned with her work. “I believe strongly in the philosophy of co-op,” she tells me. “I enjoy helping students to synthesize and reframe what they have learned at university with what is applicable in the workplace. I like watching that come together for them.”

I am interested in the way Jennifer sees her role, particularly in terms of the reframing she aims to accomplish with students, particularly by the one-way trajectory of her approach. She sees her role as helping students to take what they learn from university and reframe it through their experiences at work; she does not see it in the reverse--that is, helping students reframe what they experience at work through their continued learning upon return to campus. Jennifer’s explicit unidirectional perspective is similar to the tacit view of all of most of the other coordinators I interviewed. This is not surprising, given that their work is largely focused on preparing students for work, recruiting employers, counselling students in how to best compete for jobs and monitoring them at work. Beyond assigning and, in some cases, evaluating work term reports<sup>332</sup>, coordinators have little involvement in and control over the students’ learning processes upon their return to the university, at which point the students are back in the hands of their instructors and professors. I decide to ask Jennifer about this division of labour and how it affects her theory, practice and the students’ learning.

“In the realm of academia, they don’t really care what students do with their degrees,” Jennifer says. “It’s about the expansion of the mind, the philosophy of education, esoteric things. But in reality people are getting a degree to get a good job. Very few people can now just go to university for the sheer experience of learning.”

“So, you see your work in co-op as a way to deal with that problem?” I ask.

“We’re only a small piece of the puzzle,” she concedes. “We need professors on-side. But most of them don’t see co-op as an integrating device or even something that helps the students to develop in a well-rounded or balanced way.”

“Not even in applied programs like computer science?”

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<sup>332</sup> In the Computer Science and Arts co-op programs at Queensville, the Co-op Coordinators evaluate work term reports. In the Engineering co-op program, professors evaluate the reports.

“Most of them will pay lip-service to the program, but there is a strong core of professors who are here not even to teach but only to do their research. That’s their reality,” reports Jennifer, adding, “I’ve only ever had one professor ask me for feedback from the students and employers about how the education is in our department quality-wise.”

“I would have thought there’d be closer linkages in a department like yours,” I reflect. “What do the students think about all of this?”

“Some of them are frustrated and upset that what they’re learning out there is not being taught here. Some are resigned to the fact that university is miles away from anything they’re going to do in reality. Others just plod along.”

“How do you work with them on this problem of compatibility,” I ask.

“I tell them, ‘You have to just recognize that university and work are two different institutions, so try to integrate as much as you can for yourself as you move through them. Don’t fight it, go with it,’” responds Jennifer.

I ask Jennifer if there is anything else that interferes with the students’ ability to make productive linkages between what they learn at work and school.

“Management practices are not very good in many companies, and this stops students from progressing,” she observes.

Jennifer confirms what I have been thinking as I have listened to a number of the students’ stories in this study.<sup>333</sup> Over time, I have become increasingly convinced there are some pervasive management, organizational and structural problems that interfere with the students’ full intellectual and social development.

“What are some of these management problems?” I ask.

“They don’t plan for the students’ arrival. They don’t know what to do with students. Sometimes supervisors are overworked and don’t have time, so students are their lowest priority,” says Jennifer. “It’s worse for students who are not very assertive and can’t speak up.”

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<sup>333</sup> For examples, see the stories of Warren, Edward and Valerie (p. 194, p. 215 and p. 237 respectively).

Frank faced these problems on his work term. Luckily, he is assertive and managed to mitigate them to some degree. But he also had to work excessively long hours and forego the promises of a technically challenging job and the training to go along with it. These issues began to chip away at his enthusiasm for work and the potential for learning there. I describe this situation to Jennifer.

“It’s very common for students to work long hours in this industry, because it’s largely unregulated and there are no unions to speak of,” she explains. “Plus, they want to make a good impression.”

“What about changes in job duties and training plans for the students?” I prompt.

“Employers often change their minds about what the students are there to do. That’s understandable because the industry changes so quickly,” Jennifer answers. “But it also makes it easier for employers to renege on their promises when it comes to training.”

“So, as a coordinator, what can you do in cases like these?”

“Often we don’t hear about these things until after the fact,” laments Jennifer. “It’s a double-whammy for coordinators really. Most students don’t want to tell us about problems because they don’t want us to intervene for fear that we’ll upset their employers. Instead they prefer just to suffer through it.”

#### ***An interview with Dr. MacDonald, Frank’s favourite professor***

After my final interview with Frank, I wanted to draw out details about the approach to learning he enjoys on campus, and to contrast this with the less than satisfactory learning experience he has had at work this term. True to character, when I asked Frank to refer me to a professor who has had a profound influence on his intellectual and personal development, he sent me to the Biology department instead of the Computer Science department. Professor MacDonald has been a university teacher and researcher for more than thirty-five years. During this time he has moved from agriculture to zoology and, from there, into etymology, first in pest control and, later, in “more esoteric subjects like why and how insects survive in arctic climates.” Now, he is finding himself rejuvenated by studying biodiversity, conservation, and how trends in insect populations can serve as early warning signals of global warming.

Given this sheer range of interests, it is not hard to imagine why Frank might find Professor MacDonald intriguing. But the thing that Frank enjoyed most about the two courses he took with Dr. MacDonald is that he made biology come alive through a down-to-earth approach in which he shared personal stories about the trials, tribulations and successes of his research, its applications, and his own journey in learning. Moreover, Dr. MacDonald also connected all of this to the scientific, historical and philosophical trajectory of the biological discipline. Thus, for Frank, these courses contained just the right mixture of science and humanity. I share Frank's observations with Professor MacDonald, asking him to comment on them.

"I want to bring part of myself into my teaching," he responds. "I don't pretend that I'm truly objective as a scientist. I have my subjective opinions and biases, but I also have a lot of data that I want to share with my students to help them understand that opinions need proper justification."

"Do you invite the students into your teaching as well?" I ask.

"Sure. I want to find out about them. I want to relate to them not on the basis of what I think they should be, but on the basis of where they are. Then we can see what we can achieve together."

"Does your approach to teaching link up with a vision you have of higher education," I probe.

"Definitely. I think of the university as being a place for broad, general education," Professor MacDonald responds. "It's a place where new ideas are generated and that serves as a foil for narrow, prejudiced points of view. It's a place to broaden students' minds rather than closing them, and to supply them with the tools to continue to do that throughout their lives."

"That can't be easy these days with such large classes," I offer, based on prior knowledge that, similar to other traditional disciplines at the university, biology classes in the first two years are highly sought after.<sup>334</sup>

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<sup>334</sup> See in this chapter the observations on class sizes by Dr. Smith, an anthropology instructor (p. 245).

“It’s not,” responds Dr. MacDonald. “My introductory course has over four hundred students in it this term. That’s tragic. But I try to make up for it by getting around to all the labs for the course, in which there are only twenty or so.”<sup>335</sup>

I wonder how Dr. MacDonald gets the students thinking about broadening their minds, particularly in a field that has a strong technical emphasis. So I ask him to provide an example.

“Biology is at the centre of some very tough philosophical and ethical questions these days: reproductive technology and genetic modification are two really important issues,” he replies. “The academic, intellectual aspects are huge, but so too are the moral, ethical and even spiritual and religious dimensions. I think our students should be prepared to discuss those in a coherent fashion, so I do what I can to get them thinking about them.”<sup>336</sup>

The liberal educational vision Dr MacDonald articulates is closely aligned with the one Frank would love to pursue--that is, if only it could pay for itself somehow. I ask Dr. MacDonald if the tension Frank articulated to me between earning and learning represents a challenge to his educational approach.

“Sure. A lot of students owe a lot of money,” he responds. “They’re studying, working, taking out loans. And the word’s out that they may not get a job at the end of all of this. It’s frustrating and depressing for them.”

“How does that affect your teaching,” I probe.

“I’d say that an increasing minority of them display this attitude that says, ‘Just tell me what I need to know to get an A so that I can get out of here’,” says Dr. MacDonald. “That’s a little irritating. But they’re under tremendous pressure for grades, jobs, scholarships, and so forth. Besides, the majority of students still come to learn.”

I reflect on the description Dr. MacDonald provides in light of the Habermasian framework I used to conceive the study. My first reaction is to wonder if students who

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<sup>335</sup> Dr. MacDonald says his upper level courses have approximately thirty students in them. In one of these courses, the students go on a weeklong field school, during which he enjoys getting to know them much better.

<sup>336</sup> He adds that there is an optional fourth year course on the history and philosophy of biology that he recommends every student take.

participate in co-op might fall into Dr. MacDonald's first category. After all, they are taking a strategic approach to their university experience, at least in terms of its relationship to the labour market. But then I reflect on what I have heard from Frank, and from most of the other students in the study, and I begin to question my initial reaction. To be sure, Frank has made some strategic choices, but he is actively maintaining his interest in the orientation to learning that Dr. MacDonald describes. It is a careful balancing act. And I decide to ask Professor MacDonald about it, as I know he was one of the initiators of the co-op program in the science faculty at the university.

"Co-op students have been very pleased to get jobs closely related to their studies," he replies. "It breaks that vicious cycle of no experience, no job, no job, no experience. But it does more than that." He proceeds to describe how some of the students return from their work terms better prepared to ask questions in class and to challenge him on certain assertions, better able to handle data and write reports, more aware of what certain jobs consist of and what it takes to get along with different kinds of people.

When I ask him if this is always the case, he responds that most employers see themselves as co-educators, but that some employers exploit the students. He reports that when he was involved in co-op, the latter types of employers were asked to improve their practices. He also observes that, regardless of the practices of employers, students should take any situation as an opportunity to learn new skills. On this point, Frank, Jennifer and Dr. MacDonald all agree.

### *Analysis of Frank's story*

Frank's experience on his current work term has sculpted into relief for him a number of contradictory forces that he is struggling to reconcile. He enjoys the learning environment at university, especially those aspects of it that have little to do with his chosen discipline. But he knows his time there is coming to a close. He will soon be joining the working world on a permanent basis, and he is concerned that, on the one hand, he is not technically prepared for it and, on the other hand, it does not fit his interests, personality and passions. From the beginning of his time at university he has

been concerned about establishing himself in a career that offers financial security. But he is discovering that the seemingly rational decision he made towards this end, in studying computing and pursuing co-op, is having some unintended consequences. The more he engages with computing and co-op, the more he doubts his future career. The more he seeks technical skill development, the less he finds it, and the more he discovers about people and his interest in them, their psychology, life situations and cultures. The longer he spends in a specialized, applied discipline at university, the more he craves general knowledge from the liberal arts and sciences. The longer he spends at university, the more he longs to continue, yet the more urgent becomes his need to go to work.

The dilemmas Frank is facing stem from the strategic calculation he made in choosing to pursue a degree in Computer Science. He made his choice from a systemic, as opposed to a lifeworld, perspective. Over the course of his studies and work experiences, Frank has attempted to offset the consequences for his educational lifeworld of his original decision by pursuing his “real” interests wherever possible at school and through extracurricular activities. But this has affected his execution of his original strategy. The problematic reality of his current workplace, and the opportunity through this study to explore and discuss it in the context of his overall educational experience, has made him more conscious of his contradictory situation.<sup>337</sup>

Until recently, the highly task-focused and anti-social “culture” that Frank experienced at work was suffocating his cultural values and preferred way of being. To be a member of this workplace culture meant that Frank had to work long hours in relative isolation from his co-workers. These long hours compressed the time he had available to pursue his authentic interests and express himself outside of work. The culture at work also interfered with Frank’s productivity. He had difficulty integrating how he learned in other contexts with how he was required to learn there. These pressures, and the

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<sup>337</sup> An example of where Frank became more conscious of the dynamic of his experience as a result of participating in this study is when he realized that he had been given “lemons” at work out of which he needed to make “lemonade.”

opportunity to reflect on them through this study, prompted Frank to action.<sup>338</sup> Deciding to “make lemonade” out of the situation, he encouraged people with different cultural backgrounds and values to interact. In so doing, he strove to make the workplace more *socially integrated* through a (tentatively) communicative process. Through this process he also aimed to make the workplace more *systemically integrated* in terms of how knowledge was shared and managed.

Interestingly, Frank was acutely aware he was taking a risk in asserting his cultural values and vision of how people should be with each other at work. He thus strategically limited his work on opening up social interaction to unofficial hours, hoping these communicative practices would eventually leak into the regular work day. In navigating his way through the problems of integration he faced, Frank thus arrived at a fine balance between communicative and strategic forms of action, idealism and pragmatic political effectiveness. His learning experience at work combined many elements of his educational lifeworld, if only by chance and in the final weeks of his work term. He discovered that he could put his wide range of competence and interests to use, effecting change in both the social fabric and management system of a workplace.

### **Chapter Summary**

The stories in this chapter highlight some of the problems and successes the students had in integrating aspects of their learning in ways that were both socially and personally meaningful, and productive in terms of their human capital and career development. Using the Habermasian concepts of cultural rationalization and social modernization to interpret and analyze these stories brings to the fore a number of concrete educational issues with respect to how the students were prepared for their work terms, how they fit into their workplaces and were supported in their learning at work,

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<sup>338</sup> Interestingly, he justified his decision to act largely on communicative grounds. He wanted people to be better able to freely express themselves (an aesthetic-expressive claim). He wanted tacit knowledge to circulate more readily (a cognitive claim). And he claimed society in general would be better off if those engaged in technological forms of thought and work are encouraged to be more social (a moral-practical claim)

and how they were encouraged to reflect on their work experiences, particularly when they returned to campus.

In terms of how the students were prepared for their work terms, the amount of cultural rationalization that was encouraged in their educational lifeworlds was very important to their learning at work. As these stories demonstrated, the degree of cultural rationalization was highly variable. This variability depended in part on the design, content and educational approaches that were used in the students' academic and co-op programs. But much of it stemmed from the cultural dispositions of the students, their preferences and the choices they made, given their circumstances.

Specialization provided a depth of cognitive competence, both substantively and in terms of specific cultural standards of value, that was more readily transferred to, and integrated within, their workplaces. Sometimes this transfer process was fairly smooth and direct, as in Arlene's story where the technical focus of her work closely related to her field of studies.<sup>339</sup> More often, the transfer process was indirect. It required metacognitive effort. The connections Arlene had trouble making between her foundational knowledge of science and its application in a high tech workplace is one example. If the students had not been specialized, and/or encouraged within their educational lifeworlds to reflect on the ways they think, how they learn, and to understand, appreciate and practice alternative ways of knowing and learning, the contradictions they faced in integrating their social action and learning were difficult to reconcile.<sup>340</sup> Edward's story is an example of both of these problems.

The leaps the students made between school and work proved even more difficult when they were confronted with cultural attributes and practices (e.g., biographies, beliefs, values, norms, recognized forms of competence, expectations and interests) to

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<sup>339</sup> There was also evidence that the area of specialization on campus need not be the same as the specialized task required at work. Valerie's ability to specialize in technology at work is an example. This suggests there is a formal aspect to the processes of specialization that are transferable to work, not just content.

<sup>340</sup> Another example in engineering education is the difference between the closed loop problem solving the students experience on campus versus the open-ended problem solving they must learn how to do at work. See Andrew's story in Chapter Eight (p. 274) and Professor Brown's corroboration that follows it (p. 283).

which they were unaccustomed. The contradictions these posed were not simply about what and how to think. They were about how and who to be. Here, cross-cultural preparation in their educational lifeworlds was of great importance. It provided for reflexivity in their worldviews and identities, and enhanced their capacity to better understand, negotiate and learn from the sociocultural dynamics of new contexts. Frank's story is a good example of this.

When students found the cultural attributes and practices in these new contexts deeply problematic, they faced even more daunting challenges. Valerie's story showed how preparation in understanding rights, obligations and what constitutes legitimate cultural attributes and practices in the context of co-op programs is an important, if missing, element. Her story also demonstrated how the ability to conduct sociocultural critique is another important aspect, as there are times when cultural attributes and practices may need to be challenged, not simply appreciated nor accepted. Her story also demonstrated how learning to be politically effective was an important, but missing, element of her preparation.

In terms of their learning at work, the amount and orientation of support the students received from personnel at the university, employers or other organizational actors in negotiating the contradictions within and between processes of cultural rationalization and social modernization was important. These stories showed that there was great variability in the amount of educational support the students experienced during their work terms. The educational support the students did receive was focused predominantly on ensuring their learning helped them to integrate into systems of production, both current and future. Arlene's story was a good example of this. To be sure, the students' interests were also concentrated in this direction. But these stories also showed how a significant proportion of the challenges they faced on their work terms concerned cultural attributes and practices. Significant learning opportunities existed with respect to problems with social integration and the processes of cultural rationalization that contribute to it. There tended to be less educational support in place, however, to assist students on this front. Frank's story was an example. Some of the problems the

students also faced in their learning concerned both social and system integration, and the nature of the relationship between them. The focus and amount of educational support in these areas again proved problematic. The stories of Edward and Valerie provided telling examples here.

In terms of the students' learning at work, these stories also demonstrated that the quality of their jobs affected their ability to integrate learning from campus to work, and from previous work terms to current ones. The quality of jobs was highly variable. It depended on a number of factors. Substantive content of the work proved important. The more challenging was the content, the more the students perceived themselves to learn. Arlene's story was an example here. The less related the jobs were to the students' fields of study, the more difficulties they faced in integrating their learning between school and work. But there was not a direct relationship between this and the quality of the students' learning. Indeed, students who were exposed to entirely new fields of knowledge on their work terms went up steep and often rewarding learning curves. Edward's story provided a good example of this. Management values, practices and competence, and the systems of production in which they were sedimented (e.g., organizational strategy, flow of work, division of labour), played key roles. Valerie's story is a prime example. Alignment of purpose, interests and expectations also played a role. Frank's story exemplified this. Lastly, the existence of a supportive community of practice helped the students to learn. Arlene's story is a good example here.<sup>341</sup>

During work terms, contradictions within and between processes of cultural rationalization and social modernization offered potential for learning that could have increased the sociocultural and economic outcomes from work terms, not simply for the students, but also for their employers and co-op personnel. The related problems with quality also represented similar potential. These possibilities for learning were, however, quite different than what the various social actors had anticipated going in. They often

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<sup>341</sup> An unresolved contradiction in Arlene's story, however, is that the supportive community of practice at work propagated different values with respect to engineering ethics than did her academic program. Similarly, Valerie's acceptance into a community of men at work helped her to learn about technology, but contradicted the values into which she had been enculturated at school.

required negative, critical forms of thought and action. The risks associated with pursuing these avenues for learning were higher for the social actors. These opportunities for learning were not generally pursued as a result.

Upon returning to campus, the students' integration of their learning from work generally occurred in an *ad hoc* fashion.<sup>342</sup> Formal educational supports to encourage reflection were minimal. Most of the effort on the part of co-op personnel necessarily focused on the integration of students into workplaces and the social action and learning that is required to make this happen effectively.<sup>343</sup> The main mechanisms provided within the co-op programs to facilitate the transfer of learning back to campus are work term reports. The educational value of these reports was questionable, as Edward's case demonstrated. His case and others elsewhere in the study suggest this assignment can be a pro forma exercise.<sup>344</sup> The formal involvement of professors and instructors in the contemporary co-op programs was shown to be minimal in the stories in this chapter.<sup>345</sup> Some evidence existed in the stories of Valerie and Frank to show that professors could, and did, play important informal roles through their approaches to teaching and the nature of their relationships with students. Other evidence, such as the observations of the co-op coordinators in the stories of Valerie and Frank, suggest the amount and nature of informal involvement of professors in the students' learning in co-op is highly variable.

The stories in this chapter also provide important insights on the Habermasian lens. They highlight the importance of conceiving the co-op process dialogically. Stories such as Arlene's and Frank's suggest, for example, that co-op work sites are (or can be fashioned to be) part of their personal and academic lifeworlds. Workplaces have significant sociocultural dimensions to them that represent challenging, sometimes risky, and potentially rewarding learning opportunities. They are not simply sites of strategic

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<sup>342</sup> Valerie never returned to campus for reflection on her final work term.

<sup>343</sup> See the emphasis on job placement recommended in a recent external review of the co-op program at Queensville in Chapter Five (p. 129).

<sup>344</sup> See Lisa's story (p. 156) and Professor Brown's observations on the reports (p. 283).

<sup>345</sup> See a description of the co-op programs in Chapter Five (p. 132). It should be noted that in the Engineering Co-op program, professors read and evaluate the students' work term reports. It should also be noted that in other co-op programs at Queensville professors have more of a formal role than in the ones that were the focus of this research.

and instrumental action in the system. Conversely, universities have increasingly important economic and administrative dimensions to them. The co-op programs at Queensville are subsystems of its overall system of administration. The stories of Valerie and Frank suggest that the processes of social modernization in the co-op programs are uncoupled from the processes of cultural rationalization within the professoriate. This is an unintended consequence of the (necessary and instrumentally rational) decision to place co-op processes into a managerial framework to ease the administrative burden on the professors who originated them.<sup>346</sup>

The combination of an administrative emphasis on placing students into jobs and helping them to succeed in them and the disconnection between the professoriate and students' co-op experiences reduces possibilities for the students to undertake sustained reflection on, analysis and, where warranted, criticism of, their experiences at work from the perspective of their academic fields and lifeworlds. This is a central cultural contradiction that has been sedimented into the educational infrastructure of the university. The two stories in the next chapter demonstrate, however, that it can be overcome.

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<sup>346</sup> On the social history of the development of the co-op programs at Queensville, see Chapter Five (p. 124).

## **Chapter 8: Forging Complementary Developmental Processes, or When the Stars Align in Co-op**

### **Introduction**

The previous chapter focused on problems with integration in the students' learning in co-op and how these were related to unresolved contradictions in and between the processes of cultural rationalization and social modernization in which the students engaged. It observed that these contradictions represented important sites for learning in co-op that often remain untapped.

This chapter complements the previous one. It contains the stories of two students who, for different reasons and in different ways, were able to resolve some of the contradictions they faced within and between their academic lifeworlds and the economic system, thereby integrating their learning in ways that were both socially responsive and economically productive. This chapter also complements Chapter Six. It describes how the students developed strategic and instrumental skills and communicative forms of competence. The students forged these developmental processes into complementary wholes, each in their unique way.

### **Andrew's story**

Andrew loves school. This fall he is having another great semester. In one course he is designing a remotely operated submarine, which, as a mechanical engineering student, he finds fascinating. In another course he is learning linear control theory. For someone who enjoys math like Andrew does, this course is full of great brainteasers. But his favourite class this fall is in applied thermodynamics. His interest in this subject was sparked in three previous courses. But his passion for it was ignited on the co-op work term he recently completed. He worked for a government think tank, designing a computer program that models fire as it moves through different buildings and calculates

the amount of water required to extinguish it.<sup>347</sup> In creating his model Andrew had an intellectual epiphany that affected his development as a budding mechanical engineer.

“I’ve done other courses in thermodynamics and I’ve always been interested in it,” Andrew tells me. “But until this last work term there weren’t any thermodynamicist positions. Now that I’ve actually seen job possibilities in it, I can take this course and not feel like it’s useless.”

I observe how, similar to a number of the other engineering students in the study, Andrew defines the usefulness of knowledge largely in terms of its calibration to jobs. But I know from previous conversations with Andrew that, unlike some of his peers in the study<sup>348</sup>, usefulness does not seem to be a primary criterion in his desire to learn, his satisfaction in learning, and his emerging identity as an engineer. I think back to our last interview where Andrew told me about a book he was reading called *The Civilized Engineer*.<sup>349</sup> The book described how, with time, the liberal arts have been squeezed out of the engineering curriculum in North America in order to accommodate more technical training. As a result, engineering students have had less and less exposure to discussions about social issues and cultural values. The book confirmed one of Andrew’s emerging concerns about his chosen discipline: it tends to build a wall between scientific knowledge and the social contexts and purposes of that knowledge. Andrew worries this lack of integration in the engineering curriculum between technical prowess and social purpose is problematic for his profession. “I don’t see in a lot of the other students a regard for the social impact of their work,” he told me. “Most of them are concerned with getting a good job and making money. That’s important. You have to feed yourself and your family. But you should also be conscious of what’s going on in society. That’s important for the profession as a whole.”

In preparing for our meeting today, I had made a note to explore with Andrew the social and ethical aspects of his education and profession. Getting the other engineering

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<sup>347</sup> Andrew’s computer model will be used as part of a larger software application that will assist architects, mechanical and civil engineers, policy makers, planners and inspectors in the construction industry.

<sup>348</sup> See the stories of Arlene and Linda (p. 225 and p. 173 respectively).

<sup>349</sup> Samuel Florman (1989) wrote the book to which Andrew refers.

students in the study to discuss these topics has been more difficult than it has with Andrew, who originally brought them up without prompting. For the moment, however, I decide to pursue the notion of ‘usefulness’ that Andrew has raised at the beginning of our discussion today. I sense this notion can serve as a jumping off point to talk about social issues and ethics because its instrumental meaning contrasts so distinctly with them.

“What are you finding useful about the course in thermodynamics this summer?” I begin.

“At this point we’ve learned all the theory and we’re getting into practical stuff,” he explains. “For instance, we’ve learned equations to describe the behaviour of a jet engine. We’re now looking at those and saying, ‘Hey, we should be able to build a jet engine that is really big and efficient.’ But if you start to take reality into consideration you realize that the materials required to handle the stress implied in those equations simply don’t exist. Things will just get too hot. So we get to see limitations from the real world applied to theory. That’s the kind of stuff we need to know as engineers.”

*A déjà vu* envelops me. Andrew talked in similar ways about a major discovery he made on his last work term. His task at the time was to create a computer program that could specify dozens of variables related to a given building along with the location and intensity of fire in the building, and then to provide graphs of how much water would be needed to extinguish the fire. When I asked him how he went about developing this program he said, “At first, it seemed like just another application of the basic rules of physics. When you look at the math, it’s not very tough. You calculate the amount of water you’ll need by dividing the wattage a fire is putting out with the amount of energy a litre of flowing water can absorb in a second. That gives you the required flow rate. But then it got tricky. I just didn’t realize I needed to know what was reasonable in terms of the numbers. Like when I say ‘that’s a 12 kilowatt fire’, is that a big fire or a small fire? So my biggest learning curve was finding out, ‘Okay, well, that’s a pretty small fire. A pretty big fire is more like a megawatt, and the upper limit is 25 megawatts. You’ll never get enough fuel in one spot to build a fire bigger than that.’ The model I had just kept going and going. It wasn’t realistic.”

When I asked Andrew what he took away from that insight he replied, “I know I can do calculations, even complex ones. But I’ve learned to constantly remind myself to figure out what kinds of numbers I should be expecting.” I have come to think of this discovery as Andrew’s technical epiphany. It played a significant role in his transformation on his recent work term from being an engineering student to becoming an engineer. From our conversation today, I can see how the course he is currently taking in thermodynamics offers an opportunity for him to further consolidate his understanding of the relationships between theoretical constructs, practical limitations, and his identity as an engineer. And the realization that jobs evidently exist in the field of thermodynamics serves to tighten the connections between these elements of his experience.

But I recall there were other factors on his recent work term that assisted in the process of transformation I continue to observe in Andrew. He was assigned a challenging task that was central to the success of the overall project. As a result, he was immediately integrated into a team of highly qualified professionals. This group accepted Andrew as an equal, largely because of the expertise in computer programming he quickly exhibited.<sup>350</sup> Their reception made Andrew feel less like a student and more like a full-fledged engineer. He even learned to speak and interact like one. “You’ve got your compartmentalized responsibilities, but you have to make sure everything is working together. So there’s a fair bit of communication,” he told me partway through his work term. “But it’s not about physical parts, like on previous work terms.<sup>351</sup> It’s very abstract. We talk about things like interoperability and making sure all of our classes use the same kind of naming construct so that we can understand each other’s interfaces easily.” I wonder if and how his interactions on campus this term may be helping to shore up his emerging professional identity.

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<sup>350</sup> One of Andrew’s long standing hobbies is programming. His skills in this area thus exceed those of typical engineering students. Early in his work term, he made recommendations to the project team for changing the architecture of the system. They accepted these suggestions and, once Andrew had implemented them, the system was significantly improved.

<sup>351</sup> Before this work term, Andrew had completed three work terms with companies that manufacture heavy equipment. He was responsible for performing minor design and manufacturing improvements in some of the machines the companies produced.

“I know you really enjoyed working with the researchers last term,” I begin. “How does your experience this semester compare?”

“I definitely miss interacting with all of those PhD’s every day,” he responds. “I miss the theoretical discussions and high-level thinking.”

“So you don’t get into those kinds of interactions or discussions with your professors or colleagues here?” I probe.

“I do. But not as regularly,” explains Andrew. “It’s different working on a daily basis with experienced engineers who can give you advice in real time. You pick things up from them informally as you encounter a problem or have a discussion at lunch. It’s not like a lecture or even a lab.” He pauses for a moment, evidently to consider the contrasts he just described. “But, you know, the knowledge you use at work is definitely more focused than it is here. I’m enjoying that breadth again.”

“Tell me more about that breadth,” I prompt.

“I’m doing courses in a range of topics now, but the best example is from two summers ago. I took a series of elective courses that were based on each professor’s area of research. They were really into it and would show us stuff that was not in any textbooks. We’d go off on tangents with them, based on our own curiosity, and they would tell us everything up to the point where they themselves did not know anything. And then we’d talk about how we might find out more. It was like a big interactive book. You could just learn and learn.”

“That sounds amazing,” I respond involuntarily, mentally recording Andrew’s interest in learning for learning’s sake and its contrast with his goal-oriented learning at work. “Do you often find yourself in situations like that with your professors?”

“No. That was somewhat unusual.<sup>352</sup> But this semester I came up with this idea to arrange for small groups of us to get together with professors over dinner.<sup>353</sup> The idea is

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<sup>352</sup> Andrew adds that it is not possible or even educationally sound to expect all courses to be similar to these. He says, “There’s so much knowledge you can learn in engineering. There are specialties upon specialties. So a lot of what they’re teaching us is how to effectively learn engineering-type material. You know, how to look at reference books, how to use the information, general assumptions and problem solving techniques, generic approaches to take to problems in certain categories.”

<sup>353</sup> Andrew arranged these dinners in his capacity as an executive on the Engineering Students’ Society.

that the professors can tell us more about their research in an informal setting. It's also a chance for us to get to know them better."

"Has that been successful?"

"Fairly. We've had three dinners so far. For me, the one last week was the best. It was with Dr. Gavin Brown. I've done two design courses with him. He researches hydrogen fuel cells, so we got to learn more about that. But we also talked a lot about the social implications of engineering because that's one of his specialties. It's a very important topic."

I have been aware that up to now our conversation has largely focused on the scientific and technical aspects of Andrew's studies and recent work experience. But Andrew has just provided a bridge to the other important theme I wanted to explore with him today. Jumping at this chance I ask, "What social implications did you talk about?"

"Engineers are toolmakers. We are supposed to be servants to those who are paying us," explains Andrew. "We design and build the tools they want us to. But at what point do you stop?"<sup>354</sup> I mean, we are getting into designing some potentially critical projects. Like, climate change is happening and it's pretty obvious we're causing it. So something's going to have to be done. We're obviously going to have to build an energy infrastructure that does not pollute the environment. That's going to involve some massive engineering that could potentially cause even more problems. Or it could fix everything. With all the money and people involved it's going to be important that some kind of social conscience and some understanding of our social circumstances guide it."

"So you got into ethical questions as well as social ones," I clarify.

"Yes. It's hard not to get into ethics as soon as you begin talking about social implications."

"I know you take a course in ethics. Does this help you in considering some of the issues you are interest in?"

"In the ethics course you work largely on technical problems, such as justifying the fairness of a design or system in terms of cost or location," Andrew explains. "You

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<sup>354</sup> For a contrasting perspective on social and ethical issues in engineering, see Arlene's story (p. 225).

also get into engineering as a profession and our code of ethics.” Pausing for a moment he then adds, “But I wonder if you really can teach ethics to people at this point? You have to hope they’re already there. If they’re the type who is going to steal from their clients, they’ll steal regardless.”<sup>355</sup>

The scope of ethics Andrew describes seems too limited to address the complex social issues, such as climate change, that cause him concern. Other engineering students in the study have described how they explored in that course a number of ethical models, such as the golden rule, ethical egoism, and utilitarianism, for making judgments and providing justifications. I wonder why Andrew has not mentioned these, and whether they’d be useful. I tell him what I’m thinking.

“Yes, we touched a bit on those models, and used some of them to write about ethical dilemmas we might face,” he responds. “So, I’ve learned a more rigorous way of defining, say, intellectual property rights and justifying them or not on paper. But in truth I’ve learned a lot more about the relationship between engineering, ethics and social issues through independent reading and other activities.”

Andrew explains how he has always been a fan of science fiction novels.<sup>356</sup> He admires the best of these because they inevitably raise important questions about the complex relationships between science, culture and society. He also seeks out sociological or historical texts on science. In addition, Andrew keeps close tabs on a specific set of issues where engineering, technology and society intertwine.<sup>357</sup> The software industry, the Internet and privacy are three related areas with which he is currently engaged. I know that Andrew is very concerned about his privacy when using information technology. Early on in the study he taught me how to use encryption

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<sup>355</sup> When asked whether he has learned about ethics through his work experiences, Andrew responded, “No. I don’t think engineering students are going to encounter major ethical problems in their work because they’re not in positions of responsibility. That said, a friend was on a work term at a pulp mill and the environmental violations he witnessed caused him an ethical dilemma. I mean, should he report it or keep quiet?”

<sup>356</sup> His favourite author in this genre is Robert Heinlein.

<sup>357</sup> Andrew explains he cannot keep up with every potential issue, so he puts most of his energy into those that are directly within his span of personal interest and expertise, such as computer programming. On other issues he says he needs to rely on valid external sources to help him make judgments.

software so we could correspond, as he always encrypts his email. He also avoids credit and debit card transactions as much as possible, as he does not want financial institutions to be able to use and sell his purchasing habits. I also know he is deeply involved with the open-source software movement. Via the Internet, he is currently participating in a community of programmers from around the world to develop a computer program for reading, sending and organizing email. Once completed, this program will be distributed for free, and users will be able to access all of the computer code in the program in order to learn from it or customize it. In a previous interview, Andrew explained his participation in this community: “The Internet was built on that kind of free software ideal. It came from academia where publishing your work and making it available is vital to the advancement of knowledge. You can’t advance the sum of human knowledge unless you can access everybody’s knowledge. But people are so insulated from this idea by the consumer-oriented, mass-marketed software, that they don’t ever realize this was the case.” I remember being impressed that Andrew grounded his hobby of computer programming in a social purpose. It spoke to his obvious interest in his and others’ learning.

“I think society needs to be more aware of what’s going on in technical fields,” he says, as if reading my mind. “Technology is getting too easy, too slick. Our society is full of users of technology who have very little understanding of it. That’s dangerous because as soon as you don’t know how it works, you’re relying on someone else to do the right thing.”

“For sure,” I respond. Then, playing devil’s advocate I add, “But I wonder how realistic it is to expect people to learn about the inner workings of technology.”

“I agree the level of knowledge you need is so high now that it’s tough. But in a democracy you need to be informed so you can have your say.”

I think about the contrast in this interview compared to our last one where Andrew talked more about the importance of the liberal arts to technical fields such as engineering. In the interview today he seems to be focused more on the importance of technical knowledge to society. I ask him to connect the dots for me.

“I’ve come to believe you need to learn about society as well as science and technology in order to be a well-rounded citizen and a good professional.”

“So you came here thinking something else?”

“My original belief coming into university was that it was a training ground for professionals. You come here to get your specialized training in whatever field and then get a job. But when you have been here for awhile and you read a few books and listen to the debate about education on the CBC<sup>358</sup>, for instance, you begin to see the merits of a broad, liberal education.”

“Is that what you’re getting here?” I ask sceptically, knowing that engineering students have little space in their curriculum for elective courses outside their department, a situation that the other engineering students in the study have lamented to a greater or lesser degree.

“No. But it’s an appealing idea, so I’m doing my best to educate myself in that way.”

I think about some of the informal ways Andrew is providing breadth to his education, in addition to his reading. I remember how in a previous interview Andrew reminisced about his first two years at university. During that time he lived on campus in residence and had the chance to interact with students from other disciplines. He would sometimes accompany his new friends to lectures in order to explore what was being taught elsewhere on campus. However, in the last two years, he has been living with other engineering students, or on his own, and lamented this narrowing of diversity in his social network. In another conversation, he mentioned how when he returns home for visits with his family he inevitably gets into conversations and debates about various social and political issues with his father, who is a constitutional lawyer with a keen interest in society, the law and the ethical status of his own profession. During his work term in Ottawa, Andrew made time to tour the Parliament buildings, to watch a debate in the House of Commons, and to visit a wide range of museums and galleries.

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<sup>358</sup> In 1998, the Canadian Broadcasting Corporation (CBC) aired on radio an extensive series entitled “The Education Debates” as a part of its *Ideas* program. Andrew listened attentively to the different perspectives this series presented. He refers here to one part of the series called “On Liberal Studies.”

Other engineering students in the study have described a similarly contingent fascination and relationship with other disciplines, ideas and issues. Andrew is the only one who has articulated a commitment, however, to ground his professional identity in a social ethic. While he has not altered course in terms of his goals for coming to university--he still wants to get a professional degree and a good job at the end--the meaning he gives to those goals has changed dramatically as a result of his academic, work and extracurricular experiences. I share my reading of his situation with him.

He responds, "The way I see it, there's not much point in helping to engineer improvements in society if you don't understand or enjoy society."

*An interview with Dr. Brown, Andrew's favourite professor*

Shortly after this final interview with Andrew, I visited Dr. Gavin Brown, the professor Andrew mentioned with admiration. I wanted to find out more about Professor Brown's experience in teaching social ethics to engineering students. I also wanted to get his appraisal of my reading of Andrew's technical epiphany, recent work and academic experiences, and their relation to the process of identity formation I observed in Andrew. I started the conversation with Professor Brown by mentioning Andrew's gratitude for his willingness to dine with the students.

"I want to encourage them," explains Dr. Brown. "That's particularly important for third year students. At that point in their program they can often feel alienated."

"What do you mean by 'alienated'," I ask, concealing my surprise at his candour so early in the interview.

"They can't see what their education has to do with anything," he elaborates. "They go on their work terms and do menial tasks, or they're given work that doesn't involve a skill set that relates to what they've learned here. Then they come back and do all this theoretical stuff, and it seems irrelevant. So they're trying to line all of this up and it doesn't make sense."

I marvel at Dr. Brown's insight because it squares so well with what I have heard, in various ways, from nearly all of the students in the study, regardless of their chosen discipline. I wonder how he could be so in tune with the experiences of co-op students.

And his frank, almost self-critical language again surprises me. In designing the study I anticipated that some professors would be critical of the practices of the employers as, similar to Dr. Brown, a number have. But I did not expect them to be openly sceptical of their own educational programs and practices, as Dr. Brown appears to be. I wonder how he has come to hold these views.

“Based on what I’ve heard in this study, you seem remarkably in touch with the experience of co-op students,” I comment, providing a summary of my results and pointing out how Andrew’s experience appears to be an outlier of sorts.

“I was a co-op student myself many years ago,” admits Dr. Brown, revealing an insider’s view. “My own experience in co-op was fantastic. I had an epiphany on one co-op term, similar to the one your participant described.”<sup>359</sup>

“What happened?”

“I was working for an oil company developing process controls for a pipeline. I’d written all of these computer programs and one day I went into the field where I got to watch this big valve turn in the pipeline. It suddenly dawned on me that my program had made that valve turn. I rushed back to the office and checked my program and I could see exactly what line of code had caused that to happen.”

“How did that affect you?”

“It was an integrating experience. It showed that I was able to put together the electronics, the theory, the physics, everything. All of a sudden I realized this was engineering and I was an engineer. So, that was great. But I’m not sure it is one that too many co-op students have, mind you. I don’t remember many of my colleagues coming back from their work terms saying, ‘Hey, I had an epiphany about engineering at this gas plant!’ And in my job here I read lots of work term reports and I don’t see many epiphanies in them either.”

“Is that because the co-op jobs are menial, as you said earlier?” I probe.

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<sup>359</sup> See Andrew’s description of what he learned about thermodynamics in creating his computer program (p. 276).

“Sure. That’s a real issue. It seems like we’re just happy to place students in jobs, regardless of quality,” laments Dr. Brown, confirming what I’ve heard from most of the students, including Andrew.<sup>360</sup>

“And what about the other issue you raised earlier regarding the disconnect between what the students learn on campus and what they experience in their co-op jobs?” I probe further.

“Engineering education tends to be very analytic. We like to have closed solutions to problems, which lead to objectively examinable outcomes,” Professor Brown explains.<sup>361</sup> “So in a typical course you get a textbook and you learn some theory from it. Then you’re given assignments where you have to analyse a system by applying the theory to understand some aspect of that system. But as far as working as an engineer goes it’s usually late in the game when, and if, you get to do that level of analysis. More often than not you’re presented with a problem and you have to come up with a solution by creatively applying your engineering knowledge. In other words, there is no one best solution, no one right answer. It’s only after you’ve built the solution and it doesn’t work quite as well as you’d hoped that you can go back and analyse it and go ‘Ah-hah.’ That’s what students experience on their work terms—at least the lucky ones. And we don’t generally prepare them well for it.”

Once more, Dr. Brown confirms what I have heard from the students about the way they experience technical problem solving at work.<sup>362</sup> But what he says would also seem to apply to real world issues beyond the technical domain.

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<sup>360</sup> Arlene worked in a series of low quality jobs on previous work terms (see p. 225). Andrew observed that, based on the jobs in which many of his peers worked, co-op employers tend to underestimate the ability of engineering students. He also observed that even in those jobs that are challenging, the learning curve flattens out fairly quickly, unlike at university where it gets steeper as each semester unfolds. Students in other disciplines also experienced low quality positions. For poignant examples, see Warren’s story (p. 194) and Valerie’s story (p. 237).

<sup>361</sup> Dr. Brown regularly experiments with his teaching, and recently began using a project-based as opposed to theory-based approach in his engineering design courses. He noted that some of his colleagues considered this to be too “soft” in terms of objective outcomes. Dr. Brown refutes this by claiming “I’m interested in teaching the synthetic, not the analytic.”

<sup>362</sup> Dr. Brown’s description here pertains well to Linda’s work experience at the power plant (see p. 174), Arlene’s work experience at the cellular phone company (see p. 225) and Andrew’s recent experience (see p. 274).

“The same dynamic holds true, I suspect, when it comes to teaching ethics,” I venture.

“It does. That’s why I decided some years ago to stop teaching courses in technology and society. I came to believe that it is immoral to teach social issues and ethics as if they are separate from the technical or theoretical aspects of engineering.”

“So what do you do instead?”

“I integrate social issues and ethics right into the engineering design courses I teach,” Dr. Brown explains, providing an example of how in one course he has students design assistive devices for people with disabilities in order to get them to think about who they are designing for, the perspective they’re designing from, and the cultural and social context in which they are designing. Then he adds, “In design you can also motivate ethics because if it’s unethical, it’s a bad design. For instance, if it breaks the law it’s a bad design. So you can begin to address ethical issues by weaving them in. I try to do that with everything.”

I tell Dr. Brown a number of the engineering students have surmised that teaching ethics must be difficult because, by the time students arrive at university, their particular orientations towards right and wrong are already firmly entrenched. I also share with him Andrew’s view that many of his peers prefer not to engage with social ethics.

Professor Brown responds, “Engineering students generally are much more interested in what they can do today to solve technical problems than they are in reaching deep theoretical understandings or in grappling with fundamental longer term issues.<sup>363</sup> So I usually begin at the level of technical ethics.”

“What do you mean?” I ask.

“I’ll ask them, ‘Why do you put a capacitor on the input to an operational amplifier when you don’t need it?’ They’ll answer, ‘Well, it works better if you do it.’ I’ll say, ‘But you could get away without it.’ They’ll say, ‘Yes, you could in certain circumstances.’ I’ll continue, ‘And it would be cheaper.’ ‘Yes.’ ‘So why don’t you just leave it out?’ ‘No, no, you’ve got to put it in.’ Then I’ll ask why. And finally they’ll say,

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<sup>363</sup> For an example that supports Dr. Brown’s claim, see Arlene’s story (p. 225).

‘Because it’s the right thing to do.’ So, I try to move them to a point where they’ll think, ‘It offends my code of technical ethics not to put that element in there. To leave it out is a shortcut, a whole short-circuiting of what I believe good engineering to be.’ That’s a technical ethic. But once they get that we can jump from there to understand there are social ethics they need to consider as well.”

Andrew is the only engineering student in the study to have participated in courses with Dr. Brown. He admits that Dr. Brown’s innovative teaching methods have increased his interest in social ethics. It is also arguable that studying with Dr. Brown accounts, in part, for his more extensive literacy with social ethics than his peers in the study. It is thus possible that social ethics can be fostered through coursework, despite claims to the opposite from participants in the study, Andrew included. But perhaps this is only possible if, like Andrew, one already has an open and curious mind on such subjects.<sup>364</sup>

### *Analysis of Andrew’s story*

At twenty-two years of age Andrew has arrived at a reflexive perspective on his identity and obligations not only as a professional but also as a citizen. A “tool-builder,” he recognizes that the science and technology he learns about, uses and develops form an important infrastructure for society. He also understands that science and technology can be counterproductive if a legitimate moral order and refined sociocultural sensibilities do not guide their development and use. In this understanding, Andrew is arguably at the vanguard of his academic discipline and profession (see Moriarty, 2001).

It is clear from the example of learning about thermodynamics that Andrew’s cognitive capacity related to science has benefited significantly from his participation in the co-op program. The epiphany at work signalled an advance in his metacognitive abilities: he has learned to be cognizant of the processes, structure and nature of his reasoning (see Davidge-Johnston, 1996). An important component of metacognition is the recognition of the context in which one’s reasoning occurs. In this regard, Andrew

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<sup>364</sup> Andrew’s upbringing where he regularly discussed social issues and ethics with his father, and his extracurricular activities, including reading and participating in activist communities on-line, encouraged this curiosity.

moved beyond being a student capable of performing set tasks under controlled conditions to become an engineer capable of exercising judgment in the context of uncertainty. The communicative mode of reasoning<sup>365</sup> he discovered in the company of researchers at work assisted him in this.

Largely through his upbringing, extracurricular interests and activities, but partially assisted by formal and informal interactions at university (particularly in the company of Dr. Brown) Andrew has become increasingly adept at recognizing and negotiating the social and ethical issues that arise in the relationships between science, technology and society. As a result, he has come to believe that adhering to a statutory code of ethics is a necessary but not sufficient condition for being a professional in the information age. The capacity to engage in the discourse of social ethics is also a must. So, too, is the will to act ethically, which requires constant learning and may involve becoming activist on certain fronts.

Andrew's lifeworld is highly culturally rationalized. He has developed a significant amount of cross-cultural competence, particularly within and between the scientific and moral cultural spheres of value. He knows who he is and who he wants to be, both as a citizen and a professional, and he seeks out ways to actively, but reflexively, express, develop and integrate these identities in ways that are both socioculturally responsive and economically productive.

### **Sarah's Story**

Of all the participants in the study, Sarah has changed the most over the past eight months. Through our conversations and correspondence, I have been privileged to witness an important phase in her personal transformation. Her story has touched me deeply. While we haven't spoken at length for a month, Sarah has continued to send her weekly journals. She is on the cusp of yet another personal breakthrough, so I'm eager to talk with her. But my sense of anticipation is also tinged with sadness, as today is our final interview.

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<sup>365</sup> Communicative action, and in particular discourse, encourages reflection on the assumptions embedded in cognition.

Five years ago, Sarah's secret shame about her working class upbringing and subsequent life choices had severely undermined her self-image and confidence. As a single mother of three boys who supported her family through a melange of low paying jobs in a rural community, Sarah was worn down from constant financial strain. On a whim born partly out of desperation, she enrolled in two introductory liberal arts courses at a local community college. Sarah had attended university three decades earlier, but had dropped-out after the first year. To her surprise, she loved college this time around. To her even greater surprise, she did well in her courses. Riding a wave of renewed energy and bolstered by her initial success, Sarah continued to take courses at the college for another year. Then she came into a small inheritance, which allowed her to seriously consider doing what she had been daydreaming about for the past year: she could go to university! The timing was right. Her two oldest sons were now working and able to take care of themselves. And that left only her youngest to care for. So, Sarah moved to Queensville, starting courses at the university a few months later.

I met Sarah when she had been at Queensville for slightly more than two years. By that time she had decided to major in Women's Studies because of a "superb" course she had taken in her first semester. In that course, she found the readings resonated with her experience as a single mother who had struggled to raise a healthy and loving family. In particular, Sarah enjoyed how the authors, and the professor, spoke from deeply personal spaces but managed to link their stories and insights to broader social structures and issues. She discovered that personal experience was both a legitimate source of knowledge and a valid site of intellectual inquiry. But she also learned how contemporary discourses about class and age intersect with those of gender to shape the ways in which women can understand their experiences and act in their worlds. For the first time in her life, Sarah was encouraged to think, talk and write about her childhood growing up in poverty and with an abusive man in the house. She was invited to consider how this formative experience affected her life choices. And she was asked to conduct these reflections with scholarly rigour. To her surprise, the professor seemed interested in what she had to say. So, too, did the other students, despite the fact they were decades younger.

Their reactions left Sarah feeling “profoundly privileged and honoured.” While these sentiments were foreign to her, she deeply appreciated them.

Another important development occurred for Sarah in that first Women’s Studies course. In the second class, the professor circulated a flyer about the co-op program and encouraged the students to apply.<sup>366</sup> For Sarah, co-op looked like a good opportunity to make some money and avoid dipping into her savings. It also offered hope that she could forge a new, challenging and stable career path as a result of returning to university. She immediately applied for the program. After wrangling with co-op administrators over admission criteria that initially led to the rejection of her application, Sarah was accepted into the program a few months later.<sup>367</sup>

By the time of our first interview, Sarah had won a number of academic awards, distinguishing herself as an exceptional student. She had just started her fourth co-op work term, this time serving as a communications officer at a provincial government agency. The co-op program had provided much more than she originally anticipated. Sarah had experienced a wide range of jobs, from providing information and assistance to distressed women at a community shelter, to organizing an archive of photographs at an historic site, to digitizing maps for a government department. When I asked her about these experiences, I was surprised to learn that, despite her studies in women’s issues, Sarah found her work at the shelter to be the least appealing; while she found her technical work in the government office to be the most attractive. When I asked her about this contradiction, she explained the women’s shelter dredged up painful reminders of her past, whereas working with computers represented a new, bright future. Sarah also explained that she preferred to advance women’s causes in ways that were not hurtful for her, such as acting as a mentor for other women wishing to embark upon similar mid-life

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<sup>366</sup> I interviewed the professor who encouraged Sarah to join co-op. The professor believes co-op provides a good opportunity for women’s studies students to engaged with prevailing power structures in order to learn more about those structures and, possibly, to work from within to change them.

<sup>367</sup> At the time, Sarah was only enrolled part-time at the university and the admissions criteria stated only fulltime students were eligible.

journeys into higher education.<sup>368</sup> But she also reasoned that working longer-term in a non-profit agency would not provide the financial stability she craved, whereas finding a fulltime position with a government ministry would. She was not fully committed to this logic, however, expressing concern about being tied to a job that could become tedious and destroy her confidence, which is the way a number of women she knew had experienced their work in bureaucracies.

Not long into our first interview, I realized that self-confidence was a central issue for Sarah. When I asked about her decision to return to university after a long hiatus, she responded, “I didn’t like the rut I was in. But, after a lifetime of not believing in myself, it was hard to change. I’m sure one of the reasons I went back to school was to build my confidence. My experience at school has certainly done that, and the co-op program has given me the place to prove it.”

When I asked her to elaborate the ways in which her studies and experience in the co-op program affected her confidence, she provided some answers that caused me to take a more complex view on the potential effects of combining earning and learning via a co-op program in the humanities.

In designing the study, I had anticipated a number of the experiences Sarah related to me. For instance, the research literature on the labour market is full of examples of how employers discriminate against certain types of people, such as older workers and women. I suspected some of the students would report maltreatment, and Sarah confirmed this. Referring to the process of finding co-op work terms, she told me, “Each time I’m one of the last people to get a job. That’s probably because of my age and sex.”

“So there’s bias in the process?” I asked.

“Sure” she replied. “I can tell they’ve made a decision as soon as I walk into the room, especially if they’re men. They do a double take. It’s like they haven’t read my résumé, because if they had they’d know what to expect.”

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<sup>368</sup> Co-op administrators in the Arts and Writing Co-op program at the University of Queen'sville have a formal mentorship initiative that matches experienced co-op students with newly admitted students. Through this initiative, Sarah served as a mentor to Deborah, another participant in this study whose life circumstances are similar to Sarah's. She also organized an informal support group for women she met at work and elsewhere who were thinking about embarking on postsecondary studies.

“And how are things once you get a job?” I probed further.

“They’ve been fine, except for my last one,” she responded.

“Tell me about that.”

“I had this incredibly supportive supervisor, but it was her boss who was the problem. He hadn’t wanted to hire me because I didn’t have the computer skills. But she talked him into it. He’d wanted to hire this young guy who was a computer whiz. She wanted the work term to be a learning experience, not just a job. So in her view it didn’t make any sense to hire someone who already knew everything. Plus, I think she wanted another woman in the office, especially one close to her age. And I can see why. It was just the two of us in this sea of men. So we both had something to prove, especially because she’d taken a chance on me.”<sup>369</sup>

“So what happened there?”

“That job was desperate at times, especially in the first couple of months,” Sarah explained. “There were moments when I was in tears. It was just so overwhelming to figure out how to work these different programs and troubleshoot the equipment. I felt dumber than dog shit.”

“How did they treat you? Did anyone help you out?” I asked.

“As I said, my supervisor was great,” Sarah explained. “She didn’t know how to help me, but she calmed me down and told me to take my time. She believed in me, which is something I was grateful for. None of the men offered to help. That’s probably because they didn’t know how to work the equipment either.”

“So how did all this work out in the end?”

“Despite everything, I was cruising by the fourth month. In fact, near the end, the boss actually came to me and said, ‘Help! Show me what you’ve learned. No one else here knows how to do it.’ So, I wrote instructions and showed him some stuff. I felt powerful at that moment. But the whole experience taught me that if you’re an older woman you have to work twice as hard to prove yourself.”

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<sup>369</sup> I interviewed the woman with whom Sarah worked. She confirmed the accuracy of Sarah’s account in this paragraph.

Then Sarah shared with me an insight I hadn't entirely anticipated.

"In the end," she continued, "I had this tremendous feeling of accomplishment. It's because of the struggle I had there that I could walk with confidence into the interview for the job I'm doing this term and get it."

A job that caused Sarah great angst was also a job that increased her confidence! In designing the study, I had reasoned that, because employers generally have greater power than do students in the social relations that constitute the co-op program, most students who experienced negative employer behaviour in the labour market or at work would be demoralized.<sup>370</sup> Furthermore, I assumed that, unable to correct the practices of employers, these students would instead question the legitimacy of their academic and co-op programs.<sup>371</sup> But this is not the case for Sarah. The knowledge she has acquired through courses in Women's Studies has confirmed her own experience that power relations in the labour market and elsewhere are often arbitrary. The courses have also taught her not to be held captive to those relations.<sup>372</sup> For Sarah, the co-op program has been one way to bring those power relations more under her control.

"I know both from experience and from reading that it's harder for women my age to get jobs that are meaningful and challenging," she told me in our second interview, by which time she was thoroughly enjoying her work in communications. "But the co-op program has shown me it doesn't have to be that way. Each job gets progressively better-- at least in hindsight. The co-op has been instrumental in making me feel I belong in a professional environment. It has also been a support system."

"In what ways has co-op been a support system for you?" I inquired.

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<sup>370</sup> See Valerie's story for an example that supports this assumption (p. 237).

<sup>371</sup> See Warren's story for an example that supports this assumption (p. 194).

<sup>372</sup> Sarah told me: "Most of my life I never challenged anything. The thing that Women's Studies has given me is the confidence to challenge things. It's given me a greater understanding of how the world works, what the blocks are for women, and how to take them apart."

“While I’ve been at school I’ve been home-schooling my son.<sup>373</sup> So, apart from the co-op, I haven’t had the time to get really involved in university life,” replied Sarah. “Co-op’s been like a club.”

As she elaborated this topic, I learned that through her involvement in the program Sarah had become good friends with a number of women who, close to her age, shared similar life circumstances.<sup>374</sup> I began to think that a more apt description of the club Sarah found in co-op could be “community of women.”

When I asked Sarah if “community” might be a better descriptor of her experience in the program, she responded, “Yes...and no.”

“Oh?” I responded with mild surprise.

“I’ve definitely made some friends who have been very supportive and I’ve had a positive influence on them as well,” she explained. “But the co-op is also a kind of elite club.”

“What is elite about it?”

“To get in, your grades have to be really high,” Sarah explained. “Plus, you have to know what to say. Language is really important. You have to convince them you’re willing to work your butt off.”

“So what’s the benefit of joining this club?” I asked, noting how “club” had a strategic connotation for her that contrasted with the sense of community she found among the women she had befriended through co-op.

“The best thing is you get access to jobs that would not be open to you otherwise,” Sarah explained. “You also learn how to present yourself to potential employers. They’re

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<sup>373</sup> Partway into the period of this study, Sarah began home schooling her youngest son as he was diagnosed with learning disabilities and was having great difficulty at school. By the end of the study, he was making remarkable progress and this became another source of profound personal satisfaction for Sarah.

<sup>374</sup> Through her participation in co-op, Sarah mentored and has become close friends with Deborah, another participant in this study (see Deborah’s story, p. 184). She also became close friends with the program assistant in co-op office. At work, Sarah became close to her supervisor, who relied on her for advice about returning to university. She also befriended a woman who recently began working in her department, and helped her to get over the anxiety of starting a new job. And she continues to correspond regularly with the supervisor who helped her to make a success out of her previous work term. Sarah experienced a greater affinity with this circle of women than with the universally younger group of students she met in her courses.

very strict about that in the program. That was especially important for me. Plus, you're forced to take courses you wouldn't normally take."

"How are those courses a benefit?" I asked, inwardly questioning another assumption I had made early on in the study that the prescribed courses humanities students in co-op must pursue<sup>375</sup> were potentially deleterious to the fabric of their curriculum and academic identities.

"I had to do Computer Science," she replied. "At first I didn't see that as a benefit. In fact, it was extremely painful. But the skills I learned there have been crucial to my success at work and even in school."<sup>376</sup>

Waiting for Sarah today, I remember how she talked about another of her prescribed courses, the Philosophy of Science. Similar to Computer Science, that course was also painful until she took a risk and applied some of the lessons she learned in Women's Studies. For her final paper she researched as many philosophers of science as she could find, reviewing close to one hundred and fifty of them. In her research, she could find only two female authors. So she argued the Philosophy of Science lacked a feminist perspective, and nervously submitted her essay. To her surprise, she received a top grade. Until that time, Sarah had been unsure of the value of her studies in what many perceive to be a marginal and radical discipline. When people on her work terms asked about the usefulness of her academic field, as they inevitably did, she found herself framing its contribution in terms of generic skills, such as research, writing and communication. But Women's Studies had allowed her to tackle the Philosophy of Science, which was no small accomplishment. It had also allowed her to understand and confront gendered power relations in the labour market and workplace. As a result, she found her confidence increasing both on and off campus.

I have noticed in Sarah's recent journal submissions that the emphasis she has tended to place on skill development and establishing a career is shifting. She is now

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<sup>375</sup> In the Arts co-op program, students are required to enrol in a select number of courses to assist them in becoming more employable. See Chapter Five (p. 132).

<sup>376</sup> Sarah told me that the computing skills she learned as a result of participation in co-op helped her to be more productive in researching and completing course assignments.

concentrating more on her scholarly development and personal growth. Looking back, her experience in the Philosophy of Science course foreshadowed this shift. But the true catalyst has been a deeply personal research project she began in a Women's Studies course, and is continuing to work on this semester. She described this project in her journal:

These days I'm totally consumed by researching and writing a life history of my mother. She was born in England in the mid 1920s. But in the early 1930s she was sent to Canada as an orphan, even though her parents were still living at the time. A so-called charity brought her and two of her brothers here. Apparently this happened to thousands of children whose parents couldn't afford to raise them. My mother ended up in a residential school on a farm just north of Queensville. She and her siblings are all in their late seventies and they may not be around much longer, so I'm getting their stories. Plus I'm doing lots of documentary research, some of which involves archives in England and here in Queensville. And I'm writing to family in England, most of whom I never knew existed. This project is not just for her. It's also for my sons and me. It's about a sense of belonging. My mother never felt she belonged. I inherited that. And I worry that I've passed on some of it to my sons.

Sarah arrives just as I am reminding myself to concentrate in our conversation today on this project. Shaking hands, I tell her I've just been reading her journal and reflecting on the conversations we've had over the past year. I remark on the changes I've seen in her, and notice that her eyes well up.

"Now that I'm so close to finishing my degree, I'm daring to dream," she admits. "I didn't know if I could pull this off financially, emotionally, mentally. It's just been an incredible journey for me."

"What are you dreaming about?" I ask.

"Doing a masters degree," she says, "and writing a book."

This is the first time she has mentioned these goals.

"What about finding a steady job?" I ask bemusedly.

She laughs, "You know, two years ago that would have been the ultimate. But there are bigger and better things I can aim for now."

"I'm assuming the book will be about your mother's experience," I offer.

"Yes," she replies. "But it's getting bigger than that. I'm finding very little has been written about what happened to these children. I mean, they were taken from their

families and shipped halfway around the world with no way of getting back. And the places they ended up in were not necessarily pleasant.”

“Oh?”

“My mother was routinely beaten at the orphanage, but I didn’t know that until now. That explains why her life has been filled with fear. To think that all this time I’ve hated her for her fear because it became a part of me as well.”

I notice that Sarah is talking about her emotions in a past tense and remark, “So this research has brought you closer to your mother?”

“Yes. We’re making discoveries together. For instance, she always assumed it was her mother who rejected her. She’s been carrying that rejection around for her whole life. But I’ve discovered that it was the father who gave the children away. So that’s changed everything for her.”

“What about the rest of your family?” I probe further.

“I’m writing to aunts and uncles in England that I’ve never met. And they’re responding,” Sarah responds. “Last week, this seventy-seven year old man called to say, ‘I’m your uncle Norman and your letter brought tears to my eyes’.”

“That’s very moving.”

“It is,” she replies. After a moment of reflection, she continues, “You know, I’ve discovered there’s an incredible amount of family pride in what I’m doing. And not just in researching this story, but also in going to university. For people who are poor, university is not a place where you ever expect to go to. It’s like treading into forbidden territory.”

Forbidden territory. Sarah used this phrase recently in her journal to describe a visit she made to the former site of her mother’s orphanage. They went to confront and demystify a place that had caused a lifetime of fear. A few of the buildings were still there. Some were boarded up, but one or two were still being used for other purposes. Sarah described how her mother trembled as they walked up the crumbling concrete steps to enter one of the buildings. Then she described how, after a brief tour, her mother’s sobbing turned to soft laughter as she held her in the late afternoon sun.

I ponder the possible parallels between Sarah's conception of the orphanage and the university as forbidden territories. I think about Sarah's role in supporting her mother and I wonder if she has had someone to support her in claiming the university as her own.

"Who has helped you to make the university less forbidden?" I ask.

"Amanda White, my favourite professor," she responds. "She's really interested in my stories. She encouraged me to do this project. But more importantly she believes in me."

Sarah and I spend the next hour exploring the nooks and crannies she has reclaimed from forbidden terrain. All the while, I find my mind tracing, and trying to connect, the themes I've heard in her story. I think about how she described her fear, lack of confidence and need for belonging. I reflect on the risks she has taken, and the courage and tenacity that she has demonstrated. I think about the community of women she has built around her. And I wonder how her experience in the co-op program relates to all of this. So, near the end of the interview I ask her to try to explain this to me.

"I've arrived at a place now where I want to more fully explore what the university has opened up to me, especially the research, writing and the freedom to learn. I won't be able to do that if I get a job--at least if it's a job like I've experienced in co-op," she explains. "Now, that's not to say the co-op jobs have not been valuable. In fact, they've been instrumental. I needed to gain those skills in order to gain the confidence to pursue something else. Co-op has been a stepping-stone and not a place to stop."

Then, after a moment of reflection, Sarah adds, "I don't know what I'll do about my financial security longer-term, but right now this freedom I've discovered is more important."

### ***Epilogue to Sarah's story***

By chance I bump into Sarah a year later in the philosophy section of a bookstore. After a warm hug, she explains that she has graduated and is working part-time as a research assistant for Amanda, her favourite professor. More importantly, she tells me she has completed the manuscript for her book and is busy researching graduate schools in England.

### *Analysis of Sarah's story*

In contrast to the other humanities students in the study, Sarah has been able to shape the immediate outcome of her educational program, including her co-op experiences, in a way that gives authentic expression to her needs and interests. In so doing, she has cast for herself a confident, caring and scholarly identity. She has developed considerable communicative competence along the way, predominantly through her studies. She has learned to question the validity of scientific knowledge, supporting her own claims with facts. She has expanded her capacity to query the legitimacy of the moral orders from the perspectives of sex and class differences, and she has articulated and applied her ethical insights through practical actions.<sup>377</sup> Most importantly, in learning how to negotiate and give authentic expression to her needs, interests and identity, Sarah has developed the capacity to help others give expression to theirs.<sup>378</sup> An important part of her competence in this regard is the ability to reveal and undo systematic distortions in understanding. She conceives of this activity as transgressing “forbidden territory.”<sup>379</sup>

Sarah has also developed technological and strategic communication skills, largely as a result of her co-op experiences. These skills have also been a wellspring of self-confidence. They have helped her to shift the balance of power in the labour market more in her favour. Moreover, these skills and the confidence that accrues to them have been “instrumental” in supporting Sarah’s scholarly endeavours. Through her co-op jobs, Sarah has also come to learn what it takes to fit into a “professional” setting. She now feels capable of playing this role, but is not convinced it provides the latitude for authentic expression of interests and identity that she craves. In this regard, Sarah’s story

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<sup>377</sup> Sarah’s research and book about her mother is an example of practical discourse. It is an attempt to bring to light an historical wrong, to record that wrong on the public record, and to rectify the consequences of that wrong in the present, at least for her family. Another example is her debate with the co-op program over entrance requirements, which in her view discriminated against single mothers.

<sup>378</sup> Sarah’s major commitment in this regard is to her mother. However, she also helps other women in her “community” at school and work to do this.

<sup>379</sup> In going to the former orphanage, Sarah was helping her mother to undo a systematically distorted understanding of her biography and identity.

is similar in many ways to all of the other humanities students in the study.<sup>380</sup> But there are some key differences about her situation that provide her with greater freedom to shape her lifeworld in this way. Most important among these is that she is not under the same immediate financial pressure as the other students, because of the small inheritance she recently received and the economic contribution that her participation in co-op made. Currently, she is able to interpret her needs and interests primarily from the non-instrumental perspective of her lifeworld, thereby avoiding the potentially colonizing and distorting effects that can ensue from a perspective that is heavily (and necessarily) indebted to the economic system. If she decides to work, she can be choosier about jobs and employers, orienting her participation in the economic system in such a way that it supports and expands her lifeworld.<sup>381</sup>

A second difference between Sarah and most of the other humanities students is that she has established around her a community that extends into most of her educational milieux, including the co-op program, workplaces, classrooms and the professoriate. In this supportive community Sarah has been able to express herself unreservedly, and she has been honoured for doing so. Here she has found the confidence to open up communication with her mother, to undo misunderstandings in their relationship, dispel distortions in their self-understandings and build community in her family.

A final important difference in Sarah's situation relative to those of the other humanities students is that the broader academic community has publicly recognized and rewarded her. While Sarah is suspicious of the "elitism" inherent in these acts, and in the social function of universities more generally, these acts of recognition are nonetheless a source of great pride for her. She has overcome her embarrassment and guilt of growing up in a working class family by telling parts of the story of that upbringing to an elite

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<sup>380</sup> Lisa worries that a "techie" rather than an "artsy" future work life awaits her (see p. 161). Deborah expresses concern that her "humanity" is only able to "ooze out here and there" (see p. 190). Edward has reconciled himself with the fact that his intellectual passions will inevitably become "hobbies" (see p. 221). Valerie does not want to enter the "corporate world", but has difficulty seeing any other options (see p. 300).

<sup>381</sup> For example, Sarah currently works in a relatively low-paying but fulfilling job as a research assistant to her favourite professor.

cultural community. She has found this process simultaneously uplifting and potentially transgressive.<sup>382</sup> More than the other students, Sarah is a valued member of the academic community. This means she is better positioned to choose to expand her educational lifeworld, for instance, by going to graduate school instead of seeking permanent employment.

### **Chapter Summary**

When considered within a Habermasian framework, the two stories in this chapter approximate ideal outcomes from participation in co-op. But these stories reveal that these outcomes rest as much on the students' broader lifeworld contexts that they brought with them to the university, such as their family upbringing, subsequent life experiences and corresponding abilities, needs, values, interests and interpretive resources, as they do on how their academic, co-op programs and workplaces are constituted and run. They also reveal that serendipity plays a part in the process. In these regards, the stories reveal that the ways students experience their participation in co-op is influenced, in part, by what happens to them--that is, by which courses they take, how their professors teach and the nature of their relationships on campus, how their co-op programs are designed and administered, the types of jobs they secure, and the employers they have. Equally important, their experiences in co-op are also conditioned by what they do with what happens to them--that is, the choices they make and types of action they take--and the consequences, both intended and unintended, that ensue. Outcomes in co-op thus depend, on the one hand, on how the stars are aligned for students and, on the other hand, on how the students, with the co-operation of other social actors, forge complementary developmental paths within that existing cosmos.

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<sup>382</sup> She believes some members of the academic community recognized her for the content and quality of her contribution, while others recognized her for her high grade point average. Because of the latter, Sarah views her academic interests and scholarly work, which focuses on social struggle at the intersection of class and gender differences, to be like a Trojan horse that has been unwittingly accepted by an elite class.

## **Chapter Nine: Conclusions**

### **Introduction**

This chapter returns to the two research questions and related objectives that guided the study. It summarizes findings and draws conclusions relative to these questions and objectives. The reader will also find suggestions for how the findings and conclusions can inform policy and practices related to co-operative education, higher education and workplaces. Finally, it provides a reflection on the research process and suggests some directions for future research.

### **Making Meaning of the Relationships Between the Sociocultural and Economic Missions of Higher Education through Co-op**

The first question that guided this research project asked how undergraduate co-op students from differing academic disciplines experience and make meaning of the complex, contemporary relationships between the sociocultural and economic dimensions of higher education in the context of their co-op programs. In answering this question, the stories in Chapters Six to Eight described and interpreted the lived experiences of ten co-op students, exploring of how they constructed understandings of their social action and learning as they moved between different institutions and social spaces (i.e., university, labour market and workplaces).

From a Habermasian perspective, the students engaged in the co-op process for instrumental reasons, and they were subsequently required to orient their social action and learning in predominantly strategic ways. The meanings they produced of their experiences were largely drawn from the standpoint of the economic system, although there were degrees of difference here depending on their biographies and the disciplines in which they studied. Structurally, the students were universally wedded to this locus of meaning, as the emphasis in their co-op programs was on securing, and succeeding in, co-op jobs. This emphasis proved necessary, as the competition for suitable positions was often high, particularly for students in the humanities.

Figure 9.1 shows how the system and the steering mechanisms (i.e., money and power) between it and the students' academic lifeworlds constituted the primary domain of social action and learning. Chapter Six described how the emphasis, here, was placed on developing, using and accumulating strategic and instrumental forms of skill. These skills helped social actors to coordinate their action in the system and steering mechanisms. Skills also anchored the students' perceptions of their learning needs, and, in some cases, their identities.

The emphasis on skill development showed the students to be engaged in meaningful processes of human capital formation, corroborating the findings of Grosjean (2000). The substantive outcomes of these processes of human capital development were, however, highly variable. What participants reported depended in large measure on the quality and characteristics of the cultural attributes and practices, and the systems of production, in which they were immersed. This finding qualifies the widely held view that participating in co-op invariably increases stocks of human capital (see Ellis, 1987).<sup>383</sup>

As the students transported skills through the steering mechanisms, applied them in new workplaces and, to a lesser degree, in academic contexts, some of them saw improvements in their metacognitive capacity. Similar to research conducted by Davidge-Johnston (1996), the development of metacognitive capacity was a by-product of the co-op process. It was not generally emphasized or promoted in the students' co-op or academic programs. When it was encouraged, the metacognitive process was unidirectional rather than dialogical. It focused on mining the lifeworld for skills and knowledge to apply in the system. There is some evidence in the study that suggests a dialogical educational emphasis on metacognitive processes would improve the students' ability to learn at both work and school. Such a focus would allow them to perceive themselves to be not starting from "scratch" in each new learning context. It would also assist them in not viewing school and workplaces as two autonomous spheres of learning.

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<sup>383</sup> This finding also qualifies both human capital theory and the credentialing thesis, as outlined in Chapter Two, adding to the literature on the economic contribution of higher education.

The findings also indicate that, while some students found themselves adjusting their thinking and skills to new contexts, they did not generally engage in the transfer and application of forms of thought and skill that aimed to alter those contexts. There were structural, cultural and political limits around to the direction in which their metacognitive capacity could be oriented. These included the systems of production and management, and cultural attributes and practices, both on campus and at work. They also included the conflicting interests, and thus politics, that often lay beneath the surface of each context.

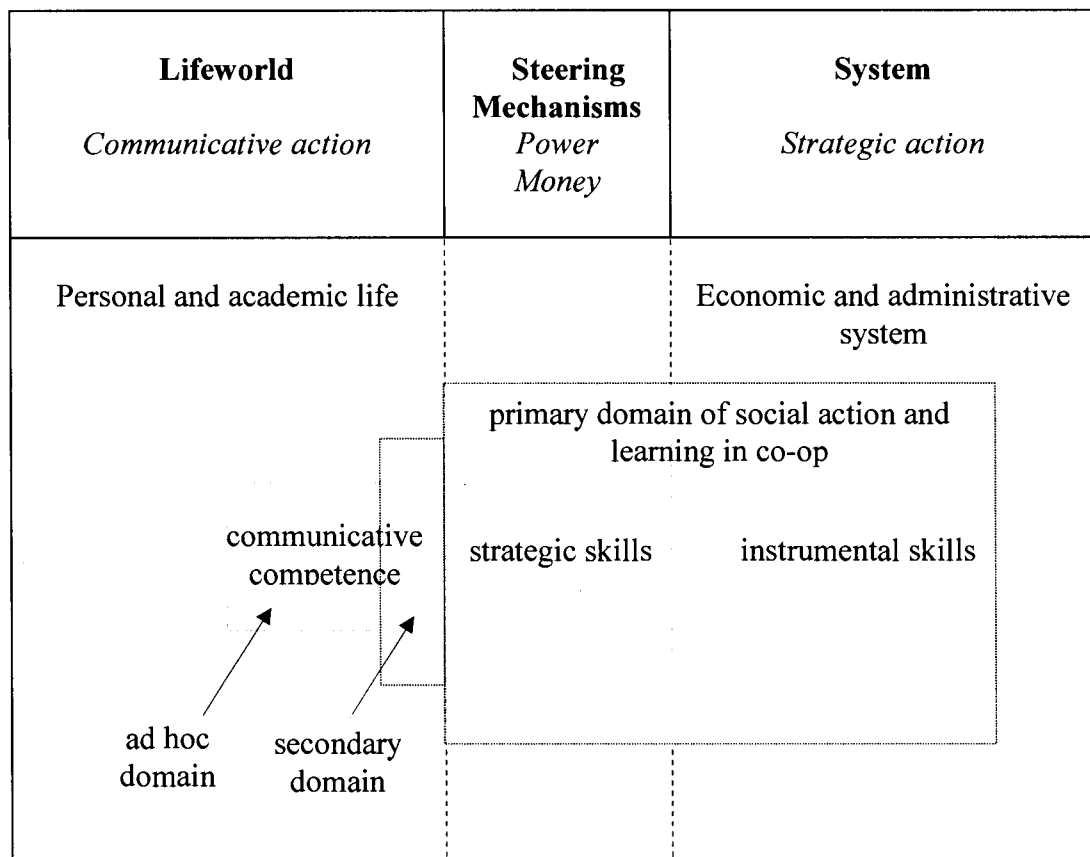


Figure 9.1 The primary, secondary and ad hoc domains of social action and learning for participants in this study

A secondary, and lesser, domain of social action and learning existed in the students' experiences in co-op (see Figure 9.1). Positioned in the students' lifeworlds, this

domain consisted of formal (or semi-formal) educational supports. These were meant to assist them in reflecting on their co-op work experiences and the relationships between these and their personal and academic competence, interests, and identities. The findings show a high degree of variability in the scope and scale of this secondary domain of social action and learning. Included here were dialogue with their co-op coordinators and, to a lesser degree, their employers, reflection and action within a supportive community of practice at work, interaction with a mentor<sup>384</sup>, and work term report writing, the latter being the most formal of these activities. The main emphasis in this domain was on the students' learning relative to their cognitive development (preferably but not always in their disciplines). But social action and learning here also touch on the legitimacy of experiences at work, including such things as cultural attributes and practices, ethics and politics in their organizations. This domain also provided a venue for students to consider the degree to which their experiences reflected, allowed for and promoted authentic expressions of their identities, learning needs and interests.

A third domain of social action and learning also existed for the students (see Figure 9.1). This was a domain of ad hoc social action and learning that occurred in the students' personal and academic lifeworlds. The scope and scale of this domain were highly variable. The types of activities in this domain included exposure to radically new forms of thought or ways of being, often through vicarious interactions or experiences. Another activity was when students pursued a particular interest or concern from their experiences at work as an important line of inquiry in the context of their studies. The students' participation in this research project was also an ad hoc lifeworld activity. For many of them, the research process provided a site for, and impetus to, engage in sustained reflection on their experiences. This reflection led some to take action in new directions. A very important component of their ad hoc learning was the students' informal interactions with their professors. When they returned to campus, if professors demonstrated openness to, and interest in, the students' co-op (and life) experiences, the

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<sup>384</sup> This semi-formal mechanism was limited to the Arts Co-op program.

students were encouraged to interpret their learning from the perspective of their academic lifeworlds.

The findings indicate that the preponderance of strategic action and related forms of learning (as portrayed in Figure 9.1) can suppress communicative action and interfere with the students' development of communicative forms of competence. In a number of cases, it was evident that the focus on strategic action in co-op workplaces, and in particular on retaining a positive focus on the acquisition of skills and future employment references, masked conflicting interests, expectations, values and practices that were impeding the students' learning and productivity. The root problems in these instances were sociocultural in nature. Communicative action, whether in the ideal form of discourse or in a more pragmatic, political form, would have been required to fully resolve them. As such, they represented good opportunities for students to practice and develop communicative forms of competence. Situations such as these could have produced learning that was socioculturally responsive and economically productive. The students were not, however, well prepared, oriented, positioned, or supported through their secondary and ad hoc domains of social action and learning to do so.

When one considers the relative scale, scope and nature of the social action and learning domains represented in Figure 9.1, the co-op program does not appear to be well nested, or integrated, into the academic lifeworld. The analysis offered of the co-op literature in Chapter Two demonstrated this to be the case on a grander scale than the empirical cases presented here. Much of the historical emphasis in research and practice on co-op has been on its economic contribution. Only more recently have a relatively small number of researchers and practitioners begun the difficult process of attempting to integrate it into the academic mainstream by attempting to define and produce its educational value.

Chapter Seven explored this problem of integration. It demonstrated how, with some regularity, most of the students described and interpreted their academic and co-op experiences, at some time, as if these were autonomous spheres of social action and learning. This was particularly evident for students in the Arts Co-op program. At least

two important problems arose from these situations. The students had difficulty furthering their academic competence, interests and identities in the co-op process. They sometimes perceived themselves to be less productive at, or committed to, work than they wanted to be.

The analysis in Chapter Seven used the twin Habermasian concepts of cultural rationalization and social modernization to explore this problem of integration. It revealed that the processes of enculturation and socialization in which the students were immersed in the co-op program tended to uncouple from the processes of cultural rationalization in their academic programs, particularly when they embarked on their work experiences. If there were substantial contradictions between the cultural practices and attributes into which the students were socialized in their academic programs and those they encountered through their co-op programs, they experienced significant problems with integrating their social action and learning. It was shown, however, that if their academic lifeworlds were highly culturally rationalized, the students developed a kind of “cross-cultural” competence that allowed them to negotiate these contradictions in personally meaningful and socially productive ways.

The processes of cultural rationalization in the students’ academic programs also tended to uncouple from processes of social modernization in the co-op labour market and workplaces. Again, this was particularly true for the students in the Arts, whose academic fields did not offer clear cut pathways into the labour market. Mismatches between the substantive content of co-op jobs and the systems of production and management, and the students’ personal and academic interests, competence and identities, resulted in problems in how the students were able to integrate their social action and learning. Students who were specialized in their chosen academic cultural sphere tended to have fewer problems in this regard. In addition, students who had developed a significant amount of sociocultural competence in their personal and academic lifeworlds were better positioned to negotiate their way through these mismatches.

Figure 9.2 portrays the overall dynamic between the developmental processes that inform how students understand their learning and social action in co-op. The one solid arrow in Figure 9.2 is related to the students' participation in the co-op program. This indicates that the co-op program is a continuous developmental process. Once they join, the students are immersed in an ongoing cycle of job searching while pursuing their academic studies, and then proceeding onto work terms. Grosjean (2000) noted that this continuous cycle produces a "co-op effect" whereby students form identities that derive substantial and ongoing nourishment from their participation in co-op. It becomes a significant source of meaning that binds together their learning experiences on campus, in the labour market and at work. The dotted lines represent where uncoupling tends to occur in the process.

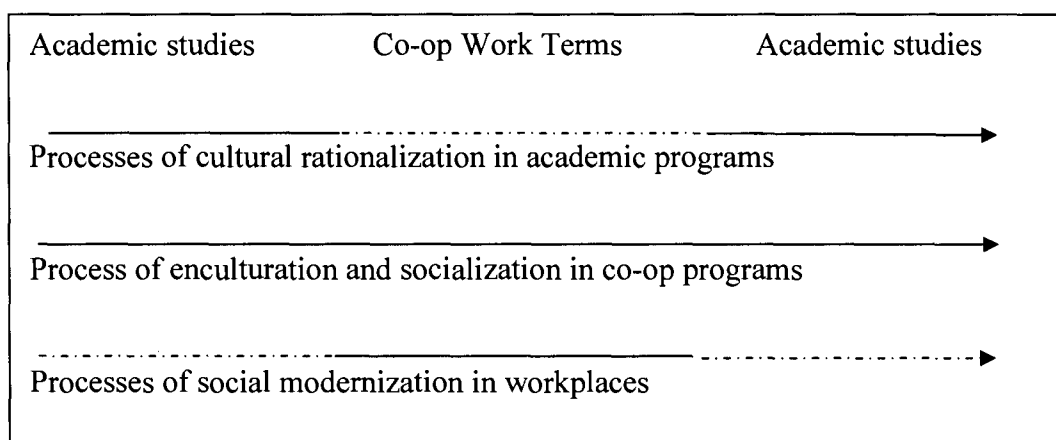


Figure 9.2 The uncoupling of developmental processes in co-op

It is very important to note that, from a Habermasian perspective, terms such as uncoupling and integration do not have linear meaning. They signify dialogical relationships that exist between relatively autonomous developmental processes. Thus, readers should not infer from Figure 9.2 and this discussion that, in order for integration to occur, the three developmental processes must merge together as one solid line, becoming identical with each other. In their ideal form, these relationships are highly

reflexive, with communicative action and related forms of competence guiding decision-making between them from the perspective of lifeworlds.

### **Social and Educational Implications of Co-op in the Context of the Knowledge Society**

The second research question guiding the study was to describe, within the context of the knowledge society, the significant social and educational implications of the ‘answers’ to the first question that can inform policy and practice in co-op programs, universities and workplaces. Before these implications are enumerated, it is important to provide a brief review of the context of the knowledge society.

The context and characteristics of the knowledge society were described in Chapter One, where the discussion began with the prevailing view of the knowledge society: the human capital perspective. This perspective emphasizes the need for knowledge to be put to more effective and efficient use, particularly in, on and through information and communication technologies, in order for individuals and nations to remain competitive in a global, interconnected economy. The challenges that this prevailing vision, and the cultural values and social practices associated with it, presented for contemporary higher education were explored. This discussion foregrounded contemporary tensions between the sociocultural and economic missions of universities in the era of knowledge societies.

From the perspective of the former, the primary roles of university communities are to unearth, develop, store, criticize and disseminate knowledge that contributes to a vibrant, socially progressive society, and to socialize students into the habits of mind and attitudes necessary to engage responsibly as citizens in such a society. The secondary role of university communities is preparing students for the world of work (Axelrod, Anisef & Lin, 2001).

From the perspective of the economic mission of universities, academic communities need to become more “relevant” (Grosjean, 2000). They need to increase their focus on developing and transmitting the knowledge and skills that will accelerate individual, regional and national economic competitiveness, and de-emphasize fields of study and forms of learning that have no immediate commercial utility. Specifically, they

should direct their attention and resources towards those knowledge-based areas of the economy that have the greatest potential for generating wealth, such as business and professional services, applied science and technology (Axelrod, 2002). Moreover, university communities need to incorporate more of the “real world” in their curricula, including work experiences such as co-op.

The Habermasian perspective offered in Chapter Three brought the sociocultural and economic missions of higher education into a dialogical relationship. It described how advanced industrial societies (i.e., knowledge societies) are comprised of both a lifeworld and a system. The former provides for the sociocultural reproduction of such societies, while the latter provides for their material reproduction. The sociocultural processes and institutions of the lifeworld provide overall direction to the society, while the economic and administrative processes and organizations in the system provide for an effective and efficient infrastructure for achieving societal purposes. The Habermasian perspective showed how, through developmental processes of cultural rationalization, universities play important roles in the reproduction of culture and socialization of citizens, and, in preparing people for productive participation in the formal economic and administrative systems (Braaten, 1991). On this view, educational experience is not socially progressive unless it can achieve these two, often contradictory, objectives in balanced and reflexive ways. Co-op programs were seen to hold promise in this regard, as they operate at the nexus between the sociocultural and economic missions of the university.

The findings in this study, discussed mainly in Chapter Six, suggest that effort is required in the co-op program, the university and workplaces to generate a better balance between the strategic and communicative action orientations if learning experiences for students are to foster both sets of competence--communicative and strategic--and thereby create an educational process that is both socioculturally responsive and economically productive. Figure 9.3 portrays how the domains of social action and learning previously represented in Figure 9.1 above might be reconfigured to achieve a happier marriage between these outcomes.

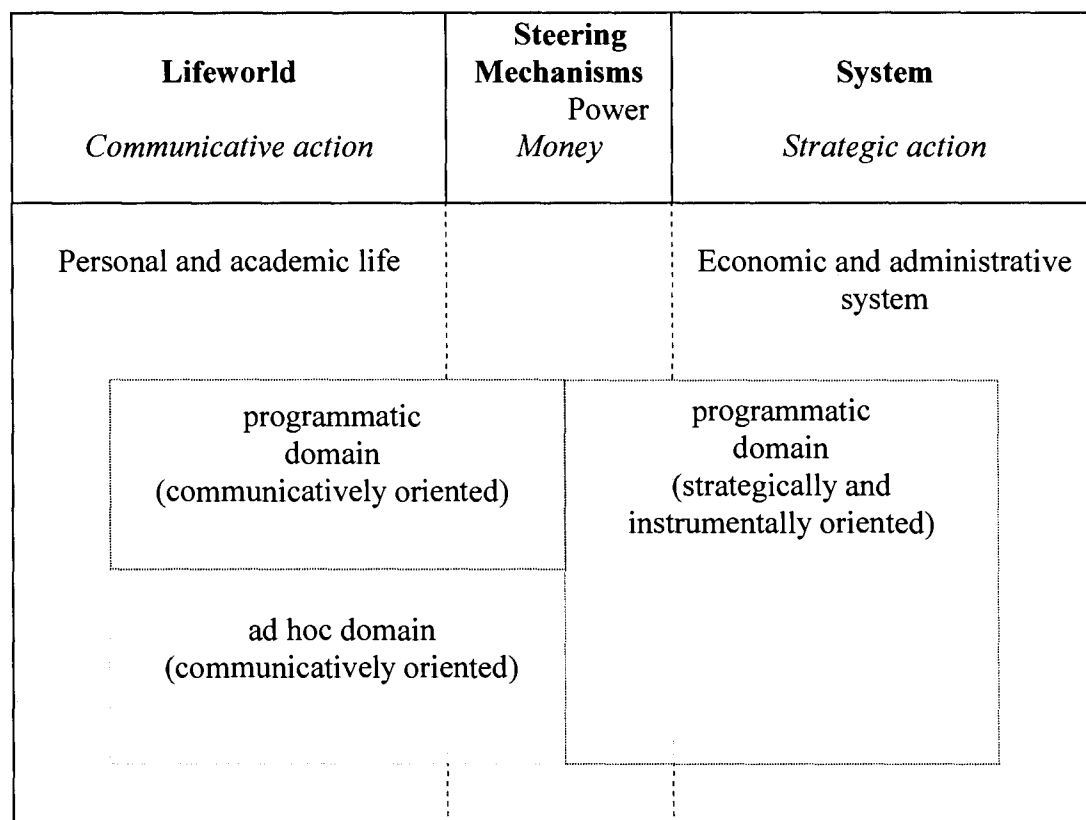


Figure 9.3 Reconfiguring the current of domains of social action and learning for co-op participants

The findings discussed in Chapter Seven also suggest that the developmental processes in which students are immersed in co-op need to become more continuous and reflexively coupled if the students are to be able to integrate their learning in ways that are socially progressive. This would allow for improved steering from the perspective academic lifeworlds of the processes of enculturation and socialization in which students engage in co-op. Figure 9.4. Some suggestions on how to encourage this are outlined in the next section.

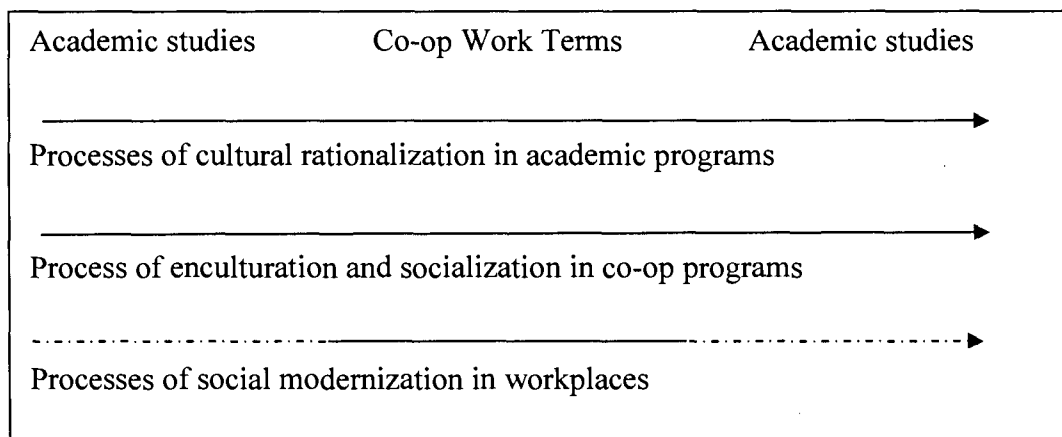


Figure 9.4: Recoupling the developmental processes in co-op

### **Informing Educational Policy and Practice**

The final objective of this research project is to describe how the findings and conclusions can inform policy and practice. In this section I provide suggestions for those who administer co-op programs, employers and students who participate in them, professors who have an interest in them and university administrators who wish to expand them. Before doing so, however, it is important to address the methodological implications of providing suggestions for policy and practice from the results of a qualitative study such as this one.

Technically, the findings from this study are not generalizable to the population of social actors in co-op at large. From a researcher's perspective, this makes the shift from discussing what "is" to recommending what "ought to be" a particularly important one to examine. Usually this shift is considered less problematic if the research findings are generalizable (e.g., the sample population of the study was large and statistically representative, variables were carefully defined, and causal models were established). This gives the reader more confidence that the findings would hold in all similar cases, thereby providing a basis for making choices with respect to policy and practice where the outcomes and potential consequences of those choices can more readily be predicted. It deserves to be noted here, however, that, following Greenfield (1979) and Hodgkinson (1996), when we draw conclusions about what ought to be from what is we make

philosophical leaps from facts to values that are, at root, evaluative judgements and not truths.

In Chapter Four, readers were encouraged to consider the findings and conclusions presented in this research report from the perspective of their transferability, rather than their generalizability.<sup>385</sup> Transferability involves readers noting the specifics of the situations presented in the research report and comparing them to situations with which they are familiar. If there are enough similarities, and the research findings appear trustworthy<sup>386</sup>, readers may then be able to infer that the results would be similar in their own situation. To make inferences and subsequently transfer findings and conclusions to other contexts, readers need to know as much as possible about the original research situation. It is thus the researcher's job to provide thick descriptions to help readers make informed judgements about whether, and to what degree, they can transfer findings to other situations (Denzin, 1997).

Decisions about the application of findings and conclusions in this study to policy and practice, ultimately, must be left to readers. What I offer in this section are suggestions for policy and practice, not prescriptions. They are inferences to guide action from the findings that are based on my own experience as a researcher in the field of co-op and a member of university and workplace communities. Readers are asked to consider whether these suggestions are transferable to their own situations as policy makers or practitioners.

Five policy issues could be addressed to help reconfigure co-op in such a way that it strikes a better balance between strategic and communication forms of social action and learning, and that provides for better and more reflexive integration of the learning that takes place in the different contexts involved. The first three policy suggestions are curricular. The fourth is structural. The fifth is about the principle of educational quality.

The findings in this study suggest that it is important for co-op students to be reasonably specialized in an academic field, and to be adept at crossing into the other

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<sup>385</sup> See p. .

<sup>386</sup> On issues of trustworthiness, see Table 4.4 and the related discussion in Chapter Four (p. 116).

academic cultural spheres of value that constitute the lifeworld of the university. In the case of the Arts Co-op program, the mandatory requirement for students to take courses in other departments and faculties contributed significantly to their “cross-cultural” competence in scientific-technical, moral-practical and aesthetic-expressive domains. While it was often challenging and even painful for the students, this curricular requirement enhanced the processes of cultural rationalization in their academic lifeworlds, and helped them to integrate more efficiently into processes of social modernization. A similar approach could be undertaken in the other co-op programs. There is evidence in this study that students in the applied sciences would not only benefit from this, but they would welcome the opportunity to explore different domains of human interest, experience and learning. It could improve their ability to better understand, and become more reflective about, the sociocultural dimensions of their scientific and technological competence, professions and workplaces.

Another curricular issue that merits a policy focus is the preparation of students for their work terms. Given the problematic experiences some of the students reported in their workplaces, universities offering co-op should consider implementing mandatory preparation activities that allow students to learn about their legal rights and obligations as an employee, what constitutes reasonable standards of behaviour in workplaces, and avenues of recourse that are open to students who have concerns during their work terms.<sup>387</sup>

The final curricular issue that merits a policy focus concerns the requirement for work term reports. These are the main avenue for encouraging reflection on and integration of social experience and learning in the co-op program. The evidence in this study reveals their current usefulness to be limited. If a better balance is to be struck between the academic lifeworld and economic perspectives in co-op, these reports need to emphasize the former at least as much as they do the latter. Better still, they would encourage a dialogical integration of the two perspectives. While this level of detail may

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<sup>387</sup> One way to achieve this policy objective and to better integrate the developmental processes around co-op, would be to have preparation of this kind to be scholarly in nature--that is, for it to be an accredited course, taught by academics with specialities in this area.

be an issue of practice more than policy, the suggestion here is that a policy expression could be made of the importance of producing analytical reports that draw on academic knowledge and competence, and that meet academic standards. The latter point would mean that professors would likely need to be involved, and this would help to more rigorously and reflexively, integrate the developmental processes in the academic and co-op programs.

On the structural front, the findings demonstrate that there is a need to (re)establish dialogical connections between the professoriate, co-op program personnel and other social actors who are engaged in the co-op process. This would allow for an improved capacity to set and steer educational goals in co-op programs from the perspective of the academic lifeworld of the university. In the university in this study, there does not currently appear to be a coherent policy framework in place to accomplish this. Moreover, if the university in this study is a good example, the emphasis in the co-op programs is likely to become even more focused on efficiency and productivity in the placement of students.<sup>388</sup> The risk here is that more, rather than less, strategic action will be fostered, and the twin developmental processes in co-op and academic programs will uncouple even further.

A final policy suggestion concerns the issue of quality. Universities offering co-op might benefit from a principled expression of what constitutes a quality co-op job and work experience. The findings demonstrate that the quality of the students' jobs, and the quality of the relationships between them and the students' academic interests, strongly affected their experiences in co-op. The quality of their jobs directly influenced their cognitive and skill development, and their enculturation and socialization into professional communities of practice. The findings also indicated that there is great variability in quality, in terms of the content of the work, and in terms of human relations in workplaces. With the increase in co-op enrolment in Canadian universities, conflicts will invariably arise between the sheer number of work sites needed and the quality of

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<sup>388</sup> For example, see Chapter Five where a recent external review of the University of Queensville's co-op program calls for a greater emphasis on job placements, and the strategic focus of senior administrators in the University emphasizes a dramatic increase in co-op enrolment.

work experiences those sites provide. A policy expression of quality could guide the decision-making and practices of coordinators in the co-op program as to whether, when and how much to intervene in job placement processes and on-the-job. The principles for guiding co-op offered by Ricks (1996), along with some of the findings here, could provide a useful basis from which to start.

This discussion about coordinator decision-making provides a bridge into suggestions for practice stemming from the findings. These suggestions are aimed at five groups of social actors in the co-op process: coordinators, students, employers, professors and university administrators.

An important finding for coordinators to consider is that students are not prone to contacting them when there are problems with their employers or co-workers. Coordinators therefore need to be diligent in reading between the lines to make sure that, above all, students are safe and treated well. The findings here also suggest that problems at work might serve as significant learning opportunities, from a sociocultural perspective, for students and employers. To pursue these opportunities, however, sometimes requires negative and critical forms of action, which students or coordinators may perceive to be too risky. In such cases, another possibility for coordinators is to encourage students to reflect rigorously on and research these problems in their work term reports, articulating hypothetical actions (or better practices) to take in future contexts.

If the technical nature of most of the co-op jobs in this study is any indication, coordinators might wish to open up ways for students to inquire into non-technical, non-task oriented, non-“skill” focused aspects of work experiences. Again, work term reports that do not focus on descriptions of duties and tasks, but instead focus on social, cultural or expressive aspects of work terms, would allow for more reflexive space to be opened up between the processes of social modernization at work and the developmental processes on campus.

The scheduling of work terms was a problem in a number of cases in this study, as it interfered with the students’ academic development. Coordinators might wish to

become more aware of the students' academic interests and how the sequence of course offerings in their programs best accommodates these interests. In addition, knowledge of the quality of instruction in certain courses or times of year in the academic departments would also help coordinators to steer students in appropriate directions.

For co-op students, four suggestions stem from the findings. The first is to follow passion. This sounds like a cliché, however, the students who made educational choices based predominantly on instrumental reasons tended to find much less meaning and reward in their learning processes both on campus and off. When possible, students should get to know their professors, particularly the ones who stoke their intellectual passion. In this study, a number of professors played significant roles, even though they were not formally involved in the co-op program. Even in their absence during the students' work experiences, they provided a source of meaning from the perspective of the academic lifeworld. Lastly, where possible, co-op students might wish to give priority to their academic schedule, rather than their co-op schedule. Evidence in this study showed that a quality educational experience on campus that allowed for a sustained emphasis in a specialized field and learning opportunities in other academic disciplines (or cultural spheres of value) was important for a socially progressive educational experience in co-op.

For professors, the findings in this study suggest that co-op programs influence how students relate to knowledge and pedagogy. Participation in co-op also affects their academic choices, enculturation and identities. The professors in this study who managed to have significant positive educational influences on the students appeared to be sensitized to this. Some of them attempted to work with the students in classrooms or through bilateral conversations to help them reflect on their co-op experiences from the perspective of their academic fields. This helped to bring balance into the process.

For employers, the findings in this study suggest that co-op employers may wish to pay closer attention to the quality of the content, processes and cultural practices and attributes of the students' work experiences. The findings indicated that students will be more productive and committed to their work if employers become a co-educator in the

process. It is an old adage of management theory, but employers need to strike an adequate balance between the sociocultural and technical dimensions in their management practices (Morgan, 1997). Employers may also wish to inquire into their definition of “skill” when they are designing work processes and recruiting. There is evidence in the study that suggests employer definitions may be too narrow, particularly in non-statutory labour market settings.

Lastly, university administrators who are thinking of starting or expanding co-op programs may wish to reflect on the proper balance between the strategic benefits of doing so and educational goals. The stories in this study show there is more to co-op students’ experiences than job searching, working and making money during their degrees. If administrators grow these programs without educational forethought they may face unintended consequences that can be negative for university communities. Co-op can be used as a strategic tool for recruiting and retaining students. But that purpose needs to be counterbalanced with educational policy and practices that encourage rigorous reflection in and on the co-op process, from the perspective of diverse academic lifeworlds.

### **Reflections on Research Method and Directions for Future Research**

Blaug (1997) and others (Ruane & Todd, 1988) note that Habermas’s critical social theory is difficult to apply in empirical research contexts, as his concepts are abstract and their interrelationships are highly complex. As a result, empirical researchers either tend to water down the concepts or produce research reports that are nearly as abstract as the original theory. Others note that his theory is idealistic and universalistic (Outhwaite, 1994; Seidman, 1997; Yeatman, 1998). They argue his theory is too distanced from the pragmatic nature of everyday social practices to be of particular analytical and interpretive value. They also suggest it can cause researchers to exhibit a kind of interpretive authoritarianism that desensitizes them to the unique and important differences in empirical contexts, such as those related to gender (Blaug, 1997; Fraser, 1989). As a result, researchers who rely on Habermas’s theory are seen to produce accounts that appear too utopian or heavy-handed, or that provide sweeping cultural

criticisms in place of concrete insights into the nature of current social practices. Blaug (1997) calls these problems “discriminative failure[s]” (p. 113) in Habermasian research accounts.

Some of these problems with discrimination came to the fore as I interacted with the participants, and (re)constructed, analyzed and interpreted their stories. It took some time, for example, to become aware that by conceptually lodging workplaces into the system (as opposed to the lifeworld) the Habermasian lens was suppressing my ability to recognize unique workplace experiences that fostered communicative forms of competence (in addition to strategic and instrumental competence). Armed with the rejoinders to applications of his theory, the problems with discrimination were much reduced from what they could have been. I also developed a metacognitive technique of applying Habermas’s concept of colonization to the Habermasian lens I was using. This encouraged me to monitor whether my system of interpretation was overriding other patterns of meaning that were emerging in the hermeneutic contexts with participants and while I drafted their stories. Readers will nonetheless decide if, and to what degree, this report reproduces conceptual issues related to the use of a Habermasian approach, or if it presents new ones. Readers are invited to consider how these issues might be avoided in any future studies that build on the Habermasian lens offered in this report.

It is important to note, however, that, according to Blaug (1997), Habermas fully intended his theory *not* to allow for the kinds of “discrimination” empirical researchers might require. On this view, it is an illegitimate use of his theory to pre-determine the specific categories and patterns of meaning that inform and stem from everyday social action. This “would amount to designing a way of life for participants” (Blaug, 1997, p. 113). Only when the experiences of social actors meet theory “halfway” can a legitimate understanding be established and reported.

One way to achieve this fusing of horizons between Habermasian researchers and their participants is through a research design and method that relies on and encourages communicative action (Blaug, 1997). The design and methods used in this study attempted to do just that. The research approach was guided by a number of the principles

of ideal speech. By involving students, co-op coordinators, professors, employers in the study, the study allowed access to representatives of the different social groups potentially affected by the discussion. As the narratives in each of the stories demonstrated, the traditional role authority of the researcher was delimited allowing the research process to be directed reciprocally. The norms of honesty and sincerity were observed. The discussions were reciprocal, not strategic. This allowed for validity claims to be raised from both sides of the discussions, and for them to be explored in specific social and educational contexts. And this exploratory approach resulted in concrete findings about extant practices in co-op and some of their social and educational implications.

This hermeneutic approach resulted in a more focused theoretical understanding. Figure 9.5 reworks Figure 3.3 to portray this new understanding, which can serve as a mid-level conceptual model that allows for greater discrimination than did the model in Chapter Three. A number of key points need to be highlighted in this new model. First, it details the important Habermasian concepts that correspond to each sphere of social action. Second, it provides greater definition to the sociocultural aspects of workplaces and the economic and administrative aspects of the university. Third, it provides much more detail regarding the steering mechanisms between the system and lifeworld in the context of participation in co-op. This model, or specific elements of it, could serve as a useful guide for future research.

| <p style="text-align: center;"><b>Lifeworld</b></p> <p style="text-align: center;"><i>Communicative action fostering:</i></p> <ul style="list-style-type: none"> <li>- communicative competence</li> <li>- social integration</li> <li>- cultural reproduction</li> <li>- socialization</li> <li>- cultural rationalization</li> </ul>  | <p style="text-align: center;"><b>Steering Mechanisms in Co-op Programs</b></p> <p style="text-align: center;">P = Power<br/>M = Money</p>   | <p style="text-align: center;"><b>System</b></p> <p style="text-align: center;"><i>Strategic action fostering:</i></p> <ul style="list-style-type: none"> <li>- strategic and instrumental competence</li> <li>- functional coordination</li> <li>- system integration</li> <li>- social modernization</li> </ul>   |
|---|--|---|
| <p style="text-align: center;"><i>Personal and academic life</i></p> <ul style="list-style-type: none"> <li>- personal interests</li> <li>- academic identity</li> <li>- academic program (sociocultural perspective)</li> <li>- academic communities</li> <li>- workplace communities of practice</li> <li>- social and cultural criticism (incl. cultural politics, and identity politics)</li> </ul> | <ul style="list-style-type: none"> <li>← (P) Definition of skills</li> <li>(P) Skills (strategic) →</li> <li>← (P) Skills (instrumental)</li> <li>(P) Financial means →</li> <li>← (M) Income</li> <li>(P) Attitude →</li> <li>← (P) Confidence</li> <li>(P) Biography → (cultural and social capital)</li> <li>← (P) Administrative/managerial acts</li> <li>(P) Political activism →</li> <li>(M) Tuition →</li> <li>← (P) Educational support mechanisms</li> <li>(P) Loyalty/legitimacy →</li> </ul> | <p style="text-align: center;"><i>Economic and administrative system</i></p> <ul style="list-style-type: none"> <li>- career interests</li> <li>- career identity</li> <li>- academic program (human capital perspective)</li> <li>- labour markets</li> <li>- division of labour</li> <li>- organization of work</li> <li>- systems of management and production</li> <li>- university administration</li> </ul> |

Figure 9.5: Reconfigured Habermasian model of lifeworld and system as it applies to co-op

In retrospect the research approach in this study could have been enhanced to better meet one of the objectives, which was to suggest new directions for educational policy and practice. This objective concerned prescription rather than description. A

complementary Habermasian approach to this research objective would have been to draw the different stakeholders--students, coordinators, professors, employers, administrators--into a dialogue (under conditions approximating ideal speech) about the current state of affairs and directions for the future, along with recommendations for changes in policy and improvements in practices.<sup>389</sup>

The idea of bringing representatives of the different social groups involved in co-op into a direct dialogue on their interests and interpretations of needs, with a view to setting directions for the future thus offers a potentially fruitful avenue of research, particularly if it were done in an action research mode that used the twin concepts (and corresponding practices) of ideal speech and communicative action as touchstones.

The issue of involvement of the professoriate in co-op could use further research. Very few studies have been undertaken in this area. The findings in the current study showed how some professors played very significant roles in shaping the academic passions and identities of some of the students. Yet, they appeared to have minor, informal roles to play in and around co-op. It would be interesting to know more about the roles they do play with respect to co-op that may not have appeared here, and what their perceptions are of co-op more generally. It would also be interesting to know what, if any, future involvement they would like to have in shaping co-op programs and what the barriers to their participation might be.

There was sufficient evidence in this study to suggest that gender, and other social forms of difference, play significant roles in how the students experience their participation in co-op, even if these might appear as subtexts. This represents an important area for future research. It would involve asking focused questions about how social structures and practices related to gender and other forms of difference, such as race, ethnicity, sexual orientation and socioeconomic class, affect the social and educational experiences of students as they participate in co-op.

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<sup>389</sup> This could have involved workshops with representatives from each stakeholder group to discuss the findings of the study and to recommend directions for the future, on the basis of (something approximating) a genuine consensus.

Finally, Grosjean (2000) noted that there is a “co-op effect,” whereby, once the students complete their first work terms, they tend to form identities that derive substantial nourishment from their participation in co-op. This research project was communicated to participants to be a study of their social and educational experiences as co-op students. Combined with any “co-op effect,” this could have created the impression that the researcher was not keenly interested in their experiences from the perspective of their academic programs. Future researchers who wish to pursue similar questions as those asked in this study may want to approach participants on the basis of their participation in their academic programs or the university more generally, with co-op being a complementary theme in the inquiry.

### **Concluding Thoughts**

The review of the co-op literature in Chapter Two showed that beginning in the 1990s researchers and practitioners were beginning to question the educational value of co-operative education. They were also starting to ponder why the pecuniary benefits of co-op often appeared to be more modest than was anticipated. In the contemporary context of the knowledge society, these questions remain central. Co-op programs would appear to provide a good model for helping to achieve the twin missions of undergraduate university education, enculturating reflective, engaged citizens who are also able to integrate productively into workplaces.

The stories in this report show that, in practice, this process is complex and sometimes inchoate. The analysis and interpretation offered through a Habermasian lens show participants to be engaged in meaningful processes of human capital formation and cognitive development. They also reveal that a preponderance of strategic action in co-op can interfere with the development of communicative competence. This impedes learning that is both socioculturally responsive and economically productive. The findings suggest that developmental processes in co-op and academic programs tend to uncouple, leading to problems with how participants integrate their learning in different contexts. They further demonstrate that participation can foster substantial and socially progressive forms of learning, when a complex interplay of factors aligns or is encouraged to align.

Finally, as this study was undertaken from within a department of educational administration, it is important to briefly suggest what the key contribution may be of this research for this particular academic subspecialty and community. This research offers an example of how Habermas's critical social theory can be applied fruitfully in empirical research that investigates, among other things, the relationship between substantive (i.e., lifeworld) and instrumental (i.e., system) rationality and values<sup>390</sup> as they manifest in and inform social action learning in educational settings. While Habermas's ideas have been eloquently transported into the field of educational administration through theoretical research (see Bates, 1989; Foster, 1986, 1989; Smyth, 1989), their use in empirical studies is rare.<sup>391</sup> This study suggests that Habermasian theory offers conceptual, methodological, interpretive and analytical guidance for treating the concepts of substantive and instrumental rationality (and the social and educational practices indexed to them) non-dichotomously. In this, the study points to ways in which problems associated with Weber's (1968) legacy in the field--in particular, how the dichotomous use of his metaphor of the "iron cage" ends in a conceptual, moral, political and educational *cul de sac*--can be undone while still respecting the fundamental importance of that legacy. In this, the study makes an empirical research contribution to an agenda Bates outlined in 1989. Lastly, for administrators of secondary schools that are involved in co-operative education and researchers investigating co-op at the secondary school level, many of the findings in this study are likely important and transferable. Of particular note here are those findings that signal potential threats to the physical and mental well-being and equitable treatment of secondary co-op students when they engage in work experiences.

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<sup>390</sup> The importance of these concepts, drawn from Weber (1968), to the field of education administration was discussed in Chapter Two (p. 34).

<sup>391</sup> See Harris (2002) and Sergiovanni (2000) for other examples of empirical educational research that rely on Habermasian concepts.

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*Appendix 1: Human Research Ethics Committee Certificate of Approval***University of Victoria**

Human Research Ethics Committee

**CERTIFICATE OF APPROVAL**

|   |                                  |  |
|---|----------------------------------|--|
| <u>Principal Investigator</u><br><b>V. Peter Milley</b><br>Graduate Student | <u>Department/School</u><br>EDUC | <u>Supervisor</u><br>Dr. Carol Harris                                |
| <u>Co-investigator(s)</u><br>N/A  |                                  |  |
| <b>Title: The Social Educational Implications of Co-operative Education</b> |                                  |  |
| <u>Project No.</u><br>364-99  | <u>Start Date</u><br>01 Dec 99   | <u>End Date</u> <i>Dec 31</i><br><del>30 Mar 00</del> <i>see per</i> |
|   |                                  | <u>Approval Date</u><br>01 Dec 99                                    |

**Certification**

This is to certify that the University of Victoria Ethics Review Committee on Research and Other Activities Involving Human Subjects has examined the research proposal and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Subjects.

  
J. Howard Brunt,  
Associate Vice-President, Research

**This Certificate of Approval is valid for the above term provided there is no change in the procedures. Extensions/minor amendments may be granted upon receipt of "Request for Continuing Review or Amendment of an Approved Project" form.**

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*Appendix 2: Invitation to Participate in the Study*

Subject: Research Participants Required for a Study Entitled The Social & Educational Implications of Cooperative Education

With the permission of your Co-op Coordinator, I am writing to recruit research participants for a study investigating the social and educational implications of cooperative education.

If you are interested in contributing your knowledge and experience as an undergraduate co-op student to improve contemporary understandings of co-op, then please consider volunteering for this study. If you do so, you will be helping to add a new dimension to the existing research. You may also find your learning enhanced, as you will be asked to reflect deeply upon and to discuss at length your academic and work experiences.

I am seeking willing participants from all years of the Coop program (including those who are just beginning). Your participation will consume approximately 15-20 hours of your time over a 6-month period that spans your next Coop work term.

If you are interested in participating or would like to receive more information, please contact me at 380-2447 (h), 721-8969 (w), or [pmilley@uvic.ca](mailto:pmilley@uvic.ca).

Sincerely,

Peter Milley, PhD (candidate)  
Department of Education Administration, Faculty of Education

### ***Appendix 3: Information Package for Potential Research Participants***

#### Information for Participants

##### The Social and Educational Implications of University-level Co-operative Education

#### Overarching research question:

What forces, factors and conditions advance or hinder socially progressive learning and action for students in university-level co-operative education? What are some of the significant social and educational implications of the “answers” to this question for co-op students and the people with whom they interact at university, and in their workplaces, communities and civil society.

#### Purposes of the research:

Within the scope of the research question, this project aims to

1. describe and interpret in-depth the lived experiences of select participants in co-op;
2. explore how these co-op participants negotiate the complex contemporary relationships between “earning” and “learning”;
3. understand how participation in co-op affects participants’ sense of identity and horizons of possibility;
4. explore how participants negotiate their understandings and actions with others as they act in and move between different institutions and social spaces (e.g., universities, workplaces, communities);
5. interpret how participants’ experiences and understandings of these experiences “fit” within their local and extended social relationships; and
6. where appropriate, generalize these findings analytically to inform policy and practice in co-op.

#### Research design:

This is a qualitative, interpretive, multi-case research design. It covers a 5-6 month period that spans participants’ co-op workterms. There are approximately ten participants drawn in equal numbers from two different co-op programs. The key elements of this design are:

1. three in-depth interviews, conducted before, during and after their co-op workterms (approx. 1-1.5 hours/interview)
2. weekly journal to be kept during the workterm (min 250 words/week)
3. informal conversations on a monthly basis (or more often) with respect to issues/themes/problems raised in the journals (approx. 15-30 min’s/conversation)
4. interviews with 3-4 people in participants’ social network (referred by participants as “significant” for whatever reason)

5. document analysis of key documents participants use during co-op (e.g, résumés, covering letters, forms, papers, etc.)
6. a “ride-along” day by the researcher in the participants’ workplaces
7. a focus group at the end of the study period
8. participant review of transcripts from interviews and focus group

Key dates and activities (dates are approximate):

Dec. 13 - Jan. 1<sup>st</sup> interviews

14

Jan. 23 - Feb 4 Review 1<sup>st</sup> interview transcripts (request return by Feb. 4)

Jan. 31 First journals submitted

Feb. 1- 12 Follow-up conversations on journals (book 2<sup>nd</sup> interviews/site visit)

Feb. 22- Mar. Site visits - 2<sup>nd</sup> interviews

12

Feb 28 Second journals submitted

Mar. 1 - 12 Follow-up conversations on journals

Mar. 23 - 31 Review 2<sup>nd</sup> interview transcripts (request return by Mar. 31)

Mar. 31 Third journals submitted

Apr. 1-12 Follow-up conversations on journals

Apr 30 Fourth journals submitted

May 1 - 12 Follow-up conversations on journals (book 3<sup>rd</sup> interviews)

May 10 - 17 Third interviews (include last submission of journal - figure out focus group timing)

May 23 - 31 Review 3<sup>rd</sup> interview transcriptions out (request return by May 31)

June 28-July 2 Focus group (sometime in this period)

July 12 - 23      Review focus group transcriptions out (request return by July 23)

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*Appendix 4: Key Participant Consent Form*

CONSENT FORM FOR PARTICIPATION IN THE STUDY ENTITLED:  
“THE SOCIAL AND EDUCATIONAL IMPLICATIONS  
OF UNIVERSITY COOPERATIVE EDUCATION”

This research project is studying the social and educational implications of undergraduate Cooperative Education (Coop). It aims to gain an in-depth understanding of how individuals experience (e.g., perceive, make meaning of, or value) their participation in Coop, and how their experiences influence their educational, cultural and social outlooks.

The primary researcher of this study is Mr. V. Peter Milley, a Ph.D. candidate from the Faculty of Education at the University of Victoria. Mr. Milley’s supervisor is Dr. Carol E. Harris, Professor of Educational Psychology and Leadership Studies, Faculty of Education, University of Victoria.

If you agree to participate in this study, you will be asked in a series of three interviews about your impressions, opinions and experiences regarding your studies, paid work, Coop program, and the people you interact with in Coop. You will also be asked to keep a record of your thoughts, feelings and experiences on a weekly basis during your Coop work-term. Your permission will be sought to interview three important people (identified by you) with whom you interact before, during and after your Coop work-term. In addition, the researcher will seek permission to participate in a limited number of experiences with you, such as work-term preparation seminars, a day at work, or an interview with your Coop coordinator. Finally, you may be asked to participate in a group interview process with other participants.

Your participation in this study will consume about 15 hours of your time over the course of a six-month period. The findings of this study will form the basis for the researcher’s Ph.D. dissertation, and may be presented at conferences and/or published in scholarly journals. Your participation in this study is completely voluntary and you can withdraw at any time, without explanation. If you choose to withdraw from the study you have the right to have any data collected about you destroyed. You have the right to refuse to participate in aspects of the study, for whatever reason.

Any data collected in this study will remain confidential. Interview results and weekly records will be kept in a locked filing cabinet in a locked office. Your name will not be attached to any published results. To protect your anonymity, the researcher will use code names for you and any other subjects or references that could be used to identify you. The cipher for these codes will be stored separately from the data, and will be filed confidentially. All participants in the group interview process will be asked to sign non-disclosure agreements to protect each other’s identities (please note: despite the use of non-disclosure agreements, complete anonymity cannot be assured for participants in focus groups). Only the principal researcher, his Ph.D. supervisor, Dr. Carol E. Harris,

and committee members, Dr. James Cutt, Dr. Rennie Warburton and Dr. Paul Thomas (all from the University of Victoria) will have access to the data.

Your individual interviews will be audio recorded, and group interviews will be video recorded. In each case, the tapes will be erased immediately after your responses are transcribed in written form. You will be encouraged to review the transcripts and to make comments on them. Any written records you provide which could be used to identify you will be altered with “white-out” or “black marker” to erase your name or other potential identifiers. These written records will be kept on file for three years or until the research is completed, whichever comes first. Then they will be destroyed.

Whether you participate, choose not to participate or withdraw part of the way through this study will have no bearing on your academic or employment status. If you agree to participate, please sign below to authorize your consent. Please return this form to the principal researcher, and keep the extra copy for your reference.

If you wish further information at any time regarding this study, please contact the primary researcher or his supervisor at the addresses below.

Signature of participant: \_\_\_\_\_ Date: \_\_\_\_\_

Researcher: Mr. V. Peter Milley  
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*Appendix 5: Informant Consent Forms*

CONSENT FORM FOR PARTICIPATION IN THE STUDY ENTITLED: "THE SOCIAL AND EDUCATIONAL IMPLICATIONS OF UNIVERSITY COOPERATIVE EDUCATION"

This research project is studying the social and educational implications of undergraduate Cooperative Education (Coop). It aims to gain an in-depth understanding of how individuals experience (e.g., make meaning of, or value) their participation in Coop, and how these experiences influence their educational, cultural and social outlooks.

The primary researcher of this study is Mr. V. Peter Milley, a Ph.D. candidate from the Faculty of Education at the University of Victoria. Mr. Milley's supervisor is Dr. Carol E. Harris, Professor of Educational Psychology and Leadership Studies, Faculty of Education, University of Victoria.

For university faculty members: If you agree to participate in this study, you will be asked in a 30-minute interview about your impressions and opinions regarding undergraduate education. Specifically, you will be asked about your academic career and interests, your educational philosophy and approach(es), the role you play in influencing students' intellectual and social development, and your knowledge of/experience with/opinion of Coop.

For co-op employers: If you agree to participate in this study, you will be asked in a 20-30 minute interview about your impressions, opinions and experiences arising from your participation in the Coop program. You will also be asked about your role in students' learning and social development, and your interactions with personnel and programs at the university.

For co-op personnel: If you agree to participate in this study, you will be asked in an interview about your impressions, opinions and experiences regarding your work in the Coop program, its relation to student's learning and their social development, and the people with whom you interact in Coop. In addition, the researcher may contact you at a later date to clarify issues and themes that arise from the interview.

Your interview will be audio recorded; however, this data will remain confidential. The audio recording of the interview will be kept in a locked filing cabinet in a locked office. The tape will be erased immediately after it is transcribed in written form. To protect your anonymity, in the transcript the researcher will use code names for you and any other subjects or references that could be used to identify you. The cipher for these codes will be stored separately from the data, and will be filed confidentially. Your name and any identifiers will not appear in any published results. Only the principal researcher, his Ph.D. supervisor, Dr. Carol E. Harris, and committee members, Dr. James Cutt, Dr.

Rennie Warburton and Dr. Paul Thomas (all from the University of Victoria) will have access to the full inventory of transcripts once they have been encoded.

The findings of this study will form the basis for the researcher's Ph.D. dissertation, and may be presented at conferences and/or published in scholarly journals.

Your participation in this study is completely voluntary and you can withdraw at any time, without explanation. If you choose to withdraw from the study you have the right to have any data collected about you destroyed.

If you agree to participate, please sign below to authorize your consent. Please return this form to the principal researcher, and keep the extra copy for your reference.

Signature of participant: \_\_\_\_\_ Date: \_\_\_\_\_

If you wish further information at any time regarding this study, please contact the primary researcher or his supervisor at the address below.

Researcher: Mr. V. Peter Milley  
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***Appendix 6: Consent Forms for Group Interviews***

The Social and Educational Implications of Co-operative Education  
Ground Rules and Non-disclosure Agreement for Participating in Focus Group

Thank you for agreeing to participate in this focus group. It forms the last major component of your participation in this study.

This form is a supplement to the Informed Consent form you signed at the beginning of this study. The terms outlined in that form still hold sway. This means that the audiotape made of this focus group will be destroyed once it has been transcribed into written form. Your name and any other identifying elements will be edited to protect your anonymity.

Ground rules

1. Respect the opinions and points of views of others
2. Listen attentively
3. Speak freely

Non-disclosure of participants' identities

In order to protect the anonymity of all participants in this study, I agree not to disclose the identity of any of the participants in this study. Furthermore, I agree not to disclose any elements of the other participants' experiences that may allow them to be identified.

Signature of participant: \_\_\_\_\_ Date: \_\_\_\_\_

If you wish further information at any time regarding this study, please contact the primary researcher or his supervisor at the addresses below.

Researcher: Mr. V. Peter Milley  
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***Appendix 7: Guides for Interviews with Key Participants***

Key Subject Interview #1 Protocol (Pre Work Term)

Part 1: Semi-structured Interview

| #  | Questions   |
|----|---|
| 1a | Tell me about yourself (e.g., your background/biography, family, socio-economic status, politics, interests, goals, problems, joys, fears)      |
| 1b | What do you believe in? What is important to you?   |
| 2a | How do you think other people perceive you?   |
| 2b | Why do you suppose they feel that way about you?  |
| 2c | How do you view your “place” in the world, and your relations to others?  |
| 2d | What do you hope to achieve in your life?   |
| 3a | Tell me about your decision to attend university. Why was this important for you?   |
| 3b | What has been your experience of university life so far (e.g., what has been significant, problematic, frustrating, elating)?                   |
| 3c | Tell me about your decision pursue your discipline or particular course of studies.   |
| 3d | What do you like about university? What don't you like?   |
| 3e | How do you think you learn best? Why do you think this?   |
| 3f | What have you learned at university?  |
| 3g | How do your studies relate to or affect other aspects of your life?   |
| 3h | Tell me about any ethical or moral dilemmas you have faced at university.   |
| 3i | Tell me about some of the people you have met at university, both good and bad. How do you feel you relate to them?                             |
| 3j | Why do you think universities exist? How did you come to this view?   |
| 4a | Tell me about your employment history (e.g., what have you worked at, how did this come about, and why?).                                       |
| 4b | What stands out for you about your experiences at work, both good and bad?  |
| 4c | Tell me about some of the people you have worked with, both good and bad.   |
| 4d | What impact has working had on other aspects of your life (e.g., did it help you learn, develop confidence, pay for more rewarding activities)? |
| 4e | In general terms, how do you think most people are feeling about work these days?   |

- 
- 5a Tell me about your life “beyond work and school” (e.g., do you partake of community activities?).
- 5b What is important for you about these interests and activities? How did you come to value them?
- 5c Tell me about some of the people in your life outside of work and school (e.g., your family, and friends).
- 
- 6a Tell me about your decision to participate in Coop (e.g., where did you hear about it, how did you make your decision, why was it important to you?).
- 6b Tell me about your experience in Coop so far (e.g., with whom have you interacted, what has been required of you, how have you felt about it, what do you feel you’ve learned, problems encountered?).
- 6c What do you hope to achieve by participating in Coop (e.g., what is motivating you?)?
- 6d Tell me about the kinds of people you have met, and hope to meet, through your participation in coop?
- 6e Coop is promoted as a means to combine theory and practice, and to help bridge the classroom and the workplace. What do these concepts mean to you? How do you currently view the relationships between them?
- 6f What and how do you expect to learn as a result of your participation in Coop?
- 6g Coop is also promoted as a way to explore career possibilities and opportunities for work. Tell me about your career/work goals. How do you see coop in the context of these?
- 6h What do you think the significance of Coop programs is for participants and more generally for society?
- 

*Part 2: Working on the résumé*

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- | # | Questions   |
|---|---|
| 1 | What is a résumé?   |
| 2 | How do you use your résumé? Who reads it? What do you think they look for in it? Why do you think they look for those things?   |
| 3 | Why does your résumé look the way it does?  |
| 4 | What have other people said to you about your résumé?   |
| 5 | Tell me about the process of writing your résumé. What process did you go through? What was going on in your mind? How did you feel? ( <i>note: work systematically through the résumé at this point, asking why each section says what it does</i> ) |
- 

Key Subject Interview #2 Protocol (Mid Work Term)

Part 1: Semi-structured Interview (general questions)

| #  | Questions   |
|----|---|
| 1a | Tell me about your work so far this semester.   |
| 1b | Why did you decide to work here.  |
| 1c | What do you like about working here? What don't you like?   |
| 1d | Tell me about the process that you went through to get to work here.  |
| 1e | Tell me about your goals and objectives for the work-term.  |
| 2a | How has this work-term changed you?   |
| 2b | How do the people here treat you?<br>Have you received any feedback? From whom? What was it? How did it make you feel?      |
| 2c | How do you communicate with others here? What are these interactions like?  |
| 2d | Are you able to "be yourself" here? For example?  |
| 2e | Tell me about this working environment in relation to your need and interests.  |
| 2f | Tell me about the politics here.  |
| 3a | How would you describe the culture of this place?   |
| 3b | Who seems to have power here? Tell me how that affects your work? Others' work?   |
| 3c | How are decisions made here? Who decides on courses of action?  |
| 3d | Have you encountered ethical dilemmas in your work? What were they? How are you dealing with them?                          |
| 4a | Does your experience here relate to your studies? In what ways?   |
| 4b | In what ways has this experience altered your thinking, or your understanding of your discipline, academic or career goals? |
| 4c | Do you feel you are learning here? What is it that you're learning? How do you think you're learning these things?          |
| 5a | How has this experience affected other parts of your life?  |
| 5b | What do you do with your time outside of work?  |
| 6a | What do you currently think about your participation in Coop?   |
| 6b | Have you interacted at all with anyone from the University? Who? In what ways?  |
| 6c | In what ways is your experience at work similar to those you have at the university? In what ways is it different?          |

Part 2: Semi-structured interview based on transcripts and "journaling" exercise

| # | Questions <i>(will be written for each participant based on key issues/problems raised in transcripts and journals, likely will focus on 8 key topics: Theory and</i> |
|---|---|
|---|---|

---

Practice? Work? Communication/Interaction? Culture? People? Self?  
University/Education? Community? Other?)

---

- 1a Do you have any alterations to make on the transcript?  
1b Did anything “jump out” at you on the transcript?  
1c Is there anything you would like to add to it?
- 

Part 3: Semi-structured interview -- working on the site visit

| # | Questions   |
|---|---|
| 1 | Tell me about your experience with the site visit.  |
| 2 | What forms were used at this time? Who completes and/or reads them? What do you think they look for in them? Why do you think they look for those things?<br><i>(note: work through the forms step by step with the participant at this time)</i> |
| 3 | What do you think about the site visit process?   |

---

Key Subject Interview #3 Protocol (Post Work Term)

Part 1: Semi-structured interview (general questions)

| #  | Questions   |
|----|---|
| 1a | What thoughts are you having now about your last work term?   |
| 1b | How do you feel now about your decision to work there?  |
| 1c | How did your work “fit” in the organization?  |
| 1d | Tell me about your work and the organization’s “place” in society.  |
| 1e | Tell me about the site visit with your coordinator...   |
| 1f | Tell me about your work term report... what, why, how, what format, usefulness to you?                        |
| 1e | Overall, what do you think about the process of going out on this work-term?                                  |
| 2a | How did the work-term change you?   |
| 2b | Tell me about feedback you received on your work-term.  |
| 2c | How do you feel to be finished? What/who will you miss? What/who won't you? Why?                              |
| 3a | Did your sense of the culture of your workplace change during the course of being there? In what ways?        |
| 3b | Were there any power or political dynamics at work? In the final analysis, who seemed to have the power? Why? |

- 3c Did you encounter any ethical dilemmas in your work? What were there? How did they arise?
- 3d Technology seemed to play a large part in your work? What is your view of technology now? Has it changed as a result of the work term?
- 
- 4a Tell me about your transition back to university. (eg, how do you feel about it?)
- 4b How do you see your work experience relating to your studies?
- 4c In what ways has this experience altered your thinking or understanding of your field of study and academic goals?
- 4d Do you feel you learned? What did you learn? How did this happen?
- 4e Tell me about your academic plans and/or objectives (eg, course selection, grades, future schooling). Are these in any way influenced by your experience in co-op?
- 
- 5a How did your work experience affect other parts of your life?
- 5b What do you plan to do now with your time “outside” of school?
- 5c How do you view your “place” in the world as a result of participating in Coop?
- 
- 6a What is your opinion of Coop now?
- 6b In retrospect, what would you have done differently with respect to co-op?
- 6c What would you have liked others related to co-op to have done differently?
- 
- 6c What are your plans for the near future?
- 

Part 2: Semi-structured interview based on “journaling” exercise and previous interviews

- | # | Questions ( <i>will be written for each participant based on key issues/problems raised in journals, with focus on 7 key topics</i> )   |
|---|---|
| 1 | Journal: <ul style="list-style-type: none"> <li>- tension between literary and technical aspects of your work (eg, computer/indexing/layout versus “good book” “interesting book” “nicely written book.”), please talk about this...</li> <li>- “mind-numbing” aspects of some of the technical work...please explain more</li> <li>- learning “tons” in relation to layout and publishing--by mistake. What does this mean? How does this learning happen?</li> <li>-</li> </ul> |
| 2 | Work?   |
| 3 | Communication/Interaction?  |
| 4 | Culture?  |
| 5 | People?   |
| 6 | Self?   |

- 7 University/Education?
  - 8 Community?
  - 9 Other?
- 

Part 3: Semi-structured interview – returning to campus

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| # | Questions   |
|---|---|
| 1 | Tell me about your Coop report. <ul style="list-style-type: none"> <li>- get a copy</li> <li>- how useful to you in terms of your learning?</li> <li>- who reads it?</li> <li>- what feedback on it?</li> <li>- who helped you to define it's content/format?</li> </ul>                    |
| 2 | What forms are used to “wrap-up” your Coop experience? What are these used for? Who completes and/or reads them? What do you think they look for in them? Why do you think they look for those things? <i>(note: work through the forms step by step with the participant at this time)</i> |

*Appendix 8: Journaling Guidelines for Key Participants*

WEEKLY REFLECTIVE “JOURNALING” GUIDELINES:  
THE SOCIAL AND EDUCATIONAL IMPLICATIONS OF UNIVERSITY  
COOPERATIVE EDUCATION”

**Objective:**

The objective of this aspect of the research is to create a record of your thoughts, feelings and experiences related to your participation in cooperative education. Themes, issues, frustrations and triumphs from this record will form part of the basis for subsequent in-depth discussions we will have mid-way through and shortly after completion of your work-term. We will also discuss these issues informally on at least a monthly basis during your experience. In addition, this journal will provide you with a personal record, which you can use to prepare for subsequent academic or work experiences.

**Task:**

Reflect on experiences that are significant for you in relation to your education, work and participation in co-op. Create, on a weekly basis, a record of your thoughts and feelings about these experiences. The character of these thoughts, and how you go about “collecting” and presenting them, is a matter of personal preference and interest. For instance, one week you may wish to reflect on a significant interaction (e.g., bad or good) with a professor or co-worker, while the next you may be drawn to think more closely about a technical problem you have encountered in your work. Or, you may find it useful to track your full range of thoughts and experiences chronologically. If you already keep a diary or journal, by all means continue to do so with this additional “task” in mind. You can use prose or point form, as long as you will be able to interpret what you write at a later date. If you feel more at ease representing your ideas visually (e.g., doodles, diagrams, charts/tables) then feel free to use these. You can combine methods of reflection and presentation as you see fit. Above all, generate your records in a way that is both useful and personally meaningful to you.

**Topics:**

You are encouraged to reflect upon whatever is relevant and important to you; however, I would appreciate it if you could dedicate some of your thinking to the following “topics.” I have provided examples of things to think about regarding these topics, but please add your own.

1. Theory and Practice  
(e.g., What is “theoretical” or “practical” about your day? How do these different kinds of activities relate?)
2. Work  
(e.g., What are you working on? What tools and resources are you using? How is the work organized? Who is doing what? Where does your work “fit” in the process or organization? What meaning does this work have for you? What helps or hinders

you in your work? Are you experiencing problems, frustrations or dilemmas? Are you proud of any accomplishments?)

3. Communication/Interaction  
(e.g., How do the people around you interact/communicate [with you or with each other]? Who is communicating with whom? Who is not interacting with whom? What are people saying about or to each other? How are important decisions made? How are these communicated? How are you getting along with others? Do people listen to you?)
4. Culture  
(e.g., Are there oft-repeated phrases that you hear or read? What kinds of things do people generally seem to agree upon? What kinds of things does there seem to be conflict around? Who is involved in such conflicts? What is expected of you [and of others]? What seems to be considered acceptable or unacceptable behaviour?)
5. People  
(e.g., Who do you interact with? Who is important/interesting to you, and why? Are you having problems with anyone?)
6. Self  
(e.g., Do you feel yourself changing? In what ways? Why? How do you feel about yourself? How do you think others feel about you?)
7. University/Education  
(e.g., How do your experiences at work compare to those at the university [and visa versa]? What would you describe as “educational” about your experience at work? What relationships do you see between the university, education and the workplace?)
8. Community  
(e.g., Do you feel “connected” to others at work or elsewhere? In what ways?)

**Length:**

You can write as much as you wish, but please try to provide 250 words (1-page, double-spaced) as a minimum every week.

**Process of reporting:**

Please send me a copy of your weekly journals on a month-by-month basis. (I have enclosed stamped, addressed envelopes to this end).

## *Appendix 9: Guides for Interviewing Informants*

### Interview Guide for University Faculty

#### Background:

Tell me about your academic career and research interests.

#### Education/university:

Tell me about your educational philosophy?

What, in your view, is the purpose of the university in contemporary society?

What challenges have there been to this purpose?

What challenges do you see on the horizon with respect to this purpose?

What undergraduate courses do you teach?

How do you approach your teaching?

How would you characterize your relationships with undergraduate students?

What do you know about co-operative education? (prompt: what experience do you have with it?)

#### Co-op:

What do you think about co-operative education? Why? How did you come to this view?

How, in your view or experience, does the co-op program affect students' educational or social development? How does this occur?

How does co-op affect your role? How do you feel about this?

#### Technology:

Technology played a large part in all of the students experiences: how do you think technology affects students' learning and intellectual development? what about their social development?

#### Skills & knowledge:

There is a lot of talk about "skills" in the context of the "knowledge society." What do you make of these concepts? Do they play into how you think about your teaching or work? How do they impact the students?

#### Participant specific comments:

(specific questions re: key participant experiences)

### Interview Guide for Co-op Employers

#### Background:

1. Tell me about your business (prompt: what is the purpose of your business? what challenges are you facing? what opportunities exist?).
2. What is your background? How did you get where you are?

**Co-op:**

1. Why did you get involved in the co-op program? (prompt: what do you hope to achieve with your participation?)
2. How do you approach the co-op student? (prompt: what do you do to with them? how do you integrate them? what do they do for you?)
3. What do co-op students learn when they work for you?
4. How do they go about that learning? (prompt: do you structure it? do you interact with them?)
5. Do you do anything differently with co-ops than you do with your regular staff?

**University:**

1. What in your view is the purpose of the university in contemporary society?
2. What challenges exist to this purpose?
3. Tell me about your interactions with personnel from the university?
4. How would you characterize these relationships?

**Technology:**

1. What role does technology play in your business?
2. How has this affected your work?
3. What role did technology play in the role of the co-op student?
4. How did that affect their learning or social development during the work term?

**Participant specific comments:**

(specific questions re: key participant experiences)