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COMMERCIALIZING HIGHER LEARNING THROUGH THE DISCOURSE OF SKILLS IN UNIVERSITY CO-OPERATIVE EDUCATION: TENSIONS AND CONTRADICTIONS

Peter Milley, *University of Ottawa*

The last 3 decades have witnessed the rise of reforms aimed at conjoining Canadian universities to the economic system. Critics have pointed out how reforms have emphasized economic utility in universities to the detriment of their sociocultural mission, producing negative effects. One curricular innovation that has spread in tandem with reforms is co-operative education (co-op), which is seen to improve economic utility but has not attracted critical scrutiny. This article offers a socially critical perspective on co-op that draws on conceptual work and a sub-set of empirical data from a multi-case study conducted in one university. A tentative portrait emerged of a previously unexplored avenue of commercialization that is mediated through co-op. The process began with students enrolling to deal with personal financial burdens and to feel more secure about their economic futures. Once in co-op, students were exposed to competitive market processes that immersed them in the commercial activity of packaging, exchanging, and accumulating their human capital, using "skills" as discursive currency. Students internalized the discipline of the market, taking an entrepreneurial stance towards their self-definition and presentation. Programmatic features did not to enable students to reflect on or remediate negative experiences (e.g., tacit or explicit sexism) or distorting effects (e.g., devaluation of sociocultural skills). Their experiences highlighted areas for further critical investigation: the devaluation of the liberal arts; power dynamics and asymmetries between employers, administrators, and students; and patterns of social relations (e.g., the exercise of gendered power) in labour markets, workplaces, and universities. The article concludes that a rebalancing of economic and sociocultural purposes is needed in co-op, and the scope of critical inquiries into economistic reforms should be extended to include micro-level effects produced through the market-driven processes at the heart of co-op.

Throughout their secular history, Canadian universities have sought to play a sociocultural role in furthering the principles of a progressive, just, democratic society , and they have strived to make contributions to the vocational development of individuals and the economic well-being of communities and the nation (Axelrod, 2002; Harris, 1976; Katz, 1985; Kirby, 2011). A dynamic set of tensions—in policy, philosophy, governance, curriculum, and so on—have existed in how university communities have pursued these twin purposes through teaching and learning, research, and community service and in light of broader political, cultural, and economic forces. The last 3 decades have witnessed the rise of reforms (e.g., de-regulation, marketization, corporatization, performance measurement) aimed at conjoining universities to the economic system and infusing them with more business-like cultures (Hyslop-Margison & Leonard, 2012; Polster, 2005).

Critics have pointed out how the accretion of reforms has over-emphasized the economic utility of higher education to the detriment of its sociocultural mission, producing some negative effects in and beyond university communities (e.g., loss of academic values, standards, and freedoms; vocationalization of the curriculum; distortions in knowledge production and ethics; and threats to democracy, citizenship, and social cohesion) (Adamuti-Trache, Hawkey, Schuetze, & Glickman, 2006; Axelrod, 2002; Axelrod, Anisef, & Lin, 2001; Côté & Allahar, 2011; Newson, Polster, & Woodhouse, 2012; Polster, 2000; Turk, 2000, 2008; Woodhouse, 2009). Nonetheless, a view prevails in state and society that such reforms are needed to address ongoing changes in the economy and labour markets and to enhance competitiveness at individual, institutional, provincial, and national levels in light of economic globalization (e.g., Clark, 2009; Gordon, 2003; Fisher, Rubenson, Jones, & Shanahan, 2009).

Commercialization and privatization have featured among economistic reform measures and discourses in Canadian university systems. Commercialization refers to entrepreneurial efforts by actors in university communities to sell their work, services, and assets to generate revenues and profits. A focus on commercial activity in universities is not new, but in an era of academic capitalism (Metcalfe, 2010; Fisher et al., 2009; Slaughter & Rhoades, 2004; Slaughter & Leslie, 1997) almost every facet of university operations and academic life can become a site for generating revenues, from research chairs sponsored by corporations to space over urinals sold for advertising (Bok, 2003; Tudiver, 1999).

Privatization refers to the full or partial conversion of assets and attributes of public (or collective) institutions into private (or individual) ones. It, too, is not new, but it represents a growing trend globally as portrayed in Stephen Ball's (2007) account of the spread of for-profit "edubusinesses" in most aspects of contemporary education systems. In the Canadian context, arguably the most significant avenue of privatization has been the restructuring of higher education finance, with the university sector witnessing substantial reductions in public financing relative to growth in private financing (Fisher et al., 2009; Metcalfe, 2010).[1] This financial restructuring, which emerged in most jurisdictions the late 1990s or early 2000s, is likely partially responsible for the focus on intensifying commercial activity in universities, as they seek to generate sources of funding. It has also resulted in dramatic increases in the tuition and compulsory fees paid by students (Polster, 2005; Shaker & Macdonald, 2014a, 2014b), a financial burden that understandably causes many students to be concerned about the personal

[1] In 2013, for example, the University of Toronto crossed a threshold such that more than 50% of its operating budget was funded from private sources (Sajjad, 2013), signaling a trend across Ontario that has been reflected in shifts in governmental and institutional discourses which now deploy the adjective "publicly-assisted" to describe formerly "public" institutions (e.g., Council of Ontario Universities, 2016; Ontario Ministry of Training, Colleges, and Universities, 2013).

economic benefits they will accrue from a university education, such as good jobs upon graduation.

One curricular innovation that has spread in tandem with the ongoing push to increase the economic utility of higher education is co-operative education (co-op). In co-op, students alternate periods of study with paid work experiences (Canadian Association for Co-operative Education, 2016a). More than 50 universities in Canada offer such programs, with aggregate enrollment of 65,000 as of 2013 (Universities Canada, 2016). At the micro-level, co-op is seen to smooth the entry of students into the fulltime job market by helping them build skills and networks and by removing barriers such as the "no experience, no job; no job, no experience" dilemma. At the macro-level, co-op is seen to improve the economic impact of higher education by developing and mobilizing human capital (Blackwell, Bowes, Harvey, Hesketh, & Knight, 2001; Siedenberg, 1988; Sattler, 2011; Tanaka, 2015). This focus on increasing the capacity of the labour force has been central to co-op since it was introduced at the University of Cincinnati in 1906 to meet the demands from industry for better prepared engineers (Sovilla & Varty, 2004) and since its inception in Canada in the late 1950s at what became the University of Waterloo, where its purpose was to address a shortage of technical skills to help North America gain technological advantage in the Cold War (McCallum & Wilson, 1988).

Despite its economic focus and ubiquitous presence in contemporary higher education, co-op has not attracted critical scrutiny from skeptics of other economistic reforms in Canadian universities (Johnston, 2007; Milley & Kovinthan, 2014). One reason for this is that co-op appears to make good sense in light of the needs of policy-makers, administrators, students, and employers. In Ontario, for example, the Premier's Highly Skilled Workforce Expert Panel (2016) recently recommended that "every student ha[ve] at least one experiential learning opportunity

by the time they graduate from post-secondary education" (p. 60), with co-op featuring in the plan. Indeed, it should not be surprising to witness growing demand among students for co-op programs. In an era of high fees stemming from increased privatization of university finance, co-op provides a means for "learning while earning." Moreover, in a period of ongoing structural change and upheaval in labour markets, co-op provides students with a "leg-up" on the competition and gives employers access to a flexible pool of employees to meet contingent or developmental needs. It also should not be surprising to see a growing supply of co-op programs as revenue hungry universities seek ways to boost enrolment and ensure students can generate the cash flows they need to persist in their studies. Co-op also promises to help universities forge connections with outside organizations in multiple sectors that might be levered for other institutional interests, such as commercial research partnerships and fundraising. In fact, co-op is said to provide these benefits, along with a host of others (see, e.g., Canadian Association for Co-operative Education, 2016b; Sattler & Peters, 2012) (see Table 1).

Table 1
Summary of Co-op Benefits

Students	Employers	Universities
• Test skills and knowledge • Get hands-on experience • Gain competitive edge • Earn money • Explore career options • Expand networks	• Access a pool of human resources • Reduce recruiting costs • Vet future employees • Benefit from fresh ideas • Provide feedback on curricula • Play a mentorship role	• Increase enrollment • Enrich the university community through work experience • Prepare students for productive roles • Enhance reputation • Receive employer feedback on curricula

The promise of instrumental and economic benefits accruing to a full range of actors and interests is what makes co-op a popular innovation. However, if one of the fundamental tasks of university communities is continually to question claims and assumptions (including those

supporting popular or commonsensical ideas), then a critical examination of co-op is warranted, doubly so because of the silence about it among critics of economistic reform. There are at least two potential starting points for a critical examination of co-op. One is that existing criticisms offered in other sub-fields in the educational and social sciences of the human capital (or human resource development) perspective have yet to inform research and practice in co-op. For example, management practices in co-op have not been scrutinized even though persistent inequities are known to exist in the treatment of certain groups (i.e., women, Indigenous peoples, visible and ethnic minorities, persons with disabilities) in labour markets (Block & Galabuzi, 2011; Krahn, Lowe, & Hughes, 2011) and universities (e.g., Galabuzi, 2010). The human capital perspective has been criticized for over-emphasizing the development of forces of production (e.g., skills) and paying too little attention to the character and patterns of social relations in workplaces and educational institutions, where, for example, racialized or gendered power dynamics delimit learning and productivity for certain groups (Fraser, 1989; Kumar, 2004). The human capital agenda tends to downplay sociocultural competencies (e.g., communication and collaboration, critical thinking, ethics, self-expression) even though they help establish healthy social and political environments for economic activity (Woolcock, 2001) and contribute to organizational effectiveness (Axelrod et al., 2001; Drummond, Finnie & Weingarten, 2015).

Another potential line of critique could centre on the refrain that the interests of key actors in co-op (i.e., students, employers, university administrators) align to create "win-win-win" scenarios (as represented in Table 1). This discursive strategy might well serve to mask competing interests at the heart of co-op, where, for example, students and employers use various strategies and tactics in labour markets to pursue their individual needs and goals, while co-op administrators intervene to regulate behaviours and maximise the number of jobs secured

by students. If co-op were reframed as a venue of conflict, the dynamics and mechanisms of power would come into view and open up space for asking critical questions, for example, about whose interests are best served.

In what follows, a socially critical perspective is offered on co-op that incorporates the foregoing potential lines of critique and draws on conceptual work and a sub-set of empirical data stemming from an exploratory multi-case study conducted in one Canadian university. The study was designed to address two questions: How do co-op students negotiate and make meaning of the contemporary relationships between the sociocultural and economic purposes of higher education? And, what are the social and educational implications of the answers to this first question?

The focus in this article is on how, by continuously engaging with market processes at the heart of co-op programs, students learn to accumulate and trade their human capital for economic gain, with the language of "skills" providing discursive currency as they navigate the relations of exchange and production that exist in the university, labour markets, and workplaces. These dynamics in co-op illustrate an unexplored avenue of commercialization that occurs at micro-levels in higher education: one that encourages students to become entrepreneurs-of-the-self (Gordon, 1991, p. 44). The conceptual and empirical perspectives reported reveal numerous internal contradictions in human capital development and exchange processes in co-op, offering potentially fruitful sites for critical inquiries.

Research Design and Methodology

The study from which the conceptual work and supporting data were derived relied on an exploratory multiple case design (Stake, 2006).[2] Ten co-op students were recruited from three undergraduate programs (Arts, Engineering, Computer Science) at a mid-sized Canadian university in an urban centre. These students became central participants, around which case studies were conducted. In-depth, semi-structured interviews were held with each participant over 8- to 12-month periods. The timing of interviews corresponded with three phases in a programmatic cycle—i.e., during the academic semester and job search process preceding a work experience, during the work experience, and during a subsequent academic semester. Focus groups took place near the end of the study. People in the students' milieus who had influences on them in their academic and co-op programs (i.e., employers, n=7; program administrators, n=5; professors, n=6) were also interviewed once.[3] Research design and subsequent data analysis were informed by a conceptual framework constructed from Habermas' (1984, 1989) critical social theory, augmented with his application of that theory to his "idea[l] of the university" (Habermas, 1987, p. 3) and rejoinders from feminist commentators (e.g., Fraser, 1989).

[2] These data are derived from an unpublished doctoral dissertation (Milley, 2004). Although somewhat dated, their use can be justified on the basis that the present context continues to reflect similar dynamics and practices to when the study was conducted and that no similar study has been published in the co-op field. With respect to context, developments in labour markets, workplaces, and universities since the research was conducted have accentuated many of the same issues the participants in the study confronted: technological innovation; restructuring of the economy and labour markets; economic inequality; reduced public spending on higher education; increased tuition fees and student debt; and credential inflation and heightened competition for good jobs. Even in areas where one would think progress ought to have been made in the last decade, such as reducing discriminatory employment practices, little has changed—e.g., according to Lambert & McInturff, (2016), "women working full time and full year in Canada earn 72% of what men earn on average [and] women with university degrees earn 10–30% less than their male peers" (p. 6).

[3] The sub-set of data reported in this article does not include data from employers. The full analysis and interpretation of data from students and administrators took place after interviews with employers had been conducted. It was not possible to re-interview employers on the themes that emerged and are presented in this article. Also, in cases where students originally reported critical or negative experiences with employers, I did attempt to recruit those employers into the study, but none agreed to participate.

A Socially Critical Lens:

Co-op as a Conduit Between the Lifeworlds and the Economic System

Habermas theorised that sociocultural and economic progress occurs through two inter-related learning processes (Habermas 1979; Outhwaite 1994). We learn to coordinate our lives with others by interacting communicatively with a sense of reciprocity that balances our individual and collective needs and interests; at the same time, we learn to participate strategically in the politico-administrative-economic institutions that help structure, organize, and sustain our individual and collective lives (Habermas, 1989). Communicative actions build understanding and foster sociocultural progress; strategic actions help attain goals and form the basis for material progress.

Habermas (1987, 1989) and others (e.g., Barnett 1993; Campbell Williams & Gunatunge 2000; Lakeland, 1993) argued that university communities (in their best moments) reflect (or ought to reflect) the idealized conditions for communicative action. Similar perspectives are offered by those who argue, without reference to Habermas, for the democratic mission of universities (e.g., Buchbinder & Newson, 1990; Newson, Polster & Woodhouse, 2012; Sit, 2008). These arguments emphasize the sociocultural mission of universities, including their role in building and sustaining the capacity to seek truths, question claims and practices, promote just and ethical behaviour, and encourage authentic self-expression. The point is not that the strategic functions of universities, such as their contributions to labour markets, are unimportant or invalid; it is just that these functions should be subordinated to, and guided by, the sociocultural mission and related learning processes.

Given that co-op connects university-based actors to the employment system, these Habermasian ideas encourage analysis of the nature of the relationships between communicative

and strategic orientations in co-op and their effects on sociocultural and economic progress. The relevance of the distinctions between communicative and strategic action to an examination of co-op becomes clearer when situated in Habermas's (1989, p. 320) model of the lifeworld and system (see Figure).

Lifeworld (communicative action)	*Steering Mechanisms* P = Power M = Money	System (strategic action)
Private life - personal life - family life	(P) Labour power → ← (M) Income from labour (P, M) Consumer demand → ←(P) Goods/services	Economic system - *public universities (human capital development)* - labour markets - workplaces - knowledge-based production
	← *Co-op Education* →	
Civil society - *public universities (sociocultural progress)* - cultural activity - communities - public discourse - social and cultural, criticism	(M) Taxes → (P) Political activism → ← (P) Political decisions ← (P) Administrative acts ← (M) Infrastructure (P) Loyalty/Compliance →	Politico-administrative system - political organisations and institutions - state bureaucracies - legal apparatuses

Figure. Co-op as an intermediary between lifeworlds and systems.

In lifeworlds, we elaborate our private and public lives through communicatively oriented action. Through systems, we pursue our individual and collective interests and goals through strategically-oriented action. Lifeworlds are sociocultural spheres, and systems are politico-

administrative-economic venues. In this model, healthy lifeworlds are central to the establishment and maintenance of functional systems, while functional systems offer the infrastructure that sustains healthy lifeworlds. Various forms of power (including the power of money) help steer the dialogical relationships between lifeworlds and systems. Because co-op programs are forums for the exchange of power (e.g., students' labour power) and money (e.g., wages paid to students by employers) they can be viewed as a steering mechanism between lifeworlds and systems. However, co-op is meant to do more than facilitate exchanges of money and power; it is also intended to be educative. From a lifeworld perspective, co-op can be viewed as supporting the sociocultural mission of universities in fostering the development of people and knowledge in pursuit of a progressive, just, and democratic society. A small number of researchers have attempted to conceptualize a role like this for co-op, drawing on John Dewey's ideas about democracy and experience in education (Heinemann & De Falco, 1990; Saltmarsh, 1992; Johnston, 2007) and on Habermas's ideas about the competencies needed to sustain healthy lifeworlds and functional systems (Milley, 2016). From a system perspective, co-op can be seen to support the university's economic mission, in this case with respect to the development of human capital. As outlined earlier, this instrumental and economic focus has been central to co-op practice since its inception in Canada. It has also predominated in the research agenda on co-op (Milley & Kovinthan, 2014).

Habermas (1989) observed a tendency in modern institutions to displace obligations to lifeworlds with strategic and instrumental concerns about system growth, efficiency, and effectiveness. He labeled this dynamic "colonization" (p. 186), arguing it prompted failures in lifeworld processes—for example, cultural institutions (i.e., universities) may suffer crises of legitimacy as their relevance comes into question and individuals (i.e., students) may experience

psychosocial problems related to needs interpretation, identity formation, motivation, and alienation. Presentiments about colonization were warranted in the study because of the intermediating role co-op played between the economic system and lifeworlds.

The formulation of this lens recognized that critics have called Habermas' work patriarchal (Fraser, 1989) and Eurocentric (Outhwaite, 1994), arguing it was insensitive to gendered and other forms of difference (Yeatman, 1994). There is not space here to assess these criticisms and Habermas's responses to them. But these the concerns sculpted into relief the importance in this study of attending to the ways in which gender and other forms of social differentiation affected the participants' experiences.

On Deciding to Pursue Co-op: The Students and Their Motivations

The ten students who joined the study came from a range of backgrounds and age groups (see Table 2). When asked why they enrolled in co-op, most said they were interested in gaining work experience or access to good jobs, goals commonly used to market co-op to students (see Table 1). The biographical contexts behind students' decisions revealed that, for some, enrollment was more of a necessity than it was a preference. Concerns about labour market outcomes and personal finances were more pronounced for mature students and those from small towns and rural areas, those from visible minority groups, and those who had experienced (or were experiencing) precarious economic circumstances. Sarah (4th yr., Women's Studies), a single-mother from a small town who had spent two decades raising her children in tough financial conditions, explained,

> I decided it was time for me. . . . I could have gone and cut material or slung hamburgers. I've done those things. . . . I decided to join 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. . . . That for me is pretty scary.

Linda (4th yr., Elec. Eng.), who grew up in a rural farming community, reasoned,

> 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. . . . So my greatest fear was graduating with a useless piece of paper. . . . If you haven't got any experience . . . then what does that do for you?

Frank (3rd yr., Comp. Sci.), a second generation Chinese-Canadian whose parents ran a small corner store, explained,

> I actually wanted to . . . do pharmacy. But . . . it was going to be too expensive . . . on my own . . . [so] . . . plan B was to take computer science . . . [because] . . . I could stay at home. . . . I chose co-op because I wanted to see what working in computing is like . . . [and] . . . to avoid student loans.

In contrast, students of Euro-Canadian heritage from comfortable economic backgrounds expressed less concern about labour market outcomes. Lisa (3rd yr., Writing), who hailed from an urban middle-class family headed by two parents with professional careers, observed, "Fortunately, getting a job is not the main reason I came to university." Participation in co-op provided a way for her to silence the voices of naysayers who asked what she was going to do with Creative Writing degree. Andrew (3rd yr., Mech. Eng.), the son of a constitutional lawyer, explained, "I've always liked taking things apart and putting them back together. . . . I was also really good at math. And I wanted to have a decent standard of living. Engineering . . . fit the bill. . . . But I also wanted to have work experience before I graduated."

Table 2
Student Participants and Their Motivations for Enrolling in Co-op

Name (pseudo)	Discipline	Year of program	Completed work terms	Age	Ethnic background	Reason for enrolling in co-op
Lisa	Writing	3	3	early 20s	Euro-Canadian	Explore career options related to studies
Deborah	English, Writing	3	2	late 40s	Euro-Canadian	Get a good, stable, well-paying job after graduation
Sarah	Women's Studies	4	3	late 40s	Euro-Canadian	Get a good, stable, well-paying job after graduation
Valerie	Anthropology, Writing	4	3	mid 20s	Euro-Canadian	Get a good job related to studies after graduation
Edward	Asian studies	4	3	early 20s	Euro-Canadian	Get a good job related to studies after graduation
Warren	Computer Science	4	3	early 30s	Euro-Canadian	Get a good, stable, well-paying job after graduation
Frank	Computer Science	3	3	early 20s	Chinese-Canadian	Explore career options Pay for school
Arlene	Computer Engineering	3	3	early 20s	African-Canadian	Get a good job related to studies after graduation
Andrew	Mech. Engineering	3	2	early 20s	Euro-Canadian	Gain work experience Get a good, well-paid job related to studies after graduation
Linda	Electrical Engineering	4	3	early 20s	Euro-Canadian	Gain work experience Get a good, stable job related to studies after graduation

Another pattern in motivation was that students in the arts tended to place more emphasis on co-op as a way to manage the perceived financial and career risks in their chosen programs of study than did the applied science students. For example, Valerie (4th yr., Anth. and Writing) explained, "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." The arts students' perceptions seemed to be shaped by what Universities Canada president Paul Davidson recently labelled "ongoing and misguided assaults on the value of a liberal arts degree" (Samson, 2016, para. 2).

In general, then, the students enrolled in co-op to lever their educational experiences into meaningful, stable employment that would compensate them for the money, time, and energy they committed to their studies and provide reasonable financial returns into their futures. This orientation signalled how co-op was seen as a viable means to manage (or, ideally, recoup) the

significant personal financial burden associated with an increasingly privatized form of higher education and, perhaps more so, to surmount structural problems that reach beyond higher education (e.g., income inequality, precarious employment, labour markets polarized between good and bad jobs). A professor in the English department observed how, in her experience, co-op students' goals were shaped by discourses that preceded and extended beyond their immersion in the university:

> Students nowadays are very practical minded. They're quite concerned about whether they'll find employment. . . . That's understandable. So, with co-op one is not introducing into their minds mercenary ideas that were not there to begin with.

A line of inquiry explored in the next section is how co-op "works" as a response to these broader issues and what this means for the lifeworlds of participants and the university.

On Participating in Co-op:

The Omnipresence of Labour Market Processes and the Significance of "Skills"

Money, labour markets, jobs, and careers are important elements of the undergraduate experience for most students, but they loom especially large for those who participate in co-op. Co-op requires an intensive immersion in the employment system that sees students competing for, and performing in, up to five different jobs as they pursue their degrees. Labour market processes and related discourses become an omnipresent feature of co-op students' everyday lives. During academic semesters leading up to work experiences, they attend preparatory workshops, write résumés and covering letters, apply for jobs, and go to job interviews. Many naturally find themselves worrying about the outcomes of their efforts. Those who are successful in obtaining jobs make transitions at the end of their academic semesters into workplaces. Once at work, they focus on good performance, because they believe successful work experiences will

smooth their way into subsequent co-op positions and future careers. Upon return to campus, students are usually required to produce a report that offers a reflection on their experiences and career goals. Depending on program schedules, they may also immediately enter into another job search process to secure their next co-op job. This whole process puts students under continual competitive and institutional pressure to succeed academically, in labour markets, and on-the-job. Their academic standing and workplace performance is tracked and monitored, and they can be asked to withdraw from co-op for not meeting requirements and expectations.

On the Language of "Skills" and Its Connection to Commercialization Processes

Data from the study reported here revealed the language of "skills" played a central organizing role in how the students made sense of their experiences during their intense journeys in co-op and in how they transacted their relationships in the market processes at the heart of co-op. Regardless of their academic discipline, students reported gaining job search skills, which included learning how to identify the skills employers were looking for and to *strategically* communicate their skills in job applications and interviews. This meant filtering and translating the sum-total of their competence (as developed in their academic and extracurricular lifeworlds, as well as through previous experiences in the economic system) into the language, attitudes, and behaviours that employers would value—for example, Lisa (3rd yr., Writing) observed, "You can put technical skills on your résumé and say, 'See, this is what I can do.' . . . But, there's no point in listing something like 'I know how to write a well-balanced non-fiction piece.'" In short, students learned that certain skills held *potential commercial value* that could be unlocked when effectively *marketed* to employers.

Through work experiences, students also learned that skills were forms of competence that, when applied, proved *useful* in light of existing workplace practices, processes, and cultures. Here, skills were deemed *instrumental* to workplace success. As instrumentalities, skills held *actual commercial value* in that they could be exchanged for a wages and career-related benefits. For instance, in discussing the computer skills she developed through co-op, Deborah (3rd yr., Engl. and Writing) boasted, "You know, on campus I'm always hearing about the really crappy financial outcomes for students . . . [but] . . . I know there's going to be some nifty job out there for me that's going to involve technology."

These findings revealed how, by continuously engaging with market processes, co-op students learned to market, exchange, and accumulate their human capital using the language of "skills" as discursive currency in the university, labour markets, and workplaces. This dynamic had the effect of fostering an entrepreneurial stance not only towards the market but also towards the self, with students seeking to identify and unlock strategic and commercial value from their academic and broader lifeworlds. In essence, the students' participation in co-op represented, in part, a commercialization process at micro-levels.

On the Differing Patterns of Experience Between Applied Science Students and Those in the Arts

A pattern emerged in how the students viewed their representation, demonstration, and accumulation of skills. Those in the applied sciences tended to experience more connections and continuities between experiences in their academic lifeworlds and workplaces than did those in the arts, contributing to a more straightforward process of exchange and accumulation of human capital for applied scientists. Budding engineers and computer scientists often saw themselves using and developing skills directly related to their disciplines. For example, based on a work

experience in which he created a computer program to calculate water flows needed to extinguish fires in buildings, Andrew (4th yr., Mech. Eng.) learned to "constantly remind myself to figure out what kinds of numbers I should be expecting" after the first version did not pass scrutiny because it included unrealistic mathematical assumptions. Upon return to campus, Andrew used this skill when doing calculations for the design of a high-efficiency jet engine.

Applied science students also saw co-op work experiences complementing the technical nature of their learning with "people skills" related to navigating sociocultural dynamics in workplaces. This squares with findings from other studies which have indicated that "work experience prepares [engineering] students to best make use of their hard skills by acquiring soft skills" (Tanaka, 2015, p. 43). Indeed, a co-op administrator in the computer science program reported that she put significant effort into focusing students' learning in this direction, telling me: "I state over and over again that the most important things they are getting . . . [are] . . . the soft skills . . . that will make a difference for them five years from now."

In contrast to the applied science students, those in the arts tended to experience discontinuities and tensions as they transitioned between their lifeworlds and the economic system. Technological skills frequently became a locus of attention for arts students, with some adjusting their programs of study, career interests, and even identities around them. For example, Lisa (3rd yr., Writing) developed a "techie" persona for use in the economic system to help her feel more secure in elaborating her "artsy" self in her academic and extracurricular lifeworlds (Milley, 2016).

For the arts students, participation in co-op served to mitigate the economic risks they associated with their chosen fields of study and ways of "being-in-the-world" (Heidegger, 1996, p. 49). Their risk mitigation strategies revealed some contradictions at the heart of their

experiences. On the one hand, most reported gaining confidence in their economic futures while developing skills at work that improved their career prospects and even proved useful in their lifeworlds. Sarah (4th yr., Women's Studies) recounted being thrown into technological tasks at work:

> 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 . . . [but] . . . in the end I had this tremendous feeling of accomplishment. . . . I could walk with confidence.

This experience contributed to her confidence and capacity to write and format a book manuscript. A co-op administrator in the arts program confirmed how students like Sarah who "stick with the process" realized such benefits, observing, "We tell them that it might not seem like much fun at first but that it will lead to something better later on." On the other hand, the arts students found their appetites for valuing, demonstrating, and developing certain kinds of competencies were frequently suppressed during their work terms. This dynamic appeared to be influenced by job content and reinforced by labour market and workplace cultures that prompted self-censorship. In discussing employers' preferences when hiring, Deborah (3rd yr., Engl. and Writing) observed, "They might care about my technical writing skills . . . but they don't care that I'm a fabulous humanities student. . . . They don't want to know I've spent years at developing people skills as a mother and a worker." Deborah's co-op administrator recognized the tensions faced by arts students and how these were mediated through the program. She remarked,

> Our work complements the academic classroom, with respect to building skills . . . [but] . . . sometimes . . . the co-op experience is dictating what the students' academic experience will be. I guess that's just . . . one of those fine lines we walk that makes us tired and burned out.

The arts students tended to experience more convoluted journeys in discovering how to trade and accumulate their human capital as part of the commercialization process, with some having to bracket, hide, or even give up aspects of their identities and competencies even as they developed and promoted new ones.

On Labour Markets and Workplaces Serving as the Locus of Meaning and Influence

When it came to the focus on skills, students and administrators, regardless of discipline, tended to take their cues from the perspective of labour markets and workplaces. As illustrated in some brief examples and a longer vignette below, this proved to have ambiguous implications and effects.

The "fine lines" mentioned earlier by Deborah's co-op administrator had to do with the institutional and power relations that surrounded her role as an intermediary between the economic system and academic lifeworld. In describing her relationship with the university community, she said,

> 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 . . . [because my job is] . . . to develop good jobs . . . [and] . . . to go to the work sites to encourage feedback, to try to ensure objectives are being met . . . [but] . . . the cooperative part with the employers is difficult.

According to this administrator, some employers sought to provide satisfactory work experiences and others treated students as "fodder." These dynamics meant "the educational part often depends on the student . . . in any job there's room to learn." Other administrators in the study reported similar dynamics with employers and similar solutions offered to students. One tried to put the issue in perspective, estimating that "90% [of work

experiences] 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."

There was considerable evidence that students' skill development and academic lifeworlds were directly affected by the nature and quality of their labour market and workplace experiences, revealing "the social setting . . . is more than mere background; it is integral to the learning process [in co-op]" (Grosjean, 2004, p. 32). For example, Andrew (3rd yr., Mech. Eng.) was assigned a challenging project in a research and development organization, where he was readily accepted into a team of professionals because he demonstrated expertise in computer programming. Their reception made Andrew feel less like a student and more like an engineer. Upon return to campus, he reported, "I miss the theoretical discussions . . . with experienced engineers who can give you advice in real time. . . . It's not like a lecture or even a lab." In sharp contrast was the experience of Warren (4th yr., Comp. Sci.) who reported a desultory work experience in which he slowly succumbed to the pressure from co-workers and a supervisor to spend significant periods of each workday playing computer games. This led to a motivational crisis that caused him to quit co-op and become deeply disillusioned with his field of study (see Milley, 2016), a process of alienation and delegitimation in his academic lifeworld that resonated within the Habermasian notion of "colonization."

Students who had difficulties with their employers reported being reticent to approach co-op administrators because they did not want to create conflicts that might put at risk positive employment references. There were indications that the administrators also had to treat employers with great care, as signalled in one administrator's observation, presented earlier, that "the co-operative part with employers is difficult." Valerie (4th yr., Anth. and Writing), laid bare the power dynamics in co-op from a student's perspective:

> There is a conflict in the [administrator's] position between needing to make the employer happy and working in the best interest of the students. . . . There are a limited number of employers . . . so [the administrator] can't agitate . . . for fear of losing a future placement opportunity.

When asked what could be done to support students who had problems at work, Valerie suggested, "The university could spend some time teaching us what our rights are . . . and how we can advocate for those in difficult situations." She also wryly observed, "But, from a marketing perspective, do you really want to create a bunch of students who are much less malleable than [those] from another university?"

Valerie's critique of the power relations related to supply and demand highlighted key tensions in the human capital development process in co-op, some of which were unwittingly signalled in Sattler's (2011) more recent findings about administrators' and employers' goals for co-op, which emphasized providing students with

> marketable, relevant, and transferable skills, including an ability to use the most up-to-date technology . . . and "soft skills" in communication, critical thinking, and collaboration . . . [as well as] . . . workplace skills as "coming to work on time, being dressed properly [and] conducting yourself properly." (p. 66)

Based on the students' and administrators' experiences reported above and the views expressed by employers and administrators in Sattler's study, skills in co-op are mainly understood from the perspective of the economic system, such that the development of "soft skills" is about learning to fit into existing processes and relations of exchange and production (i.e., proper conduct). Valerie's anthropology professor, who was responsible for helping to instill Valerie's (socially) critical thinking skills, identified some political tensions in co-op that could be unearthed if one began questioning how the economic system is organized and how it might be changed to be more functional for more people:

> I hate to say it, but a lot of students are going to be marginalized in their work. . . . That's one of the central contradictions of the so-called knowledge economy. . . . 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. . . . I don't want universities to basically become production sites for the labour market . . . [because] . . . 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." . . . If just one of them says after a co-op term, "We need to change the way work is organized," then . . . I'd see that as a real accomplishment.

The views expressed by Valerie and her favourite professor resonated with critiques of the human capital agenda in higher education (discussed earlier) which have not featured in the research base on co-op that is meant to inform practice (see e.g., Milley & Kovinthan, 2014).

From the standpoint of a Habermasian conceptual framework, the emphasis placed on strategic communication and instrumental relationships with self and others in light of omnipresent market discourses was significant. On the one hand, it revealed the human capital development, mobilization, and accumulation processes in which the students were engaged and how the students identified and exploited opportunities to extract commercial value from "technical" and "soft" or "people" skills. On the other hand, the elevated and persistent levels of strategic action raised questions about the potential colonizing effects on academic and personal lifeworlds. These effects stood out for the arts students. Deborah (3rd yr., Engl. and Writing) put it this way:

> 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.

But potential colonizing effects also entered subtlety into the lifeworlds of applied science students, as the following vignette about Linda's experience illustrates.

Linda's Story: Discovering Gendered Power in "People Skills"

The oldest of seven siblings in a tight-knit family, Linda was in her early 20s when she left their farm to attend university. By our first interview, she was in her 4th year and had completed 3 co-op work terms at different industrial plants. Linda was excited about her upcoming co-op job. It marked a shift into "hi-tech," working in a research lab at a large telecommunications company. Our second interview took place part-way through her hi-tech work experience. The position was proving to be challenging. It involved running lab tests to measure the absorption characteristics of proprietary organic substances. The theory behind the experiments was new to Linda. The learning curve had been steep, and she was still finding her grasp of the chemistry to be "sketchy." She wanted to master the knowledge base to be more productive, but found her supervisor, a chemist, to be uncommunicative, and felt this was stalling her progress. She had yet to learn the "big picture" and had not received any feedback. Her work was beginning to lose its meaning. It was becoming "just a job."

I asked Linda how she would approach the electrochemical theory if she were on campus. She said she'd ask questions in class and tap the knowledge of the group of "girls" with whom she studied, explaining,

> A lot of the stereotypes that you've heard about male engineers are real. . . . With the other women I'm not afraid to say, "I think you're wrong and maybe you should approach it differently." Whereas . . . to tell [a male lab partner] 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 . . . I just don't want to start a big confrontation.

When I inquired if gender might be an issue with her current supervisor, she responded, "Maybe, but I don't think so. It's just the type of person he is, and the type of person I am. . . . Plus, he is under a lot of pressure. This is not his only project."

This ambivalent response left me unconvinced. Not long after hearing it, I had the opportunity to discuss gendered power dynamics in engineering with the administrator of Linda's co-op program. The administrator had a unique perspective, having been one of a handful of women to have graduated a few years earlier from the program she was now managing. The administrator said her experience as a student had been "very intimidating. . . . The guys were always all over the equipment in the labs . . . but I just learned to elbow my way in." She recounted sexist incidents in the co-op job search process, where employers from "the old boys club" asked how well she made coffee or if she would be a distraction. As a student, she had reported such incidents to the co-op administrators, but felt they did nothing. When I asked if she thought things were different for female students like Linda, she replied "I'm not sure if it still happens. I hope it doesn't. I sure hope we'd hear about it." She hadn't heard about Linda's issues.

When Linda and I spoke upon her return to campus, she saw her hi-tech experience as a chance "to become more articulate and communicative." She was beginning to see a new dimension of the "people skills" her co-op administrators frequently encouraged students to focus on. Earlier in the study, Linda had revealed she knew people skills could provide an advantage in convincing employers she was "the right one" for their organisations. Now she told me they might provide a means for having an authentic discussion with employers as to whether they and their organisations would be the "right fit" for her. This signalled her interest in being less deferential in the face of power. During a focus group near the end of the study, Linda met a participant who was majoring in women's studies. She had never spoken with someone immersed in feminist thought. By the end of the conversation, Linda was eager to register in an

introductory Women's Studies course, signalling her interest in learning to confront gendered power. She looked into the possibility, but her timetable would not accommodate it.

Analysis of Linda's Story

In Linda's overall experience, co-op provided opportunities for skill development that complemented her studies. Her challenge of working in a tangential field of knowledge with an uncommunicative supervisor heightened her awareness of sociocultural dimensions to learning. Up to that point she had experienced the development of "people skills" as having strategic value when competing for jobs and instrumental and commercial value when fitting into existing social relations at school and work. But when Linda spoke of becoming more "articulate and communicative" as a result of a negative work experience, she was pointing to new understandings about how "people skills" also contributed to facilitating mutual understanding across different scientific outlooks (i.e., electrical engineering and chemistry) and to establishing legitimate interpersonal relationships through the authentic expression of one's needs and expectations (i.e., frank dialogue with employers). From a Habermasian perspective, she was learning that "people skills" could support communicative as well as strategic action.

Beyond her co-op administrator's advice to focus on "people skills," Linda did not report other institutional or curricular supports to help her navigate the sociocultural dimensions of her academic and work experiences. This absence signalled problems in how Linda's educational program, including co-op, was helping to prepare her for a professional environment structured by longstanding gendered power relations known to have deleterious effects on women (Faulkner, 2009a, 2009b; Mills, Franzway, Gill, & Sharp, 2014). These relations manifested in her experiences on and off campus. With the group of women students in her academic program

she could be communicative (e.g., asking direct questions, being authentic), but with the male students she needed to be tactical (e.g., demure, deferential) to avoid "big confrontations." This dynamic created a circuitous route to learning and diminished the size of her potential learning network.

To promote the communicative learning processes she experienced with the group of women students, Linda would have had to confront head-on the problem of gendered power relations. Given the small number of women in the program, such a move would have benefited from having institutional backing. Although effort had been expended on reducing sexism on Canadian campuses and in engineering programs, Linda's experience suggested gendered power relations were still playing out (despite the co-op administrator's hope they were not). Indeed, according to a recent article in *MacLean's*, women in science and engineering are still "discouraged at every turn by thousands of small, sexist moments that make them feel unwelcome and unworthy" (Schwartz, 2015).

The institutional context seemed to inform Linda's response in the workplace. When asked whether the issues with her supervisor had a gendered dimension, she responded with ambivalence, deference, and denial. This pattern suggested she had transported her strategy for dealing with gender dynamics from campus to work. Her response was tacit, possibly stemming from an *unconscious* repression of (potential) conflict, an example of what Habermas (1989) called "systematically distorted communication" (p. 333). The resulting strategic action of being deferential to her supervisor interfered with her ability to advocate for her needs, leading to a suboptimal learning process that negatively affected her capacity to contribute fully to a company's goals. With no safe mechanisms for discussing these relations and her responses to them (other than in the context of our interview), Linda was left to her own initiative to work

through them and to cope with their effects on her learning and career; hence, her interest in taking a Women's Studies course to boost her capacity.

The approach in Linda's program of studies to developing "people skills" seemed to fall short because of its predominantly strategic and economic orientation (i.e., competing in the labour market and fitting into existing social relations of exchange and production). The under-emphasis on the sociocultural concerns (i.e., developing communicative competence capable of opening up authentic dialogue across gendered power relations) negatively affected Linda's learning on and off campus and her productivity at the hi-tech company.

Towards a Rebalancing of the Lifeworld and System

A professor from the English department who participated in the study offered a perspective on the effects of reforms that increase the presence of private and commercial interests in universities, dismissing co-op as being related to such reforms:

> I don't think [co-op] 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.

The findings presented here, however, suggest the scope of critical inquiry about economistic discourses and reforms should be extended to include micro-level effects on the lifeworlds of students produced through participation in the market-driven processes at the heart of co-op and to the effects on institutional lifeworlds (the sociocultural mission of higher education) of the accumulation of micro-level changes.

What emerged through this exploratory study was a tentative portrait of the economistic logic that is mediated through co-op into individual lifeworlds. That logic suggests students are frequently motivated to pursue co-op to deal with financial burdens stemming, in part, from the

privatization of university funding and to help them feel more secure about their economic futures in light of ongoing restructuring and uncertainty in labour markets. In being widely perceived and pursued as a viable response to these economic issues, co-op helps to manufacture consent for existing policies and reforms by naturalizing them as realities rather than choices. Once they enter co-op, students are exposed on a continual basis to competitive market processes that immerse them in the commercial activity of packaging, exchanging, and accumulating their human capital, in part by using the language of skills as discursive currency. Students are also able to convert this capital into money form, which can be used on a continuing basis to fund their programs of study. Throughout the co-op process, students internalize the commercial discourse and discipline of the market and learn to take an entrepreneurial stance towards their self-definition and self-presentation. This stance can alter students' lifeworlds by shaping their self-concepts, motivational systems, and academic decisions. For example, in this study, students in the arts reported gravitating towards learning opportunities that could help them develop "techie" skills that would appeal to employers.

The programmatic features and administration of co-op in this study did not appear to create spaces for students to critically reflect on or remediate any negative experiences or distorting effects associated with their participation. Based on this study, examples of areas that warrant further critical investigation by co-op researchers and practitioners include the devaluation of the liberal arts; power dynamics and asymmetries between employers, administrators, and students; and patterns of social relations (e.g., gendered power relations as highlighted in Linda's story) in workplaces and universities, including in the co-op job search and workplace oversight processes administered by the latter.

But the study also revealed that co-op represented a dynamic, dialogical process. As with any educational initiative, the values that undergird it and the ends to which it was put were paramount in shaping processes and outcomes. In other words, co-op could be reconfigured to achieve a dynamic equilibrium between the sociocultural and economic contributions of higher education. Indeed, most of the students and administrators in the study yearned for a better balance. Andrew (3rd yr., Mech. Eng.) captured this desire for change:

> Most [students] 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. . . . 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.

There were indications in this study that a rebalancing of the dialogical relationship between the system and lifeworld mediated through co-op is warranted to better address sociocultural purposes. Not only might this help students build competencies that contribute to a progressive, just, and democratic society (e.g., one in which the capacity to critique and alter problematic social relations, such as those constructed through the exercise of gendered power), it might even help to unlock more human capital by allowing students' humanity (e.g., their authentic, as opposed to commercialized, selves) to do more than simply "ooze out here and there."

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