THE PRACTICE OF DOCTORAL EDUCATION: A BOURDIEUSIAN ANALYSIS OF THE SOCIALIZATION OF DOCTORAL STUDENTS

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
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Ontario Institute for Studies in Education
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Abstract

Attention to doctoral education from scholars and policy makers has increased dramatically over the last two decades. Recent research on doctoral education has focused on the experiences of doctoral student and on issues related to financial aid, time to degree, completion rates, supervisor relations and socialization. The socialization framework has been used most frequently to understand the experiences of doctoral students, and this research continues to explore students’ experiences through the lens of socialization.

A crucial component of this research is the use of Pierre Bourdieu’s theory of practice to examine doctoral education, in general, and the socialization of doctoral students, in particular. The concepts of habitus, capital, field and practice were used to explore doctoral education as constitutive of particular processes and expectations that underscore specific notions of success. In doing so, the socialization of doctoral students was examined through these tools to determine the extent to which different socialization mechanisms were experienced differently by students. Finally, an investigation into the histories, experiences and relationships of these students prior to enrolment in doctoral study suggested that particular elements of students’ pasts were highlighted as significant factors to their understanding of the expectations of doctoral study and ability to demonstrate competence with academic tasks, both of which impacted their socialization during doctoral education.
This research revealed that doctoral education operated with particular rules and expectations that promote specific notions of success. These rules, expectations and parameters of success were deeply tied to demonstrations of task competence through the traditional academic tripartite. Considerable discussion highlighted operationalizations of “research” that included securing external, competitive scholarships, publishing in academic, peer-reviewed venues and presenting at disciplinary academic conferences. Students who were able to achieve these experiences were deemed to be more “successful” during doctoral study. Importantly, there was a tendency of “reinforcing advantage” to the experiences of “successful” doctoral students to the extent that those students who demonstrated acumen with particular aspects of academic work were offered and encouraged to take on more experiences and responsibilities that enriched their doctoral education.
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This Ph.D. has taken 5 years to complete. It has been a source and product of considerable personal and professional growth and strain. But more importantly, I did not do it on my own. In fact, I think very few of us truly do anything or accomplish anything “on our own”. I have incredible and elaborate networks of support that provided immeasurable layers and types of support for which I am so grateful.

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Formal Notice

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Table of Contents

Abstract ................................................................................................................................. ii
Acknowledgements .............................................................................................................. iv
Formal Notice ...................................................................................................................... vii
Chapter 1 Reviewing the Development of Doctoral Education ............................................ 1
   Introduction ....................................................................................................................... 1
   History of Graduate Education ....................................................................................... 3
   Significant Recent Quantitative and Qualitative Research .............................................. 9
   The Focus of This Dissertation Research .................................................................... 15
   Locating Myself ............................................................................................................. 17
   Outline of Thesis .......................................................................................................... 20
Chapter 2 Socialization and Bourdieu’s Theory of Practice ............................................. 21
   Introduction ..................................................................................................................... 21
   Doctoral Education ....................................................................................................... 21
   Socialization .................................................................................................................. 22
   Bourdieu’s Theory of Practice ...................................................................................... 34
Chapter 3 Methodological Approach ............................................................................. 47
Chapter 4 Not All Engineers Are “Haves” Findings From Interviews With Engineering
   Doctoral Students, Faculty Members and Administrative Personnel ............................. 59
   Introduction ..................................................................................................................... 59
   Importance of Disciplinary Focus .................................................................................. 59
   The Department of Engineering .................................................................................... 60
   Doctoral Students in Engineering ................................................................................ 62
   Habitus ........................................................................................................................... 65
   Capital ............................................................................................................................ 68
   Field .............................................................................................................................. 75
   Engineering as a Discipline as a Field .......................................................................... 76
   Consulting as a Field ..................................................................................................... 78
   Tensions Between Academe and Industry as a Field .................................................... 79
   Academe as a Field ....................................................................................................... 80
   Intersections Among Habitus, Capital and Field ......................................................... 81
List of Figures

Figure 1. Graduate socialization framework conceptualizing graduate and professional student socialization: The Weidman, Twale, and Stein (2001, p. 37) Interactive Stages of Socialization: Anticipatory, Formal, Informal, Personal. ................................................................. 32

Figure 2. Nuanced model of doctoral student socialization................................................................. 151
## List of Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>Description of Research Project Letter</td>
<td>165</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Invitation to Participate: Faculty and Staff</td>
<td>167</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Informed Consent: Faculty and Staff</td>
<td>169</td>
</tr>
<tr>
<td>Appendix D</td>
<td>Email Notes to Prospective Participants</td>
<td>171</td>
</tr>
<tr>
<td>Appendix E</td>
<td>Invitation to Participate: Students</td>
<td>172</td>
</tr>
<tr>
<td>Appendix F</td>
<td>Informed Consent: Students</td>
<td>174</td>
</tr>
<tr>
<td>Appendix G</td>
<td>Interview Guide: Faculty and Staff</td>
<td>176</td>
</tr>
<tr>
<td>Appendix H</td>
<td>Interview Guide: Students: First Half of Interview</td>
<td>177</td>
</tr>
<tr>
<td>Appendix I</td>
<td>Interview Guide: Students: Second Half of Interview</td>
<td>178</td>
</tr>
</tbody>
</table>
Chapter 1
Reviewing the Development of Doctoral Education

Introduction

This dissertation focuses on the experiences of doctoral students in the disciplines of Engineering and of Philosophy through the Bourdieusian concepts of habitus, capital, field and practice. Through the use of Bourdieu’s concepts, this research explores academic work in doctoral education and the socialization of doctoral students. Central to this research, concerns of inequality, both in the nature of academic work and in the socialization of doctoral students, suggest that socialization is experienced differently by students and part of that differential experience is related to students’ histories, experiences and relationships prior to and during doctoral study as well as students’ achievements during doctoral education. I turn now to a discussion about the importance of research on doctoral education, an articulation of the history of doctoral study and finally a more detailed review of the parameters of this research.

Doctoral education is an area of interest for both scholars and policy makers in many jurisdictions. In Europe, Enders (2004) described the growth of doctoral education through the 1990s as “remarkable” (p. 420) with some European countries doubling their Ph.D. graduate output over the decade. Policy drivers and new organizational forms in Australia significantly increased the number of Ph.D. graduates during the 1990s following the introduction of the unified national system for higher education (UNS) in 1988 (Pearson, Evans, & Macauley, 2008) Increasing attention to doctoral education reform in the United States led to a number of new initiatives, including Preparing the Professoriate (Nyquist &
Woodford, 2000) and the Carnegie Initiative on the Doctorate (Golde & Walker, 2006). In the Canadian context, there have been recent attempts to gather large-scale quantitative data on doctoral graduates (King, 2008). Also, in 2007, the national research councils generated a list of key competencies or skills for doctoral graduates (Tri-Agency Statement, 2007). In addition, the Ontario government announced in the 2005 budget a dramatic expansion of graduate education to build research capacity for the growing global knowledge economy (OCUFA, 2007).

This heightened attention to doctoral education enables governments to become increasingly interested in doctoral education due to the linkages that have been recognized between research, globalization, knowledge economy and competition. For instance, European research universities contend, “the training of world class researchers is an essential factor in developing a powerful science base for the European knowledge economy and must form a major part of the European R&D policy in the coming years” (Ferrari, 2007, p. 3). A report from Statistics Canada states,

Knowledge creation and innovation through research and the development of highly qualified personnel is becoming increasingly crucial in the global economy. The Government of Canada has stated that the country must improve its knowledge advantage…A key strategy to achieve this goal is the education of doctoral graduates. (King, 2008, p. 9)

Finally, Nerad, Trzyna, and Heggelund (2008) provide a succinct articulation of this celebrated relationship between doctoral education and national prosperity:

Doctoral education is seen as playing a crucial role in the production of knowledge and doctorate holders are viewed as a primary source of innovation, research and development capacity and as workers able to perform well in complex, knowledge-intensive situations. Consequently, governments around the world have begun to expand doctoral training capacity and critically evaluate existing doctoral education. (p. 5)
Importantly, governments have been framing doctoral education as a panacea for economic prosperity and social well-being.

This interest in doctoral education needs to be further situated in the broader context of the role of universities and their growing research function. The next section will focus on a brief review of the history and key issues of doctoral education in the United States, but it will also highlight key developments in the evolution of doctoral education in Canada. This initial focus on US history is necessary due to the extensive literature on US higher education and the fact that doctoral education in Canada has been influenced, to a large extent, by our southern neighbours. Also, despite a rich scholarly history on doctoral education in the UK and Australia, the absence of these literatures from this review concerns the different systems of higher education that operate in these jurisdictions as well as the differences in doctoral study and doctoral student preparation. So, Canadian higher education is more similar to US higher education than other jurisdictions and the nature of doctoral study in Canada more closely resembles doctoral education in the US rather than doctoral education in the UK and Australia.

**History of Graduate Education**

Graduate education in the US was heavily influenced by the German research university model. Two specific characteristics were upheld: (a) the emphasis on scientific inquiry; and (b) the expectation that faculty members would engage in research (Walker, Golde, Jones, Conklin Bueschel, & Hutchings, 2008). The opening of Johns Hopkins University in 1876 marked the inception of US graduate education, albeit, with obvious ties to its German ancestry. The focus at this new university included Ph.D. degrees in arts and
sciences, with financial aid for students through the use of fellowships (Rudolph, 1962, as cited in Walker et al., 2008).

The history of US graduate education could be conceptualized as progressing through five distinct stages. Walker et al. (2008) articulate this history as: establishment; expansion and the link to funded research; retrenchment and innovation; diversification and fragmentation; and waves of reform. The establishment stage involved the creation of institutional infrastructure to support doctoral study. This infrastructure included the presence of both undergraduate and graduate programs at universities with faculty member teaching in both curricula. During the early years of the 1900s, disciplines and resulting academic departments established footholds in universities as well as the creation of professional associations and of peer-reviewed journals (Walker et al., 2008), both of which signaled the presence of a research infrastructure that promoted doctoral study. Expansion was tied heavily to post-WWII developments as undergraduate populations soared, yet the rate of doctoral study enrollment surpassed the rate of undergraduate enrollment (Walker et al., 2008). This swelling of doctoral enrollment prompted the federal funding of university research with a specific interest to support faculty research with graduate students. The retrenchment phase was a time of significant fiscal claw-back from government (Walker et al., 2008). This reduction of federal support to doctoral study resulted in focused conversations about the purposes of doctoral education. Despite these conversations about broader purposes and objectives of doctoral study, applications to, and programs of, doctoral study blossomed during this period, signaling an important entry point into the next phase of diversification and fragmentation. This phase was characterized by three specific trends: the increase of women in doctoral programs; the introduction of new disciplines and disciplinary
arrangements to doctoral study; and the recognition of non-academic careers upon completion of the Ph.D. These elements of diversification provided crucial dynamics that influenced the significance of the fifth stage: waves of reform. Reform efforts originated from multiple stakeholders of doctoral study, which attempted to account for disciplinary differences and resultant career trajectories of doctoral graduates.

The trajectory of US and Canadian histories of graduate education share similarities and differences. Overall, these histories of graduate education reveal similar patterns of early 20th century establishment, post-war expansion, increasing government linkages and significant fiscal problems of the 1970s and 1980s. Significant differences between the two histories of graduate education are reflected in the earlier start and concerted reform efforts that characterize US graduate education. For instance, by 1900, the US had awarded a total of 3,500 doctorates (Walker et al., 2008), while, in the same year, the first Canadian doctorate was awarded by the University of Toronto in physics (Williams, 2005, 2008). Also, Walker et al. (2008) document efforts of doctoral education reform by highlighting various actors in the US, ranging from national graduate education bodies (Council on Graduate Studies) to philanthropic foundations (Woodrow Wilson Foundation) to in-depth scholarly texts (i.e., In Pursuit of the Ph.D.) to professional disciplinary societies conducting surveys of its members (American Chemical Society). This sort of multi-stakeholder investment in doctoral education reform has not been seen in a Canadian context. Although reform efforts were more fragmented historically, recent initiatives at the national level suggest a more coordinated strategy for the future of doctoral education in Canada. Of particular relevance, the three national research granting councils developed a statement of principles that outline specific professional skills that should be understood and internalized by researchers, and
implemented through the preparation of the next generation of researchers. This statement of principles described specific competencies of researchers, which recognized both disciplinary conventions of the training of doctoral graduates as well as the limited academic labour market that provided stable employment. For instance, notions of collaboration involved academic and non-academic parties and revealed both the need for researchers to understand communication skills beyond disciplinary conventions as well as the need for researchers to be employed in positions external to traditional professorial appointments.

While the development of doctoral education in the US has been characterized as, “a story of contradictions” (Walker et al., 2008, p. 21), a similar haphazard style of development could characterize the history of doctoral education in Canada. Canada possesses an even more decentralized higher education system with universities and provincial and federal governments engaging in a dance of funding, responsibility and autonomy for doctoral education. While creating doctoral programs and broader research agendas were important goals, Canadian universities also engaged in various activities to establish their identities and traditions. The move to secularize universities in Canada was partially related to funding concerns and an attempt to avoid denominational politics (Jones, 1996) yet, despite this separating of church and education, specific traditions in education were tied to cultural or religious heritage. For instance, Dalhousie, Queen’s and McGill maintained Scottish traditions that emphasized practical skills and science while other institutions maintained traditions of reflective study and undergraduate teaching (French and English, respectively) and of teaching and professional development (US land grant institutions) (see Williams, 2005, 2008).
The cities of Toronto and Montreal became recipients of significant investments in industrialization, commerce and immigration which, when coupled with the rise of physical and social sciences and increasing disciplinary specialization in the international research community, created the necessary conditions for the German model of graduate education to gain a foothold into the Canadian higher education landscape (Williams 2005, 2008). Hence, at the turn of the 20th century, the University of Toronto and McGill University were the only Canadian institutions that were committed to doctoral education.

The infrastructure for doctoral education and its current relationship with government and university was borne during the First World War when the federal government created the National Research Council (NRC) to fund industrial research (Williams 2005, 2008). This council established the first publicly funded research fellowships and cemented the precedent for federal involvement in linking advanced research with economic prosperity and industrial development (Williams, 2005, 2008). The solidifying of government involvement in advanced research and doctoral interests came after the Second World War where strategic and economic national interests were served with scientific research. An explicit relationship between economic development and doctoral education was advocated by the federal government and was realized through the establishment of multiple national councils (i.e., Canada Council for the Arts; Medical Research Council) that were invested in supporting advanced research (Williams, 2005, 2008). In addition to this focus on economic and industrial interests, the formation of national research councils signaled a specific interest in furthering a Canadian understanding or self-knowledge mechanism linked to national identity and cultural development.
As in the US, the era of rapid and extensive expansion of higher education resulted in a concomitant increase in enrollment for doctoral studies. Despite the proliferation of doctoral studies across the country, “no single post-secondary education or doctoral training system emerged” (Williams, 2005, p. 4). Sustained economies of scale and institutional reputation complemented institutional strategies, which offered funding and additional incentive packages for prospective doctoral students. This resulted in a concentration of the responsibility of training doctoral students under the auspices of a handful of institutions. Namely, the same five large universities (University of Toronto; McGill University; University of British Columbia; University of Alberta and; University of Montreal) have been responsible for training over 50% of doctoral students over the last 40 years (Williams, 2005).

The 1980s and 1990s were characterized by substantial reductions of federal funding for universities, and thereby required the increasing use of various actors into the financing of the university as well as revised configurations between governments and universities. Specifically, Williams (2005) writes, “universities increasingly turned to students and the private sector for support…universities, provinces and the federal government…rearranged their collective responsibilities for funding, governing and conducting higher education, advanced research and doctoral studies in Canada” (p. 5). Different provinces absorbed these modifications to the funding of universities differently, but most noticeably, there was a distinct change in the student population enrolling in doctoral study. The participation of women increased significantly during this period, from 36% in 1991 to 46% in 2001, and the number of international students enrolling in doctoral study swelled to nearly 34% by 2001 (Williams, 2005).
Despite this rich history of doctoral education in the US and in Canada, there is a paucity of scholarly research on doctoral education in Canada, so this dissertation signifies an important entry point into more empirical research in this area. Much of the existing scholarship on doctoral education that will be used for this dissertation is anchored in the US literature, given its deep history and significant scholarly impact. A considerable amount of this literature employed quantitative methods to investigate doctoral education, with interests in many different areas.

**Significant Recent Quantitative and Qualitative Research**

Nerad (2004) reviewed the criticisms of the current state of doctoral education and highlighted the need for continued investigations. As an attempt to explore the criticisms of doctoral education, Nerad examined three recent national surveys of students and former students of doctoral education: the Survey on Doctoral Education and Career Preparation (Golde & Dore, 2001); the 2000 National Doctoral Program Survey (NAGPS, 2001); and the “Postdoctoral Appointments and Employment Patterns of Science and Engineering Doctoral Recipients Ten-plus Years after Ph.D. Completion” (Nerad & Cerny, 2002). The Golde and Dore (2001) report, “At Cross Purposes”, was derived from a survey that was administered in 1999 and was targeted to doctoral students at 27 institutions across 11 disciplines, a total of 4,000 students in their third year or beyond. This study focused on the current experiences of students and on whether they regarded themselves prepared for their subsequent careers. The National Association of Graduate and Professional Students study (NAGPS, 2001) sought to survey every student who had been enrolled at least for a semester since 1995. The study focused on students’ learning environment, faculty/student mentoring opportunities, clarity of program structure and requirements and the extent to which the program fostered
diversity. The study received responses from about 32,000 current and recent doctoral students from 5,000 programs across 400 institutions in the US and Canada. The final study by Nerad and Cerny (2002) surveyed about 6,000 Ph.D. recipients from 61 research universities 10–14 years after degree completion, in six disciplines: biochemistry, computer science, electrical engineering, English, mathematics and political science. This focus of 10–14 years after degree completion was meant to assess the quality and usefulness of the programs of doctoral education, information about job searches and overall job satisfaction.

Various issues were highlighted by the three surveys. The major criticisms highlighted that doctoral students are educated and trained too narrowly; they lack key professional skills, such as collaborating effectively and working in teams, have no organizational and managerial skills; they are ill prepared to teach; and they are taking too long to complete their doctoral studies and in some field many do not complete their degrees at all. Finally, doctoral students are ill informed about employment outside academia.

Nerad (2004) claimed that the first two criticisms are rooted in perspectives from industry, government and non-profit organizations that employ Ph.D. graduates. Central to these criticisms is the notion that the Ph.D. degree is a vehicle to a professorial career which does not necessarily include the development of broad communication skills as well as project and team management experiences. The third criticism originated from teaching intensive universities where the overwhelming response from participants was the lack of pedagogical training for doctoral students. The concern about time-to-degree completion and more general completion rates was grounded in a resource-conscious orientation by policy makers and by graduate deans where issues related to doctoral degree completion inhibits the amount of qualified personnel to fill growing research and development (R&D) jobs and
limits the possibility of securing professorial appointments, respectively (Nerad, 2004). Importantly, the significance of discipline is a crucial factor to this criticism of time to degree, rate of completion and broader employment trends after doctoral degree acquisition. Of particular interest to the scope of this research was the conceptualization of the disciplines in terms of financial aid and time to degree. More specifically, Nerad (2004) writes, “students in the sciences and engineering are well funded and have a reasonable time to degree. Those in the humanities and social sciences have the double burden of limited funding resources and long courses of study” (p. 189). I will return to this conceptualization of disciplines later in this thesis; however, I raise the significance of the discipline as an important contributor to understanding the experiences of doctoral students. Lastly, the criticism focusing on employment possibilities external to academic appointments also possesses a disciplinary nuance. The extent to which doctoral students aspire for an academic career varies considerably across disciplines from a vast majority of students in the humanities and social sciences to a significant minority in the engineering fields. Yet, “all three studies found that students want information about jobs outside of academe” (Nerad, 2004, p. 190). So, this criticism could be reflective of the difficult academic labour market, but could also be a call to reform what Ph.D. students do upon degree completion and how to structure opportunities for diverse careers during the doctoral process.

The significance of Nerad’s (2004) analysis to this research is twofold. First, it demonstrates the importance of disciplinary focus to the experiences of doctoral students as well as to the broader issues of doctoral study, those of employment, time to degree and completion rates. Given the focus on doctoral education across jurisdictions by policy makers and scholars, any reform efforts to doctoral education must consider the nature of the
discipline for doctoral graduates, and how these dynamics impact initiatives related to national economic prosperity, R&D concerns and the future of the professoriate. Second, it highlights important considerations in doctoral education that reform efforts, both at the programmatic level and from a research perspective, need to highlight and emphasize.

In addition to this aggregated review of quantitative research, Nettles and Millet (2006) provided a thorough survey and analysis of many issues related to doctoral study. These authors attempted to generate a statistically reliable, generalizable picture of doctoral students across disciplines in the US. The main areas of interest included: demographics, preparation and screening, financial aid, socialization, productivity, personal satisfaction, rate of progress and degree completion (Nettles & Millet, 2006). Bowen and Rudenstine (1992) captured the simplicity (and resultant complexity) of finances for doctoral students, “money plainly matters” (p. 178). Although “money plainly matters”, there are a host of other issues that impact doctoral students’ experiences which are tied to not only the presence of money or resources, but also to the other components of academic work in which doctoral students engage. Some scholars recognized a relationship between the type of funding students receive and overall research productivity (Buchmueller, Dominitz, & Hansen, 1999; Ethington & Pisani, 1993). Disciplinary difference emerge with this focus on the type of funding, as research assistantships are more plentiful in the sciences and engineering than in the humanities and social sciences (Nettles & Millet, 2006). Also, Bowen and Rudenstine (1992) revealed a relationship between funding and time to degree as well as completion rates. Millet and Nettles (2009) emphasized the importance of time to degree, completion rates and rate of progress as the three strategies to win doctoral education. Rooted in notions of efficiency and cost-effectiveness, Millet and Nettles (2009) emphasized specific
predicators of student success (i.e., doctoral degree completion) to each strategy. Specifically, full-time enrollment status (for rate of progress), research productivity (for completion rates) and the presence of a mentor and parental socioeconomic status (for time to degree) were identified was the most powerful predictors of doctoral degree completion (Millet & Nettles, 2009). Importantly, all of this quantitative research reveals the complicated and nuanced landscape (and scholarly literature) related to understanding doctoral education and the experiences of doctoral students. While the Nettles and Millet (2006) research revealed important dynamics of doctoral study that could be targeted by future reform efforts, importantly, there was not a disciplinary case-study analysis to fully understand how these different dynamics are interpreted and experienced through different disciplines. The research emphasized five different “disciplines”; however, various aspects of doctoral education were explored rather than an investigation on how a particular discipline is organized and how these elements of doctoral study operate in that particular discipline.

I raise the results of these surveys not as a checklist of items to be addressed through this dissertation, but rather as crucial contextual dynamics that reinforce the significance of sustained, scholarly interest in the doctoral education literature. In addition to these quantitative approaches, more recent research with current or former doctoral students has utilized qualitative perspectives (see Gardner, 2008, 2009; Golde, 2005; Wulff et al., 2004). Golde (2005) focused on doctoral student attrition and conducted extensive case-studies to examine departmental and disciplinary elements that may have shaped students’ decisions to leave doctoral study. Her findings were anchored in the mismatch between students’ expectations and the norms or mores of the specific disciplines and/or departments. This mismatch resulted in significant discomfort from students regarding academic preparedness,
relations with supervisors, perceptions of academic life and realities of academic job market (Golde, 2005). Wulff et al. (2004) designed a multi-institutional, longitudinal study to assess teaching experiences and perceptions of both doctoral and master’s students. An important initiative to reform efforts of doctoral study concerns the impetus and implications of this research: the Preparing Future Faculty (PFF) initiative. More specifically, scholars and policy makers in the US wanted to understand the nuances to developing the next generation of scholars and faculty members. So, this research on teaching experiences of graduate students was meant to provide an entry point into understandings related to the emergence of future professors. Findings from this research highlighted the need to provide on-going training, mentorship and reflection to graduate student teaching assistants throughout their teaching experiences. Also, the findings suggested that there needed to be a broadening of what constituted teaching to include issues beyond instructional techniques involving constructing feedback and addressing different learning styles and needs in a classroom (Wulff et al., 2004). Lastly, Gardner’s (2007, 2008, 2009) work has heavily influenced the scope and methodology of this research project. Her scholarship utilized a socialization framework to understand the experiences of doctoral students, and her research could be categorized more broadly to encompass concerns about the experiences and relationships of current doctoral students across disciplines and how these students understand the expectations and requirements of academic life. She has explored the notion of the graduate student “grapevine” where important information is communicated within this “secret” arrangement (Gardner, 2007); examined the presence of a “mold” for graduate students thereby suggesting a normative orientation to socialization (Gardner, 2008); and interviewed faculty members in seven different disciplines to assess interpretations and parameters of “success” in graduate
school as perceived and articulated by faculty members (Gardner, 2009). Throughout her studies, Gardner incorporated qualitative approaches with semistructured interviews of participants. Hence, this dissertation follows these more recent projects, with a focus on qualitative methods with current doctoral students.

An important distinction of this research is the use of the work of a particular sociologist to guide the methodology and analysis of participants’ stories. Although recent scholarship on doctoral education has utilized qualitative approaches, has emphasized the socialization framework and has focused on current doctoral students, previous research, while employing the conceptual framework of socialization, could also be viewed as atheoretical. That is, major scholars from the disciplines of economics, psychology, political science or sociology have not been incorporated into the literature on doctoral education, doctoral student experience or socialization. As such, this research introduces the work of Pierre Bourdieu to this area of research and suggests that his concepts provide novel ways of conceptualizing doctoral education and the socialization of doctoral students.

**The Focus of This Dissertation Research**

Much of the literature does not apply the ideas of major theorists to the study of doctoral education. Interestingly, given the tremendous influence of his work in other areas of education, researchers have seldom (see Espinoza, 2007) investigated the interpretation of doctoral education or socialization using the tools introduced by Bourdieu. Research has focused on college choice and the transition to post-secondary education as a function of parental involvement (Perna & Titus, 2005), the experiences of low-SES and high-SES students in post-secondary education (Walpole, 2003) as well as issues of institutional
hierarchy in the post-secondary education context (Naidoo, 2004). Importantly, Espinoza (2007) examined the experiences of black and Latino, female doctoral students with some components of Bourdieu’s theory of practice. However, this study will emphasize his conceptual tools of capital, field, habitus and practice. In particular, this study asks whether Bourdieu’s ideas of capital, field and habitus offer new ways of conceptualizing doctoral education? In addition, to what extent do habitus, cultural capital and social capital contribute to a student’s ability to conceive of, engage with and experience doctoral education? For this latter question, I operationalize the activities of socialization to include, but not be limited to: (a) learning and utilizing the language of academe; (b) creating and sustaining academic/non-academic relationships; (c) conceptualizing and completing the stages of doctoral education; (d) being aware of and gaining competency or fluency with research, teaching and service aspects of academic work. In particular, research refers to conference presentations, academic publishing and attaining external scholarships; teaching involves evidence of teaching improvement or excellence; and service concerns departmental, disciplinary, institutional and wider professional association involvement.

This operationalization suggests that doctoral education can be constituted by specific practices and processes, which may vary in their intensity to socialize students to the professoriate. Also, the experiences, schemata and strategies with which student arrive to doctoral education can be useful in so far as the conditions of doctoral education, and academic work more broadly, recognize and celebrate them. While there is some caution about linking doctoral education to careers in the professoriate as a clear outcome, the definition of socialization used for this dissertation as well as previous literature on socialization and doctoral education have focused on this implicit (and perhaps explicit)
relationship between the activities in doctoral education and entry into the academic profession.

**Locating Myself**

Consistent with qualitative approaches and with methodological aspects of Bourdieu’s theory of practice, I feel it necessary to situate myself—history, experiences, relationships, and perspectives—in this study on doctoral education and the socialization of doctoral students. My interest in studying doctoral education and the experiences of doctoral students came from my own reflections on my graduate study journey between my Master’s and my Ph.D. I had reviewed literature that explored various facets related to undergraduate student populations, but there were not many opportunities to read the literatures pertaining to doctoral education in the Higher Education program. I was interested in the increasing corporate or industrial presence in university affairs and became critical of the ways in which knowledge production, via research opportunities, projects, and questions, became an important focus of the literature on academic capitalism. I thought about the role of doctoral education and the work of doctoral students as embedded in this broader conversation about the research function of the university, and the ways which doctoral students experienced their doctoral education.

By the beginning of doctoral studies, I recall reading literatures that used different critical theories to explore issues in higher education, with a particular focus on issues of power, privilege and inequality. I quickly became interested in Bourdieu’s theory of practice and, despite the difficulty of Bourdieu’s articulation, I found the material refreshing, thought-provoking, and salient to the different contexts in which inequality can occur. As I
progressed through doctoral study, I was very fortunate to earn the support of various faculty members and students that enabled me to experience many different facets of an academic life. I was able to present at academic conferences, publish peer-reviewed and invited manuscripts, learn about and teach about inclusive teaching practices, and serve on numerous departmental, institutional and professional association committees. In many ways, I experienced a very rich doctoral journey with very fruitful relationships and opportunities, most of which centred around the academic tripartite of research, teaching and service.

Given my interest in power, privilege, and inequality across contexts, I found myself thinking about the conditions of inclusion and exclusion that enabled particular individuals or groups to be “present” and “accepted” in a specific context. When I dined at restaurants, rode the subway, had BBQs with my family and peers, and engaged in the different aspects of academic work, I continuously wondered about the parameters or conditions of access and the ways by which these conditions were visible, explicit or understood. I began to reflect on my own positionality, my history, my relationships, my experiences, and my ways of knowing that rendered some of my understandings as “obvious” or even “taken for granted” to me.

So, this reflective gaze and my interests in power and privilege brought me to think about issues in doctoral education and the socialization of doctoral students from an “inclusion vs. exclusion” perspective. Was there something about doctoral education and/or about the nature/perspectives/understandings of the students within doctoral study that served to maintain trends of inclusion and exclusion? I found Bourdieu’s (1977, 1990) theory of practice as a natural framework to explore these concerns.
The use of Bourdieu’s (1977, 1990) theory of practice to explore issues of inclusion and exclusion in an educational context is a major development in my scholarship for two very profound personal reasons. My father was a teacher in his native homeland of Trinidad and immigrated to Toronto to study at the University of Toronto. He eventually completed his Bachelor of Education degree and taught in secondary schools in the Toronto area. He loved teaching and working with students; however, due to significant racism in the classroom and in the broader structure of education, he left the teaching profession to pursue business, insurance and finance. He wanted to attend graduate school, but was unable to do so. In his later years, he returned to his educative capacity (albeit tangentially) as he worked as a private, part-time tutor in Mathematics. But, he always missed the classroom. About 30 years after he left the teaching profession, I decided to apply to a Master’s program that focused on education. Throughout my master’s and Ph.D., I have become increasingly interested in issues of social justice and inclusion/exclusion across contexts as well as practices of power and privilege in education. Since I did not know of my father’s reason to leave the teaching profession, I feel that, in some ways, I have become the extension and the realization of a history about which I knew nothing. On some level, my interest in power, privilege and inequality and the completion of a doctoral degree are testaments to the influence of history on one’s experiences and trajectories.

The second major reason for my use of Bourdieu’s (1977, 1990) theory of practice for this research is the broad similarities between Bourdieu’s social origins, his analytical focus and resultant academic career. His rural familial history was always an important lens through which he viewed not only his experiences and trajectories, but also the experiences and trajectories of others. Constantly reflective of his own history and his academic
accomplishments, Bourdieu continued to write about issues of domination, hierarchy and struggle, perhaps because he would not let himself forget about them from his own story. While not from a rural family, I often felt like the “outsider on the inside” in various educational contexts and, in some ways, internalized this status as a means to continue to think about the practices of social life that promote issues of access and recognition and, by extension, exclusion and misrecognition. While I am in no ways as prolific as Bourdieu, I do envision an academic career with many opportunities to write, to teach and to work with student and faculty colleagues. I have been very diligent during my doctoral years to demonstrate that I wanted to, and can, do facets of academic work and will continue to engage in these activities.

**Outline of Thesis**

This thesis continues with reviews of the socialization literature, doctoral education literature related to socialization and with a discussion of Bourdieu’s (1977, 1990) theory of practice. I then review my qualitative methodology and my procedure to acquire research participants. My findings chapters could be considered as case studies with one chapter on my findings from Engineering and one chapter on the research conducted in the department of Philosophy. Each chapter explicates findings from this study by focusing on disciplinary nuances and on how habitus, capital and field operated as analytical tools to examine participants’ stories. My concluding chapter discusses elements from my findings that cut across both disciplines as well as aspects that are specific to each discipline. I then discuss the implications of my research to conceptions of doctoral education as well as to nuanced understandings of the socialization model used to explore doctoral education. I now turn to a review of the socialization literature and of Bourdieu’s theory of practice.
Chapter 2
Socialization and Bourdieu’s Theory of Practice

Introduction

This chapter provides a review of the relevant scholarly literatures that pertain to this research. Specifically, I will review the socialization literature as it relates to doctoral education and the doctoral student experience. Then, I will outline Bourdieu’s (1977, 1990) theory of practice and attempt to highlight how Bourdieu’s concepts can be used as analytical tools to assess doctoral education, in general, and the socialization of doctoral students, in particular. The main objective of this chapter is to review the relevant literatures to this research and to indicate the saliency of the concepts of habitus, capital, field and practice to offer a new understanding of doctoral education and the socialization of doctoral students. The material in this chapter draws from my previous work on doctoral education, socialization, and Bourdieu (Gopaul, 2011).

Doctoral Education

Although scholarly interest in doctoral education has an extensive history (see Berleson, 1960; Stork, 1953, 1973), much of this literature has not examined Canadian institutions or populations. The Canadian literature on doctoral education has slowly developed in recent years (Acker & Haque, 2010; McAlpine, Amundsen, & Jazvac-Martek, 2010). Despite this paucity of Canadian-based scholarship on doctoral education, other jurisdictions, namely the US, UK and Australia have a rich history of research in this area (see Golde & Walker, 2006; McAlpine & Norton, 2006; Neumann, 2002, 2007; Parry, 2007). This literature review will draw primarily from the US literature on socialization due to the
similar systems of doctoral education in the US and in Canada, as well as the absence of the term socialization from the literatures of the UK and Australia. Interestingly, the last two decades has been witness to an intensification of scholarly attention to doctoral education. Many different areas within doctoral education have been examined including attrition (Golde, 2000; Lovitts, 2001), financial aid (Nettles, 1987; Nettles & Millet, 2006), structure and process (Tinto, 1997), discipline (Golde, 2000, 2005), supervisor relations (Golde & Dore, 2001; Lovitts, 2004) and socialization (Austin, 2002). The socialization framework remains the most frequently used orientation (Sweitzer, 2009), and some scholars suggest that attrition from doctoral programs is directly related to socialization effects (Golde, 2000; Tinto, 1997).

**Socialization**

Given the popularity of the socialization framework in the doctoral education literature, an overview of the relevant socialization literature is necessary. This chapter uses a definition of socialization from the work of Merton (Merton, 1957; Merton, Reader, & Kendall, 1957). Merton et al. (1957) define socialization as, “the processes through which [a person] develops [a sense of] professional self, with its characteristic values, attitudes, knowledge and skills…which govern [his or her] behaviour in a wide variety of professional situations” (p. 287). The importance of establishing membership with a particular group and how that membership includes particular values, attitudes, and knowledge is significant to the context of doctoral education.

Other scholars have engaged with this definition and contributed to its development. For instance, Bragg (1976) suggests, “the socialization process is a learning process through
which the individual acquires the knowledge and skills, the values and attitudes, and the habits and modes of thought of the society to which he/she belongs” (p. 3). Other scholars have questioned this modernist definition of socialization, arguing that it assumes the rationality and constancy of culture (see Tierney, 1997). In particular, some scholars (see Antony, 2002; Antony & Taylor, 2004; Tierney, 1997) suggest that this rational orientation to socialization implies a linear, serial progression through a set of specified activities and ultimately contributes to assimilation and homogeneity (Tierney & Rhoades, 1994).

Four stages of socialization have been identified where novices move toward the goal of role acquisition: anticipatory, formal, informal, and personal (Thornton & Nardi, 1975). The anticipatory stage involves developing an awareness of the characteristics of the desired group (Van Maanen, 1983). For doctoral students, this entails application to and entry into the doctoral program as well as observations and interactions with peers and faculty members. The formal stage of socialization casts those entering into the organization as veteran newcomers who have some experience but still need to learn the expectations, standards, rewards, and sanctions of the organization (Weidman, Twale, & Stein, 2001). At the informal stage, individuals learn about the informal expectations and degrees of flexibility associated with the role (Austin & McDaniels, 2006). Finally, at the personal stage, individuals internalize the parameters and dimensions of particular roles and begin to integrate a new professional identity with their existing self-image.

Extending this theory, Weidman et al. (2001) identified three core elements of socialization that map onto the stages and constitute their well-respected model of graduate student socialization. The three central features were knowledge acquisition, investment, and involvement. The element of knowledge acquisition involves learning the language, history,
problems and ideology of the profession. Here the integration of self-image and professional identity comes to fruition as prospective group members mirror and model the behaviours and broader codes of conduct after established members. The core feature of investment reflects the channeling of time, energy, and self-esteem into the organization/group and thereby giving up or forgoing other options. Finally, the notion of involvement leads to role identification and commitment. During this process, individuals participate in various professional activities and internalize their identification with the commitment to the professional role.

In addition to these core elements, Van Maanen and Schein (1979) highlighted six polar dimensions that also accompany the socialization process. Both Tierney and Rhoads (1994) and Weidman et al. (2001) recognize the significance of these dimensions to the socialization of graduate and professional students. These six dimensions of socialization include: collective versus individual; formal versus informal; random versus sequential; fixed versus variable; serial versus disjunctive; investiture versus divestiture.

The collective versus individual dimension highlights the extent to which common opportunities are experienced equally by new doctoral students. Specifically, Weidman et al., (2001) emphasize, “collective socialization refers to the common set of experiences encountered by all graduate students in an academic program” (p. 27). Meanwhile, “individual socialization refers to processing new members in an isolated and singular manner” (Tierney & Rhoads, 1994, p. 27). Fundamentally, disciplinary cultures and associated differences in the production of knowledge can be significant elements that highlight this continuum. For instance, students in humanities may experience a much more
isolated process than doctoral students in engineering or the biomedical sciences due, in part, to the models of peer interaction and supervision.

The formal versus informal aspect of socialization reflects when new members engage in particular experiences that are created to specifically shape them in distinct ways. The “checkpoints” of a traditional doctoral program (i.e., proposal, comprehensive exam and dissertation defense) can be considered elements of formal socialization for doctoral students. Informal socialization is related to greater variances in individual expectations due to the focus on learning by trial and error (Van Maanen & Schein, 1979). Given this propensity for variation, informal socialization is deeply rooted in peer cultures where information about norms, expectations and activities can be exchanged during a less hierarchical context than with faculty peers or thesis supervisor. This focus on peer cultures and individual variance also opens the notion of unequal exposure to informal socialization due to issues of race, class, gender and other social categories around which inequalities can be built.

The socialization dimension of random versus sequential highlights the clarity and specificity of specific activities in which newcomers need to engage. The “checkpoints” of doctoral study are not only specific, but are organized in a sequential manner. Thus, the transition from exams, to proposal, to defense usually occurs in that particular order, which is an example of sequential socialization. However, random socialization can be reflected in the varied opportunities that doctoral students experience and the extent to which these opportunities occur. For instance, doctoral students vary in their exposure to research and teaching activities as well as their involvement with academic publishing and scholarly conferences.
The fixed versus variable dimension of socialization relates to the rigidity of the timeline for a newcomer to move to successive stages or roles. Due to the varying circumstances and capabilities of each student, doctoral students usually experience variable socialization as related to the timeframe in which to complete the different stages of the doctoral process (Weidman et al., 2001).

Serial versus disjunctive socialization involves the explicit and structured involvement between newcomers and senior organizational members. In the context of doctoral education, serial socialization often involves a relationship with an advisor (usually a faculty member, but sometimes a senior doctoral student) who provides advice during each step of the doctoral journey. New doctoral students who do not experience this sort of mentorship can be considered to experience disjunctive socialization. Specifically, mentoring may occur as fragmented or piece-meal, rather than a coherent and comprehensive account from senior organizational members.

Finally, investiture versus divestiture socialization concerns the congruency and acceptance of individual characteristics and organizational culture or expectation. That is, students who experience investiture find that organizations welcome their individual histories and values whereas students who experience resistance from the organization around values and characteristics, are involved with the process of divestiture. Tierney and Rhoads (1994) suggest that this divestiture occurs more frequently for women and students of colour as universities are organizations that hold mainstream values and mores.

Considerable work on socialization of graduate students utilized the work of Merton et al. (1957) which emphasized a rational, linear approach to learning between newcomer and
organization. Clark and Corcoran (1986) suggested a three-stage model to emphasize the socialization of doctoral students to the professoriate. In particular, they argued that entry to doctoral study was part one, experience and competence with aspects of academic work constituted part two and finally the acquisition of a faculty position was the final stage. Braxton and Baird (2001) articulated a similar three-stage process for graduate student socialization, but with slightly different parameters for each stage.

The socialization literature uses the interactions between faculty and student as a significant frame to organize the practices and processes of doctoral education. The role of the faculty member to the socialization of doctoral students is crucial and has a well-documented literature (see Austin, 2002; Bragg, 1976; Golde, 2000). In conjunction with this idea, Baird (1990, 1993) added the dimension of time that suggests that socialization processes and opportunities tend to increase as students reach successive stages in their programs (see also Nettles & Millet, 2006). Senior students (usually in their candidacy/writing phases) tended to have more frequent interaction with faculty members as well as more opportunities for conference presentations and publications than students in the coursework stage.

In elaborating upon these interactions, Baird (1993) discusses the significance of disciplinary culture as an important distinguishing variable. Specifically, students in the sciences and in engineering often work and conduct thesis research in collaborative teams (Mendoza, 2007), whereas humanities and social sciences student pursue doctoral studies in a very isolated, solitary fashion (Smallwood, 2004). This marked difference between the disciplines inherently influences the amount and perhaps type of interaction with faculty and peers. This emphasis on disciplinary culture resonates with Becher and Trowler’s (2001) as
well as Biglan’s (1973) findings that supported the notion of qualitative differences in academic work. Hence, the disciplinary context of doctoral education is a salient component to understanding how the doctoral process is experienced and how socialization mechanisms operate across disciplines. Golde (2000, 2005) highlights the importance of considering disciplinary differences when researching doctoral education. Although her work focuses on issues of doctoral student attrition, her claims about the significance of disciplinary norms and customs resonates with my work on socialization. Specifically, Golde and Dore (2004) write, “explorations of doctoral preparation must take into account and build on the particularities of the various disciplines” (p. 20). For this research, the disciplines of Engineering and of Philosophy were the research contexts to explore doctoral students’ experiences. The doctoral education literature that focused on these disciplines has been sparse. Large quantitative studies have explored different facets of doctoral study, for instance time to degree, financial aid, and socialization, and have used doctoral studies in Engineering as a context for study (Nettles & Millet, 2006). However, these findings do not focus on Engineering as a case study, but rather use participants’ responses to explicate aspects of doctoral study. Scanning across the different aspects of doctoral study assessed by Nettles and Millet (2006), a picture of Engineering doctoral students emerges. For instance, Engineering doctoral students reported high social interaction with faculty members, but low social interaction amongst peers. Also, Engineering doctoral students made the fastest progress on their doctoral degrees, completed their doctoral degrees at the fastest rate, and reported the highest levels of satisfaction with their doctoral program (Nettles & Millet, 2006). Meanwhile, only the Golde and Dore (2001) report explored the experiences of Philosophy doctoral students. The only finding that focused on Philosophy doctoral students
was that over 88% of participants wanted a tenure-track academic appointment upon graduation, which was the highest response across fields. The remaining findings aggregated participants’ responses or emphasized other disciplines.

Austin (2002) further emphasized the critical role of the graduate school as the socialization context for future faculty members. Specifically, Austin (2002) suggested that while working with faculty members is crucial for socialization, students were “very reliant on peers, family and friends (usually external to academe) to make sense of their experiences” (p. 104) in doctoral education. Importantly, Austin (2002) articulated themes that arose from a 4-year longitudinal study of doctoral students who worked as teaching assistants. This focus on the experiences of teaching assistants in the literature on socialization arose from the work of Staton and Darling (1989), Sprague and Nyquist, (1989), and Nyquist, Abbott, Wulff, and Sprague (1991), which ultimately articulated a non-linear approach to socialization. In doing so, this early work with teaching assistants advocated a “more dialectical, culturally based perspective” (Austin & McDaniels, 2006, p. 408).

Specifically, Staton and Darling (1989) revealed that TAs interact with other TAs to learn and construct their roles and thus communication, interaction and observation are crucial to the socialization of TAs. In addition, Sprague and Nyquist (1989, 1991) articulated that TAs work through three stages as they develop comfort and competency with their instruction. For instance, early doctoral students identify as “senior learners”, emphasizing a student rather than instructor identity. Next, TAs gain more comfort in the classroom, both through the content of the course and with authority in the class, and begin to assume a “colleague in training” perspective. Finally, the most senior TAs identify as “junior colleagues” and have secured confidence and authority and can communicate in collegial ways (Sprague &
Nyquist, 1989). This development occurred through significant communication and interaction with faculty and TA colleagues. As such, these findings promoted the notion that socialization is not a linear process and that a dialectical practice can, and does, occur in the socialization of doctoral students.

This non-linear approach has also been described as a post-modern approach to socialization which “recognizes the unique contributions brought to the academy by each newcomer and seeks not to absorb novices into the traditional habits, norms and behaviours of the academy but to honour their contributions in ways that enable their presence to change the academy” (Austin & McDaniels, 2006, p. 408). Although some scholars recognize a direct link between doctoral persistence and socialization (see Golde, 2000; Tinto, 1997), other scholars (Tierney 1997; Tierney & Rhoades, 1994) have argued that the model of socialization often celebrated in the literature (i.e., Weidman et al., 2001) supports an assimilation/congruency model that presupposes graduate education as monolithic. Hence, alternative models need to consider the experiences of underrepresented groups in doctoral education, namely women and students of colour (Antony, 2002; Antony & Taylor, 2004) as well as overlapping contexts including disciplinary, departmental, and institutional dynamics (Gardner, 2008).

Antony (2002) argues for greater clarity of what successful socialization entails, as he maintains that doctoral students can experience emotional and cognitive dissonance due to the assumption of doctoral education as monolithic. In particular, Antony (2002) writes, “a modified framework for graduate student socialization distinguishes between developing an awareness of, versus developing a personal acceptance of, a field’s content, values and norms” (p. 373). This perspective emphasizes a less linear approach to socialization where
the differences of newcomers are welcomed by the organization and used to create new organizational procedures and structures.

Despite the controversy between the traditional modernist and culturally-oriented post-modern approaches, scholars recognize that the model developed by Weidman et al. (2001) as the “most comprehensive framework for understanding graduate and professional student socialization” (Austin & McDaniels, 2006, p. 411). According to Figure 1, the Weidman et al. (2001) framework emphasizes institutional, programmatic and peer culture as well as broader influences including personal history, professional communities, personal networks and novice professional practitioners. The core elements of knowledge acquisition, investment and involvement are focused in the university setting, but the influences of the other four factors are shaped as concentric ellipses to reflect the non-linear orientation and application to the socialization of graduate students.
My intent thus far has been to outline relevant scholarship pertaining to socialization and how the contours of these discussions are significant to my research. I turn now to the significance of using Pierre Bourdieu’s (1977, 1990) theory of practice and associated concepts to explore two distinct, but related issues: (a) mapping the relationships between students’ histories, experiences and trajectories, and how these connections enable “success” in doctoral education and; (b) rendering visible the conditions of academic work that, while possessing a socialization function, produce inequalities and hierarchies in the experiences of students that impact doctoral student socialization. Analyses utilizing the concepts of Bourdieu (1977, 1986, 1990) highlight and extend the discrepancy noted by Antony (2002)
by emphasizing the experiences that students bring to doctoral education and how the efficacy of socialization practices can fluctuate across students and contexts.

By highlighting Bourdieu’s (1977, 1986, 1990) notion of struggle, hierarchy, and domination, this chapter casts doctoral education, in general, and the socialization of doctoral students, in particular, as constitutive of practices and processes that enable particular groups of students to be successful. I use Bourdieu’s tools of capital, field, habitus, and practice to illuminate the very structural and procedural dynamics of doctoral education that serve to reconstitute particular inequities, thereby enabling some students, but also limiting the potentialities of others. These inequities include the competitive dynamics that underscore many aspects of academic work, including securing external funding, academic publishing, and conference presenting. The nature of these elements constitutes sites of struggle for individuals where the outcome of such struggles produces a have/have not culture to doctoral education which can be framed evidence of symbolic violence that filters into the socialization experiences of doctoral students.

By using Bourdieu’s (1977, 1986, 1990) theoretical tools to investigate the doctoral experience and its socialization processes, this chapter aims to question how aspects of academic work, which socialize students during their doctoral years, operate as mechanisms of inequality. In many ways, this chapter encourages readers to think about different ways of structuring doctoral education and the socialization aspects of such education as well as to highlight questions about how the varied experiences and expectations with which students arrive to doctoral education can illuminate strategies to optimize students’ learning and development.
Bourdieu’s Theory of Practice

While scholarly interest in doctoral education has increased substantially over the last two decades, no known studies or articles attempt to explore the influence of major social theorists on the theorizing of doctoral education. What would the ideas of Butler, Fanon, Bakhtin, Foucault, Said, Nussbaum, Derrida, Deleuze, Gramsci, Arendt, and others contribute to our understanding of doctoral education? To begin this conversation, the work of Pierre Bourdieu (1977, 1986, 1990) has spanned nearly four decades with topics as diverse as social space, education, art, culture, immigration, and mobility. Initial readers of Bourdieu’s work may find his writing taxing and almost incomprehensible; however, his main focus was to understand the historical saliency of power and privilege within social interactions as well as the subtle forms of domination that persist to maintain social inequality. This critical stance highlighted normative perceptions and behaviours as well as the perceived arbitrariness of the “established order” that resulted in forms of symbolic violence, “the imposition of systems of meaning that legitimize and thus solidify structures of inequality” (Wacquant, 2006, p. 217).

While Bourdieu’s original theorizing was based on specific cultures and contexts, such as Algeria and France in the 1950s and 1960s, scholars (see Horvat, 2001; Lareau, 2001; Marginson, 2006; Reay, 2004) have employed his conceptual and methodological tools to identify patterns of social struggle across countries and contexts. Of particular relevance to this chapter is the use of Bourdieu’s concepts to assess and explore the social stratification within and reproduction by educational systems. Recent scholarship (Gardner & Holley, 2011; Lehmann, 2007; Naidoo, 2004; Walpole, 2003) has explored specific aspects of higher education with various Bourdieusian tools to illuminate how systems of privilege and
advantage are constituted by and for institutions of higher education. Much of this literature on Bourdieu and higher education used isolated aspects of Bourdieu’s (1977, 1990) theory, rather than the multiple concepts of his broader theory and methodology. For instance, Lehmann (2007) focused on the habitus of university students to assess their feelings of “fitting into” university culture, Walpole (2003) emphasized cultural and social capitals as well as habitus to explain the differentiated post-secondary experiences and outcomes of low-SES and high-SES students. Further, Naidoo (2004) highlighted the importance of field to reveal institutional strategies that resulted in hierarchical relations between institutions of higher education. Finally, Gardner and Holley (2011) conducted research on first generation doctoral students with Bourdieu’s notion of capital, but also drew from other researchers who write about “capital”. Focusing specifically on how first-generation doctoral students navigated access to college and then pursuit of a doctoral degree, Gardner and Holley (2011) demonstrated that significant barriers existed for first generation students, barriers related to economic, cultural and social capitals.

Importantly, Bourdieu himself conducted research on matters of higher education. The Inheritors (Bourdieu & Passeron, 1979) and Homo Academicus (Bourdieu, 1988) were thorough accounts of the prevalence of symbolic violence and of the powerful forces of reproduction that operate in educational fields. In The Inheritors, Bourdieu and Passeron explored the transition from secondary school to post-secondary school for French adolescents and revealed that the notion of social mobility as an outcome of educational attainment was problematic and normative. In Homo Academicus, Bourdieu highlighted the university as a site of struggle wherein which different disciplines compete for legitimacy and domination in the academic field and the broader intellectual field. More specifically,
Deer (2008) writes that *Homo Academicus*, “signals the beginnings of a more reflexive conceptualization of the specificities of the intellectual field in relation to other social fields and, more particularly, the fields of power and economics and their implications” (p. 124). I now turn to a deeper discussion of habitus, capital, field and practice as well as an articulation of how these components become salient in the context of doctoral education.

An understanding of Bourdieu’s (1977, 1990) theory of practice must recognize the chief struggle for Bourdieu: to overcome the traditional notions of objectivism and subjectivism and how this binary orientation to the social world is in need of reconstitution. To reconcile this binary, Bourdieu developed the concepts of habitus, capital and field. Bourdieu’s concept of habitus is central to his theory of practice (Bourdieu 1977). Waquant (2006) writes, “habitus designates the system of durable and transposable dispositions through which we perceive, judge and act in the world” (p. 220). Early socialization is extremely crucial to the development of habitus, as external structures are internalized by individuals and shape action such that existing opportunity structures are perpetuated. This internalization occurs through the unconscious presence of these structures and the resultant presence of conditions and conditioning that reconstitute the relevance of these structures. There are two important dimensions to habitus that need delineating. First, habitus structures action by defining the limits of that action. Second, habitus produces perceptions, beliefs, and practices that reinforce the early socialization of existing external structures, thereby possesses a tendency to reproduce stratification. The dispositions associated with habitus construct action to the extent that actors will engage in activities and practices that create success as defined by their resources and previous experiences (Bourdieu, 1977). Habitus operates as a constellation of perceptions and attitudes that frame particular actions as
possible in different situations. So, habitus acts as both a generative and restrictive mechanism to action such that some actions are likely to be deemed more appropriate in certain contexts based on an individual’s positionality as well as experiences that assist in determining what is valued and acceptable. Importantly, habitus is an amalgam of an individual’s past and present; however this amalgam is never finished or final as it is always in the process of completion (Reay, 1998).

Given the importance of early socialization through family and peer groups as well as the development of this double-sided disposition of habitus, the role of habitus to inform and restrict behaviours, perceptions and tendencies produces possibilities for agents to select as they go through life. Specifically, Swartz (1997) writes, “The dispositions of habitus predispose actors to select forms of conduct that are most likely to succeed in light of their resources and past experiences. Habitus orients action according to anticipated consequences” (p. 106). These dispositions are malleable as they are influenced by the very social milieus that are filtered by the habitus.

In the context of doctoral education, the habitus of particular students may mediate their ability to cultivate significant faculty and peer relationships as well as to understand the broader practices and processes of doctoral education. The early (childhood) socialization of doctoral students may provide them with particular tools or schema for understanding some of the pressures, relationships, tensions, and rewards of the doctoral process. Further, some doctoral students may possess considerable academic habitus and are able to go through the doctoral process with ease. This congruence between habitus and the environment in which individuals are located is described as a “fish in water”. Specifically, Bourdieu and Wacquant
(1992) reveal, “when habitus encounters a social world of which it is the product, it finds itself ‘as a fish in water’” (p. 127).

However, this facility with doctoral education is not solely on the shoulders of the individual, for the fluency of tasks or ideas is only possible in particular social milieus. That is, the congruence between habitus and environment may be an important consideration when applied to the socialization experiences of doctoral students. Interestingly, habitus may provide a novel frame to understand the tension of acceptance versus awareness of academic norms/values (Antony, 2002) that emerges for particular students. The development of the tension as well as an ability to ameliorate the tension may be mediated by one’s habitus. A Bourdieusian analysis of socialization may support Antony’s argument such that traditional socialization models homogenize the doctoral experience and exclude individuals who do not fit into a particular mold. Gardner (2008) notes, “For underrepresented students, the experience of graduate education and its normative socialization patterns may not fit their lifestyle and diversity of their backgrounds” (p. 135) which highlights how a focus on the habitus of students resonates with a social justice orientation to doctoral education. More specifically, the lifestyles of underrepresented students may include values and mores that are distinct from normative socialization dynamics in doctoral education. This distinction may produce situations for students that are experienced as exclusionary, thereby undermining social justice initiatives that promote inclusivity and celebrate diversity.

In addition to habitus, Bourdieu’s (1977, 1986, 1990) notion of capital is pivotal to his arguments. The concept of capital can be viewed as accumulated labour, and as a form of power. In relation to habitus as a system of dispositions, the accumulation and acquisition of capital influences the position(s) individuals occupy in society and the resultant manifold
dispositions they possess. As such, the position of any individual or group in social space can be accounted for, in part, by the amount and nature of accumulated capitals (Wacquant, 2006). Bourdieu (1986) emphasizes the interaction of three sources of capital that can be converted or transformed into one another: economic, cultural, and social.

In addition to economic capital, social classes possess social and cultural capitals that are passed on from parents to children as particular attitudes, preferences, tastes, and behaviours that have differential values (Lamont & Lareau, 1988). Bourdieu (1986) defined social capital as the “aggregate of actual or potential resources linked to possession of a durable network of essentially institutionalized relationships of mutual acquaintance and recognition” (p. 248). Interestingly, social capital refers to an individual’s possession of or access to resources that can be converted into other forms of capital. These resources can include money or knowledge and can also refer to relationships with other actors who acknowledge such relationships.

Cultural capital refers to the system of attributes, such as language skills, cultural knowledge, and mannerisms, that is derived in part from one’s parents and that defines an individual’s class status (Bourdieu, 1986). This focus on “class” is not the same as Marxist interpretations of class as rooted in the possession of money or financial resources, but rather is a component of existence that is co-constituted through notions of positions within social space and lifestyle. While struggles amongst individuals and groups in relation to economic and cultural capital assist in delineating positions in social space, it is the perceived (and real) legitimization of high-brow aesthetic consumption that not only establishes the social order, but serves to reinforce struggles to overturn it. Cultural capital can also include a variety of
notions, including aesthetic preferences, knowledge about schooling, and educational credentials (Swartz, 1997).

The tools of cultural and social capital provide novel ways of documenting and understanding the practices of doctoral education. The cultural capital possessed and developed by particular students may be reflective of the inequitable structure and process of doctoral education. Not all students can be full-time, published, and on external funding, yet the processes and requirements of doctoral education may push these scarcities as requirements. Also, not only are these opportunities afforded by particular kinds of students, but the acquisition of these awards position and distance students from one another, thereby illuminating them as desirable by faculty members and institutions, for example. From interviews with part-time students, Gardner (2008) reveals, “these students’ experiences are clearly disparate from their peers who are traditionally full-time as they typically do not receive the full scope of the socialization experience” (p. 134). The force of cultural capital can be seen in who gets into doctoral programs, who gets what within doctoral education, and who gets known by the end of the doctoral process.

This reality is also shaped by social capital such that despite an overarching discourse of the doctoral process as isolated and individual, building and maintaining various relationships is foundational to engaging with and maximizing opportunities within doctoral education (Gardner, 2009; Golde, 2005; Sweitzer, 2009). The relationship between student and supervisor is pivotal and has a well-documented presence in the literature (see Harnett & Katz, 1977; Lovitts, 2001; Nettles & Millet, 2006). However, the notion of peer relationships as well as non-academic relationships or academic relationships beyond the student’s department has received limited attention (see Gardner & Barnes, 2007; Golde, 2005;
Sweitzer, 2009). Considerable advice and information can be communicated during brief exchanges in the hallway, at lunch, or during conferences. But the ability to cultivate these relationships is grounded in particular modes of speech, conduct and dress that may be different across social spaces. Similarly, Young (1990) suggests that “symbolic meanings that people attach to other kinds of people and to actions, gestures or institutions often significantly affect the social standing of persons and their opportunities” (p. 23). So, attending and/or presenting at a conference is not just attending or presenting but rather is embedded in a complicated dance of language, dress, and speech as well as other markers of distinction, that is, institution or faculty supervisor. Hence, doctoral students oscillate in these different spaces with different, and at times conflicting, expectations that must be understood and managed in productive ways.

The notion of field is of critical importance to the idea of capital. A central analogy to understanding Bourdieu’s (1977) concept of field is to the idea of “rules of the game” that assist in setting standards. In particular, Bourdieu and Wacquant (1992) write, “A field may be defined as a network, or a configuration, of objective relations between positions…we can, with caution, compare a field to a game…it follows rules or regularities that are not explicit or codified” (p. 98). More specifically, Wacquant (2006) reveals, “the various spheres of life, art, science, religion, the economy…tend to form distinct microcosms endowed with their own rules, regularities and forms of authority, what Bourdieu called “field” (p. 221). Simultaneously, field is also dynamic and ever changing, so actors are fluid or dynamic in terms of how they interact with other actors as well as how actions, products, or practices possess capital or power.
There are three elements to Bourdieu’s notion of field that require articulation. First, field can be considered as a space of structured positions that requires (or imposes) specific dynamics on its participants. Second, field is a space of struggle and contestation where participants “seek to preserve or overturn the existing distribution of capital” (Wacquant, 2006, p. 222). Finally, field possesses degrees of autonomy related to its ability to regulate itself and insulate itself from external pressures or dynamics. In addition, capital only has power in fields that recognize that particular manifestation of labour (read: capital) as a source of power. This connection between field and capital has been the missing link in many of the studies employing cultural and social capital as explanatory mechanisms (see Lareau, 2001). More specifically, Lareau writes, “It is not possible to understand truly what is given currency, what is highly valued and what is not highly valued unless you understand field. Capital only has meaning in light of field” (p. 82). Wacquant (2006) succinctly discusses field, “every field is thus the site of an ongoing clash between those who defend autonomous principles of judgment proper to the field and those who seek to introduce heteronomous standards” (p. 222).

To use Bourdieu’s terms (1977, 1990), I conceive of doctoral education as a field with actors (students and faculty members primarily) occupying different social positions and distances and in competition for particular forms of capital. These positions are shaped by the expectations and experiences that students bring to the doctoral process, the tacit knowledge of the culture of doctoral education and academe more broadly, and the demonstration of competence through the different mechanisms of academic work. Disciplinary differences may be theorized as sub-fields in which competitive dynamics may operate differently.
I consider the professional development activities of writing grant applications, presenting at conferences and academic publishing as emblematic of possessing differential amounts of capital and that actors can be thought of as more or less successful depending on the extent to which these activities (capital) in degree and in kind are possessed. More specifically, the acquisition of these activities (capital) is mediated not only through the relationship between student and faculty members but also through the positionality of students themselves. To acquire access to these resources/opportunities, students need to develop the capacity to engage in fruitful relationships and demonstrations of competence with actors who possess, and therefore moderate particular forms of capital. While the traditional faculty member, most likely the student’s supervisor, would possess the desired capital, advanced and/or successful doctoral students may also be sought after by particular students.

Combining the elements of habitus, capital, and field creates practice. Bourdieu (1984) summed up the relationship among these elements as follows:

\[ [(\text{habitus})(\text{capital})] + \text{field} = \text{practice} \]

Habitus and capital interact within a field of interaction to produce practice (Horvat, 2001). Practice is the actions that individuals take within a particular environment. These actions are influenced by the rules of the game and the standards by which power and legitimization are constructed and practiced. Also, these actions come from early socialization of what an individual believes to be available choices or strategies. Importantly, practice is a fluid concept as the interplay between habitus, field, and capital change over time and influence action in different capacities. Horvat summarizes this notion clearly such
that, “practice can be conceived of as action that is directed by the internal dispositions and preferences of individuals as well as adherence to the rules that govern a given field” (p. 214). Given the focus on struggle, the concepts of habitus, capital and field enable an examination of reproductive tendencies related to the congruence of social and mental structures, as well as possibility of transformation when disjunction and fissures occur amongst these elements, leading to innovation, crisis and change (Wacquant, 2006).

The emphasis on practice is a novel way to frame doctoral education and the socialization of doctoral students. More specifically, the processes of doctoral education may vary in their intensity to socialize students during doctoral education, and the habitus of individuals as well as broader norms of academic culture all become illuminated using Bourdieu’s (1977, 1986, 1990) emphasis on practice, habitus, field and capital. This reading of doctoral education and its socialization elements encourages questions about the limits and possibilities of socialization as well as broader discussions about the structure and programming of doctoral education.

This Bourdieusian analysis may also reveal the power relations, competition for coveted resources, and abilities to push/re-define norms and expectations throughout the doctoral process. In particular, students may experience different opportunities and relationships due to accumulated successes (capital). As such, the extent to which students experience different facets of socialization may be related to their portfolio of accumulated capital, their positionality with respect to other students, and to broader expectations and requirements of the field (i.e., research, teaching, and service competencies).
The significance of analyzing the socialization of doctoral students with the tools of habitus, capital, field, and practice highlight the need to understand the expectations and experiences that students bring to doctoral education as well as the activities in doctoral education that reflect the needs and interests of systems of education. Increasingly diverse student populations possess a host of dynamics related to their own upbringing and contexts that may not receive recognition or support in doctoral education, related in many ways to the normative socialization patterns of such education. More specifically, doctoral education can be considered to be made of particular practices and that these practices both reflect and are embedded in other systems with their own mechanisms of privilege and inequality. For instance, the need to secure external funding and to learn the process of academic publishing are crucial aspects of academic work, but students who acquire these successes are positioned differently from their student colleagues due to the reward systems of academe.

This focus on students’ differential positioning based on their portfolio of accumulated successes (i.e., capitals) demonstrates the need for continued commitments to social justice, inclusivity, and the celebration of diversity. Consistent with Gardner’s (2008) work on how enrolment status is related to socialization experiences, my argument further bolsters the importance of recognizing the multiple histories and experiences of different student populations if efforts to promote social justice notions are to be sustained. Parallel to this recognition of student populations, the need to render visible the effects of the conditions of academic work on socialization experiences is equally pressing. Individuals and institutions can address both of these concerns in doctoral education by diversifying what success and socialization mean during doctoral study.
Importantly, this research focuses on doctoral education and the socialization of
doc toral students with the concepts of habitus, capital, field and practice from Bourdieu’s
(1977, 1990) theory of practice. This research attempts to demonstrate a new
conceptualization of doctoral education and of the socialization of doctoral students by
exploring the experiences and relationships of doctoral students prior to and during doctoral
study as well as by assessing how the components of academic work, which possess a
socializing function, also operate as mechanisms to distance and differentiate students based
on their portfolios of accomplishments, thereby establishing and reinforcing systems of
inequality. I turn now to my methodological framework for this research which emphasizes
qualitative approaches with doctoral students, faculty members and administrative personnel
in two departments at a large, urban, research-intensive university in Ontario.
Chapter 3
Methodological Approach

This dissertation explores the socialization of doctoral students in the disciplines of Philosophy and Engineering with the ideas introduced by Pierre Bourdieu (1977, 1990). While Bourdieu’s work has spanned nearly four decades with topics as diverse as social space, mobility, immigration, culture, education and art, an examination of doctoral education has received limited attention (see Espinoza, 2007; Gardner & Holley, 2011), and a focus on the socialization of doctoral students in a novel context in which to apply the tools of Bourdieu. My examination of doctoral education incorporates Bourdieu’s concepts of habitus, capital, field and practice. This study focused on a number of key research questions: (a) to what extent do Bourdieu’s ideas of capital, field and habitus offer new ways of conceptualizing doctoral education; and (b) how do habitus, cultural capital and social capital contribute to a student’s ability to conceive of, engage with and experience doctoral education?

This chapter aims to identify my methodological approach for this research and, in doing so, explores briefly my epistemological orientation, emphasis on disciplinary significance and data collection procedure. I further discuss my methodological choices in relation to previous qualitative research conducted on doctoral education and/or doctoral student experience. Also, my specific procedure for data collection is outlined with a brief discussion about a minor change and about particular challenges that developed and resultant solutions to address these challenges. Finally, given the qualitative nature of this research project, I conclude with a couple of limitations to the scope of this study.
Given this focus on Bourdieu’s (1977, 1990) concepts and the importance of students’ perceptions and experiences prior to and during doctoral study, a general premise of this project is that individuals seek understanding of the world in which they live and work. A primary purpose of this research project is to communicate the experiences of doctoral students from the students themselves. This emphasis on lived experience and the meaning-making processes employed by the participants confirm the constructivist approach to knowledge and the social world. In particular, these meanings are negotiated both socially and historically by individuals and occur through varied interactions with others as well as through various historical and cultural norms and values (Creswell, 2003). More specifically, Creswell (2003) suggests, “constructivist researchers often address the ‘process’ of interaction among individuals. They focus on the specific contexts in which people live and work to understand the historical and cultural settings of the participants” (p. 8). Hence, the constructivist framework is well suited for a qualitative investigation of the experiences of doctoral students. This qualitative perspective will include phenomenology as the methodological orientation to explore and reveal the experiences of doctoral students with a particular emphasis on semistructured interviews. Highlighting the specifics about phenomenology, Creswell (2003) discusses, “understanding the ‘lived experiences’ marks phenomenology as a philosophy as well as a method, and the procedure involves studying a small number of subjects” (p. 15).

Observations of the environment in which doctoral students are located will also be explored; however, this ethnographic approach to my research will not be a main component of the data collection. A critical dimension to this methodological discussion is the definitive qualitative orientation with a focus on semistructured interviews. I also conducted
observations of the departments as well as reviewed departmental documents and texts on the corresponding websites. Given the focus on students’ experiences and the nature of the meanings that students attach to their experiences, I incorporated these other data collection approaches to provide further contextual information about the environments in which these participants experience their doctoral study. Marshall and Rossman (2001) remind us that, “a study focusing on individual lived experience typically relies on an in-depth interview strategy, although this may be supplemented with other forms of data” (p. 61). I highlight these additional data collection methods to introduce this research as a quasi-case study analysis as well. The notion of case study is succinctly articulated by Creswell (2003) when, “the researcher explores in depth a program, an event, an activity, a process or one or more individuals…[by using] a variety of data collection procedures over a sustain period of time” (p. 15). So, this research was not a definitive case-study analysis per se, but rather was rooted in qualitative approaches that focused on the meaning-making practices and lived experiences of doctoral students. The focus on discipline resulted in a quasi-case study approach that incorporated other data sources beyond in-depth interviewing. Through the use of interviews and other data collection mechanisms, the desired outcome was to present the experiences of students from the students’ perspectives with an understanding of the multiple dynamics related to doctoral study.

I conducted semistructured qualitative interviews with doctoral students in the departments of Philosophy and Engineering at one large, urban research intensive university in Ontario. There were two reasons for focusing on students in a single institution: (a) to highlight disciplinary differences in doctoral education if they exist, and in doing so, to maintain the institutional context for students to examine the significance of the discipline;
and (b) the importance of institutional context and culture impacting the implicit relationship between doctoral education and the research culture of an institution. So, the focus on one institution was to provide a clearer examination of the disciplinary nuances as well as to limit institutional differences around research culture and infrastructure. Gardner (2008) suggested that investigations into doctoral education needed to consider the institutional contexts in which such education is situated. Further, considerable research reinforces that the department, not the whole institution, is the locus of control for doctoral education (Gumport, 1993a, 1993b). Policies related to admission, financial support, and criteria for degree completion and curriculum are anchored in the department or program (King, Bruce, & Gilligan, 1993). The focus on discipline as an important context to examine doctoral education and the socialization of doctoral students was built on Golde’s (2000, 2004, 2005) work where she asserted that disciplines provide pivotal contextual dynamics to doctoral student attrition as well as supervisory styles (Baird, 1993), knowledge production (Smallwood, 2004) and employment trajectories (Mendoza, 2007; Nerad, Rudd, Morrison, & Picciano, 2007). As such, the importance of disciplinary norms and customs is a significant component to understanding differences in doctoral student socialization.

Biglan (1973a, 1973b) offered a way of categorizing disciplines by suggesting that disciplines vary according to: (a) the existence of a single paradigm; (b) the requirement for practical application; and (c) the concern with life systems. The dimension of paradigmatic consensus oscillates along a continuum that is characterized as hard (in the sciences) and soft (in the humanities) and where the middle ground is stacked with the social sciences, with noticeable propensity to either the hard or soft poles. The notion of hard means that there is consensus amongst members of the disciplines that a single, prevailing paradigm exists in the
discipline. As such, disciplines characterized as soft emphasize multiple (and perhaps competing) paradigms in a discipline. The dimension of practical application varies from a strong positive orientation (applied) in education and engineering, while a strong negative score (pure) can be found in mathematics, history and philosophy. The final dimension concerns the discipline’s interest with living or organic objects of study. Disciplines that lean in the positive direction include biological and agricultural sciences, while economics and languages occupy the negative scores on this dimension.

The choice of focusing on Engineering and Philosophy map onto these dimensions in particular ways. Engineering constitutes a strong hard, applied and non-life system categorizations. Philosophy is characterized by a strong pure and soft orientation that is oppositional to the hard and applied strength of Engineering. According to Biglan (1973b), philosophy sits in the non-life system orientation; however, it is only marginally designated as non-life. While some of the social sciences (i.e., psychology and sociology) occupy the dimensions of soft, pure and life system-focused, the exclusion of these disciplines to this research was based on two crucial criteria. First, the strength of Philosophy as oppositional to Engineering on the first two dimensions was much stronger than those of the social sciences. Hence, the marginal categorization of non-life system for Philosophy was not conceived as overly problematic, given the same categorization for Engineering. Also, my academic background is strongly rooted in the social sciences, so I wanted to explore disciplines in which I had no experience, which Philosophy and Engineering satisfied. Finally, the labour market outcomes of doctoral programs in these discipline vary significantly. For Engineering, most doctoral graduates prefer and pursue non-academic positions (Mendoza, 2007; Nettles & Millet, 2006), while Philosophy doctoral students are very invested in
finding a tenure-track professorial position (Golde & Dore, 2001). As such, I envisioned that these specific and different labour outcomes may produce interesting variations during doctoral study. These differences in disciplines may impact the experiences of doctoral students and particular norms/expectations of academic culture.

Originally, I planned to interview 4 to 5 students in each department at distinct phases of the doctoral process. The distinct phases to which I am referring are the coursework phase (less than 2 years in the doctoral program) and the writing phase (in years 4 and 5 of the doctoral program). Despite the differences in time to degree across disciplines (see Bowen & Rudenstine, 1992), the use of years 4 and 5 as the writing phase offers a good approximation of the trajectory of doctoral students and some flexibility of the differing demands of the disciplines.

In addition to student interviews, semistructured interviews occurred with specific faculty members and staff personnel. In particular, a faculty member in each department who was responsible for administrative duties related to specific programming was interviewed. Also, a graduate liaison officer or equivalent in each department was interviewed. These individuals possess salient links to the departmental culture and norms and acquire specific knowledge about students, disciplinary customs and institutional requirements. Hence, these interviews held relevance at departmental, disciplinary and institutional levels as well as provided a different perspective on the doctoral process, yet still remain salient to the student experience. I emailed these faculty members and administrative personnel directly and scheduled the interviews.
These interviews with non-student individuals also represented an attempt to understand the specific contexts that students experience. These interviews provided specific elements related to the disciplinary or departmental contexts in which students experience their doctoral study. These elements included research funding and infrastructure, supervisory styles, employment processes for doctoral graduates, professional development opportunities and support and efforts to promote competency with academic tasks. More specifically, this commitment to discussing the significance of contextual factors influencing the perceptions and experiences of students resonates with an ethnographic method to social phenomenon and was complemented by observations throughout the department.

The recruitment of student participants was conducted primarily through email requests sent through the appropriate communication channels/personnel. Both departments communicated my request for participants through graduate student listservs that reached all current doctoral students in each department. Although issues of race, class and gender are not specifically theorized in this research, efforts were made to include these sorts of diversities in this research. Initially, the interviews required two separate, but related interviewing sessions. Each session involved an interview of approximately 60–90 minutes in length, with one interview focusing on biographical and familial experiences while the other interview explored a student’s experience in doctoral education.

An email request to participate was sent to doctoral students through departmental listservs and upon confirmation of a participant’s interest in this research project, a consent form was sent to the student via email with detailed information about the project. The participants were asked to provide a current CV in addition to the signed consent form. Although no specific template for the CV was suggested, the email asked that the CV include
the following areas: education, teaching/research assistantships, publications, conferences, consulting work, scholarships/fellowships internal and external to the University, work experience and any professional development experiences. Specific times were arranged between researcher and participant to submit the signed consent form and updated CV, which provided an opportunity for each individual to express any concerns or requests for additional information.

The first interview focused on biographical elements in an attempt to illustrate the development of habitus as well as to document specific experiences or personnel in a participant’s life trajectory that may prove significant to this research project. The last question in the first interview was intended to initiate specific reflective processes in the participant by encouraging him/her to think about how these experiences/perspectives may have impacted their doctoral experience and process. The specific interview guide for the first interview is outlined in Appendix H.

The second interview drew extensively from the participant’s CV as well as broader trends from the doctoral education literature. The particular areas of interest for this second interview are outlined in Appendix I. The academic tripartite of research, teaching and service was used to explore students’ experiences and relationships in doctoral education.

In July 2010, I began data collection and arranged interviews with faculty members and administrative personnel in the department of Engineering. I decided to arrange and conduct interviews in one department first, rather than hold interviews in both departments simultaneously. Given the need to understand the context of the department and discipline, I decided to interview faculty member and staff personnel prior to conducting interviews with
doctoral students. I believed that these initial interviews would enable an awareness and understanding of the contexts in which students are embedded and how, if at all, these contexts and resultant relationships may impact the experiences of doctoral students.

Over August and September 2010, I was only able to confirm the participation of two doctoral students in Engineering. In early January 2011, I contacted the ethics office to inquire about the procedure to modify my data collection method. This two-interview procedure was modified due to the lack of student participation in my research. I believed that the requirement of two interviews was perceived as too large a time commitment for students, which resulted in poor student participation. The ethics office approved a slight modification to my data collection procedure where students were required to participate in one interview and both the biographical information and experiences in doctoral education were examined during that sole interview. This modified approach was communicated to doctoral students through departmental listservs and I was able to confirm additional student participants.

I completed data collection in Engineering by the end of April 2011 where I interviewed two faculty members, one administrative staff member, and five doctoral students. Two of these doctoral students were interviewed with the original two-interview procedure, while the remaining student participants engaged in a single interviewing session. In May 2011, I began interviewing faculty members and administrative personnel in Philosophy and completed all data collection by the end of July 2011. In Philosophy, I interviewed one faculty member and two administrative personnel.
Despite this minor change in data collection technique, I experienced some difficulty in securing doctoral students in Philosophy to participate in my study. To address this issue, I communicated with administrative personnel in the department to ascertain which students may be more inclined to participate due to their strong commitment to student life in the department. I believed that access to and the support of these student gatekeepers would act as an anchor to encourage additional doctoral students to participate in my research. This indeed was the case: upon completion of the interview with one student, a note was sent by that student to other doctoral students in Philosophy to encourage them to contact me to inquire about participation in my study. Within a few days, I was able to confirm the participation of many Philosophy doctoral students. In total, I completed 10 interviews with doctoral students in Philosophy.

Of significant ethical concern to this research project is the extent to which participants can be identified. In particular, the interviews with specific faculty members and staff personnel may be easily identifiable despite the use of pseudo-names and other non-identifiers. This identification is due to the lack of personnel in administrative capacities in each department; however, these participants were ensured that all efforts to maintain confidentiality and anonymity will be upheld but that given their particular position and responsibilities, identification may be possible. The institution will be described as a large, research-intensive university in Ontario.

In some respects this research emphasized a quasi-case study design that involved two cases: that of Engineering and Philosophy, though the emphasis was on answering the core research questions by understanding the student experience in each of these two sites. As previously mentioned, the notion of a quasi-case study design attempts to highlight the
focus on particular settings (disciplines of Engineering and of Philosophy) with the use of various data sources. The focus was on the experiences of students, so the additional data sources were used to provide contextual information in which to understand and to situate the students’ experiences. Semistructured interviews to understand the lived experiences of these doctoral student participants remained the crucial focus of this research study. All interviews were audio-taped and then transcribed. Also, transcripts were provided to participants to assess accuracy and to provide an opportunity for concerns and/or clarification. Next, I engaged in ongoing analyses incorporating respected qualitative methods (Lincoln & Guba, 1985; Patton, 1990) which included categorizing, synthesizing, finding patterns and developing interpretations. Specifically, analytic induction was the type of analysis conducted, which “is an approach to collecting and analyzing data as well as a way to develop and test a theory” (Bodgan & Biklen, 2003, p. 63). Given the focus on socialization, the significance of discipline as an important anchor to the experiences of students and Bourdieu’s (1977, 1990) theory of practice, these elements constitute the “specific problem, question or issue” (Bodgan & Biklen, 2003, p. 63) to which this research addresses through the procedure of analytic induction. Hence, the themes and/or patterns from the data were analyzed to assess the saliency of Bourdieu’s concepts to doctoral education and to the socialization of doctoral students. In addition, the development of a nuanced socialization framework was explored through this analytic induction analysis. So, analyses situated the themes or patterns in accordance to the history/trajectory, capital accumulation and positionality of individual students as well as the broader, contextual fields in which these experiences resided. Also, in addition to broad themes that were generated through the use of
analytic induction, themes and codes were explored that mapped onto Bourdieu’s concepts of habitus, capital, field and practice and onto the socialization framework.

The major limitations of this research project concern the generalizability of the data as well as the focus on the specific disciplines at a large research university. Given the qualitative nature of the design, these results cannot be generalized to all departments of Philosophy and Engineering nor can they encompass the diversity of experiences of doctoral students. Also, the results are specific to these disciplines and studies exploring other disciplines may find similar or different results. Finally, this research project did not specifically investigate how issues of gender, race and class impact and are impacted by socialization processes in doctoral education. Having said this, I contend that these issues are extremely significant to these processes and, through the interviews with students, where concerns related to gender, race or class or their intersection surfaced, they were discussed accordingly. I turn now to a discussion of my findings from the interviews with Engineering faculty members, administrative personnel and doctoral students.
Chapter 4
Not All Engineers Are “Haves”
Findings From Interviews With Engineering Doctoral Students,
Faculty Members and Administrative Personnel

Introduction

This chapter will discuss and explore the research conducted in the department of Engineering. I chose a sub-area within Engineering as the focus of this research; however, I will continue to use the broader term of Engineering due to issues of confidentiality. I interviewed administrative personnel and faculty members to generate an understanding of the contexts within which students experience their doctoral education. While the primary focus of this research is to explore the doctoral student experience, the information provided by these other participants constituted critical contextual dynamics to further understand the experiences of doctoral students in Engineering. Prior to elaborating about the students’ experiences, I turn now to a brief discussion of the importance of discipline to my research. Then, I continue with an outline of departmental and programmatic elements that were articulated by administrative personnel and faculty members, and then present my findings from interviews with doctoral students in Engineering.

Importance of Disciplinary Focus

Golde and Dore (2004) asserted that disciplinary contexts are a crucial element to any study of doctoral education. As such, a focus on disciplinary contexts is an important component to this research and much of my understanding of disciplinary categorization draws from the work of Biglan (1973a, 1973b). He categorized disciplines along three
specific attributes: (a) paradigmatic consensus; (b) the requirement for practical application; and (c) the concern for life systems. Engineering is categorized as a hard, applied and non-life system discipline to the extent that there is significant paradigmatic consensus in the discipline, is a focus on practical application and it concerns itself with non-biological research interests. In addition to these dimensions, Biglan (1973a, 1973b) explored the social connectedness of disciplines and a disciplinary culture’s commitment to research, teaching, administration and service. Finally, Biglan (1973a, 1973b) also examined disciplinary differences related to both quality and quantity of scholarly publications. Due to the presence of a single paradigm to Engineering, social connectedness is high and research is collaborative. These elements translate into a discipline that emphasizes research conducted in team-oriented lab settings. The practical application focus to Engineering also suggests that graduate students would be taught with this focus on application in various phases of their doctoral research as well as their engagement in doctoral study.

The Department of Engineering

There were a number of departmental and programmatic elements associated with the research site that were significant to understanding the experiences of doctoral students in Engineering. This department has both undergraduate and graduate student populations. In terms of graduate education, there were two master’s programs and one doctoral program. The master’s programs focused on a professional degree as well as a research-based degree, while the doctoral degree was a research degree. There were approximately 40 faculty members with graduate student supervision loads close to 7 or 8 master’s and doctoral students per faculty member; however, some faculty members supervised considerably more students. The nature of doctoral student supervision involved an employee-employer
framework where professors entered into a contract with doctoral students to provide funding for 4 years. The organizational model for research supervision was the faculty member working on a particular research project at the centre of the research team and 4 to 8 graduate students, primarily doctoral, tied to this research project. Graduate students would conduct research on the specific topic as a component of their funding as well as a mechanism for students to learn about research. Graduate students would also use this arrangement to explore possible thesis topics. This organizational infrastructure enabled considerable collaboration and team-oriented research amongst graduate students tied to the research project. There was an explicit and transparent timeline for doctoral degree completion whereby specific milestones or accomplishments are satisfied at particular moments during doctoral study. For instance, at 12 months into the doctoral journey, students are expected to have completed coursework and have organized their research proposal session (or termed, qualifying exam) with a committee of three faculty members.

Although the department did not maintain specific statistics on attrition or employment trajectory, the consensus among administrative personnel was that doctoral degree completion rates were very high and doctoral student attrition was extremely low. Program and graduate student quality were significant considerations; however, the minority of doctoral graduates pursue academic appointments. The department seemed very invested in concerns about quality, as student recruitment was a major priority to the extent that potential doctoral students were invited to a meeting to discuss the highlights of the doctoral program. Also, departmental interest in program quality was highlighted through the focus on curricular aspects of the doctoral program that were consistent with curricula of other prominent programs in Engineering at prestigious US universities.
Lastly, the role of industrial partners to the research infrastructure of the doctoral program in Engineering was significant. Relationships with industry provided a financial element to students (and faculty members) as research projects often involved matching grants between government and industrial partners. Doctoral students were accepted into the program based on the confirmation of these research contracts such that faculty members who secured industrial commitments were able to accept a specific number of doctoral students based on the money and opportunities embedded in the research contracts. While doctoral students could earn extra monies through teaching assistantships, the majority of doctoral student funding originated from these research contracts with industrial and government partners. While direct monies from industry were not explicited by faculty members, the attainment of federal research grants, which funded doctoral students, always involved some participation or involvement of industry. In addition to this financial component, research projects with industrial organizations provided important contexts for students to experience and understand the role of application to the nature of research endeavours. The development of effective researchers was a critical objective of the program; however, enabling students with technical skills beyond laboratory requirements was a crucial element to the doctoral student experience. As such, the creation of productive researchers required an appreciation and understanding of the research and funding dynamics that involved industrial partners and government stakeholders and policy makers.

**Doctoral Students in Engineering**

This section will discuss the findings from interviews with Engineering doctoral students. I will use Bourdieu’s (1977, 1986, 1990) concepts of habitus, capital and field as a framework to illuminate the comments from participants. Discussing these findings through
the lenses of habitus, capital and field offer some difficulty as these concepts are intertwined with each other. Efforts will be made to discuss these concepts in isolation; however the intersections among these concepts will also be revealed. In addition, the findings indicate that particular experiences or relationships through participants’ lives were important to doctoral education. So, the focus becomes one of highlighting these dynamics from participants’ histories and then discussing how these dynamics filter into their doctoral experiences and resonate with the concepts of habitus, capital and field. Prior to discussing participants’ comments, I offer a brief articulation of contextual factors of each participant. These contextual dynamics provide some aspects of each participant’s history or experiences that may add additional detail to the saliency of habitus, capital and field to a student’s doctoral journey.

Susan had recently submitted the final draft of her thesis and was preparing for her final oral exam when I interviewed her. Both of her parents completed graduate school and were teachers or administrators in the education system. Travel was an important activity for Susan and her sisters as each of them valued and participated in multiple opportunities for international travel. Upon reviewing her CV, she demonstrated considerable success and achievement with the academic tasks of publishing, conferencing and teaching. She collaborated with faculty colleagues in Canada and internationally and possessed multiple teaching opportunities throughout doctoral study. Susan was very positive about her experiences and relationships in doctoral education and had recently been notified that she won a very prestigious award to study at an international research-intensive university.

Margaret was at the end of her second year when I interviewed her. Her dad was a professor and mom had worked in research centres in universities. Margaret and her family
moved a few times within Canada and internationally, which provided her with an understanding of global dynamics. She demonstrated an inclination for academics throughout her schooling and was very positive about her doctoral studies. She discussed the importance of faculty member mentorship as well as peer networks during doctoral study. She won multiple scholarships, acted in a leadership capacity in many research projects and had published and presented on those research opportunities.

Michael was nearing the end of his third year and, of his own admission, was “behind” in the program. He was raised in a very affluent neighbourhood and attended various enrichment programming during his early education. His parents were employed in professional fields and his sibling was also completing doctoral studies. He communicated tensions about the role of industrial partners to the research infrastructure of his discipline. However, Michael was successful with attaining scholarships and publications and also had a patent pending.

At the end of her fourth year, Michelle communicated the pressure of finishing her thesis in a timely fashion. She was the daughter of a physician, and moved around among Canada, Asia and Australia throughout her childhood. She discussed some tension in the relationship with her thesis supervisor and was unsuccessful with scholarships and publications. While her demeanor was pleasant, she was noticeably stressed and somewhat dissatisfied with her experiences in doctoral study.

Greg articulated his doctoral experience as an opportunity for entrepreneurship rather than an apprenticeship for a scholarly career. Both of his parents would be considered professionals; however, Greg’s father possessed an entrepreneurial spirit that framed Greg’s
approach to his doctoral education. Greg communicated some discomfort with his interpretation of “being behind” colleagues in the same cohort. Although at the end of fourth year, Greg acknowledged that he would need another 12 to 18 months to complete this thesis. He was unsuccessful with scholarships and publications, but given his entrepreneurial approach to doctoral study, he was convinced of the success of a consulting company from his doctoral education. Greg was well-known amongst his student peers as he championed departmental social events for doctoral students and participated in various service activities. He communicated resistance to the metrics of success—those of publications and impact scores—that were traditionally defined within academe.

Habitus

The perceptions and actions that participants engaged in, as mediated by their habitus varied significantly across participants. However, the saliency of the concept of habitus was noticeable in terms of how students discussed their experiences and relationships within their lives. For instance, all five doctoral students in Engineering explained that the pursuit of higher education was a necessary goal in their families. These students described how attending and completing post-secondary education was assumed as normative. Susan commented, “So I was always like...I always had the idea that, ‘Oh, yeah, I’m a smart girl’ and it just seemed like higher education...I like school so that would be my road. It was taken kind of as a given”. Also, Michelle suggested, “My parents are very academic oriented. So they definitely like seeing their children going into an academic stream and getting higher degrees. They do believe in higher degrees of education”. It is interesting to note that all students came from families that completed post-secondary education and also had parents
who worked as professionals. Parents were professors, engineers, teachers, physicians and senior managers.

To complement this normative interpretation of post-secondary school attendance, participants articulated that they really felt comfortable in a doctoral study environment as well as interacting with similar “types of people” as Margaret discussed,

I looked around and I thought these are people that I really want to spend my time with...like I would like to have these people for colleagues. They seem to have some same oddities I do; they seem not to mind my other oddities. You know, I can be myself around these people. They were people I wanted to work with and the nature of the work seemed to be interesting, it seemed to be fun.

To support this, Susan echoed, “And I knew like early on that I was like I love being surrounded by these kinds of people and I want to always be surrounded by these kinds of people, so that was something I for sure wanted”. Similar to this notion, Michael discussed the presence of academically focused people in his life. Specifically he noted,

I never really knew anyone who did Ph.D.s or was academic growing up. Scratch that. No, I totally did, because a great family friend, whose Mom tried to teach me piano, was...must have got his Ph.D. at some point. Anyhow, he’s now a prof. So I guess I did have a fair number of academic-y people.

Although previous excerpts from participants’ stories highlight the significance of educational attainment or environment and habitus, Greg revealed another layer to the saliency of habitus. Here, he discussed how his father was an entrepreneur and Greg engaged in his doctoral study with this entrepreneurial flair,
While I was working became interested in this area of Industrial Engineering called [a sub-area of Engineering]. And I kind of saw it as a niche market where I could start a consulting business and, you know, I looked around at the companies I had worked at and I saw a lot of opportunity for it, so I was kind of targeting opportunity and at the same time it gave me the Industrial Engineering… When I was younger he [Dad] did have his own engineering firm… why I want to have my own business is because I feel it’s a better model for me to be productive. I’m not a 9:00 to 5:00 person.

These comments from participants demonstrate the influence of habitus on the experiences and relationships within doctoral education. Habitus could be interpreted as perceptions and beliefs that make particular actions more attainable or appropriate given early socialization. So, the fact that participants emphasized that post-secondary education completion was strongly advocated by their parents could suggest early socialization occurred in ways that normalized this achievement. Also, the comments focused on environment and feeling “comfortable” within that environment resonate with the habitus notion of “fitting in” particular environments with “similar” people. This congruency assumes that people with similar types of habitus (upbringing, socialization, experiences) not only congregate together, but also “feel more comfortable” together in various social milieus. Finally, the last comment highlights the diversity of how habitus may operate in doctoral education. This comment did not address issues related to education, but emphasized the power of early socialization and the influences of parental actions into the constellation of actions deemed appropriate by individuals. The participant’s exposure to and awareness of an entrepreneurial father was internalized by the participant, as he actively framed his doctoral education as an opportunity to conduct similar entrepreneurial activity.
Capital

This discussion of capital attempts to document aspects of economic, social and cultural capital that did and are playing significant roles in the lives of these participants. It is difficult to fully articulate the significance of capital in these stories due to the need to situate these capitals in the contexts of habitus and field. After discussing capital and then field, I explore the intersections of these concepts and more comprehensively outline the significance of Bourdieu’s (1977, 1990) theory of practice to the experiences of doctoral students.

The participants discussed the presence (and absence) of economic capital or financial resources as a crucial variable during doctoral study. Susan revealed how the presence of a large external scholarship provided her with autonomy in her research focus, as she noted, “I guess the NSERC, the 3-year NSERC grant that allowed me to pursue research with no industry ties allowed me to pursue the topic that I chose and cared about”. Similarly, Margaret discussed her track record of earning external funding, which included a large federal scholarship,

I’ve got the CIHR doctoral scholarship and then I’ve got...the Canada Graduate Scholarship version...and then I’ve got top-up funding from a CIHR strategic training initiative administered out of [major research university]. So, at the moment, I’m entirely externally funded.

Interestingly, Margaret, also articulated the presence of a financial foundation for her education, “my grandparents especially, but then also my parents with the baby bonuses, saved a lot of that to put toward our education later. So we knew we had the money for an education or a down payment or whatever we needed it for it was there”. Further, Michael
noted the motivation to apply to doctoral education when he found out about his large federal scholarship, “The first one was the OGS and then I got the NSERC. I was like, ‘Hell, this is a lot of money. Well, I guess I should do it’”.

Importantly, other participants revealed how the lack of economic capital was a troublesome situation. Specifically, Michelle emphasized that she and her lab colleagues were slower than other colleagues to doctoral degree completion and had to save money during their fourth year to help address costs for their fifth year of study, “We’re all in fourth year and we’re all behind. We all know that we’re going to be here for at least one extra year, so we’ve all been saving up”. Similarly, Greg noted the lack of funding from his supervisor, which reduced Greg’s chances of attending conferences and purchasing lab equipment,

He [my supervisor] said he doesn’t have a lot of money. I just didn’t realize that he has to pay for absolutely everything and it has implications. And again if I was going to a very small university for whatever reason you kind of more prepared for that than going to [major research university], especially in to Engineering.

This focus on economic capital, as evidenced by notions of access to or in possession of monetary resources, also highlights the importance of relational considerations between habitus, capital and field to fully reveal the analytical power of Bourdieu’s (1977, 1990) theory of practice. While I discuss intersectionality later in this chapter, I offer the importance of particular conceptualizations of field inherent to participants’ comments about capital. Interviewees noted the perceived autonomy to conduct research (research as a field) in relation to acquisition of a large external scholarship. In addition, participants discussed parameters for success and infrastructure in the discipline of Engineering (Engineering as a
field), a normative expectation to doctoral degree completion and an understanding (or expectation) that resources to conduct and disseminate the research findings would be abundant in Engineering.

Social capital involves access to networks of individuals as well as to the resources of those individuals. Susan discussed the importance of having a strong peer network,

We would like hang out around the tables and chat and have like fantastic conversations about research and how like research applies to things that you see in your life. So a lot of accessible conversations, but that were also research oriented. My peers are always great to have around and work with, always helpful and smart.

Similarly, Michelle highlighted the importance of the lab model for feedback, “there’s a few people in other labs that I would actually get some feedback from if I have questions. Our lab is really good in that we do a lot of brainstorming or discussion together”.

In the context of research and supervision, Margaret revealed how working with different faculty members enabled her to identify the best supervisor,

I had the luxury of knowing or having worked with all of my potential master’s supervisors. There were three guys that I considered and I had done fourth year projects with two of them and a co-op term with one of them. All very good scientists and it was a case of picking who I thought would be best for me first.

Interestingly, Margaret also emphasized how strong the link between individuals within a network can be,
My master’s supervisor was my Ph.D. supervisor’s first Ph.D. student…I know, that’s incestuous, but the whole group tends to be. And the labs maintain close links. My master’s supervisor was Director of [a research centre in the health care industry] which had been set up by my Ph.D. supervisor, who had spun it off.

This discussion on social capital reveals the importance of multiple (and in this context, specific) network configurations that enable students to experience doctoral studies. Specifically, there are the resources embedded in peer networks as well as the endorsement and support of faculty members. Both networks constitute important elements to doctoral students’ journey in and through doctoral studies. Also, the composition and scope of the networks highlights the interconnected nature of student peer and professorial dynamics to recognizing and utilizing social capital in doctoral study. The different elements of capital demonstrate the tendency for students’ positionality to be related to issues of capital accumulation in terms of the composition of capital, the amount of capital, and the amount and type of capital over time to reveal the trajectories of students and provide some detail as to how students occupy their current positions in doctoral study.

The manners by which cultural capital was articulated by participants were focused on cultural preferences and practices (i.e., travel, art, dance, language) as well as on educational achievements or familiarity with educational contexts. Importantly, a grouping or clustering of participants may begin to emerge as this discussion on cultural capital continues. This section foreshadows an upcoming discussion about the presence of intersections among habitus, capital and field in ways that highlight the saliency of Bourdieu’s concepts to the experiences of students in doctoral study.
In terms of cultural preferences, Susan encapsulated this aspect of cultural capital,

We [Susan and her two sisters] were all in dance classes and so I did tap and jazz. Well, started ballet at 3 and then went to tap and jazz. And I also played the piano….We also took skiing lessons from age say 8 and up. We would have two family trips, in March break and Christmas break, and spend those weeks skiing together.

To add to this, Margaret noted her experience with foreign language,

A pretty strong language program at this [her high school] school...in Grade 9 they introduce a third language, so you could pick German or Spanish or Japanese. So when I moved, I moved in Grade 10, I had the option basically of picking up a language a year late or doing creative writing, which is really not my thing. So I took Japanese. I was lucky in that my parents could have helped me with any of the three languages, because my Mom had taken Spanish, my Dad had taken German and Japanese.

Travel and learning about different cultures was also highlighted by participants. Susan revealed the significance of travel to her upbringing,

But my mom when she was beginning to teach, while she was still in the convent and teaching French, she was in Switzerland for a little while. So they seemed pretty worldly. They also encouraged us to do student exchanges. So, when I was in high school, I spent 3 months in Italy with a family there and we hosted an Italian girl at our house. And the same thing happened with my older sister Rene, who went to France for 3 months.

Similarly, Margaret discussed her experiences at an international school in China,

My good friends there [at the school in China] were from the States, the Netherlands, but grew up in Austria, Zimbabwe, Singapore...Yeah, really nice international experience. As international as you can get. And I mean it shapes
the way you look at things, because like there’s complete acceptance of the multinational thing. There was...you learn...you pay attention to different things about world events.

Finally, Michael recalled the importance of travel when he was a child,

I was fortunate enough that we had to take a lot of trips. My parents enjoyed traveling and so we did a lot of hiking trips….Grandparents lived in Austria their whole lives I guess. So, they’re Americans, but moved there after the war and stayed there, so we had excuses to go visit Grandma and Grandpa and then, you know, go somewhere else nearby with Grandma’s car.

In addition to cultural preferences, familiarity with educational environments and the attainment of educational credentials mark a dimension to cultural capital. These same participants highlighted specific, albeit similar, experiences with educational institutions. These notions of cultural preferences and familiarity with educational contexts resonate with Bourdieu’s focus on lifestyle as it related to class status. The comments from participants highlighted professions or careers with high economic capital (law) and with high cultural capital (teachers, professors). The resultant interpretations of cultural capital reiterate Bourdieu’s interest in the struggle between the possessors of economic and cultural capital for permanence in the social field, which corresponds to lifestyles and class position, in the Bourdieusian sense of class. Parental educational attainment was a powerful example of cultural capital used by these three participants. For example, Susan revealed that both parents had graduate degrees,

So, they [parents] both have master’s degrees. My mother had a master’s in French literature. And my Dad was History and did a master’s of education in History and then ended up a high school History teacher and moving up to
administration, like Vice Principal. And my mother was a French teacher in high school.

Additionally, Michael described the educational and career trajectories of both parents,

Dad did property law...did Math and realized he was not good enough for Math to do anything with Math, so went into law which is basically just Math applied to social stuff. And Mom did English I think and then got married and then got divorced and decided she was going to make it as a single mom, so she went to Law School to make it and then she met Dad and decided, “I don’t really like Law” and so she did Conflict Mediation/Resolution.

Finally, Margaret discussed both parents’ academic employment,

My Dad teaches Chinese language and literature at [university in Canada]. He’s a professor there. My mother also studies China when she was young… She did a bit of postgrad work and then ended up working at a university research centre at the [same university].

Importantly, all participants had parents who completed post-secondary education and who were actively employed in professional fields (i.e., medicine, law, education, engineering). However, the significance of a familial link to academe through graduate/doctoral education is a particularly powerful aspect to the experiences of these participants. I will explore these ideas further momentarily. For now, it is noteworthy to explicate that cultural capital operates in many forms and can be found in the histories and experiences of all the participants. Also, cultural capital (in addition to economic and social capitals) is a crucial analytical tool to understanding the experiences of these doctoral students. Highlighting the focus on cultural capital (in relation to parental educational attainment and to cultural/aesthetic preferences) furthers how the presence and intersections
of specific cultural capitals gain traction in doctoral education. More specifically, the experiences of particular students through music, language and travel intersect with the parental educational attainment at the graduate/doctoral level. My intention here is not to suggest a linear relationship between these elements, but to highlight the interesting presence of both experiences into the articulations of students who have internalized very positive experiences in doctoral study. This positive experiential articulation will become more emergent when I discuss the intersections among habitus, capital and field. I turn now to an articulation of the saliency of field and the manners by which different environments or contexts possess “rules” for success and standards. Then, I will turn to a discussion of the intersections among habitus, capital and field and the ways in which Bourdieu’s (1977, 1990) theory of practice was manifested in my data.

**Field**

An awareness of the “rules of the game” or field was certainly varied amongst these students. The notion of field concerned different contexts or environments: Engineering as a discipline; academic publishing; securing research funding; the nature of the academy; the role of industry/private sector in knowledge production. Participants communicated significant understanding that rules for being “successful” operated in these different contexts and that not all contexts shared similar rules. Also, these comments resonated with the three aspects central to conceptualizations of field: that of structured positions in space; of multiple struggles amongst participants for legitimacy; and of forms and degrees of autonomy within such fields. Although presented in isolation here, it is critical to note that these conceptualizations of field are not mutually exclusive. These dynamics are operating
simultaneously as fields overlap with each other to the extent that struggles for legitimacy and notions of autonomy are constantly at stake.

**Engineering as a Discipline as a Field**

In terms of disciplinary understandings, participants articulated how Engineering “operated” as well as how specific rules of Engineering were associated with other aspects of academe. Susan commented that engineering is focused on real-world applications,

> I like how in [sub-area of Engineering] it’s more about creating change and having like smaller numbers of people but you’re working on like a problem that will actually fix something in a hospital. So I like the focus on real world problems that they have in Engineering and I’m very happy to be involved in a discipline that values that.

Other comments that highlighted Engineering as a discipline suggested that due to the nature of Engineering, other aspects (i.e., research, working with industry) were specifically affected. Here, Margaret discussed how research related aspects that are specific to Engineering (and its sub-areas) impacts degree time to completion,

> Engineering is probably faster [to complete the doctoral degree] than a lot of other things because not all engineering projects require human subject research. And I think human subject research introduces a type of delay, which people doing materials research just don’t face.

Another participant, Michael, commented on the nature of Engineering research,

> Because of the structure of engineering research, you can only do the research really when you have interest enough from a company that they’re willing to pay for a chunk of it that you can then go to government funding bodies.
In addition to this specific focus on research, participants discussed a myriad of other issues that were related to their understanding of Engineering as a discipline that operated in particular ways. Greg lamented about the admission procedure and organizational structure of doctoral education in Engineering,

I got to say that was actually one of the things I wasn’t quite...I was more...the things that didn’t match my expectation. And that’s how Engineering works and I was more basing the model of how things work in Humanities based on my wife’s experience of going through her Ph.D. In Engineering, you kind of...you’re given admission by a professor, so they’re the one who is saying, “Yes, I’m going to take this student on”. It’s not actually the department. So once you come in, then it’s really not that you have this kind of blank slate of explore the field and pick what topic you’re interested in. It’s really now you’re limited to well, what are the topics that lab is interest in that period of time.

In addition to this organizational concern, one participant revealed concerns about issues of publishing and scholarships. For example, Michelle noted, “Engineering you are expected to be publishing a few papers...every discipline has different rules and sort of different publication culture”. Building on this focus on publishing and the extent to which expectations are transparent, she continued, “Unspoken [rules about publishing]...I think maybe two or three...three. Like out of your own thesis, you should probably be able to publish three papers out of it”. Lastly, Michelle revealed the lack of scholarships in her sub-area of Engineering,

There are scholarships specifically for healthcare, relating to medical healthcare stuff; there’s scholarships specifically for environmental related studies; there are scholarships for people who do actual mechanical engineering or very specific disciplines like material or chemical. They all
have their own scholarships, but [specific sub-area of Engineering] doesn’t have one.

These comments highlight how aspects of doctoral education (supervision structure, publications and scholarships) can be experienced through disciplinary conventions, norms and procedures. Also, the use of broad brush strokes to describe the tendencies of a discipline may be misplaced due to the nuances of sub-areas of a discipline and how these comments suggest important shifts in the nature of academic work through the sub-areas of a discipline.

**Consulting as a Field**

While disciplinary conventions impacted academic activities, this continued nuance to the significance of disciplinary conventions can be found in the role of industry and how participants articulated their experience during doctoral study. Specifically, many participants discussed the influence of consulting opportunities during their program. Participants were very vocal that consulting activities in Engineering were standard practice. Michael noted the acceptance of consulting activity among professors in Engineering,

> It’s [consulting] kind of accepted I think in Engineering, even in professors. A lot of professors run their own businesses. They teach, they have tenure, and they...some product of their research that they hope to make money off. They try and commercialize and run their own business.

Similarly, Greg echoed that faculty members were invested in consulting opportunities,

> Now I know there are definitely within Engineering in the broader sense, there are labs that are very active in doing that [consulting]. It could be the supervisor or the lab generally that brings in a lot of that and those are labs that probably have better funding situations.
In addition to the importance of generating revenue, participants also suggested that consulting opportunities were mechanisms to network with multiple colleagues and to broaden the type and amount of experiences during doctoral study. For instance, Michael noted, “consulting work has been really helpful in, again, keeping the connections to other people in the field and bringing the extra money and, more importantly, just getting more projects, more experience under your belt”. Similarly, Michelle highlighted the importance of consulting as a vehicle to increase her employability profile,

While the extra money is great, the [consulting] project was very interesting and we’re all hoping that it looks good on a résumé, cause it’s very prominent research project. It’s a really big company, so it should sound good. It’s much better than having no experience in the field.

**Tensions Between Academe and Industry as a Field**

This discussion about consulting opportunities as a quasi-standard practice in Engineering highlighted additional concerns from participants about the tensions between academe and industry. For instance, Margaret noted tensions between academic and corporate needs,

I think there will throughout the project be the tension between the academic need to do things thoroughly and according to process and the commercialization driven need and the sort of industrial need to iterate quickly and to move things at a reasonable pace.

This difference between how academe and industry operate was further highlighted by Margaret again when she noted, “I anticipate challenges because research demands openness whereas I guess the industry standard is for confidentiality, so there’s some interesting things in terms of trying to balance that, but I think they’re very real problems that I just need to
learn to deal with”. Michael noted similar tensions in terms of gaining access to specific data of research sites and establishing trust between academe and industry,

So the challenge is trying to do way more in the sense of deal making and sort of organizational trust establishing than...or figuring out how to promise the right output that overcomes the skepticism or the lack of trust of letting outsiders in to see the dirty laundry.

While these comments focused on the importance of understanding the practices and priorities of academe and of industry, the following comment from Greg cast the relationship between academe and industry in more transactional and problematic terms,

I see a trend in universities in favouring science, but that’s because Engineering and science bring in their own money from private sectors and then your IP can be licensed or commercialized… I mean people say that the business world is dirty. I find academia to be far more complex and kind of underhanded even.

**Academe as a Field**

An understanding of the academic environment or field was articulated by participants. Although some of this discussion was highlighted through the lens of Engineering as a discipline, other comments suggested an interpretation of the priorities within the broader academy. Greg emphasized the problematic significance of the need for publications in academe,

I don’t like the way publications are valued in academia. I mean I see a lot of crap out there….Like the more the better...just regardless. I mean I’ve seen people publish the same thing in three different journals and just add one paragraph at the end… it’s kind of bad that everybody else out there is looking for you to come out and, you know, have this big long list of publications.
Although Margaret did not specify publications, her comment resonated with this notion of “accomplishment” during doctoral study,

I figure once you come out with a Ph.D., you’re judged relative to the other people coming out with Ph.D.s and they’re not looking at exactly how long it took you. They’re looking at what you’ve done and how well prepared you are.

Both participants articulated a particular understanding of how rules around “accomplishment” operate in the field of academe.

The significance of participants’ understanding of field was crucial to their experiences in doctoral education. Field meant multiple contexts including Engineering as a discipline with particular conventions that impacted academic work, the relationship between academe and industry and academe more broadly.

**Intersections Among Habitus, Capital and Field**

This discussion has focused on exploring how participants’ responses could be assessed with habitus, capital and field as separate constructs. Bourdieu (1977, 1990) emphasized a relational dimension to these concepts, so to fully utilize his ideas, I will describe intersections among the responses that demonstrate both the saliency of Bourdieu’s concepts to understand the experiences of doctoral students and the nature of doctoral education (and academe more broadly) as a system that emphasizes particular interpretations of success. While there was not a direct, linear connection between academic parents and the pursuit of a Ph.D. by these students, the students who communicated great pleasure and excitement about doctoral studies were the students with parents or close family members
who completed graduate or doctoral study. Also, these same students were successful at attaining external funding, academic publishing and patents. Further, these students were able to communicate a fluent awareness (and positive outlook) of the academic field, including disciplinary conventions as well as broader understandings about academic life. Importantly, the argument here is not to prescribe that all successful doctoral students need to have familial ties to doctoral education; rather the constellation of experiences and relationships encapsulated in the concepts of habitus, capital and field gain traction in doctoral education. That is, doctoral education (and academe more broadly) can be considered to have rules that define standards and success, and that individuals with particular perspectives or experiences are enabled to be successful in this context due, in part, to the importance of the system of doctoral education recognizing (or validating) particular experiences as more resourceful.

I will now discuss particular aspects of participants’ stories that reflect this congruence between particular portfolio of experiences and relationships that reflect habitus, capital and field and the extent to which participants were deemed successful in or content with doctoral study. A crucial component to this argument is not only that specific aspects of habitus, capital and field gain greater traction in doctoral education; but also, that particular accomplishments or successes further enable additional successes, thereby reinforcing “advantage”.

While these comments will be lengthy, the profound fluency and awareness of the academic field, and the embedded personal reflection within them exemplify the intersections among habitus, capital and field. For instance, Margaret discussed her conceptualization of the Ph.D. and broader research impacts,
It’s about experience and it’s about building my competence as much as I can in the areas that I think will be important. So, how to do research in a few fields and getting I guess a few studies under my belt, getting that experience...how to...knowledge translation is a big thing, especially health research. How do you get your findings out there? How do you make sure that people are benefitting from them?

She continued to discuss the importance of gaining a full set of experiences,

So, working with commercial partners is something else I’m getting out of this, which is pretty neat. And then, yeah, I’m getting the supervision experience, a little TA-ing on the side. I’m trying to come up with that full set of experiences; that’s the goal, right?

Also, Margaret wanted an understanding of the proposal review process for an upcoming conference as a critical component to her development as a researcher,

I think it would be fantastic experience to review the protocols just in terms of learning to look for key things, in terms of knowing the research that is going on at the hospital. I think I can gain a lot from it and I also think that it’s probably something I should do.

The comments from Michael further provided evidence of this awareness and reflection on the parameters that define success in doctoral education, as well as his ability to attain success,

The help that we got [for scholarship applications] was within the lab, students helping each other out; within the supervisor/student relationship with the prof re-reading. Obviously he’s got an interest in us getting money… He [supervisor] would critique and my writing has definitely improved a lot since I came here. That’s probably the biggest thing I’ve learned in the past little while is how to write better reports.
Also, Michael and his colleagues received external funding and he was able to articulate the significance of this accomplishment in regards to how it favourably positions doctoral students,

A lot of my colleagues did [received scholarships]. I think probably about two-thirds of the lab is on some scholarship or other, cause essentially if you don’t get a scholarship, you’re less likely to be accepted…Between faculty and students, yes. Between students and students, no. It’s more just the prof sort of realizes that they’re paying for you out of their own pocket [if student does not win scholarship], so I think you get a little bit less leeway in your own work and possibly you get asked to do more annoying side tasks…And also for sure when you have your own funding and you’re self aware enough to know that you have some influence, then you can have much more say in how projects get scoped and which supervisor you sign up with.

These aforementioned comments highlight the powerful intersections amongst habitus, capital and field to the experiences and reflections of specific doctoral students in Engineering. Within each of these excepts, participants revealed significant understandings of what is valued (e.g., capital) as well as the presence of standards, expectations and notions of success folded into their doctoral environments. Participants highlighted the importance of field as composed of structured positions in space as well as the presence of struggle, legitimization and autonomy.

As an important contrast, the comments from Michelle and Greg—who did not have parents with graduate or doctoral degrees—communicated frustration with various aspects of doctoral study. The intention here is not to suggest that success in doctoral education necessitates doctoral level parental education, but the presence of parental education, social and cultural capitals and fluent awareness of multiple fields amongst specific participants sets
an intriguing perspective on the traction of Bourdieu’s (1977, 1986) tools to the context of doctoral education. I will explore this notion further in my concluding chapter. For now, please note that in previous excerpts, there were concerns about the admission procedures, assignment of supervisor, role of publications in academe and lack of scholarships for their particular sub-area of Engineering. Coupled with these perspectives on doctoral education, a final comment from Greg summarized the intersections between habitus, capital and field,

So maybe if you’ve had that background [disciplinary knowledge and specific research project], it’s a lot easier to make that decision because you kind of have a better sense of where you want to go. But when I came in I really had no real sense of what I wanted to do my research in. If I fully knew how the structure [in Engineering and academe] worked, it would have made a difference.

Recall that Greg had an entrepreneurial family history and explicitly noted that he wanted a similar opportunity through his doctoral study. Although consultancy was a common practice within the Engineering department, it may be possible that this overt orientation to entrepreneurialism may have affected his engagement in doctoral education. More specifically, Greg internalized an entrepreneurial approach to his doctoral study based in large part on his father’s entrepreneurial past. This argument is to suggest that the power of habitus, for example, can be found in how doctoral students engage in their education, but also how particular forms of habitus gain greater traction in doctoral study more so than other forms. Also, this propensity for consulting and entrepreneurial may be more suited for disciplines that are more aligned with a market-oriented behaviour or condition. So, all Engineering participants had parents who attained professional employment and post-secondary education, yet it was particular students who were able to understand the multiple
and multi-layered expectations within doctoral study and to demonstrate competence with particular forms of academic work. The habitus, capital accumulation and field awareness of these particular students are pivotal to recognizing the use of Bourdieu’s (1977, 1990) theory of practice to doctoral education. Hence, students entered into doctoral study with different notions of habitus, and those notions of habitus operated in doctoral education, with greater or less success, as frameworks or lens through which students experienced their doctoral study.

The last component of these findings from Engineering that reflect Bourdieu’s (1977, 1990) theory of practice concerns the tendency for aspects of academic work to reinforce advantage. Recognizing the importance of securing the support of a federal granting council, Susan noted,

And then by third year I think I got that NSERC summer studentship and that was...that was not a fabulous job, but I think really good for my CV, cause once you get one NSERC thing, then they love you. They’re like, “Oh, this committee thought you were great; now we’ll always think you’re great.

Susan also experienced these rolling or multiplying experiences with her teaching,

So I, in my fourth year of undergrad, I started TA-ing , which was pretty early. TA-ing my peers basically. And that was fantastic. And I’ve continued to TA and then my advisor, he actually was spending lots of time in Japan while I was doing a master’s and the earlier part of my Ph.D., so he invited me on as a co-instructor for one of his courses. So, early-ish in Ph.D. I was also instructing and lecturing. I learned a lot; and continued to lecture and then eventually got my own course at [research university]. I’ve taught that a couple of times, so I think I have 13 TA-ship positions over the last 6 years and maybe 6 co-instructors or 7 or something like that.
Another example of this reinforcement of advantage came from Margaret and her comments on scholarships, mentorship, grant writing and patents,

I had the CIHR scholarship for my master’s; I didn’t have it in the first term; I had the [specific health institution scholarship], but then I got the CIHR funding in the second term of my master’s. My master’s supervisor is very good at writing grant applications and helped with the first scholarship application. I suspect that went a ways to helping, but then I also had a patent pending, which can’t have hurt. But, I think the fact that I had a lot of help writing the application was a big deal.

A significant contrast to these examples of reinforcing advantage is the experience of reinforcing (dis)advantage, which simply reifies the significance of reinforcement. Michelle commented on how research delays have had a negative impact on her success at attaining scholarships, “I hold OGS 1 year here and I think because we’re late...behind in what we’re doing, so that sort of hampers our further ability to get more scholarships. Because you’re in here for three years and haven’t done enough work, you’re not going to get a scholarship”.

This final comment from Margaret embodies many of these aspects of habitus, capital and field as well as the tendency for reinforcement or multiplication,

Something I like about my current lab is the notion of sort of a more holistic training environment, where it isn’t just the research. It’s also the other stuff you will need to make yourself an attractive prospect as a full package researcher. Or a full package academic, I guess. So, the inclusion in...you get the opportunity to be included in grant writing, the opportunity to be included in sort of strategic direction discussions sometimes, which is interesting…I’ve been willing to put a substantial amount of work into making sure that the projects I’ve worked on, the opportunities I’ve been given, has had successful outcomes and demonstrated competence tends to lead to more opportunities.
I’ve put the work in to make sure that things happen and I know that, for example, my position on the current project, the larger project, is based on the fact that I’ve been able to complete other projects…I try to do a good job with the things I’ve been given. That leads to being given more.

These findings suggest that Bourdieu’s (1977, 1990) concepts of habitus, capital and field provide a lens to explore the experiences of doctoral students in Engineering. Not only do these concepts document the importance of early socialization, experiences and relationships to student engagement with doctoral study, but also these findings illuminate particular practices in doctoral education that resonate with specific experiences or perspectives. This differential resonance results in different student experiences, partly defined through aspects of academic work that reflect success. So, this analysis on doctoral education and on Engineering, in particular, reveals the saliency of Bourdieu’s concepts to illuminate doctoral education as a specific context that participants perceive as possessing rules, which, in turn, delineate standards and metrics of success. Individuals and groups within doctoral education struggle to attain legitimacy and power by demonstrating competence with academic tasks. With respect to the specificity of Engineering, particular dynamics (i.e., research with industrial partners) reinforce the continued struggle between actors as tensions between research needs and industrial desires continually re-shape the relations between actors as well as broader contexts in which these relations occur. I turn now to the findings from interviews with individuals in the department of Philosophy.
Chapter 5
“Nothing Succeeds Like Success”
Findings From Interviews With Philosophy Doctoral Students, Faculty Members, and Administrative Personnel

Introduction

This chapter will review the research that I conducted in the department of Philosophy. Prior to interviewing doctoral students in Philosophy, I focused on interviews with administrative personnel and faculty members in this department. As such, I turn to a discussion of the major themes and notions that were highlighted by these non-students as critical contextual elements to further situate the perceptions and articulations of current doctoral students in Philosophy. However, prior to discussing these elements, I turn now to a brief outline of the importance of studying Philosophy as a discipline and then continue with a focus on departmental and programmatic aspects of the Philosophy doctoral program.

Disciplinary Significance

Golde and Dore (2004) suggested that, “explorations of doctoral preparation must take into account and build on the particularities of the various disciplines” (p. 20). As such, my understanding of disciplinary categorizations originates from Biglan’s (1973a, 1973b) research. Biglan suggested that disciplines varied according to the presence of a single paradigm, the need for practical application and the focus on life systems. Thus, Philosophy (and various other humanities disciplines) is framed as soft due to the presence of multiple paradigms from which to draw for philosophical research. Also, Philosophy is considered a pure discipline due to its lack of a focus toward explicit application projects and is focused
on non-life systems. Importantly, this non-life categorization is not very strong, so
Philosophy straddles the non-life/life system categorization. In addition to the three elements
that characterize disciplines, Biglan (1973a, 1973b) also examined social connectedness,
commitments to research, teaching, service and administration, and finally, scholarly
publication outputs. Social connectedness is low in humanities disciplines as there is low
consensus about the use of a prevailing paradigm in the discipline. This multi-faceted
paradigmatic approach encourages research conducted in isolated and individual capacities
and discourages collaborative research and teaching approaches.

The Department of Philosophy

The department of Philosophy included in this study is one of the largest Philosophy
departments in Canada. A major theme that emerged was a central focus on perceptions of
quality. This focus on quality involved distinct but related notions that included graduate
students, program, and employment. A widely recognized international ranking system, the
Philosophy Gourmet Report, cited this program as one of the best philosophy doctoral
program in Canada, so there were many departmental initiatives to maintain and improve the
prestige of the program. A major factor to program quality concerned the quality of faculty
members, so special attention was paid to increase the faculty complement over the last few
years. Also related to program quality was the quality of doctoral students admitted to the
program. Given that many potential doctoral students in this program also applied to other
top programs, particularly in the US and in the UK, a major recruitment lever was the
funding package awarded to doctoral students. As such, considerable departmental efforts
focused on providing funding above the institutional minimum as well as developing funding
packages that decreased teaching duties of doctoral students without sacrificing funding
levels. There was a recruitment fair for prospective doctoral students to visit the campus and attend classes prior to making a final selection on which doctoral program they would attend.

The explicit purpose of this doctoral program was to train individuals to teach philosophy and to conduct philosophical research. As such, there were multiple mechanisms within the program that highlighted these specific outcomes. An explicit timeline of doctoral degree completion with specific milestones was articulated by the department and there was also a professional development timeline that suggested when doctoral students should begin presenting at conferences and considering publications. There was departmental funding for doctoral students to present at two conferences each year and multiple venues for doctoral students to discuss and to gain feedback on working manuscripts. Also, there was a Professional Development Seminar taught by a faculty member focused on doctoral students who were near completion and included topics of how to search for academic positions, how to develop a curriculum vitae, and how to prepare for interviews and job talks.

Lastly, the importance of employment outcomes was a significant proxy to quality and was related to perceptions of recruitment. Specifically, if doctoral graduates were gaining employment in top programs, then that demonstrated the quality of the recruitment initiatives as well as the quality of the overall program. A placement officer, who was a faculty member, and a placement assistant, who was an administrative staff member, took responsibility for coordinating the academic job application process for students. There was a publication entitled Jobs for Philosophers that contains academic positions in Canada and in the US, and potential applicants identified to which positions that would apply and then the placement staff ensured that a strong, coherent application was forwarded from the department. So, the notion of quality was folded into many aspects of this department from
recruitment to funding and to employment. I now turn to a focus on the perceptions and articulations of current doctoral students in Philosophy.

**Doctoral Students in Philosophy**

This section will review the findings from interviews with Philosophy doctoral students. I will use the Bourdieuian (1977, 1990) concepts of habitus, capital and field as a construct to explicate the participants’ comments. This discussion will examine these comments through the lenses of habitus, capital and field; however, it is difficult to discuss these concepts in isolation from each other. Efforts will be to maintain this isolation, but the intersection among the concepts will also be discussed. These participants articulated experiences and relationships from their histories that they believe were significant in terms of contributing to their doctoral studies. Hence, the focus of this chapter will be on revealing components of participants’ lives and experiences and then discussing how these elements filter into their doctoral education journey through the lenses of habitus, capital and field. Prior to discussing these experiences, I will briefly provide some contextual information about each participant to better understand how their specific experiences connect to the concepts of habitus, capital and field and also how these concepts relate to their doctoral student experience.

Overall, there were 10 Philosophy doctoral students whom I interviewed, and 6 were male while 4 were female. My first interviewee was Arthur, a doctoral student who was in the dissertation-writing phase at the end of his fourth year. He came from a middle-class background where both parents were employed. His parents encouraged education, as he attended Catholic school due to its perceived quality over public schooling. However, he
quickly realized that he was an atheist in a Catholic school which marked his feelings of outsider-ness at an early stage of his educational career. Arthur demonstrated an academic aptitude throughout his schooling; however, he made special efforts to engage in additional experiences to complement his academics. In particular, he possessed a rich history of service-like activities where he participated in various forms of committee work.

Paul had just completed the first year of his doctoral program and graduated from a prestigious university for his undergraduate education. He attended a selective high school and knew from an early age that he wanted a doctorate and that an academic life was a goal. His parents were employed in the professions and several of his relatives were professors. Although early in his doctoral journey, he communicated relative comfort with the practices of academic publishing and conference presentations.

I interviewed James at the end of his third year of doctoral study. Both of his parents were well-educated and gainfully employed. Education was a priority for James and his siblings, as his brother was completing a Ph.D. and his sister was enrolled in medical school. Also, James’ father was a professor and accomplished professional in his field. Schooling was turbulent for James through his primary years and most of his secondary school years. Religion played a vital role in James’ life during his high school years and enabled him to focus on his education.

Ken was my fourth student interviewee and communicated sincere warmth about his childhood and family relations. He grew up with many relatives around him and articulated great support and encouragement from them. Ken recognized academic differences between him and his high school friends. He attended a very selective undergraduate program where
he was motivated by highly academically oriented students. He switched disciplines and found a steep learning curve to the expectations in the doctoral program, but he communicated overall satisfaction with his decisions and educational trajectory.

Lisa was at the end of her sixth year and was in the dissertation-writing phase. She commented that her parents had “normal” employment, but extensively emphasized the importance of education to her and her brother. They both started in private school, but Lisa did not feel comfortable in that environment and eventually enrolled in public schooling. Given her time in the doctoral program, Lisa articulated significant understanding about various aspects of doctoral study. Although not successful at attaining scholarships or publications, she possessed an acute awareness of the discipline and broader academe.

Ted, who was at the end of his fifth year, came from a large family with strong religious commitments. Although he is close in age to his siblings, Ted took a very different educational journey than his siblings. Ted had a very pragmatic approach to his university education whereby he believed in attending a selective undergraduate institution and participating in a program well-known for its track-record of securing employment for graduates. Keenly aware of the dynamics of academe, Ted was intentional about his decision to complete doctoral education in a top-tier program where employment possibilities upon graduation would be optimal.

A self-proclaimed perfectionist, Leslie was at the end of her third year of doctoral study, but was engaged in the writing phase. She possessed a rich family history that was dotted with political turbulence related to instability in her native country. Leslie was educated outside of Canada and was intensely invested in her schooling. She was encouraged
by both her parents, and spent every day, including the summer months, engaging in her studies. Completing university education, particularly in the sciences or the professions, was a requirement, period. Leslie was well aware of the paucity of secure academic employment, so she was strategic about participating in multiple experiences prior to and during doctoral study to maximize her ability to pursue diverse employment opportunities upon graduation.

Although she experienced profound financial difficulties and came from a family that could not provide financial support, Sarah communicated significant pleasure and satisfaction with her doctoral experiences. Her parents had limited exposure to post-secondary education. She was sensitive to differences in wealth and status across her peers throughout her schooling, which informed her decisions to apply to and attend specific universities. Despite a lack of parental education and financial resources, she had productive and positive experiences with research, teaching and service during her doctoral studies.

At the end of her fifth year, Alana had just submitted the first draft of her thesis to her supervisor when I interviewed her. Both of her parents were professionals, and Alana had considerable exposure to music and travel during her childhood. She completed enriched or gifted programming and had very supportive relationships with teachers during her schooling. Her doctoral student experience was dramatically different to her peers as she participated in a collaborative program that did not enable her to participate in departmental activities or secure any teaching or research assistantships, yet she was classified as a Philosophy doctoral student. As such, she had little connection to the department, the faculty members, administrative personnel or fellow doctoral students.
Frank recently completed his first year of doctoral studies and was an international student. His parents were professionals and advocated that Frank pursue post-secondary education. Although supported by faculty members and peers throughout his education, Frank communicated some tension about a future academic career given the performance metrics of publication in academe.

I now turn to the participants’ comments to reveal the saliency of Bourdieu’s concepts of habitus, capital and field and how these concepts also operate in their doctoral student experiences.

**Habitus**

This concept acts as a mechanism for individual action that originates from early socialization from family and peers and is largely unconscious in nature. Individuals understand what actions are possible and possess value, based on internalized norms and expectations as understood through early relationships and experiences. In many instances, participants articulated that the pursuit and value of education from parental investment and encouragement was of paramount concern. Participants suggested that their parents insisted that education acted as a vehicle for mobility and prosperity, in some instances, but also as a normative expectation that was not optional. For instance, Lisa commented on the intensity of her father’s advocacy for the pursuit of education,

And, my dad pushed … not that my mom didn’t, but my parents pushed really hard education. And I can remember as a child, my dad would go to these stores where you could buy educational games for children, and he would buy these various mathematical puzzle things and he would force us to sit down at the table after dinner and do hours of various educational games and do the
multiplication tables... He was very much about just education. The only way you are going to get anywhere in life is if you have a good strong education.

Although slightly less intense than Lisa’s comment, Alana articulated a similar parental investment and encouragement in education, “both of my parents were educated and were interested in education and definitely encouraged my studies and energy to be invested in school”.

Many participants also suggested that attending post-secondary education, particularly universities, was a normative expectation. Leslie, who experienced extreme pressure from her parents to attain high grades during school, discussed this expectation, “But it was never a question whether or not I would go to university because of the mentality under which I grew up. The same one that taught me I have to do engineering was the same one that said, “If you don’t go to university, you’re a nobody”. Frank articulated a similar expectation from his family, “That [attending PSE] was kind of the assumption. I mean both my parents have like post-college work, graduate school. So I think that was definitely...I always looked at that as probably kind of the prime candidate for what I would do”.

In addition to this emphasis on education, some participants communicated a comfort or ease about being in doctoral study. Paul indicated that his pursuit of an academic career seemed like a natural decision,

Well, I think from about the age of 16 or 17 onwards, I was quite confident that I wanted to pursue an academic career. Probably earlier than that, actually, although with less sense of exactly that would entail. So, I’ve always found learning and teaching and discussing academic matters my primary area
of interest and my primary area of competence. So, it always seemed kind of the obvious choice to take a doctorate and then seek an academic position.

Ted seemed to echo this comfort with doctoral education as a natural choice for him,

Once I got to doctoral studies, I just kind of found that it suited me pretty well...you are always just doing it on your own, and it suited me because I found that I could read the stuff really quickly and go into the seminar and be able to talk about it without there being much issue. I felt it suited me because again, it was okay. I was doing reasonably well at it. And, I’m academically inclined.

This “natural” propensity for Paul and Ted to pursue an academic career and/or doctoral education suggests how particular habitus can feel “more comfortable” in particular environments than other habitus, and, by extension, in other environments. I will explore this notion more fully later in this chapter.

A particularly powerful experience from three students’ stories was the role of religion in their upbringing. Although not articulated by many participants, it was noted as a significant factor as part of some participants’ histories. Arthur discussed his experience in Catholic school,

So, I was in the Catholic system and in the third grade, this is when us Catholics do our First Communion. So, we spent a bunch of time learning about Jesus and stuff, which kind of bored me a lot. I didn’t find it interesting. I didn’t understand why I should care and to this day I don’t. I’ve gone the other way. But so, I actually told my third grade teacher that I didn’t want to do it. And she got really offended by this, because she was like very “Catholic”. When I say “very Catholic”, she had a cousin who was a Cardinal. So very Catholic, right? And so she pulled me out and she had this long
conversation, and I mean, I don’t remember all the specifics of the conversation, but she kept trying to convince me that I should be doing it, and she couldn’t offer me the right sort of reasons, I eventually just said, “okay, I guess I don’t believe in your God then”. And so she sent me to the Principal’s office. So this actually links back after the part that I said my parents let me do and think what I want. So, after they came and got me from the Principal’s office, they sat me down and they said, “Okay, you don’t have to believe in God if you don’t want to, it’s fine. But just pretend to do it”.

James revealed that he was withdrawn during schooling and that religion played an important aspect of his change in engagement,

There would be recess and then everybody would go out and play soccer and I would stay in my carrel just drawing, all on my own...like I wouldn’t interact with anyone for the longest time. This was like for years and years. And then that started actually changing...well it started changing when I went to high school, but it really changed after this kind of like discovery of faith.

Finally, Ted communicated common dinner practices that involved religious activities as well a history of education in private Christian schools, “You just sit around and read the little Today books. Those little Today booklets, you kind of go through that stuff. I should mention too, that I went to Private Christian schools, that’s from kindergarten until Grade 12”.

This focus on religion as a powerful element to these participants’ stories is an interesting development that may be related to the discipline of Philosophy; however, I raise this theme as an entry point into a discussion about the notion of “other-ness” that was communicated by many participants. This otherness was articulated across contexts and included concerns about religion, class and educational achievement. Arthur communicated
his resistance to religious ideas and how that experience enabled him to persevere through doctoral studies,

In somewhat of an indirect way, not in a direct way, they [previous experiences and relationships] contributed to my willingness to actually stick with it [remain in doctoral education]. I’m sure a lot of doctoral students will tell you that there’s a certain point which they think “ahh, maybe it would be nice to go out into the world and earn some money”. There’s a certain point that you think “maybe I don’t really want to continue with this. This is a lot of effort and I don’t know if I’m going to get the payoff that I was originally expecting when I came in”. So I suppose in a way, those sort of experiences influenced me to do this. Sort of to stick with it, probably because the sense in which I was, I guess, differentiated from the rest of my fellow students, being all Catholics and me not being a Catholic for quite a while. I suppose it got me to value things that I liked as opposed to things that everyone else liked, such as money and success.

While this notion of religion was not articulated by Sarah, her interpretation and experience with “other-ness” was related to class and wealth and the assumptions she had about universities in Ontario and about peer groups and finally reflections on this “other-ness” during her doctoral studies,

There were schools that I didn’t apply to because I assumed that I wouldn’t get into them, [this institution] being one of them, and other schools I didn’t apply to because I thought their reputations didn’t suit me…like [another university], for example. When I was in high school, I was very conscious of being poor and it was … to me that was a place where rich kids went to school, and I wasn’t going to be one of them, and I would have this massive student loan and probably still have to work and I just couldn’t see myself in that environment. I think as a kid, like in high school, I had a lot of friends whose parents were comparably quite wealthy. My boyfriend at the time, his
dad was head of [a medical centre] and his mom was a GP. So they were really educated. They were well to do, and I felt … probably they never thought anything of it, but I felt poor by comparison. And it was something that I was always conscious of. Many of my friends didn’t have jobs and so I think I had a real “chip” on my shoulder when I started my undergrad that I was going to be somebody who had to work for it, and other people just got things handed to them, and then when I got to this level, and I started getting scholarships, now everything is just handed to me, and I see that that’s not actually … it doesn’t make my work less valuable. And, it makes me really appreciate what I’ve been given.

The last example of “other-ness” that was suggested by participants involved an awareness of differences related to academic achievement. Ken communicated that he was aware that he was more academically inclined than many of his school peers, “And I remember in Grade 6 being sort of recognized when I was leaving that I had done very well academically and sort of started becoming conscious that this is something I’m good at”. Ken continued, “I think things started getting a little trickier as we got older, because being really good in school did, I feel, create differences with my peers”. In describing his doctoral experience, Ken suggested these feelings of “other-ness” again,

I just didn’t know how that [the expectations of the program/discipline] was going to be, and coming in I was aware that I didn’t know what to expect and I was pretty nervous about it, in part because I still didn’t think that I belonged here. I was like, “What am I doing here?” I just didn’t really…I really didn’t feel like…I felt a little bit like an outsider coming in and then not really knowing what to expect. I was a little stressed out.

These participants’ responses demonstrated the influence and saliency of habitus on their experiences as well as how these experiences permeate into doctoral education. Habitus
involves early socialization from family and peers and incorporates norms and expectations related to possible actions and values. So, individuals understand what is expected of them, how actions are interpreted and what actions or perceptions are deemed appropriate based on multiple socializing experiences and relationships. The importance of pursuing education was a value that many participants articulated. So, the pursuit of education was a goal that was internalized (and thereby pursued) as normal to many of these participants. The influence of habitus was also found in participants’ comments that suggested the pursuit of an academic career was obvious and enrollment in a doctoral program was a natural decision. These comments resonate with the notion of habitus such that individuals feel comfortable or actions seem naturalized in environments that are consistent or aligned with a particular habitus. This can be thought of as a “fish in water” which suggests that individuals can be very comfortable in certain environments which reflect the internalized expectations or norms of particular individuals. The last element that revealed the significance of habitus on the participants’ doctoral experiences involved the differentiated notion of “other-ness” articulated by students. Here, students commented that they had internalized experiences in their lives that produced a sense of “difference” or “other-ness” and that this element of “other-ness” became a significant component of their understanding their doctoral journey. These participants used this aspect of their history as a lens to interpret their doctoral student experience. This last element was a sharp indicator of the saliency of habitus to the doctoral student experience, as students not only possessed experiences prior to enrolling in doctoral studies, but also used those experiences as a frame to understand or interpret aspects of doctoral education. I now turn to a discussion on the role of capital in the comments from participants.
Capital

This discussion of capital attempts to reveal the influence of economic, social and cultural capital on these participants’ perceptions of their experiences prior to and within doctoral study. Interestingly, the notion of economic capital was not articulated by many participants. Arthur was one of only two students who commented on specific monetary resources,

My parents had actually put away a significant amount of money for me during my childhood. They invested in one of these Registered Education Savings Plans. You invest $10,000 or $12,000 or $20,000 or whatever it is and it pays out closer to $40,000 by the end. So yeah, I had about probably about the resources of $35,000 to $40,000 to use on my post-secondary education.

Another student, Sarah, revealed that her parents encountered significant financial turmoil, “Probably the biggest event that shaped how my childhood went was my parents having to declare bankruptcy… As a result we moved from sort of a rural environment into the city, into a housing project and changed schools”. The paucity of references to economic capital was surprising; however, it may be due to the majority of participants originating from middle and upper-middle class backgrounds as well as generous funding packages for doctoral students in this department. So, the notion of money or wealth was not an “issue” or concern. I will explore this interpretation further after discussing social and cultural capital.

Participants articulated the importance of social capital repeatedly, but primarily in the context of support, encouragement and endorsement from various individuals prior to and within doctoral education. Participants consistently highlighted support and encouragement from faculty members, both prior to and within doctoral education. Arthur revealed, “I did
certainly get a lot of encouragement in my undergrad, especially in the upper years when the classes became small enough that I knew the professors. So, certainly a lot of them did say to me, ‘you’re the kind of student who has to go to grad school.’” Also, Paul suggested that professors reinforced his decision to pursue an academic career,

I think most of the professors who I worked with gave … encouraged me to pursue a Ph.D. I didn’t recall it specifically as encouragement because I hadn’t been trying to decide whether or not to. I’d … that had already been my plan… But yeah, number of professors, reassured me that it was definitely the right course for me to be taking…I think a lot of people have always told me that they thought I should or they assumed I would pursue an academic or intellectual career.

Sarah, Frank, and Alana indicated support from faculty members, including confirmation that they would be good candidates to pursue doctoral studies. Sarah recalled,

My last year at [a university], I had two professors who were both really, really supportive of the idea that I should go on. One of them gave me a summer reading list including a book on the person who is now my supervisor. It’s great, because he was her supervisor. So, had I not met that person at that point in time and had him tell me, “Yeah, I think you are smart enough. Here’s some stuff that you should think about if you want to keep going”.

Frank echoed this notion of confirmation from faculty members to enroll in doctoral education. He noted, “I had a couple of professors that I think who were pretty encouraging for me to do it [enroll in doctoral study]…who thought I would do well on it”. Ken articulated the support and encouragement of a faculty member in his doctoral program who provided both personal and professional advice,
He [faculty member] won’t be my thesis supervisor, but he’s sort of my supervisor for the first 2 years. Unbelievable. Absolutely unbelievable. A real mentor. He’s been a big part of my...he’s supported me in issues in my personal life and in my academic life. And I can’t say enough good things, so that has really helped me out a ton. Because I’ve come in with some pretty clear weakness, he’s helped me identify them, hasn’t made me feel insecure about them, helped me sort of improve, because they need to get better, you know? He’s great like that.

Finally, Alana revealed,

A professor of mine, who was actually my first Philosophy professor, so he taught the course in first year undergraduate that inspired me to switch to Philosophy. He also wrote a reference letter for me for graduate school… I took more courses with him and yeah, he gave me the impression that I was well suited to this kind of pursuit. So, I’d say he was influential in my choice of doing the Ph.D.

While the importance of mentorship or support from faculty members was articulated by many participants, Ken also articulated that the lack of strong role models was a deficiency in his schooling. In particular, he noted,

Looking back there was really very little strong role models or at least male role models in the grades above me, like guys that were going on to university, doing well in school and being like the sort of... Yeah, after meeting people in university and finding out what their high school experience was like, I was like, Oh, really. There are no interesting people like that at my school.
In addition to supportive relationships with faculty members, a couple of participants highlighted relationships with other individuals that proved useful. Arthur noted the importance of securing the trust of administrative personnel,

I feel that I can go in and ask them [administrative personnel] questions that deal with sort of their administrative areas. And I don’t feel that I’m going in and bugging them, and I don’t feel that they are bugged by me going in and asking them. And that’s good, because they often end up volunteering more information when you have a good relationship with somebody. So I think that I probably learned a lot more about the background of how administration actually works from doing this sort of thing and this has allowed me to, in a way, anticipate certain aspects of what would be coming up, better than I think a lot of my fellow grad students.

Finally, Leslie revealed that developing friendships with peers across different cohort years provided her with valuable advice,

I became really good friends with people who were way ahead of me, and then was friends with people in my year. I’ve had … the people that are ahead of me have always been really nice. I’ve gotten along a lot better with them. I don’t know why. We’re in a kind of “they’re always giving me advice” kind of relationship.

Participants repeatedly emphasized the importance of faculty member sponsorship, endorsement and support as a form of social capital. As I turn to a discussion of cultural capital, the relationships between social and cultural capital begin to emerge as critical factors to the experiences of many of these participants.

To begin this articulation of cultural capital in the experiences of these participants, it is significant to focus on educational achievements of participants’ parents. The familial
emphasis on education was also linked to the educational achievement and career paths of many of the parents of these participants. The vast majority of these participants’ parents or close relatives were employed in professional fields and/or completed graduate or doctoral studies. After this focus on cultural capital, I will turn to a discussion of field and, in doing so, trends or commonalities across participants begin to emerge that reinforces the intersectionality of habitus, capital and field, particularly as it applies to doctoral education and the experiences of specific students. This intersectionality also leads to a conceptualization of doctoral education as a system that reinforces advantages by emphasizing particular notions of success. Those students who demonstrate competence or “success” will continue to engage in experiences that promote this success; hence, the reinforcing advantage of doctoral education. I will explore this crucial development more extensively in the next chapter.

The educational achievements of participants’ parents may have provided students with an understanding of educational environments from which participants benefited as well as a comfort with various aspects of schooling. For instance, Paul revealed his familial history in education, “So my dad is an architect. My mom is presently an Arts teacher, although she wasn’t in full time work for most of my childhood. Neither of them are academics, but my father’s father and his father both are Professors of Philosophy”. James articulated a similar parental history with academe and professions, “My Dad is a lawyer and he’s a university professor… My Mom has been working for multinationals all her professional life, so she’s working at HP right now. She’s a software engineer”. In addition, James’ siblings engaged in advanced education, “My brother is studying a Ph.D. in Math and
my sister is studying...she’s in med school”. Furthermore, Leslie revealed that her parents were well educated,

My mom and dad are both … my dad is an Engineer. He was a consultant for sugar factories in [foreign country]. He took care of importing and exporting. He was a businessman… My mother is a super star. She should have been a CEO of some company. She has a master’s degree in economics and she had a scholarship to MIT which she gave up to marry dad because she was in an arranged marriage and then she did … she just started a Ph.D. in urban planning when I was nine but she eventually did not complete it.

Finally, Alana communicated that both of her parents were well-educated professionals, “So both of my parents are doctors, physicians and my mom’s a GP and my dad is a psychiatrist”.

Participants also indicated good relationships with teachers and a comfort with particular academic practices. These elements may suggest that participants understood particular norms or expectations of schooling (through their habitus and cultural capital) to enable successful experiences or relationships in various educational contexts. For instance, Paul discussed his comfort with conference presentations, “What I’ve generally found, I think was that, the presenting aspect was relatively straightforward and I really didn’t have a problem with that”. Also, Leslie revealed her comfort when communicating with professors, “I always got along well with my profs. I was one of these really annoying kids that just chatted with profs all the time in their office hours…I would go to her office hours to ask about whatever problem that I was stuck on”. Finally, Alana communicated her positive relationships with teachers,

I was quite close to my teachers usually, and I was in a gifted program starting in Grade 4, so I was surrounded kids who were similarly, academically
inclined. Certain teachers and my relationships with teachers really stand out all through my younger years. I tended to form close relationships with my teachers, admire them, value their opinion.

These examples of cultural capital reveal that the histories of students and the experiences and relationships to which they are exposed possess value and that value gains traction during and leading up to doctoral education. Importantly, as a discussion on field and the intersections of habitus, capital and field continues, some intriguing relationships and trends begin to emerge. In many instances, these participants possessed an awareness of the rules of the academic field in ways that participants without these parental achievements did not possess. Also, the comfort with and confidence about various academic practices were more noticeable in participants with these portfolios of parental educational and career achievements.

Field

The concept of field involves the notion of “rules of the game” such that different fields may operate in accordance to specific rules, and that success in such fields is contingent on understanding what is valued and what is not valued in those different fields. Discussions of field involve concerns about structured positions within fields, the prevalence of struggle amongst individuals to maintain or create legitimacy, and finally, aspects of autonomy that preserve the internal dynamics of field from external interests or pressures. Participants articulated many different fields in relation to the doctoral student experience, but I have conceptualized them as: (a) discipline as a field; (b) research as a field; (c) tension among research, teaching and institutions as a field; and (d) the academic game that includes doctoral education and employment as a field. I have delineated participants’ comments into
these conceptualizations of field, but it is necessary to keep in mind that these are not discrete fields operating independent of one another. Rather, multiple fields exist and often overlap which possess similar and distinctive rules for success, structured positions, struggles for success and degrees of autonomy. I present these isolated aspects of field to demonstrate the significance of participants’ perceptions as well as the complicated nature of how field operates and the multiple fields in which participants participate.

**Discipline as a Field**

The notion of discipline as a field concerns participants’ conceptualization of Philosophy. In particular, participants revealed that Philosophy is much more than subject matter or content and suggested that it provided tools and other mechanisms that enabled cognitive and writing clarity. Frank claimed, “I found how useful studying Philosophy had been for me just in terms of critical thinking, in terms of the ability to express ideas clearly, to write well”. Building on this comment, Ted highlighted the importance of Philosophy to his ability to think,

So it was when I figured out that Philosophy wasn’t the subject matter, but it was also a discipline. A rigorous way of going about looking at arguments for various positions… realizing that Philosophy is a discipline, and has a certain set of conventions that go along with how you do it, and these conventions are actually really, really good thinking tools for figuring out these kinds of problems.

This emphasis on Philosophy as a discipline with particular norms or conventions was further articulated by Ken,

Even after I did a 2-year master’s and I wrote my thesis and I still don’t think I really understood what I was doing. I really didn’t understand the
disciplinary norms. I didn’t have a very well rounded background in Philosophy, so it would be pretty hard for me to understand what the expectations were.

Leslie commented with a particular interpretation of Philosophy as a discipline that reinforced the notion of conventions or norms inherent to Philosophy,

I basically work very hard to distance myself from all the experiences, from the major informing experiences of my childhood and my early life. The reason is a bit weird, I guess. First of all, in philosophy, to make an argument in Western philosophy, anyway, the first step is you want to separate yourself and be completely objective and rational by the argument. So, it’s almost like a mask problem. You want to somehow show someone that regardless of who your person is you can do what this problem requires for you to do to solve. So, doing anything philosophically that has to do something with your personal experiences, ehhh, you can probably do it once you have tenure, once you’ve published a lot, once people know that you can do good problem solving on your own, but it’s risky.

While these comments focused on Philosophy as a discipline at a broad level, some participants focused on the programming or curricular infrastructure of Philosophy doctoral programs as a critical component to their doctoral education. In particular, students highlighted the pro seminar course as a pivotal aspect to their education and overall engagement and satisfaction with the program. Sarah revealed,

I think it’s [the pro seminar course] the most important course that people take in their first year. Not because of its content, but because it provides social cohesion. What the pro seminar gives you is a place where there are no students auditing the course, no master’s students, and no upper year students who happen to be a specialist in the area who elevate the level of conversation
to something you can’t understand because they already know everything. So it’s a place where you are on a more or less even playing field and you might feel safer saying something that you are not sure about, or asking the question that seems like a stupid question, because it’s only your immediate peers… there is a focus on it [the pro seminar] being writing intensive. So they are trying to get your writing skills up to their standard.

Leslie also highlighted the significance of the pro seminar; however, she described her experience as much more negative and problematic. She noted,

They have this pro seminar class there that’s kind of basically going to break you and it did… It’s a one term program that every single incoming Ph.D. student has to take and you don’t get to choose what it’s about, they’ll just tell you “it’s about x”…. it’s the most demanding thing any of us has ever done. You’re writing papers back to back. You’re reading things that are harder than anything that you have ever read. The standards of writing are all of a sudden way up…. everyone at [major research university] is so nice and so supportive and so kind, but in other programs, like in the U.S. programs which also have the pro seminar which our is modeled on, they tell you “There’s 9 of you, next year they’ll be 5. This is how we weed you”. So it’s an intense experience.

Both students suggested that the pro seminar course is focused on writing; however, Leslie also revealed how the pro seminar course is involved in other aspects of the doctoral student experience,

The graduate coordinator will write you a letter when you are applying for SSHRC first year as a Ph.D. student. So regardless of what relationships you have already built in your life with professors who think you’re awesome, somehow your graduate coordinator is supposed to find out enough about you to write you a letter, as I’m sure you know. Probably most of us would get
mega SSHRCs if we were in smaller schools, so how well we all do with these grants, for example, has a lot to do with how we get ranked at a graduate office. How does the graduate office find out about us? The pro seminar. So what does that do … well, you know, you definitely don’t want to look like an idiot or look like you’re scared or anything.

These comments suggest that not only do particular norms operate in Philosophy as a discipline, but that curricular aspects of the doctoral program provide opportunities for students to be assessed in ways that can contribute (or detract) from other significant aspects of developing credibility in doctoral education (such as attaining scholarships).

This notion of developing credibility (or legitimacy) is an important theme that is woven through many aspects of this articulation of field. In many ways, field operates under particular rules that define success, so awareness of these rules and fluency with tasks that demonstrate competence in accordance with these rules emerge as very influential to students’ experiences and achievements in doctoral study. Many participants’ comments reflect the continued struggles for credibility and legitimacy in these multiple fields. I turn now to participants’ comments that reveal the complicated landscape of research as a field. In particular, I will focus on research as earning external funding; ambiguity around the role of publications and the politics of conferences.

**Research as a Field**

Participants seemed to understand that attaining specific elements (e.g., publications, external funding, conferences) were critical attributes to their doctoral student experiences. For instance, Paul revealed, “If we define hierarchy of value, then yes. In that some [academic accomplishments] are better than others. Some are seen as having much more
significance”. Although he did not specify the elements that constitute the hierarchy, other students revealed some awareness of his notion of a hierarchy of value. Ken discussed his aptitude for securing external grants, but linked it to a broader awareness that may be external to his knowledge of Philosophy,

Yeah somehow I’ve been successful at writing grant proposals. I don’t know if it’s because I did a lot of sales in [previous career] and had to get...I knew how to pitch a project. You have to get people to buy in and I think in these anonymous competitions...I don’t know maybe I have a sense for what they’re looking for and how to play the game perhaps.

Although Lisa was not successful at earning scholarships, she was acutely aware that this was a disappointing situation, “as for the research, I’ve been disappointed with my own performance on that. I haven’t won any awards or scholarships. I think that’s just because I am a crap writer of grant proposals or anything like, I just don’t know how to do the sales pitch that sells it”. In addition to this awareness of the need to secure external funding, participants also communicated an awareness of the importance of publishing scholarly articles during doctoral study. For instance Lisa revealed,

I knew that obviously the more publications that you have the better it is… I expected that the work that you would submit for publication would be much more polished than what actually is submitted… No, it’s [getting publications] not about having this beautiful finished polished work. It’s just getting to the conversation.

However, through their comments, there was considerable tension between publication quantity versus publication quality. James stated,
I came here in a rush. I was like talking to her [a faculty member] like 2 weeks after I came, “Okay, so I want to publish”. And then she was like, “Well, take a minute”…. my point was “Would you read this thing for me and make comments?” But then she was like, “Slow down, slow down”…. maybe you’ll regret it later. You actually get published and you change your views or something…or you realize that the argument was actually a really bad one.

Lisa highlighted this tension as well by weighing the advice of her supervisor with her interpretation of the demands of the academic job market,

So if my supervisor thinks you’ll make it if you have one good publication. Okay, but the job committee that’s going to look at my application, are they going to feel the same way, or are they going to say “no, no. What’s more important is the 15 publications in the lesser journal”. And that’s where it becomes very difficult because there are rules but there are no standards, or the standards don’t go across the board, or different rules for different people for different places? It’s just very, very messy and confusing.

Further, Ted articulated a structured approach to his commitments to conference presentations and publications that also highlighted this tension and sparked questions about the “timing” of these experiences,

So it was partially on the advice of my supervisor that I don’t need to start worrying about that [presenting at conferences] until it gets closer to the time where I’m going on the market. So this coming year, I’m planning to do quite a bit more of that. Publications, I’ve been told kind of the same thing. So, it’s better to have one really good one than a bunch of them that aren’t very good. So what I’m really concerned to do before I’m done the doctorate and before I go on the job market is to get one good publication.
The comment from Ted that emphasized conference presentations was also a concern for other participants. While they did not specify the notion of “timing” as crucial to when they did conference presentations, these participants recognized that there were implicit rules or expectations about academic conferences. Lisa revealed,

> Certain strategies and tricks of the trade, which I think the whole point is that this is the whole you either sink or swim. You either figure it out… but the kind of just find conferences, submit abstracts and you can write the paper afterwards. I never submit an abstract if you have a paper written. No, write the abstract and you can quickly write the paper afterward. “What?! This is done?! Huh!” And I was like, “oh, the same paper, just write a different abstract, send it to another one”. “What?! No, you can’t give the same thing!” “Of course you can, just tinker a few things and do it”. I guess I was very naïve on that aspect of it and I really wish I had known earlier.

Additionally, Leslie discussed her understanding of the social norms that operated at conferences, social norms that related to asking questions, how and with whom to spend your time,

> I kind of figured out what was or was not appropriate to ask. And then how the parties afterward work and you don’t want to push yourself to hang out with people who don’t want to hang out with you, and how not to suck up too much, but make sure you speak to the one or two people that are at the conference that you really like their work.

So, these participants highlighted that scholarships, publications and conferences have rules associated with them that are important to know if one is going to be “successful” at attaining or experiencing these academic elements. Also, there was significant discussion about different perspectives of the rules or standards, which indicates the codified nature of field as
well as continued struggle for legitimacy by individuals and groups within the field. These different interpretations of the rules are influenced, in part, by the perspectives of faculty members who assist in establishing particular forms of autonomy for the broader field of Philosophy and academe. Specifically in relation to conferencing mores and publishing expectations, these faculty members provide critical information to doctoral students, which these students internalize and of which they try to make sense. Significantly, doctoral students realize that rules exist, but also, and equally importantly, these struggles that continue to define the rules and standards of success are constantly at stake. I turn now to the field of research, teaching and institutional hierarchy that participants articulated. This field is broader in scope than the previous, but it emphasizes similar elements of a hierarchy of value and initial lack of transparency.

**Tensions Among Research, Teaching and Institution as a Field**

The hierarchy of value was also evident in participants’ interpretation of the emphasis on research versus teaching in their doctoral program. Some noted that the imbalance of focus toward research may be linked to the nature of this particular doctoral program in Philosophy, which may also be linked to perceptions of research intensity as a proxy to institutional or programmatic quality. Lisa provided considerable detail about the imbalance between research and teaching and how it may be related to the nature of the program,

I expected, and this might just be the nature of this program per se, I expected that it would be more “okay”, if you chose to not want to be the superstar researcher that travels the world and is at the top university, but that rather you chose that you wanted to be more of a “teacher” and focus on the teaching and whatnot. I’m interested in the research, but I’m also very much interested in the teaching part of it, and so I would be perfectly happy teaching at a
smaller liberal arts college, where I’d have some time to do my research, but I’m happy having a decent teaching load. And there are some people in the department that look down on that. “Oh, that’s because you can’t cut it in the research and you’re choosing you’re going into teaching”. In the Philosophy department there is over a hundred faculty members. So you’ve got plenty of them who are “oh, yeah, it’s perfectly fine to go into teaching and then commend that”. And others would say, “if you’re not going to become a fancy researcher, then you should just leave the program, and leave your spot for somebody else”. Obviously, this is a top, what 20 programs, so obviously they want to push out good researchers. They want to push out people that are really super stars. They don’t want to push out people a bunch of people that are looking for smaller liberal arts college teaching positions.

This tension about research and teaching was also noted by Frank, and he suggested that this sort of imbalance would steer him out of an academic career,

What I’m interested in most is teaching Philosophy. That’s what excites me the most. I would want to publish; I would want to write about stuff. But that would not be my primary focus and I think...I do feel somewhat different than other people who are just very gung-ho and want to publish. So the fact that I think a lot of the emphasis seems to be on publishing and evaluation based on publishing and that sort of performance, rather than teaching, is something that kind of pushes me against that [an academic career].

While Ted did not emphasize this imbalance between research and teaching specifically, his interpretation between institutional quality and the likelihood of securing employment as an academic was evident,

I mean the reasons why I stuck around in the doctoral program is because [this institution] is a good school … Philosophy. That played a major role in my decision… when I was applying to schools I was “if I get into a good place,
I’ll go” because then there’s at least a fair decent chance that I will find employment as a professor somewhere. If your expectations are correct for what you are getting into, then I would recommend anybody to take a Ph.D. [at this institution], or in any other school in Canada, so long as your expectations are right, because you get a Ph.D. at [smaller, less research-intensive university], your chances of getting employment are 1 to 2%.

These participants’ comments highlight a significant perceived imbalance between research and teaching in this doctoral program, which may also be linked to assumptions about academic quality and research intensity. These reinforcing hierarchical patterns (need for publications, scholarships, and conference presentations as well as the focus on research over teaching) suggest dynamics that shape the experiences of doctoral students. Students’ awareness of these elements may reconfigure their approach not only to their particular educational experiences, but also more broadly to their career and employment options. Finally, I turn to a discussion about the academic field more broadly and how aspects of doctoral education as well as the academic labour market are folded into an understanding of the academic field.

**Academe as a Field**

Many participants reflected on the difficult academic job market and how various aspects of the doctoral student experience were related to “marketing” or “selling” oneself. This suggested that the activities in doctoral study not only enabled students to learn about the discipline and broader academic field, but also constituted an opportunity for individual students to create, establish and maintain a brand of oneself as that brand possessed value by the rules and expectations of the academic field. Ken provided a broad overview of many of the aspects that other participants emphasized that related to an awareness of the academic
field, “I think my biggest problem that I’ve learned is that: okay, you have to accept that there are sort of rules that you have to abide by and I’m sort of a loose cannon. So I think part of the last few years is realizing learn the technique, learn how everything is done”. Arthur discussed a change in his understanding of what was valued in academe and his resistance to that interpretation,

I think a lot of people’s expectations in those [academic job prospects] regards are very, very, very naïve. In general, and now, even more specific, because it’s, I’m sure you’re aware, it’s quite a bit hard. Yeah. So, I’m finding that … I suppose in a nutshell, before I’d known and I thought … so the really, really hard part is going to be putting together this thesis thing. And then, but once you’ve done that everything will just fall into place like dominoes. And, I realize, it’s in fact, the opposite. The hardest thing is to get all the other dominoes lined up around the thesis project. The thesis project is like the last tiny little domino that falls at the end… Obviously, you need to publish a lot more outside of your thesis. You need to go to conferences. Get to know other academics more, because … I suppose, one of the ways that you can describe this change in my perception is … my perception before was that people would want to hire you solely on the basis of your academic work which they would immediately see the merit of. As opposed to you having to sell your academic work in ways that don’t seem traditionally academic.

While Arthur offered his interpretation on links between activities during doctoral study and employment outcomes, James’ comment emphasized competition amongst students and was more specific to day-to-day situations during doctoral study,

In the back of our minds we know we’re going to be competing for jobs with one another. This caution is very much like...you know I don’t like going to talks here, because everybody’s trying to shine and so it becomes a competition. Who raises their hand first and who has the best question and
who can go through the material and understand it better. It’s not about building the ideas, but it’s more about you showing yourself off.

Lisa told a story about her brother’s experience, who was enrolled in Ph.D. program in Philosophy at another institution, and this story was similar to those of her colleagues,

His [brother] bubble about what academic philosophy is has been burst. He thought it was very much kind of where it’s all about the ideas and there’s no kind of politics, and there’s no bureaucracy... Everybody just wants to be pure philosophers and that’s not how it works. So that bubble has been burst and so now he’s kind of fearful that it will be a similar dynamic no matter where he goes that it’s about publications and conferences and references and getting your name out. He doesn’t want to do that whole kind of marketing … he wants to just be able to pursue ideas for ideas sake.

Lisa continued to state that she found the “marketing” expectation and requirement as very difficult to understand and successfully perform,

It really is a kind of as you approach the end, and now you are really in this … you’re in a marketing kind of … I call it a “marketing business mode” where now it’s about you need to find a way to make yourself sell, because it’s very competitive to get a job, and you’ve put all this time into this and you need to get a job. So how can you sell yourself, and the kind of having to switch yourself into that mode and figure out “what sells, what sells, what sells”. And do things strategically to try and make yourself sellable. I found that to be very difficult.

While participants lamented this marketing orientation that undermined the integrity of “being an academic”, other participants claimed that the lack of transparency around the job market realities were linked to broader intentions at the departmental level. Leslie suggested,
There is huge incentive for departments like mine to keep graduate students around. We provide them with an amazing teaching help, RA help... it happens to be the case that there’s perverse incentive for department administrators to not reveal the information that I told you that I wish I had, which is basically, “honey, you’re not going to get a job”. If someone had just told me that even that if everything goes fine and you somehow do become a superstar and publish, you won’t end up in a major city in a good school teaching. That’s information that they don’t have the incentive to give.

Reflecting on her decision to enroll in the doctoral program, after a successful career outside of academe, Leslie revealed,

I would probably have a pretty easy time transitioning to a policy analyst job or a consulting job straight out at a consulting firm and given that there’s no jobs in philosophy. There are so few jobs in philosophy, I just did not understand this when I left government to come back to the Ph.D. Everyone tells you and you think “I’m different”. So I’m scheming to transition to [another education-related] job, because I’m doing [specific discipline/program], which will actually be helped by having some practical experience after my Ph.D.

Finally, Sarah recognized that she would be moving into a difficult academic labour market, but was more grounded about her employment possibilities, “That [to be a professor] is something that I want, but I think it is really important to be realistic, as well, and not set yourself up for disappointment. The job market is not good. So, do I want that, yes? Will I be heartbroken if I don’t get it? No.”

These comments suggest that participants’ awareness of the academic field was evident; however, their reactions to that awareness may have produced some cognitive and emotional dissonance for many of them. This awareness was spread across multiple and, at
times, intersecting contexts so as to demonstrate the multiple subtleties required to comprehensively conceptualize the academic field. While participants communicated some clarity (and mild consensus) about the need to achieve publications and scholarships as indicators of success from previous sections, comments from this section highlight the complicated nature of field and the struggles for autonomy that operate. Participants emphasized the need to “market themselves” near the end of their doctoral journey, which signals the presence of external pressures (marketing/advertising) to the field that shifts the rules of standards and of success from purely academic notions of achievement to more complicated dynamics. I turn now to a discussion of the intersections among habitus, capital and field and demonstrate the saliency of these concepts to understanding the doctoral student experience as perceived by these students in Philosophy.

**Intersections Among Habitus, Capital and Field**

This discussion has focused on exploring the relevance of the concepts of habitus, capital and field to participants’ experiences in doctoral study. This relevance has been revealed on two particular levels: (a) some participants possess experiences and relationships that are of considerable valuable in doctoral study and that value enabled deeper understandings of expectations as well as more noticeable competencies with the academic tasks needed to be successful within doctoral education; and (b) some participants engage in doctoral study and its processes with frameworks or tools or expectations that originate from experiences or relationships that they were exposed to prior to doctoral education. Importantly, by examining the intersections among habitus, capital and field, I hope to further illuminate the saliency of these concepts to the experiences of these participants during doctoral study.
There was a marked difference across multiple contexts between participants who had family members who completed doctoral or graduate study and participants who did not have family members with similar experiences. Interestingly, for those participants with academic familial histories, there was not a common achievement or particular relationship that defined the extent of that academic lineage. However, it was noticeable that these participants had greater awareness of the academic field, or felt more comfortable with certain performance expectations, or communicated stronger relationships with faculty members than participants without academic familial histories. Also, there were a couple of participants who did not have academic families and definitely communicated feelings of other-ness in relation to the expectations of doctoral study and academe or to the expectations of Philosophy as a discipline or described great surprise at the tacit expectations related to academic work in doctoral study.

There were specific comments from participants that reflect these sorts of linkages between familial history and the dynamics of doctoral study. Ted revealed his understanding of many issues highlighted by my focus on habitus, capital and field,

You guys are doing the exact same work and very often you get these things [scholarships] coming out of your undergrad, so … They put the most money into people at the stage where you don’t know what’s going to happen with them. So you might end up with somebody who has got nothing and somebody who has the big Canada Graduate Scholarship, and really the difference between them is minimal. It’s what school they went to. It’s who they have writing their letters. It’s how much they have been coached by, in many cases, peoples parents are academics or people like me who have no idea. “Who should I ask for my letters”, I have no idea who’s famous, who’s
not. People don’t like [previous supervisor], I don’t know this. You kind of find this stuff out afterwards.

Further, Lisa articulated frustration with the scholarship application process in her department. An important variable to this comment may be the notion that she was not from an academic family and was not successful with securing scholarships or publications,

I think my only disappointment is with the awards, and that’s where it’s a little bit to a disadvantage to be in a large department … because obviously, a larger department has a larger quota of people they can put through, for example, with the OGS and the SSHRC and whatnot, but it’s more … there’s a larger quota, but there’s a lot more competition. You have more applications coming in, and it’s … yeah, I mean the cream of the crop rises and you see very quickly and you know exactly who to put through and who not to put through.

Lastly, Ken, who did not have academic parents, communicated his feelings of otherness in the discipline of Philosophy, but he experienced a situation where interactions between habitus, capital and field may have proven evident,

Yeah, like I just found out there’s a…our department is aligning with…I don’t even know…somehow aligning with the [prestigious research university]… I just found out one of my peers is going over there to give a paper. I was like, “I never even heard about this and he’s going to give a paper”. So I mean that’s a really good opportunity for him, but it’s like why did he get picked and not me or something like that, right?

A critical dimension to this comment was that the student who was given this opportunity was from an academic family and was informed about the opportunity from his supervisor, and Ken was not.
The last significant development about the use of Bourdieu’s (1977, 1990) concepts to the study of doctoral education can be found in the notion of “reinforcing” advantage. In some ways, the notion that individuals from highly-educated families would be more “successful” in similar educational contexts may seem more aligned with my aforementioned point. While this tendency seems to exist, I also wanted to emphasize that the practices of doctoral education can be conceptualized as mechanisms that reinforce advantage in particular academic contexts. Sarah, while not from an academic family, certainly engaged in the application to and experience of doctoral study in strategic ways that could be explained with Bourdieu’s concepts. Through her understanding of the rules for success and the struggles for legitimization, she was able to secure a particular accomplishment that she perceived as important to her ability to negotiate relationships in doctoral study. Sarah’s experiences reveal the possibility of change and innovation to Bourdieu’s theory of practice. While she did not come from a wealthy family, or have relatives with doctoral degrees, she was able to gain legitimacy in doctoral study, but more importantly, recognized that this legitimacy was tied to particular academic achievements and demonstrations of competence. Hence, she provided a comment that demonstrates the saliency of Bourdieu’s concepts particularly in the context of doctoral study and academe more broadly,

I think part of what happens when you apply for something like a SSHRC or an NSERC is that you are ranked by your department. And so I think that this makes some other people sometimes feel badly that they assume that you were ranked above them. And that might have been true, but if so, it’s mainly because the department recognizes that once you have gotten an award from these people once, they tend to believe themselves. If they thought you were worthy of an award in your master’s program, they are going to be inclined to think that they were right and give you an award. It’s this sort of “nothing
succeeds like success”. I don’t think I had done anything up to the point of the applications in the first term to distinguish myself, except having won a SSHRC before, to get ranked ahead of people who were probably doing better than I was. And the faculty, just because there are certain people they know who has won awards, they just expect more of you in a good way. Like when something stupid comes out of your mouth, because you’re somebody who has won a big scholarship, they assume it is not as stupid as it sounded, whereas if something stupid came out of your mouth and you hadn’t won that scholarship, maybe you’re stupid. They cut you more slack.

This last comment reveals the intersections among achievement, hierarchy of value and legitimacy on which Bourdieu’s (1977, 1990) concepts were originally designed. The application of Bourdieu’s habitus, capital and field demonstrate that particular individuals with specific experiences and relationships find the expectations and task requirements in doctoral study easier to understand and perform. Also, as importantly, the multiple experiences and relationships that individuals possess can be thought of as components to a framework that enable individuals to engage in doctoral study and the broader practices of academic work. I turn now to a discussion of the major findings of my research in relation to my specific research questions. Also, I identify specific limitations to this study and then I explore implications of these findings to future research on the doctoral student experience, doctoral education and the academic profession.
Chapter 6
Major Findings and Conclusions

Introduction

This research explored doctoral education, in general, and the socialization of doctoral students, in particular, using the concepts of Pierre Bourdieu (1977, 1990). Scholarly attention to doctoral education and to the experiences of doctoral students has increased over the last two decades, and doctoral education has been framed as a significant policy lever to increase individual social and economic mobility across jurisdictions. Two central aspects of this research involved an examination of the experiences of current doctoral students as well as a focus on discipline as significant factors to understand the traction and relevance of Bourdieu’s tools to doctoral education. This interest in students’ experiences and the importance of disciplinary contexts reflects recent scholarship that has emphasized these elements as crucial to understandings of doctoral education. Similarly, the qualitative approach to gathering data provides a rich methodology to understand the voices of students and their perspectives and interpretations about their experiences in doctoral study. Importantly, I used the concepts of habitus, capital and field to understand the experiences and relationships of doctoral students prior to and during doctoral study, and revealed that there are significant linkages between participants’ histories, experiences and trajectories that prove crucial to how they engaged in doctoral study.

Habitus can be considered both a restrictive and generative mechanism to individual action as early socialization experiences and practices are internalized by individuals. This internalization results in an understanding of what actions and behaviours are most
acceptable and understandable in different contexts and milieus. In addition to habitus, capital is a central feature of Bourdieu’s theory of practice and can be thought of as accumulated labour and as a form of power. Bourdieu argued that there are three forms of capital that are individually possessed and can be converted into one another: economic, cultural and social capitals. Economic capital refers to money and financial resources, while cultural capital concerns educational credentials, knowledge about schooling and aesthetic preferences. Finally, social capital emphasizes relationships with individuals and access to their resources and knowledge. Lastly, field can be as an abstract concept that possesses particular rules and expectations that define what is valued in that particular context, as well as continued struggles amongst individuals to establish the conditions of value and worth.

This chapter explores findings from both disciplines that are illuminated with this focus on habitus, capital and field. Efforts to articulate similar findings across disciplines as well as a specific discipline-based conventions or norms are revealed. Further, specific implications related to the conceptualization of doctoral education as well as to the model of doctoral student socialization are discussed. Next, methodological limitations of this research and suggestions for further research are offered prior to a concluding section that summarizes this research and its scholarly significance. Most importantly, this research demonstrates that doctoral education can be conceptualized as a context that has particular rules that enable students to be successful and that students with specific experiences and relationship understand the expectations of doctoral study and demonstrate greater acumen and competence with academic tasks that reflect and reinforce particular definitions of success.
Cross-Case Analysis of Engineering and Philosophy

The focus of this research was to investigate the experience of doctoral students in the disciplines of Engineering and of Philosophy with the analytical concepts of Pierre Bourdieu (1977, 1990). In particular, the concepts of habitus, capital and field were used to explore the dynamics of doctoral education through an understanding of the experiences and relationships of current doctoral students prior to and during doctoral study. Fundamentally, the research revealed that the saliency of these concepts to doctoral education operated on two distinct levels: (a) that particular experiences and relationships that students acquire prior to doctoral education enable them to understand the dynamics and expectations of doctoral study to the extent that they are more successful at demonstrating competence and; (b) some students engaged in doctoral study with particular expectations or perspectives that were derived from experiences or relationships prior to doctoral study.

Participants from both disciplines revealed that the pursuit of a university education was a normalized expectation from their families. Participants commented that parental encouragement to complete undergraduate studies was, at times, explicitly discussed, but more often, was assumed by these participants as the only desirable action. Also, 14 out of 15 participants revealed that their parents had attended or completed university. Interestingly, of the participants who communicated that their parents completed university education, eleven participants revealed that their parents were employed in professional fields and/or completed graduate or doctoral studies. So, the saliency of the pursuit and completion of university education operated on numerous levels for these participants. Completing a university education was normalized by these participants which can be thought of as a
component of their habitus. Early interaction with parents may have contributed to participants’ understanding that a university education was a desirable (and required) pursuit.

The role of habitus to the articulations of these participants also concerns how the power of early socialization provides actions and perspectives that seem appropriate in various contexts. More specifically, participants in both disciplines described instances where the understanding of experiences or relationships prior to doctoral study was used as a lens through which to engage in doctoral study. From Engineering, Greg had a father who had an entrepreneurial history, and Greg internalized this specific history as a way to understand and to engage in his doctoral education. Also, from Philosophy, three students discussed the notion of “other-ness” to their educational trajectories. This other-ness was rooted in religion for two students and in differential academic achievement for one student; however, all three students experienced other-ness during doctoral study in ways that connected with earlier histories and contexts related to this other-ness. Hence, examples from both disciplines reinforce the importance of habitus as a constellation of perceptions and understandings of action that individuals utilize across contexts. Even though doctoral education and academe more broadly does not necessarily view entrepreneurialism and other-ness as indicators of success, the importance here is that the presence of these elements in the histories of students and the fact that these same students used these elements or frameworks to engage in and conceptualize doctoral education.

In addition to this diversified application of habitus, the notion of participants’ parents completing advanced education suggests that an example of cultural capital operated in various ways for participants: education credentials. From Philosophy interviews, Paul describes his familial history of professional and/or graduate degree acquisition, “So my dad
is an architect. My mom is presently an Arts teacher….my father’s father and his father both are Professors of Philosophy”. From Engineering interviews, three participants revealed their parental educational achievements. For instance, Susan revealed, “So they [parents] both have master’s degrees. My mother had a master’s in French literature. And my Dad was History and did a master’s of education in History”. Also from Engineering, Margaret discussed both parents’ academic achievements, “My Dad teaches Chinese language and literature at [a university in Canada]. He’s a professor there. My mother…did a bit of postgrad work and then ended up working at the research centre at [the same university]”.

This tendency for high parental educational achievement amongst doctoral students resembles research conducted through quantitative approaches that revealed that doctoral degree recipients appeared to have had parents with substantial educational attainment (Smith and Tang, 1994; Nettles and Millet, 2006). While the scope of the interview questions did not address specific connections or experiences between parental educational attainment and resultant student aspirations to doctoral study, the presence of these two factors amongst participant narratives that were overwhelmingly positive about doctoral study is an interesting aspect of this research. As will be noted later in this chapter, the relational aspects of habitus, capital and field in the context of academic work in doctoral study suggest interesting future research on the specific experiences and relationships of doctoral students who are the children of academics.

The acquisition of an education credential is in and of itself an example of cultural capital; however, a related element of cultural capital that also connects to habitus is the ability to feel comfortable in educative environment and to engage in relationships with individuals within these contexts (e.g., teachers). Participants communicated a comfort and
ease in doctoral study as well as the building of supportive relationships with teachers and professors throughout participants’ educational journeys. Susan from Engineering commented on her comfort about the relationships with individuals in doctoral study, “And I knew like early on that I was like… I love being surrounded by these kinds of people and I want to always be surrounded by these kinds of people, so that was something I for sure wanted”. In addition, Alana from Philosophy emphasized the importance of her history of nurturing relationships with teachers,

I was quite close to my teachers usually, and I was in a gifted program starting in Grade 4, so I was surrounded by kids who were similarly, academically inclined. Certain teachers and my relationships with teachers really stand out all through my younger years. I tended to form close relationships with my teachers, admire them, value their opinion.

The building of supportive relationships with teachers and faculty members can also be thought of as an element to the significance of social capital to the experiences of these doctoral student participants. Participants highlighted the importance of faculty member support to a myriad of elements related to doctoral education: reference letters, verbal encouragement to apply, advice on professional development during doctoral study, and support for personal issues. For instance, Margaret from Engineering described how working with different faculty members enabled her to identify the best supervisor,

I had the luxury of knowing or having worked with all of my potential master’s supervisors. There were three guys that I considered and I had done fourth year projects with two of them and a co-op term with one of them. All very good scientists and it was a case of picking who I thought would be best for me first.
From Philosophy, Ken articulated the diversity of support from faculty members,

He [faculty member] won’t be my thesis supervisor, but he’s sort of my supervisor for the first 2 years. Unbelievable. Absolutely unbelievable. A real mentor. He’s been a big part of my...he’s supported me in issues in my personal life and in my academic life. And I can’t say enough good things, so that has really helped me out a ton. Because I’ve come in with some pretty clear weakness, he’s helped me identify them, hasn’t made me feel insecure about them, helped me sort of improve, because they need to get better, you know? He’s great like that.

While habitus and capital played significant roles in the experiences of these doctoral students, the concept of field was a particularly powerful element to their stories. Participants articulated an awareness of multiple fields. Interestingly, participants did not mention the pursuit of a community college education, and there were a couple of participants who were apprehensive about revealing that they spent some time at college prior to their undergraduate education. From a Bourdieusian perspective, this apprehension to reveal community college enrolment suggests a perceived hierarchy of value between the educational settings of university and of community college. Participants internalized this differential value such that community college was considered lower than university education, such that post-secondary education was a field that possessed rules of success and value. A component of their histories that contributed to this interpretation was the normalized understanding of the pursuit of a university education from their parents and their parents’ achievements. From Philosophy, Leslie highlighted this implicit differential value associated with the pursuit of a university education, “But it was never a question whether or not I would go to university because of the mentality under which I grew up. The same one that taught me I have to do engineering was the same one that said, “If you don’t go to
university, you’re a nobody”. So, given that one or both parents of nearly all of the participants completed university education, participants understood that a university education was the desirable pursuit.

From interviews in both departments, participants recognized that their discipline possessed particular conventions or norms and that these norms impacted specific aspects of doctoral education. For instance, in Engineering, participants discussed the nature of research, as informed by industrial partners, as well as the admission procedure to the doctoral program which focused on the supervisor, and not the department. The influence of industrial partners to the experiences of doctoral students in disciplines similar to Engineering was explored in Mendoza’s (2007) work on the role of academic capitalism and doctoral student socialization. Her work focused specifically on a Materials Science department; however, she contended that disciplines that possess greater affinity to “market dynamics” would be amenable to issues associated with academic capitalism or market-like behaviours. While this market orientation was not present in Philosophy, the doctoral students in Philosophy revealed how this discipline constituted more than just content or subject matter and thus provided tools or mechanisms to enable cognitive and writing clarity. There has been a paucity of research that investigated Philosophy as a disciplinary context for doctoral education or for doctoral student socialization (except for Golde & Dore, 2001).

Another aspect of the experiences of doctoral students that can be linked to disciplinary differences was the formal mechanisms in the program or department for collaboration, community and teamwork amongst doctoral students. Both the research funding infrastructure and research supervision style of Engineering enabled experiences for students grounded in collaboration and teamwork. In Philosophy, the pro seminar course was
cited by participants as a significant programmatic element; however, there were mixed
comments about the extent to which this course offered opportunities for community or
teamwork. While Philosophy doctoral students discussed a relatively collegial atmosphere
amongst students, very few formal mechanisms to build community were suggested by these
students.

Despite these differences across disciplines, participants also recognized similar
dynamics in their respective disciplines by examining the academic field in which their
discipline operated. So, participants from both disciplines noted the importance of academic
publishing as an indicator of success (and, in some ways, a necessity) during doctoral study.
There were subtle nuances to how each discipline conceptualized the significance of
academic publishing. In Engineering, students highlighted the expectations that doctoral
students engage in academic publishing during doctoral study, and one student lamented this
need for publication during doctoral study. Students commented on opportunities for
publication through the research supervisor and also through the research lab team. In
Philosophy, the notion of publication was cited as an important accomplishment; however,
students were cautioned about publishing “too early” in their doctoral study. Students
revealed that faculty members encouraged students to delay publishing manuscripts until in
their final year of doctoral study. Each discipline possessed a particular ethos regarding
academic publication: Engineering was focused on production and quantity, while
Philosophy emphasized caution and quality.

Further, both groups of participants highlighted the importance of securing research
funding during doctoral study. The origin of this funding was different for each discipline as
industrial partners were crucial to the research infrastructure of Engineering and external
funding through competitive scholarships were critical to the research culture of Philosophy. Nevertheless, funding for research was an important aspect to these students’ doctoral journeys. The congruence between these notions reflects the broader nature of academe and the rules and expectations that govern “success” in the academic field. More specifically, the need for peer-reviewed publications and for securing external funding may be more consistent with broader interpretations of success (and necessity) with the academic field and is promoted across disciplines. So, there may be disciplinary nuances to these elements of success; however the presence of these elements in both disciplines may suggest that this could be a broader trend across disciplines and indicates a rule or expectation of academe as an organization or the academic field.

Another significant distinction between these disciplines was the explicit departmental infrastructure to assist doctoral graduates with securing employment upon graduation. In Philosophy, there was a specific faculty member and administrative personnel who coordinated academic job applications from doctoral students. This two-person team was known as the placement officers, and their mandate was to generate the strongest application to academic jobs for graduating doctoral students. In Engineering, students discussed the presence of industrial partners in research projects, and hinted at the possibility of securing employment with these partners upon graduation; however, there was no formal mechanism or infrastructure to solidify this employment potentiality.

Finally, a crucial difference between these disciplines that also constitutes a departure from the scholarly literature was the presence of monetary resources available to doctoral students in each department. Nerad (2004) revealed the common conceptualization of the sciences and humanities as related to amount of resources, “students in the sciences and
engineering are well-funded…those in the humanities and social sciences have the double burden of limited funding resources and long courses of study” (p. 189). However, this tendency of “sciences as rich” and “humanities as poor” was not fulfilled through this research. Two of the 5 students from Engineering revealed financial difficulty related to a fifth year of doctoral study because the funding package only covered 4 years. Also, these students revealed the lack of departmental funding for conference travel as well as the purchasing of lab equipment. Meanwhile, the department of Philosophy seemed to operate with considerable funds and a flexible budget that included resources for conference travel for doctoral students and for social activities. Also, the composition and amount of funding for Philosophy doctoral students was very generous and did not require extensive teaching duties for students. So, the findings from this research not only suggest disciplinary differences related to funding amounts and options, but also provide evidence against the common conceptualizations of the disciplines related to resources.

Given previous research that revealed the need to consider disciplinary aspects to understanding doctoral students’ experiences (see Golde & Dore, 2004), the effect of each discipline was noted in participants’ stories; however, how understandings of each discipline intersected with Bourdieu’s (1977, 1990) concepts was less straightforward. While there was not a specific combination or presence of habitus, capital and field that suggested the pursuit of a particular discipline, the participants who possessed intersections among these elements demonstrated greater awareness of and competence with the expectations and tasks of academic work.

Research on doctoral education focusing on the disciplines of Engineering and of Philosophy has been rather limited. The only research that explored participant responses
from Philosophy was the Golde and Dore (2001) quantitative study and the results were aggregated across disciplinary fields. No other research has focused exclusively on the experiences of doctoral students in Philosophy. Often, research that examined the disciplines within the humanities (Golde et al., 2006) has emphasized the disciplines of English and of History. Similarly, the literature on Engineering doctoral education has been aggregated to discuss aspects of the doctoral student experience with Engineering as representative of the STEM fields, with no focus on a case-study analysis of Engineering (Nettles & Millet, 2006). Literature that focused on Engineering doctoral education highlighted the paucity of attention to graduate education relative to undergraduate education to the extent that there has been “a certain complacency in academe regarding [Engineering] graduate education” (Akay, 2008, p. 405).

The discussion thus far has focused on elements of my findings that demonstrate the saliency of Bourdieu’s (1977, 1986, 1990) concepts in isolation from each other; however, by examining the intersections among habitus, capital and field, a more detailed articulation of the findings from my research emerges. The intersections among habitus, capital and field produced a clustering of participants and their experiences and relationships that could be considered “successful” in doctoral study. Specifically, the 5 participants who had parents or close relatives who completed graduate or doctoral study communicated greater ease with and awareness of the expectations within doctoral education. As such, the habitus of these participants involved a sensibility about the pursuit of graduate or doctoral education as a viable action, and a related comfort with the spoken and unspoken rules of academe accompanied the articulations of these participants. Similarly, the participants developed strong linkages with faculty members prior to and during doctoral study, and simultaneously,
discussed the pursuit of advanced education as a “natural” decision. Participants from Philosophy were particularly transparent about this “comfort” as Paul described his interest in the pursuit of an academic career,

Well, I think from about the age of 16 or 17 onwards, I was quite confident that I wanted to pursue an academic career. Probably earlier than that, actually, although with less sense of exactly that would entail. So, I’ve always found learning and teaching and discussing academic matters my primary area of interest and my primary area of competence. So, it always seemed kind of the obvious choice to take a doctorate and then seek an academic position.

Also, Ted echoed this comfort with doctoral study,

Once I got to doctoral studies, I just kind of found that it suited me pretty well…you are always just doing it on your own, and it suited me because I found that I could read the stuff really quickly and go into the seminar and be able to talk about it without there being much issue. I felt it suited me because again, it was okay. I was doing reasonably well at it. And, I’m academically inclined.

Also, these participants demonstrated a keen awareness of the dynamics of research funding, competitive scholarships, professional development, academic publishing and the broader academic labour market. Finally, these participants were successful at attaining these publications, scholarships and/or faculty member sponsorship. This understanding of the intersections of the tasks and dynamics of academic life can be found in the stories of some of the participants. In particular, Margaret from Engineering discussed different components of academic life, and articulated connections amongst these components,

I had the CIHR scholarship for my master’s; I didn’t have it in the first term; I had the [specific health institution scholarship], but then I got the CIHR
funding in the second term of my master’s. My master’s supervisor is very
good at writing grant applications and helped with the first scholarship
application. I suspect that went a ways to helping, but then I also had a patent
pending, which can’t have hurt. But, I think the fact that I had a lot of help
writing the application was a big deal.

In addition, Margaret revealed both the saliency of habitus, capital and field in doctoral study
as well as the notion that combining these elements can result in “reinforcing advantage” in
doctoral study,

Something I like about my current lab is the notion of sort of a more holistic
training environment, where it isn’t just the research. It’s also the other stuff
you will need to make yourself an attractive prospect as a full package
researcher. Or a full package academic, I guess. So, the inclusion in...you get
the opportunity to be included in grant writing, the opportunity to be included
in sort of strategic direction discussions sometimes, which is interesting…I’ve
been willing to put a substantial amount of work into making sure that the
projects I’ve worked on, the opportunities I’ve been given, has had successful
outcomes and demonstrated competence tends to lead to more opportunities.
I’ve put the work in to make sure that things happen and I know that, for
example, my position on the current project, the larger project, is based on the
fact that I’ve been able to complete other projects…I try to do a good job with
the things I’ve been given. That leads to being given more.

Also from Engineering, Michael revealed a “value” associated with winning a scholarship
that impacted his perception of faculty support and encouragement,

A lot of my colleagues did [received scholarships]. I think probably about
two-thirds of the lab is on some scholarship or other, cause essentially if you
don’t get a scholarship, you’re less likely to be accepted…I guess. Between faculty
and students, yes. Between students and students, no. It’s more just the prof
sort of realizes that they’re paying for you out of their own pocket [if student
does not win scholarship], so I think you get a little bit less leeway in your
own work and possibly you get asked to do more annoying side tasks…And
also for sure when you have your own funding and you’re self aware enough
to know that you have some influence, then you can have much more say in
how projects get scoped and which supervisor you sign up with.

Interestingly, a powerful comment from Sarah from Philosophy reiterates the
conceptualization of doctoral education as constitutive of particular practices and
expectations that suggest differential values across academic tasks as well as the significance
of the accumulation of “successes” and how that accumulation impacts students’ experiences.
Importantly, Sarah did not have parents who completed doctoral study, and her experiences
in and perspectives about doctoral education reveal the significance of innovation and change
in Bourdieu’s (1977, 1990) theory of practice when there is incongruency between habitus
and field. Previously, I noted the congruence between habitus and field and the resultant
experiences and achievements of particular students in doctoral study. However, Sarah’s
narrative demonstrates the power of struggles for and awareness of various capitals that assist
in establishing legitimacy amongst different sets of rules for success. Yet, her comment
emphasizes an unequal structural interpretation of doctoral education,

I think part of what happens when you apply for something like a SSHRC or
an NSERC is that you are ranked by your department. And so I think that this
makes some other people sometimes feel badly that they assume that you were
ranked above them. And that might have been true, but if so, it’s mainly
because the department recognizes that once you have gotten an award from
these people once, they tend to believe themselves. If they thought you were
worthy of an award in your master’s program, they are going to be inclined to
think that they were right and give you an award. It’s this sort of “nothing
succeeds like success”. I don’t think I had done anything up to the point of the applications in the first term to distinguish myself, except having won a SSHRC before, to get ranked ahead of people who were probably doing better than I was. And the faculty, just because there are certain people they know who has won awards, they just expect more of you in a good way. Like when something stupid comes out of your mouth, because you’re somebody who has won a big scholarship, they assume it is not as stupid as it sounded, whereas if something stupid came out of your mouth and you hadn’t won that scholarship, maybe you’re stupid. They cut you more slack.

A crucial counter to this discussion about “successful” students is to reveal a particular understanding of “unsuccessful” students and their experiences in doctoral study. Michelle, from Engineering, described her “failure” to secure external, competitive scholarships and her perceived notion of being “behind” an expected doctoral degree completion trajectory, “I hold OGS 1 year here and I think because we’re late...behind in what we’re doing, so that sort of hampers our further ability to get more scholarships. Because you’re in here for 3 years and haven’t done enough work, you’re not going to get a scholarship”.

The following participants’ comments reveal their perceptions of how habitus, capital, and field can operate in doctoral study to enable particular groups of students to be successful. Importantly, these comments reinforce both the traction of Bourdieu’s concepts to doctoral education as well as the unequal structural orientation to doctoral study. Ted, from Philosophy, reveals,

You guys are doing the exact same work and very often you get these things [scholarships] coming out of your undergrad, so … They put the most money into people at the stage where you don’t know what’s going to happen with them. So you might end up with somebody who has got nothing and somebody who has the big CGS, and really the difference between them is minimal. It’s what school they went to. It’s who they have writing their letters.
It’s how much they have been coached by, in many cases, peoples parents are academics or people like me who have no idea. “Who should I ask for my letters”, I have no idea who’s famous, who’s not. People don’t like [previous supervisor], I don’t know this. You kind of find this stuff out afterwards.

Finally, Greg, from Engineering, discussed tensions about his lack of understanding related to specifics of the discipline and broader expectations of academe,

So maybe if you’ve had that background [disciplinary knowledge and specific research project], it’s a lot easier to make that decision because you kind of have a better sense of where you want to go. But when I came in I really had no real sense of what I wanted to do my research in. If I fully knew how the structure [in Engineering and academe] worked, it would have made a difference.

The finding of “successful” is a particularly powerful example of the saliency of Bourdieu’s concepts to doctoral education to the extent that it highlights how doctoral education can be made up of particular expectations and processes that possess value and the students who are able to understand these dynamics and demonstrate competence in the tasks that define academic work are better suited to experience “success” within doctoral study. So, on one level, the application of Bourdieu’s concepts to doctoral education suggest that particular experiences and relationships prior to doctoral education are more likely to gain traction within doctoral study to enable those particular students to experience aspects of academic work that are associated with doctoral study in ways that are deemed “appropriate” or “desirable” or “successful”. In addition, Bourdieu’s (1977, 1990) concepts of habitus, capital and field reveal that doctoral education, as a system of expectations and processes, imposes a value on particular aspects of academic work. Thus, the students who understand
this differential valuation within doctoral study tend to, according to this research, experience a more positive and “successful” experience within their doctoral education. Interestingly, it was the students themselves who internalized, interpreted and articulated notions of success in doctoral study as consistent with the performance metrics of full-time faculty members at research-intensive universities. In particular, the acquisition of research funding (scholarships) and publications were discussed by students as highly desirable since these achievements were thought to enable greater autonomy and “worth” in academic settings. While this understanding of the differential systems of value in doctoral education, and academe more broadly, may be related to parental educational attainment and related relationships and experiences prior to doctoral study, Bourdieu’s concepts as applied to doctoral education also reveal that the doctoral educational environment is also a field that has particular rules surrounding what is valued, and its accompanying value within doctoral study. As such, these rules of value seemed to be commensurate with tasks that are organized by the academic tripartite of research, teaching and service, with a particular emphasis on research activities. So, participants’ understanding of these dynamics was also related to their achievements and successes in doctoral study. This reinforcing advantage in the processes of doctoral study and in the achievements and perspectives of participants is a crucial implication of this research.

**Implications**

This research contributes in three distinct ways to the related scholarship on Bourdieu, doctoral education and the socialization of doctoral students. First, this research is the first application of Bourdieu’s (1977, 1990) theory of practice to doctoral education, in general, and to the socialization of doctoral students, in particular. Next, the findings of this
research suggest a new way of conceptualizing doctoral study: as constitutive of particular practices, processes and expectations that possess value and can create differential student experiences based on the accumulation of “capital” during doctoral study. This notion of “capital” includes the achievements of particular academic tasks (i.e., academic publishing or securing external funding); however, “capital” can also be framed as the attainment of multiple experiences and accomplishments in doctoral study as well as access to additional (and increasing) responsibilities and tasks in the academic field. Acker and Haque (2010) identified similar patterns of stratification through possible connections between doctoral education and the academic labour market. These authors touched on Bourdieu’s (1986) notion of capital as a mechanism to differentiate (and in some ways dictate) the acquisition of academic positions for particular doctoral students. As students demonstrate competence through the acquisition of academic accomplishments, they reveal to moderators of opportunities, who are faculty members, to provide additional opportunities and experiences to enable further successes for these students.

The differential portfolios of achievement in doctoral study enable some students to more successfully understand and negotiate expectations and relationships as well as perform related academic tasks with fluency and competence. This notion of success involves the histories and experiences of students prior to doctoral study as well as students’ academic achievements during doctoral study. Those students who could be considered more “successful” than other students demonstrated an awareness of and competence with the expectations and tasks of doctoral study. Also, the more “successful” students often had parents who completed doctoral study, so these individuals understood the rules and procedures of doctoral study which reflect interpretations of success that are similar to
broader elements of academe (e.g., academic publishing and securing external funding).

Taken together, this reinforcing or cumulative advantage for particular students with specific portfolios of accomplishments highlight the Matthew effect (Merton, 1968) in doctoral education and to the experiences of doctoral students. The notion of the Matthew effect originated from an analysis of researched conducted with Nobel laureates in the US (Merton, 1968). Specifically, the Matthew effect “consists in the accruing of greater increments of recognition for particular scientific contributions to scientists of considerable repute and the withholding of such recognition from scientists who have not yet made their mark” (Merton, 1968, p. 3).

There were instances where students (Sarah and Lisa, Philosophy; Greg, Engineering) without this sort of academic habitus were able to be aware of the rules and procedures that defined success in doctoral study; however, only one of them (Sarah) was able to demonstrate competence with an indicator of “success”. Despite this minority population, the incongruence between habitus and field demonstrated by Sarah, Lisa and Greg reveal that the presence of struggles for legitimacy in doctoral education can be understood and experienced by individuals even if they do not possess the academic habitus of their student colleagues.

Given this framework to understand doctoral study and the activities and relationships within it, a specific implication of this research concerns the socialization approach that characterizes much of the literature about the experiences of doctoral students. While there is some controversy between modernist and culturally-oriented post-modernist approaches to socialization, the Weinman et al. model (2001) (see Figure 1) remains the “most comprehensive framework for understanding graduate and professional student socialization” (Austin & McDaniels, 2006, p. 411).
Figure 1. Graduate socialization framework conceptualizing graduate and professional student socialization: The Weidman, Twale, and Stein (2001, p. 37) Interactive Stages of Socialization: Anticipatory, Formal, Informal, Personal.

The framework includes multiple elements of personal history, family networks, professional affiliations and institutional, programmatic and peer cultures to understand the socialization of doctoral students. This research adds additional rigour to this constellation of elements to socialization; however, a significant contribution of this research is how robust and influential certain elements are to socialization more so than other elements. This focus on Bourdieu’s (1977, 1990) concepts to the socialization of doctoral students reveals issues of legitimization, value and hierarchy that permeate, and in many ways shape, the doctoral student experience. Hence, socialization is not the same for all doctoral students, and Bourdieu’s notions of habitus, capital and field demonstrate that particular portfolios of accomplishment as well as a keen awareness of the tacit expectations of doctoral study, and
academe more broadly, enable different opportunities and relationships, and overall experiences, for doctoral students. Hence, there is a logic of practice (Bourdieu, 1990) to doctoral study.

Despite this presence of a logic of practice to doctoral education with particular relations and congruence among habitus, capital, and field, participants’ stories also reflected the bi-directional orientation to the socialization experiences of doctoral students. More specifically, while socialization highlights the significance of the institution or program shaping students’ experiences in doctoral study, recent scholarship has identified the multiple ways that students themselves bring particular experiences or understandings to the doctoral processes that pushes back on these institutional or programmatic dynamics (Antony & Taylor, 2004; McDaniels, 2010; Tierney & Bensimon, 1996). Findings from this research study emphasize similar trends of agency/resistance through participants’ stories. In particular, Greg (Engineering) and Sarah (Philosophy) were students who revealed incongruence between habitus and field, yet engaged in doctoral study in ways that demonstrated their particular understandings of academe that could be viewed as agentic or pushing back on institutional, disciplinary or programmatic norms.

This Bourdieusian interpretation of doctoral education has implications for the Weidman et al. (2001) model of socialization. In particular, the model casts four concentric ellipses as the influences to socialization. While these elements are considered non-linear, the size and shape of the ellipses implies that all elements possess equal weight and influence to the socialization of doctoral students. This research suggests that the concentric nature of these ellipses does not address the elements of hierarchy and differential value that these elements may have to the socialization of doctoral students. As such, the contours of these
ellipses may need to be modified to more accurately encapsulate these issues of inequality. Interpreting these ellipses with breaks, fissures, stresses or emphases enables a more nuanced version of socialization that is grounded in the diversity of students’ backgrounds and relationships and the value or significance of these dynamics to their socialization. Also, a more careful interpretation implies that critical aspects of academic work are valued differently, and thereby affect students’ experiences. A slightly nuanced depiction of the current Weidman et al. (2001) model of socialization (see Figure 2) highlights issues of power and differential value across academic work and contexts, and, in doing so, emphasizes notions of inequality within doctoral study.
Figure 2. Nuanced model of doctoral student socialization.

Here, the contexts, processes and communities emphasized by Weidman et al. (2001) remain; however, the three-dimensional approach attempts to capture the scope of significance of particular elements to doctoral student socialization. Similarly, the distance each element has from the centre context (university) also suggests a differential value to each element’s influence on doctoral student socialization which is centrally located within the university and its resultant practices and relationships.
Limitations

A major limitation of this study is the lack of generalizability due to its use of qualitative methodology. The results from this research are focused on the specific individuals within their respective departments at this particular institution. I cannot claim that these findings would occur again at another institution, in different departments or with additional participants. As such, these findings cannot apply broadly to the nature of other Engineering departments or other Philosophy departments at other institutions.

Also, the nature of these student populations does not necessarily encapsulate the experiences and perspectives of all doctoral students. In particular, these students were full-time and received funding packages, either through the program or through external competitive scholarships. As such, recent research (see Gardner & Gopaul, 2012) suggests that part-time and full-time doctoral students experience doctoral study differently due, in part, to their enrollment status. I raise this notion of enrollment status due to the increasing presence of part-time doctoral students at various institutions. Importantly, research about the doctoral student experience may need to consider enrollment status as a crucial variable to understanding the experiences and relationships of doctoral students across disciplines. Similarly, these students were enrolled in doctoral programs at a highly intensive research university. The preparation and training of doctoral students at less intensive research institutions would also be very insightful.

Related to this notion, many of the participants could be considered as fortunate, privileged or successful doctoral students. While all participants were not necessarily equally successful to one another, a limitation of this research is the focus on relatively fortunate
doctoral students who have experienced overall positive relationships and opportunities
during doctoral study. It would be interesting to explore the conceptual tools of Bourdieu
(1977, 1986) with students who occupy much less privileged or marginalized status.

**Future Research**

The results of this research provide entry points into particular areas of future
scholarship. The use of Bourdieu’s (1977, 1990) theory of practice to the study of doctoral
education can be framed as an initial attempt to apply the concepts from a major sociologist
to the dynamics of doctoral study. Future research can build on this approach by assessing
the contributions of other major social theorists to this area of scholarship. For instance,
social theorists like Gramsci, Said, and Fanon as well as philosophers such as Arendt,
Foucault and Nussbaum may provide additional nuances to understand doctoral education
and the experiences of students.

Considering the sustained interest in doctoral education and the multiple reform
efforts to doctoral education across jurisdiction, this research has particular relevance for the
continuance of reform initiatives. In particular, conceptualizing doctoral education as a
system of expectations and processes encourages institutional, departmental and
programmatic strategies to render visible these tacit aspects of doctoral study, which may be
more transparent to individuals who possess a familial history with graduate study. On one
level, the focus here is not to suggest that all students need to aspire to the professoriate, but
rather to inform students of the multiple processes and expectations that operate in doctoral
education and academe more broadly. Importantly, the only forum in which to prepare future
faculty members is doctoral education. So, in many ways, doctoral education will and should continue to operate as a system that enables the continuance of the professoriate.

On another level, the increasing enrollments in doctoral study as well as the turbulent academic labour market necessitate significant changes to programs of doctoral study. Faculty members, administrative personnel and students need to deliberately structure opportunities for students to engage in a diverse array of activities and projects that promote multiple experiences and skill sets. Students, in particular, need to be explicit and thoughtful about searching for and asking for different types of experiences and relationships during doctoral study. Most significantly, I would encourage students to recognize the academic tripartite that structures academic work, but to also move beyond this framework as a means of organizing activities during doctoral study. Departments and programs may be a little slower at implementing changes that are not rooted in the traditional notions of research, teaching, and service, so, students themselves can be the entry point into new conversations and possibilities related to doctoral study. Of course, this vulnerability by students needs to be supported and nurtured by faculty members and the broader institutional infrastructure.

This research was particularly focused on the role of discipline and of student experience to understanding practices in doctoral study. These elements were important foundations upon which this research was conducted, but also constitute crucial elements for future research. Both discipline and student experience can be considered through a focus on the mobility of doctoral student and graduates as well as its relation to labour/employment outcomes and trajectories. In particular, research focused on the academic labour market trajectories of “successful” students may provide important insights into stratified notions of academe and academic work. It may be that particular portfolios of success enable certain
students to access specific types of employment at specific sorts of institutions. Also, geographic mobility of doctoral students may reveal significant institutional or programmatic layers to the doctoral student experience such that students may be more concentrated in particular cities or institutions. In addition, mobility concerns employment trajectories and this aspect has significant disciplinary aspects. Disciplines that have programmatic elements that involve relationships with industrial partners may result in a shift by doctoral graduates to pursue non-academic employment rather than traditional professorial appointments. This notion is consistent with Mendoza’s (2007) findings from doctoral students in a Material Sciences department and Akay’s (2008) discussion of reform in Engineering doctoral education. So, these employment outcomes may have implications for the programmatic and curricular aspects of doctoral programs and, by extension, the experiences of doctoral students.

Lastly, given the tendency of cumulative effect or the Matthew effect from this research on doctoral student experiences, an intriguing future project may be to examine the relationships, experiences and perspectives of doctoral students who are the children of academics. It would be fascinating to hear about how these types of students interpret and engage with doctoral study.

Conclusion

This research explored the experiences of doctoral students in two different disciplines and utilized the concepts of Pierre Bourdieu (1977, 1990) to understand participants’ experiences and relationships prior to and during doctoral study. The focus of this research was not only to explicate the use of Bourdieu’s concepts to doctoral study, but
to also investigate the extent to which socialization dynamics fluctuated across participants based, in part, through the use of habitus, capital and field. Importantly, the findings from this research suggested significant nuances to the current model of socialization to more accurately demonstrate the aspects of inequality and hierarchy of value that are woven through the academic work of doctoral education. Fundamentally, this research revealed that not all students are socialized in similar ways, that activities and aspects of academic work possess differential values and socializing effects, and that students’ portfolio of achievements in doctoral education can be linked to particular experiences and relationships prior to and during doctoral study through Bourdieu’s habitus, capital and field.
References


Appendix A
Description of Research Project Letter

Date: July 24, 2010

Description of Research Project – Administrative and Departmental Elements

Dear Department Chair or equivalent:

I would like to advise you of a research project that I am undertaking for my doctoral dissertation in Higher Education in the department of Theory and Policy Studies in Education at OISE/UT under the supervision of Dr. Glen A. Jones.

The purpose of this study is to understand the experiences of doctoral students in Philosophy and Engineering at a large, urban research-intensive university in Ontario. I will interview 16-20 doctoral students. These doctoral students are at different phases of the doctoral process. To email these students, I plan to use the departmental listserv. To contextualize these experiences further, I will interview a faculty member and staff member to provide additional information about departmental, disciplinary and institutional aspects that inform the experiences of students. I would like these non-student participants to have some administrative responsibilities in the department as well as to possess substantial student interaction. Finally, I would also like to visit each department and conduct ethnographic observations of students, faculty and staff. I will take extensive field notes that will be used solely for the purposes of this doctoral research project. In providing these details about my research project, I hope to gain your authorization to conduct my project in your department and to contact the members of your department accordingly. This study will contribute to the academic literature on doctoral education, the socialization of doctoral students and the doctoral student experience by discussing current experiences in the context of early socialization as well as by revealing a more nuanced version of doctoral education. Understanding these experiences may assist in developing policy directions and initiatives, particularly at departmental and institutional levels, that reflect some of the themes that emerge from this research study.

Please contact me with your interest in authorizing this project and I will send you an administrative consent form as well as a departmental observations consent form via email. My doctoral thesis is being supervised by Professor Glen A. Jones who can be contacted at gjones@oise.utoronto.ca or 416-978-8292 should you require additional information that I am unable to provide. His mailing address is 252 Bloor Street West, 12th Floor Dean’s Office, Toronto, Ontario M5S 1V6.
I look forward to your participation and thank you for your contribution.

Best wishes,

Bryan Gopaul  
PhD Candidate, Higher Education  
Theory and Policy Studies

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Appendix B

Invitation to Participate: Faculty and Staff

UNIVERSITY OF TORONTO
OISE | ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

May 5, 2011
Request to Participate in a Research Interview - Faculty and Staff

Dear Participant:

I would like to invite you to participate in a research project that I am undertaking for my doctoral dissertation in Higher Education in the department of Theory and Policy Studies in Education at OISE/UT under the supervision of Dr. Glen A. Jones.

The purpose of this study is to understand the experiences of doctoral students in Philosophy and Engineering at a large, urban research-intensive university in Ontario. These doctoral students are at different phases of the doctoral process. To contextualize these experiences further, I am seeking the participation of a faculty member and staff member to provide additional information about departmental, disciplinary and institutional aspects that inform the experiences of students. I would like these non-student participants to have some administrative responsibilities in the department as well as to possess substantial student interaction. Participation in this project involves one interview session for approximately 45 minutes. This study will contribute to the academic literature on doctoral education, the socialization of doctoral students and the doctoral student experience by discussing current experiences in the context of early socialization as well as by revealing a more nuanced version of doctoral education. Understanding these experiences may assist in developing policy directions and initiatives, particularly at departmental and institutional levels, that reflects some of the themes that emerge from this research study.

You are among six identified faculty members and/or staff personnel from these departments selected to participate in this study. This interview will be audio-taped and then later transcribed and interpreted. The tapes will be stored in a locked cabinet in the researcher’s home for five years. You will be given an anonymous code to ensure confidentiality. You may withdraw from this interview at any time without consequence penalty or judgment. Please contact me with your interest in participating and I will send you an informed consent form via email. My doctoral thesis is being supervised by Professor Glen A. Jones who can be contacted at gjones@oise.utoronto.ca or 416-978-8292 should you require additional information that I am unable to provide. His mailing address is 252 Bloor Street West, 12th Floor Dean’s Office, Toronto, Ontario M5S 1V6.

I look forward to your participation and thank you for your contribution.

Best wishes,

Bryan Goepaul
PhD Candidate, Higher Education
Theory and Policy Studies

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Appendix C
Informed Consent: Faculty and Staff

August 4, 2010

Research title: The Socialization of Doctoral Students: Examples from Philosophy and Engineering

I have read and understood the description of the research study “The Socialization of Doctoral Students: Examples from Philosophy and Engineering” and have received sufficient answers to any additional questions which I have regarding this research project.

By signing this form, I confirm that I am a faculty member or staff member who has administrative responsibilities for the doctoral program of either Philosophy or Engineering at a large, urban research university in Ontario. I understand that for my participation in the interview, I hereby indicate that I am voluntarily willing to participate in the interview process and agree that the information I provide may be used for the purpose of your study. While this interview will be used primarily as an exit requirement for this researcher’s doctoral degree, I understand that the information from this interview may be used in academic publications and/or conference presentations. I understand that my anonymity will be preserved and that I can refuse to answer any question and/or quit the study at any time without consequence, penalty or judgment. I further understand that despite solid efforts to maintain confidentiality and anonymity, it is conceivable that the identities of myself or other administrative personnel may be discernable, as these positions are held by faculty and by staff members for a specified period of time. In addition, these individuals may be recognizable because there are usually only a handful of individuals responsible for administrative duties in each department. I understand that the interview will be audio-taped for the purposes of transcription and I consent to having this interview audio-taped. The tapes will be stored in a locked cabinet to which only the researcher will have access. I understand that the researcher will destroy this transcribed material five years after the completion of this project. I have kept a copy of this consent form for my records. Finally, I understand that I can get a copy of the transcribed interview by contacting the principal investigator, Bryan Gopaul at bryan.gopaul@utoronto.ca.

If further questions arise regarding my participation in this study, I can contact Bryan Gopaul at bryan.gopaul@utoronto.ca or at 647-388-6490. Also, I can contact the Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273, if I have questions about my rights as a participant. This doctoral thesis is being supervised by Professor Glen A. Jones and he can be contacted at 416-978-8292 for further information. His mailing address is 252 Bloor Street West, 12th Floor Dean’s Office, Toronto, Ontario M5S 1V6.

Name: ___________________________ Date: ___________________

Signature: ____________________________

Ontario Institute for Studies in Education
252 Bloor Street West, Toronto, ON M5S 1V6 Canada

www.oise.utoronto.ca
Signature: ___________________________

Bryan Gopaul
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bryan.gopaul@utoronto.ca
Email 1
Hello,
I am a PhD Candidate in Higher Education in the department of Theory and Policy Studies in Education at OISE/UT and have attached some documentation outlining my doctoral research project. This project investigates the experiences of doctoral students in two departments at this institution. I am contacting you to ascertain interest in participating in my research study. Please see the attached documents for further details and contact details.

Thank you,
Bryan Gopaul

Email 2
Dear Participant,
Thank you for your interest in my research project. To commence this process, please provide an updated version of your curriculum vita (CV). Please include the following areas: education, teaching/research assistantships, publications, conferences, consulting work, scholarships/fellowships internal and external to the University, work experience and any professional development experiences. This information will assist me to develop some questions that will inform our second interview. You can send this information to me electronically or in hardcopy. Please email me directly so that we can arrange a day, time and meeting place so that you can provide me with the signed consent form, the updated CV (if in hardcopy form) and I can clarify any questions you have about this research project.

Thank you,
Bryan Gopaul
Appendix E
Invitation to Participate: Students

UNIVERSITY OF TORONTO
OISE | ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

Date: February 21, 2011

Request to Participate in a Research Project - Students

Dear Participant:

I would like to invite you to participate in a research project that I am undertaking for my doctoral dissertation in Higher Education in the department of Theory and Policy Studies in Education at OISE/UT under the supervision of Dr. Glen A. Jones.

The purpose of this study is to understand the experiences of doctoral students in Philosophy and Engineering at a large, urban research-intensive university in Ontario. These doctoral students are at different phases of the doctoral process. Participation in this project involves providing a current curriculum vitae and completing one interviewing session. Your CV should include the following areas: education, teaching/research assistantships, publications, conferences, consulting work, scholarships/fellowships internal and external to the University, work experience and any professional development experiences. The interview session will be approximately 60 minutes, but will focus on different elements. For the first part of the interview, I will ask biographical questions to provide a broad sketch of your early experiences and relationships. The second half of the interview will focus on your experiences during doctoral education. This study will contribute to the academic literature on doctoral education, the socialization of doctoral students and the doctoral student experience by discussing current experiences in the context of early socialization as well as by revealing a more nuanced version of doctoral education.

Understanding these experiences may assist in developing policy directions and initiatives, particularly at departmental and institutional levels, that reflect some of the themes that emerge from this research study.

You will receive a $25 for participation in the interview.

You are among twenty identified, doctoral students from this institution selected to participate in this study. This interview will be audio-taped with your permission and then later transcribed and interpreted. The tapes will be stored in a locked cabinet in my home for five years. You will be given an anonymous code to ensure confidentiality. You may withdraw from this interview at any time. Please contact me to confirm your interest in participating in this study and I will send you the informed consent form via email. My doctoral thesis is being supervised by Professor Glen A. Jones who can be contacted at gjones@oisc.utoronto.ca or 416-978-8292 should you require additional information that I am unable to provide. His mailing address is 252 Bloor Street West, 12th Floor Dean’s Office, Toronto, Ontario M5S 1V6.

I look forward to your participation and thank you for your contribution.

Best wishes,
Bryan Gopaul
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Appendix F

Informed Consent: Students

March 21, 2011

Informed Consent Form

Research title: The Socialization of Doctoral Students: Examples from Philosophy and Engineering

I have read and understood the description of the research study “The Socialization of Doctoral Students: Examples from Philosophy and Engineering” and have received sufficient answers to any additional questions which I have regarding this research project.

By signing this form, I confirm that I am a student enrolled in a doctoral program in either Philosophy or Engineering at a large, urban research university in Ontario. I understand that prior to the interview I need to provide the researcher with an updated curriculum vita. I understand that this CV should include the following areas: education, teaching/research assistantships, publications, conferences, consulting work, scholarships/fellowships internal and external to the University, work experience and any professional development experiences. I also understand that participation in this project involves one interview that should require approximately 60 minutes to complete. The interview will focus on biographical information with specific focus on early (childhood) experiences and relationships that may be meaningful and/or influential and will investigate specific aspects of the doctoral student experience including relationships with faculty members and peers.

I further understand that I will receive a $25 for my participation in this interview.

I hereby indicate that I am voluntarily willing to participate in the interview process and agree that the information I provide may be used for the purpose of your study. While this interview will be used primarily as an exit requirement for this researcher’s doctoral degree, I understand that the information from this interview may be used in academic publications and/or conference presentations. I understand that my anonymity will be preserved and that I can refuse to answer any question and/or withdraw from the study at any time without consequence, penalty or judgment. I understand that the interview will be audio-taped for the purposes of transcription and I consent to having this interview audio-taped. The tapes will be stored in a locked cabinet in the researcher’s home to which only the researcher and thesis supervisor will have access. I understand that the researcher will destroy this transcribed material five years after the completion of this project. I have kept a copy of this consent form for my records. Finally, I understand that I can get a copy of the transcribed interview by contacting the principal investigator, Bryan Gopaul at bryan.gopaul@utoronto.ca. The copy of transcribed interview material will be sent to me via email.

If further questions arise regarding my participation in this study, I can contact Bryan Gopaul at bryan.gopaul@utoronto.ca or at 647-388-6490. Also, I can contact the Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273, if I have questions about my rights as a participant. This doctoral thesis is being supervised by Professor Glen A. Jones and he can be
contacted at 416-978-8292 for further information. His mailing address is 252 Bloor Street West, 12th Floor Dean’s Office, Toronto, Ontario M5S 1V6.

Name: ____________________________ Date: _______________________

Signature: ____________________________

I agree to have this interview tape recorded __________ (Please initial)

I would like to receive a copy of my transcription for review __________ (Please initial)

Bryan Gopaul
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Appendix G
Interview Guide: Faculty and Staff

Interview Guide: Faculty Member/Staff Personnel

1. Please describe your role in the department

2. Please describe your activities with doctoral students

3. Have these activities changed over the years?

4. Please provide some details about the doctoral process for students in this department

5. Please provide some information about the admission process for prospective doctoral students

6. Please provide some details regarding doctoral student departure from this department

7. Please provide some information regarding what doctoral graduates do after they complete their studies here

8. What sorts of professional development opportunities exist for students?

9. Are there certain students who “stand-out” in your memory?

10. What is it about these students that make them “stand-out”?
Appendix H
Interview Guide: Students:
First Half of Interview

Interview Guide for First Half of Interview – Biographical Information

1. Could you provide some more information about your childhood life/experiences

2. Could you describe your family life

3. What occupations do you parents hold? Their highest level of education?

4. Could you describe your primary and secondary school life

5. What sorts of sports/activities/interests did you explore/try out when you were younger

6. Do you have specific memories that stand out? Please describe them

7. Could you tell me about how you arrived at the decision to enroll at [institution] for your undergraduate studies

8. How, if at all, do you think these early experiences impact your perceptions of and experiences in your doctoral studies
Appendix I
Interview Guide: Students:
Second Half of Interview

Interview Guide for Second Half of Interview – Experiences and Relationship in Doctoral Education

1. Please describe why you decided to pursue doctoral education

2. Did you always know you wanted to pursue a doctorate? If so, why and how?

3. When did you decide to pursue doctoral education?

4. What significant moments or people, if any, stand out for you as influential to your decision to pursue doctoral studies?

5. What were your expectations of doctoral education prior to beginning them?

6. Please describe your relationship with your supervisor and staff members in your department.

7. How would you characterize your department/disciplinary culture?

8. Please describe your experiences with research, teaching and service activities/opportunities during your doctoral education

9. How would you characterize your relationships with your peers in your program/department?

10. To what extent have you had experiences with non-university organizations/personnel (i.e., community organizations, NGOs, industrial actors)?

11. What has been the most rewarding aspect of your doctoral student experience?

12. What has been the most frustrating aspect of your doctoral student experience?

13. Given what you know now, what would you have liked to have known when you started your doctoral education?

14. In what ways, if at all, has your perspective of doctoral education changed?