

DOES MONEY REALLY MATTER IN DOCTORAL EDUCATION?:
EXPLORING THE INFLUENCE OF FINANCIAL CONSIDERATIONS ON DOCTORAL
STUDENT SOCIALIZATION

By

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ABSTRACT

DOES MONEY REALLY MATTER IN DOCTORAL EDUCATION?: EXPLORING THE INFLUENCE OF FINANCIAL CONSIDERATIONS ON DOCTORAL STUDENT SOCIALIZATION

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Doctoral student socialization is the most popular theoretical lens for understanding doctoral education. Socialization perspectives have illuminated the complex processes doctoral students undergo *within* their doctoral programs. Very little attention has focused on forces external to doctoral education. This study highlighted the ways in which 35 advanced doctoral student's financial considerations exerts influence on their financial decision-making as they navigate the series of socialization decisions confronting them throughout their doctoral education journey.

This dissertation study offers insight into a series of decisions involving financial implications doctoral students make about their education. I utilized rational choice and socialization theory to explore how these decisions made by doctoral students shaped aspects of their educational trajectories. Study participants demonstrated that they conducted cost-benefit analyses about their doctoral program with particular emphasis on activities known to foster socialization. Guided by these theoretical perspectives, participants evaluated financial considerations in decisions concerning: (1) going to graduate school, (2) selecting a graduate program, (3) financing doctoral education, (4) participating in professional aspects of doctoral education, and (5) factoring a doctoral student's family finances into their decision-making process. Study findings illuminated complex calculations participants evaluated as they navigated their doctoral education. I conclude by offering suggestions for practice, policy, theory

and future research on doctoral student financial decision-making and doctoral student socialization.

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CHAPTER 1: INTRODUCTION

Margaret, a prospective doctoral student, recently received an acceptance and a research assistantship offer to a doctoral program located about two hours from her home. This doctoral program provides students with the option of attending part-time or full-time. Margaret is currently employed as a full-time instructor at a local community college. Her goal after completing her doctoral degree is to become a tenure stream faculty member. She is currently weighing the decision to accept the assistantship offer, which would cover her tuition and provide more opportunities for Margaret to engage with her fellow students and program faculty, and require her to move closer to her new doctoral program. On the other hand, Margaret can keep her current job, which would mean a steady salary and benefits, but would require her to use loans and savings to cover tuition. She would also have less time to engage in departmental activities if she keeps her full-time job.

Alex, a third year doctoral student, recently received acceptances for two conference papers at a large research conference located on the other side of the country. When the conference schedule is released, she realizes her papers are scheduled for the first and last sessions of this five-day conference. She must decide whether or not to attend a conference that would require her to purchase a round-trip plane ticket, rent a hotel room for 5 nights, pay for meals throughout, and register for the conference. She projects the total conference cost to exceed \$1600 dollars. Alex has been encouraged by her faculty members to submit proposals to conferences for the experience and to network with established scholars who can help her advance her dissertation ideas. However, the cost of the conference is approximately 10% of her annual pre-tax salary.

Paul, a full-time doctoral student on assistantship, and his partner recently had a daughter together. Paul's partner is employed full-time as a teacher and makes \$38,000 per year. Paul's assistantship provides him with flexibility to work from home as needed, but since his daughter was born he feels like he is missing out on departmental activities and rarely sees his fellow classmates. Paul and his partner are weighing the costs and benefits of spending more than \$1200 each month on daycare in order to free up time for Paul to read for class, conduct research, fulfill work obligations, and eventually graduate in two more years. Together, they must decide between placing the child in daycare full-time or Paul working at the office 3 days a week and still paying \$700 for daycare each month.

These scenarios represent real challenges doctoral students in the United States face as they navigate their graduate education. Although each vignette describes a different decision, the unifying similarity is the important influence of financial considerations. Each decision Margaret, Alex and Paul (and partner) must make affects not only their financial bottom line, but

also their opportunity to engage in academic and professional preparation experiences necessary to be successful doctoral students. This important process is known in higher education literature as doctoral student socialization (Gardner & Mendoza, 2010). Broadly defined, socialization is a process through which cultural norms, values and behaviors of professional life are communicated to newcomers (Merton, 1957; Tierney, 1997; Van Maanen & Schein, 1979). Doctoral student socialization investigates the pathways to, through and beyond doctoral education (Austin, 2002; Gardner, 2007, 2010; Gardner & Mendoza, 2010; Golde, 2005; Lovitts, 2001; Weidman, Twale, & Stein, 2001). An important outcome of doctoral student socialization is “identification with and commitment to” norms, values and behaviors of professional life (Weidman et al., 2001, p.36; Merton, 1957; Tierney, 1997; Van Maanen & Schein, 1979).

Doctoral students often engage in three socialization processes --“mastering the knowledge base of their disciplines and specialty areas, learning their discipline’s theories and methods, and establishing relationships with peers, faculty, and their adviser” (Lovitts, 2005, p.140; Weidman et al., 2001) -- to develop an identity and commitment to the discipline. Doctoral student socialization guides students in their transformation from neophyte to emerging scholar (Walker, Golde, Jones, Bueschel, & Hutchings, 2008; Weidman et al., 2001).

Studies using socialization as the theoretical underpinning have helped scholars to better understand the doctoral student experience; however, a limitation of doctoral student socialization studies is an overemphasis on endogenous forces, such as, departmental and professional communities (Austin, 2002; Gardner, 2007; Gardner & Barnes, 2007; Golde, 2005; Herzig, 2004). Only recently have higher education scholars started to consider how factors external to doctoral education itself like gender (Sallee, 2011), race (Antony, 2002; Ellis, 2001; Felder, Stevenson & Gasman, 2014; Gonzalez, 2006), and faculty entrepreneurship behaviors

(Mendoza, 2007; Szelenyi, 2013) shape doctoral student socialization. This study extends understandings of external forces influencing doctoral education by considering how financial considerations shape doctoral student socialization.

Problem Statement

Financing doctoral education is a “complex matter” involving both tangible factors, like “cost, price, personal income, multiple types of assistantships, and fellowships”, and intangible factors, like “personal attitudes toward, understanding of, and psychological approaches to acquiring and using money” (Nettles & Millett, 2006, p.71). Bowen & Rudenstine (1992) opened the chapter on financial support for doctoral students in their book, *In Pursuit of the PhD*, with the following statement:

The availability of financial support is often assumed to be *the* most important factor in encouraging timely completion of the PhD-- and its absence is widely believed to cause protracted periods of time to be devoted to frustrating (and often ultimately unsuccessful) efforts to obtain a PhD (p. 177).

This statement connects financial support with time-to-degree while implicitly suggesting that lacking financial support negatively influences the broader doctoral experience. Scholars studying doctoral education have written extensively about the role of financial support in studies examining enrollment decisions (Ekstrom, Goertz, Pollack & Rock, 1991; Fox, 1992; Heller, 2001; Malcom & Dowd, 2012; Perna, 2004; Shapiro, O'Malley & Litten, 1991; Weiler, 1991), average time to doctoral degree attainment (Abedi & Benkin, 1987; Ehrenberg & Mavros, 1995; Maher, Ford, & Thompson, 2004; Nettles & Millett, 2006) and attrition (Berelson, 1960; Gardner, 2007; Lovitts, 2001; Nettles & Millett, 2006; Strayhorn, 2010). While these studies have demonstrated the importance of financial support, financial factors have received little attention in the doctoral student socialization literature.

Recent study findings provide several examples stressing the importance of financial support for doctoral students (Acker & Haque, 2015; Gardner & Holley, 2011; Johns Hopkins University, 2012; University of California Berkeley, 2015). Kathryn, a participant in Gardner and Holley's (2011) barriers during doctoral education study, described how she is surviving as a doctoral student by stating:

For me to survive—and that is really what it is about, survival—I have to have this second job...The only way I am able to survive is actually on student loans. So when I get out of this, I am going to have a ton of debt. (p.86)

Surviving requires that doctoral students make sacrifices, which can impact monetary, health and personal well-being. Quinn, a participant in Acker and Haque's (2015) study, described a detrimental living situation:

Where I live ... I share the rest of the facilities with the people who own the house. Ah, so, and that in itself sometimes it affects your ability to work because you're, you constantly feel that you're within a small little prison, that kind of thing, and so it affects the quality of your work ... The financial issues, different issues that really, you know, affect your health, that really come together to form like a nexus, you know. So, the living conditions are not very great, and I wish I were able to afford something, a space where I can, you know, do my own cooking and be comfortable in that space. (p.6)

The quotes provided by Kathryn and Quinn not only convey difficult financial situations for some doctoral students, but they also underscore how financial considerations affect their doctoral education. Doctoral students taking second on-campus jobs are often limited by the number of hours they can work, so students find off-campus jobs that quietly go unreported to the student's institution (Patel, 2015). In Kathryn's case, taking a second job reduces the amount of available time she can invest in learning the key theories of the field and in building relationships with her peers, faculty and adviser. Quinn's quote highlights the sacrifices doctoral students make to save money. By living in a less desirable living situation, Quinn acknowledges the impact of his living situation on work product and mental health. These situations may seem

extreme, but these stories may not be so atypical when considering that the average doctoral student receiving an assistantship earns \$16,000 per year (National Center for Educational Statistics, 2011).

In addition to individual accounts on how important financial considerations are during doctoral education, higher education institutions have accentuated the need to better understand financial support during a student's doctoral program. The University of California Graduate Student Happiness and Well-Being Report (2015) noted that graduate students mentioned financial concerns in the written comments more than any other category. The report shared several quotes listed below from graduate student respondents to characterize financial concern:

My husband and I would not be able to get by on this salary without taking loans, were it not for the generous financial support of his parents. Our colleagues are in the same position. Many have taken loans, and many are accepting money from their parents. The situation is even more dismal for graduate students with children.

I don't go out with friends because I can't afford it, thus all work and no play.

The only reason that I have been able to live comfortably this year is that a friend is letting me house-sit for half the usual rent. Otherwise money in the past has been so tight that I have to double think whether I can eat out with friends or go anywhere. It is frustrating. (p.4)

Scholars of doctoral student socialization readily acknowledge that informal interactions are paramount to helping students learn more about the cultural norms and values of their department and discipline (Gardner, 2007; Golde, 2005; Weidman et al., 2001). The University of California (2015) report highlights that informal interaction with peers and other doctoral students can be mediated by financial concerns. A recent report by the Johns Hopkins University (JHU) *Committee on the Future of PhD Education* (2013) outlined specific financial challenges for doctoral students:

insufficient funding of PhD students leads to financial problems and debt, and that such issues were not just problems for recruitment of good students but also posed serious hardships for the students we have. The very fact of financial hardship and of needing to take on part time jobs, either in the field or outside of it, can lengthen the time to degree. In turn, the longer time to degree causes further financial and other personal stress. (p. 11)

Together, these institutional accounts and reports demonstrate and confirm the complex influence financial considerations has on the doctoral student experience from recruitment to degree completion. This JHU report specifically calls attention to an array of decisions (e.g., taking part-time jobs) and mental-health issues (e.g., financial stress) doctoral students may encounter during their programs. The financial challenges outlined above have prompted doctoral students to wonder “whether the financial reward [after completion] compensate[s] for the poor lifestyle” during doctoral education (Rogers et al., 2015, p.10). In essence, financial considerations may reduce participation or attentiveness required during doctoral studies.

Despite the documented relationship between financial support, time to degree and attrition, higher education institutions may be exerting additional financial pressure through tuition credit waiver reductions, reducing health care coverage for dependents of doctoral students, and not increasing stipends to keep pace with inflation (Kim & Otts, 2010; Patel, 2015; Singer, 2007). Doctoral education is designed to be a period of intense concentration to prepare doctoral students to be future educational stewards (Walker et al., 2008); however, financial concerns can lessen a doctoral student’s focus. Workplace studies have found that financial concerns translate into increased absenteeism from work (Metlife, 2012), act as distractions while at work (American Institute of Certified Public Accountants, 2013), and cause employees to spend at least 3 hours each workweek thinking about or handling financial problems (PricewaterhouseCoopers, 2014). In 2013, a Gallup Survey reported many families live paycheck to paycheck and wonder how to make ends meet. Seven out of ten American workers feel stress

due to finances (American Psychological Association, 2014), and have little saved for emergencies (FINRA Investor Education Foundation's National Financial Capability Study, 2012). While these workplace and family financial reports did not specifically evaluate doctoral students, due to the modest stipends many doctoral students receive, one can assume that finances concern the doctoral student population as well.

To demonstrate how financial considerations can influence the doctoral student socialization, I return to Margaret, Paul and Alex's vignettes opening this chapter. First, Margaret is deciding whether to accept the assistantship offer, move closer to her doctoral program, or to keep her current job where she will be responsible for paying tuition and fees out-of-pocket. From Weidman et al.'s (2001) socialization standpoint, Margaret should accept the assistantship offer. Doing so will allow Margaret to devote more time to learning the key theories, engaging with peers and faculty, and participating in departmental events that will prepare her for her future tenure-stream faculty career. On the other hand, Margaret should weigh the costs and benefits of attending her doctoral program full-time. She will likely come out ahead financially if she keeps her full-time employment and pays her tuition out-of-pocket. Margaret also has established networks in her community and at the community college. Margaret must decide whether more intense interaction with key socialization agents inside the classroom, outside the classroom, and within the department outweigh the financial burden of paying for tuition and living expenses.

Second, Paul and his partner are weighing the costs and benefits of placing their child in full or part-time daycare. From Weidman et al.'s (2001) standpoint, full-time daycare will give Paul the flexibility to be on campus to interact with peers, prepare for class, and meet with his adviser. On the other hand, working from home with their child a few days a week will detract

from Paul's focus and will eliminate face-to-face interaction with peers and faculty. Paul believes he will be left out or feel disconnected from his department. From a financial decision-making perspective, Paul and his partner must consider whether paying \$14,400 per year in daycare costs and consuming more than a quarter of their annual pre-tax income can be offset through increasing Paul's socialization experiences and likelihood of finishing faster than working from home a few days a week.

Third, Alex was encouraged by her faculty member to submit to this conference because of networking potential and exposure to emergent research. From Weidman et al.'s (2001) perspective, conferences provide a venue to meet, interact, and connect with established scholars and other doctoral students (Gardner & Barnes, 2007). Doctoral students are often encouraged by their program faculty to present their research and make connections with established scholars. But doctoral students must weigh the costs (e.g., conference registration, membership, hotels) with the benefits of participating (e.g., presenting, making connections). Many associations offer inexpensive conference pricing for graduate students to facilitate their participation, but travel and hotel costs often comprise the largest expenditures. As Alex's vignette illustrated, a doctoral student can reasonably spend between 5% and 10% of their yearly pre-tax income to attend one conference.

Doctoral education scholars need to better understand how doctoral student socialization can be mediated by financial considerations. Despite holding a prominent place in doctoral student attrition and timely completion scholarly corpus, the topic of financial considerations is noticeably absent in the doctoral student socialization literature. To address this gap in the literature, I qualitatively explored the ways in which doctoral students factor financial considerations into their decision-making about choices influencing their doctoral education.

Informing this study was the use of two theoretical perspectives: graduate student socialization (Weidman et al., 2001) and rational choice theories. I elaborate on these theories and studies using these theories in the next chapter. Together, these theories highlight the tension between monetary influences and its effects on decision-making towards doctoral student socialization opportunities.

Research Questions

The primary research questions guiding this inquiry are:

- How do doctoral students make decisions about their graduate education when these choices have financial implications/considerations?
- How do financial considerations shape decisions influencing socialization opportunities?
 - SQ1: How do these decisions influence doctoral student' interactions with students, professors, and other key socialization agents?
 - SQ2: How do these decisions influence doctoral students' connection to departmental and disciplinary contexts?

Within the context of this study, I draw upon Nettles and Millett's (2006) description of finances being a "complex matter" to articulate a definition of financial considerations. Financial considerations are defined as the tangible components ("cost, price, personal income, multiple types of assistantships, and fellowship") and intangible components ("personal attitudes toward, understanding of, and psychological approaches to acquiring and using money") (p.71).

Study Purpose

The purpose of this research is three-fold. First, this study introduces and explores the ways in which doctoral students incorporate financial considerations into their decision-making

process on the road to, through and beyond doctoral education. To explain doctoral student socialization, scholars have developed a variety of models to address socialization during graduate education (Weidman et al., 2001; Bragg, 1976; Gardner, 2009; Gardner, 2010; Gardner & Gopaul, 2012; Golde, 2005). Previous models of doctoral student socialization have addressed and accounted for certain background characteristics such as race (Felder et al., 2014; Gonzalez, 2006) and gender (Sallee, 2011a; 2011b), disciplinary and departmental contexts (Gardner, 2007, 2008, 2009, 2010; Golde, 2000), career outcomes (Austin, 2002; Szelenyi, 2013), attrition and time to degree (Gardner, 2010; Lovitts, 2001); yet, little is known about how financial circumstances influence a doctoral student's decision-making process and how those decisions shape doctoral student socialization.

Second, this study illuminates the processes of how doctoral students make decisions with financial implications concerning their socialization opportunities. To understand the impact of the financial decision-making process, I pair graduate student socialization (Weidman et al., 2001) theory with rational choice theory (Elster, 1986, 2007) to inform the data collection and analytical procedures. Using these two theoretical orientations as my guide this study contributes to the extant literature on doctoral student socialization by enhancing understanding of how financial considerations shape doctoral student decision-making processes. Previous socialization studies do not fully account for, or explain, how financial considerations may influence a doctoral student's decision-making process concerning their socialization. This study continues exploring these factors external to doctoral education by investigating how financial considerations mediate the choice process for doctoral students.

Finally, this study explores the widely held belief that a person with more formal education exercises better financial judgment than a person with less formal education. Studies

examining financial judgment/literacy have not exclusively studied graduate students. Instead scholars studying financial literacy have included graduate students as a population within their studies. Compared to undergraduate students in these studies, graduate students demonstrate greater levels of financial knowledge (Chen & Volpe, 1998; Murphy, 2005; Volpe & Chen, 2002). For example, Chen and Volpe (1998) found a statistically significant relationship between the number of years a student was enrolled in postsecondary education and their financial knowledge. The authors speculated that people with more years of formal education must be more interested in financial matters, must have gained more financial knowledge from more exposure to daily transactions, or have had to manage their own money. However, a shortcoming within the financial literacy literature is the overreliance upon undergraduate student populations. As previously mentioned, studies have not exclusively studied graduate students. Financial literacy studies with graduate student populations tend to aggregate students enrolled in professional programs, such as medicine or law, with students enrolled in traditional PhD programs (Chen & Volpe, 1998; Joo, Grable & Bagwell, 2003; Robb, 2011; Robb & Sharpe, 2009; Volpe & Chen, 2002). The aggregation of these different graduate student populations proves problematic. Numerous studies have shown differences in the ways in which doctoral students enrolled in professional degree program finance their doctoral programs compared with traditional PhD programs. Students enrolled in professional service programs tend to finance their degrees primarily through student loans and also have enhanced earning potential. In sum, professional doctoral degree pursuers are likely to think about their financial situations in different ways than PhD degree seekers. While this study does not evaluate financial literacy, it explores how doctoral students account for financial considerations in their decisions while enrolled in their graduate education.

Study Significance

Understanding how financial considerations shape doctoral student decision-making and ultimately their socialization is significant to several constituency groups including society in general, policymakers, higher education institutions, academic departments, prospective and current doctoral students, and the field of higher education research.

The benefits of doctoral student socialization ascribe to society in three ways. First, society depends on doctoral education to produce the world's future scholars, administrators, policymakers and industry leaders (Walker et al., 2008). Students earning doctoral degrees can meet society's economic demand for advanced degree holders (Sommers & Franklin, 2012). Second, these advanced degree holders tend to earn higher wages than bachelor's degree or high school diploma holders (Baum et al., 2013). This increased earning potential translates into higher taxable revenue bases and health outcomes for society. Third, during doctoral education, students interact with peers and faculty to learn and understand professional norms and behaviors (Austin, 2002; Gardner, 2007, 2010; Gardner & Mendoza, 2010; Golde, 2005; Lovitts, 2001; Weidman, Twale, & Stein, 2001) Several studies have identified lacking sufficient socialization as rationales for leaving doctoral education or faculty positions (Jayakumar, Howard, Allen, & Han, 2009; O'Meara, Launder & Campbell, 2014; Xu, 2008). Doctoral education requires society to make a significant monetary investment in the form of tuition waivers and interest on federal student loans. Poorly socialized doctoral students are at risk of dropping out. If a doctoral student drops out before completing their degree, society does not realize the future economic benefit from its monetary investment. This dissertation can benefit society by clarifying how society's financial investment into doctoral education benefits doctoral student socialization.

This study is significant to policymakers. Like society, policymakers may not see a direct benefit for financing advanced degrees; however, policymakers appropriate state and federal funding for higher education and make decisions about student loan legislation. Policymakers have typically focused their attention on undergraduate populations, but more attention is needed for advanced degree seekers. During academic year 2011-12, graduate students borrowed more than \$35 billion dollars in student loans to finance their degrees (College Board Advocacy and Policy Center, 2012). While not all students (e.g. STEM doctoral students) borrowed during a graduate degree program, more graduate students rely on federal student loans to meet their fiduciary shortfall. Of particular importance is the role policymakers have had in increasing the financial burden for students using the federal student borrowing system. This dissertation incorporates doctoral student perspectives and voices in understanding the doctoral student financial analysis process in deciding whether to borrow during a doctoral program.

This study is significant to higher education institutions and academic departments as well. Higher education institutions invest substantial financial resources into doctoral education. This investment is best characterized as risky given the high attrition rates and lengthy times to degree of many doctoral students (Berelson, 1960; Bowen & Rudenstine, 1992; Lovitts, 2001; Nettles & Millett, 2006). Smallwood (2004) calls attrition in doctoral education a “scandal” and the “central issue in doctoral education” (para. 11). In a study of doctoral student attrition, the University of Notre Dame estimated that the institution would save \$1 million per year in stipends if attrition went down by 10% (Smallwood, 2004). The diminishing state appropriations for higher education have caused higher education institutions and their leaders to pass on more financial burden to students across all levels of higher education. For doctoral students, the increased financial burden has appeared as diminished tuition credit waivers, increased

healthcare costs for the doctoral student and dependents, and stagnated increases in stipend amounts that have not kept pace with inflation (Kim & Otts, 2010; Patel, 2015; Singer, 2007). These reduced investments in doctoral students may encourage a prospective student to forego graduate education altogether, or for those students intent on pursuing a doctorate, require doctoral students to find alternative sources of income (e.g., off-campus jobs, participating in fellowship programs unrelated to degree) to supplement their tuition and cost of living expenses. Making this financial choice has the potential to affect doctoral students' attentiveness to learning foundational materials, interacting with peers and faculty, and participating in departmental activities.

Embedded within higher education institutions are academic departments. Unlike undergraduate education, the academic department is the central hub of campus life for doctoral students (Golde, 1998, 2005). The department is responsible for many aspects of doctoral education such as orienting the student to the field, determining class schedules, assigning advisers, and allocating financial resources to students. Departments often expect students to participate in departmental events so that they become socialized to the normative behaviors and expectations of the department and discipline. When taking into account their financial situations, doctoral students might not be able to fully participate in departmental happenings. Doctoral students lacking these socialization experiences may leave their program before completing their degree or unnecessarily prolong their time in doctoral education (Lovitts, 2001). Finally, departments are often judged by doctoral student outcomes (e.g., time to degree, attrition). Despite the documented relationship between financial support with time to degree and attrition, higher education institutions and academic departments do not have an understanding of how financial considerations influence socialization. This dissertation offers higher education

institutions and academic departments empirical evidence towards understanding how financial considerations shape doctoral student socialization.

This study is significant to prospective and current doctoral students as well. If financial factors have a significant effect on timely completion and attrition decisions (Abedi & Benkin, 1987; Berelson, 1960; Bowen & Rudenstine, 1992; Ehrenberg & Mavros, 1995; Gururaj, Heilig & Somers, 2010; Lovitts, 2001; Nettles & Millett, 2006; Strayhorn, 2010), then it is imperative to explore doctoral student perspectives of how financial circumstances influence socialization processes. Doctoral education is a time and space for growing one's skill set and forming a scholarly identity, however, the extant scholarship does not acknowledge how financial considerations can mediate a doctoral student's ability to participate in these socializing activities. This dissertation makes use of doctoral student perspectives and voices to illuminate the importance of financial considerations in making decisions about doctoral student socialization.

Finally, this study contributes to the body of doctoral education research. Socialization theory is the most prevalent theory used in studies of doctoral education. Many early socialization studies treated graduate education monolithically (Bragg, 1976). Gradually, doctoral education studies incorporated departmental and disciplinary contexts as important factors in shaping doctoral student socialization (Gardner, 2010; Golde 1998, 2005; Weidman et al., 2001; Austin, 2002). More nuanced studies have enhanced understanding of the doctoral experience by examining how certain personal characteristics like race and gender (Ellis, 2001; Antony, 2002; Felder, Stevenson & Gasman, 2014; Saltee, 2011) mediate doctoral student socialization processes. In spite of this growing body of doctoral student socialization literature, the impact of financial considerations on doctoral student socialization has not been empirically

studied. This study extends current understandings of doctoral student socialization by evaluating how financial considerations exert influence on socialization.

Dissertation Structure

This dissertation contains five chapters. The purpose of this first chapter is to present the underlying problem and research questions guiding this study. Chapter 2 evaluates literature relevant to the study and outlines the theories guiding this inquiry. Chapter 3 describes the methodological strategy and research design. Chapter 4 presents results from this study. Chapter 5 engages the results in a dialogue with extant literature and offers implications for practice, theory, and future research.

CHAPTER 2: LITERATURE REVIEW

This study focuses on how financial considerations shape doctoral student socialization. This chapter reviews relevant scholarly literature related to the study's two primary research questions. These research questions are:

- How do doctoral students make decisions about their graduate education when these choices have financial implications/considerations?
- How do financial considerations shape decisions influencing socialization opportunities?
 - SQ1: How do these decisions influence doctoral students' interactions with students, professors and other key socialization agents?
 - SQ2: How do these decisions influence doctoral students' connection to departmental and disciplinary contexts?

This literature review is organized around three main topics embedded within these research questions: doctoral student socialization, financial support, and financial considerations. This literature review begins with doctoral student socialization because this approach narrows this review to a specific process for a specific population. In introducing doctoral student socialization, I highlight the evolution of the theory and draw attention to the assumptions undergirding this theoretical perspective. Given how few socialization studies have focused on financial aspects, a primary assumption underlying doctoral student socialization is that external forces do not enter into doctoral education. In the second section, I discuss the role of financial considerations in doctoral education. To address financial considerations, I begin by analyzing financial support studies as this topic has been extensively studied by scholars of doctoral education. Following the financial support literature, I introduce financial considerations that

may arise for doctoral students. Finally, I describe the two theoretical perspectives guiding this research.

Doctoral Student Socialization

Socialization has become the most prevalent theoretical perspective employed to understand doctoral education from an individual and organizational perspective (Austin, 2002; Boden, Borrego & Newswander, 2011; Ellis, 2001; Gardner, 2007; Gardner, 2008a; Gardner & Mendoza, 2010; Golde, 1998; Golde, 2005; Gonzalez, 2006; Mars, Bresonis & Szelenyi, 2014; Mendoza, 2007; Szelenyi, 2013; Weidman, Twale & Stein, 2001). In this literature review, I limit my analysis to the individual level. While I am interested in the macro level of how organizations (e.g., institutions and disciplines) create structures and norms to foster socialization, it is beyond the scope of this study. Socialization teaches individuals

how to behave, what to hope for, and what it means to succeed or fail. Some individuals become competent, and others do not. The new recruit's task is to learn the cultural processes in the organization and figure out how to use them (Tierney, 1997, p. 4).

In essence, socialization teaches people how to navigate the organizational context, understand the organizational rules, and how to establish membership in an organization. Over time, socialization goals have remained largely static; however, understanding of socialization as a process has undergone significant revisions (Weidman et al., 2001).

Robert Merton (1957) conceptualized socialization as a unidirectional, linear process through which the socialization agent communicated acceptable norms, values and behaviors to organizational newcomers. Recent postmodern perspectives contend that socialization operates as a bidirectional process through which the organization influences the individual, while the individual affects the organization too (Austin, 2002; Austin & McDaniels, 2006; Tierney & Rhoads, 1994; Weidman et al., 2001). Austin and McDaniels's (2006) described the bidirectional

nature of socialization as follows: “While novices are learning about the organization, their involvement and interactions should also lead to organizational change” (p. 401). Similarly, Weidman, Twale and Stein (2001) added:

Graduate and professional students do not passively respond to specific situations; rather, they actively extract clues to their behavior and continually evaluate themselves in the context of peers, faculty mentors, program expectations, and personal goals. Although students may resemble their mentors, they have the power and potential to modify the standard socialization process as they evaluate their progression through it. (p. 18)

This quote highlights the agency of individuals and organizations during socialization. More importantly, this statement reflects the growing sentiment that students experiencing socialization do not have to internalize or accept these normative behaviors (Antony, 2002). Instead, doctoral students become aware of normative behaviors through socialization, but do not have to exhibit these behaviors to be socialized. Doctoral students make a choice to embrace or reject norms, values, and behaviors.

Socialization scholars have also modified their understanding of socialization as a linear stage process. Socialization during graduate school differs from other educational contexts because “socialization of graduate students is an unusual double socialization. New students are simultaneously and directly socialized into the role of graduate student and are given preparatory socialization into graduate student life and the future career” (Golde, 1998, p. 56). Early doctoral education scholars viewed socialization as a process through which a doctoral student would complete a task and advance to the next one. More recent conceptualizations illustrate graduate student socialization as a set of interactive stages, or developmental phases (Weidman et al., 2001). These stages can operate in isolation or in combination. Weidman, Twale and Stein (2001) offered a four-stage model that I briefly use to illustrate the dynamic nature of doctoral student socialization. The first stage, *Anticipatory Socialization*, begins before a student enrolls

in a doctoral program. The onset of anticipatory socialization starts when a student envisions themselves in a doctoral program. Students become “aware of the behavioral, attitudinal, and cognitive expectations held for a role incumbent” (Weidman, et al., 2001, p.12; Antony, 2002; Austin, 2002; Lovitts, 2001). The *Formal Stage* of doctoral student socialization begins when a doctoral student officially enrolls in coursework. Through coursework, formal socialization agents (e.g., primarily faculty) communicate the relative importance of course material, introduce students to normative expectations and facilitate interaction between peers and faculty (Weidman et al., 2001). Through the *Informal Stage*, graduate students learn from their peers what constitutes acceptable behavior within the field. The final outcome of socialization models has been debated by scholars. Some scholars view successful socialization as doctoral program completion (Gardner, 2010; Lovitts, 2001; Tinto, 1993) while others believe that doctoral student socialization is the first step in socializing a person for a career (Tierney & Rhoads, 1994; Weidman et al., 2001).

Previous understandings of socialization relied on the idea that everyone receiving the same socializing messages will achieve the same socialization outcomes (Becker et al., 1961; Merton, 1957). Such a view neglects the individual background characteristics and experiences of a doctoral student. In the Weidman model, the authors assert that several external factors affect the doctoral experience and doctoral student socialization. These factors include background characteristics (e.g., race, gender), personal communities (e.g., family), professional communities (e.g., professional associations), and novice practitioners as complicating factors in doctoral student socialization. Taken together, these modifications to socialization theory have helped scholars better understand doctoral student socialization as a process.

Despite the noted extensions of doctoral student socialization, a criticism of socialization theory is the overreliance on a homogeneity assumption, which assumes all doctoral students receive socialization messages evenly and in the same ways. Socialization literature has been highly theoretical and has done little to challenge this assumption. The sparse empirical literature on the experiences of marginalized students emphasizes socialization models were created by white men for white men (Berelson, 1960). The most recent Survey of Earned Doctorates (2013) indicated that while doctoral degree recipients were nearly three-quarters white, the demographic composition of doctoral student reflects a changing student body. People from more diverse backgrounds are participating in doctoral education, yet little is known about their socialization experiences. Several studies with marginalized student populations have identified socialization as a process that has tried to “convert them” to academic norms and values that are resisted by culture (Antony & Taylor, 2004; Ellis, 2001; Felder et al., 2014; Gardner, 2008b; Gonzalez, 2006). Instead of acknowledging and embracing the differences across student cultures, socialization theories assumes that doctoral students will assimilate to the norms, values and behaviors of the field.

Second, doctoral student socialization models were created with faculty careers in mind (Lovitts, 2001; Tierney & Rhoads, 1994). These studies assume doctoral students have the same end goal. Recent reports contradict this assumption by reporting that more than half of doctoral students do not seek faculty positions (Golde & Dore, 2001). Doctoral students need to be prepared for careers as administrators, policymakers, executives and entrepreneurs in addition to faculty careers. Socialization theory should account for a diverse array of employment opportunities.

Third, socialization studies assume full-time enrollment. A growing population within doctoral education are part-time students, yet, few studies have explicitly examined this student population (Gardner & Gopaul, 2012; Gardner 2008). A challenge for studying part-time doctoral students is identifying who qualifies as a part-time student. Each institution has a set of rules that governs part-time student classification. Two recent empirical studies have explored the experiences of part-time doctoral students (Gardner, 2008b; Gardner & Gopaul, 2012). The three part-time participants in Gardner's (2008) study lamented a lack of interaction among doctoral student peers. Part-time students attributed this lack of interaction to not having the opportunity to interface with full-time student peers. In a second study, Gardner and Gopaul (2012) interviewed ten part-time doctoral students, who had full-time jobs. Part-time students felt a greater connection to faculty than other doctoral students. The faculty connection resulted from the formal interactions that happened inside of the classroom. Doctoral participants felt saddened by their lack of interactions outside the formal classroom context and lack of a peer support network.

Finally, doctoral student socialization models assume doctoral students are well resourced financially. Doctoral student socialization studies pay no attention to the role of financial considerations in socialization, yet, many doctoral students make decisions on the basis of financial considerations. For example, why do people consider attending a doctoral program part-time? There are many answers to this question, but one common response would likely be earning a full-time employment pay check while attending a doctoral program as a part-time student. How might this impact their socialization? On the other hand, a student receiving institutional support must weigh decisions, such as, starting a family, attending conferences and taking a second job. Each of these decisions has ramifications on their financial well-being and

doctoral program. Financial considerations are an important assumption that is overlooked within the extant doctoral student socialization literature. Each individual must weigh costs and benefits of their socialization against their financial circumstances.

Financial Considerations in Doctoral Education

Previous research tends to regard financial support as the full portfolio of financial matters for doctoral students. This perspective is limiting and offers an incomplete picture of the financial reality doctoral students face. To develop the term, financial considerations, I first review literature related to doctoral student financial support. I follow financial support with a review of doctoral education literature on specific financial considerations a doctoral student may need to assess.

Financial Support

Bowen and Rudenstine (1992) opened their chapter on financial support for graduate students in their book, *In Pursuit of the PhD*, with the following statement:

The availability of financial support is often assumed to be *the* most important factor in encouraging timely completion of the PhD-- and its absence is widely believed to cause protracted periods of time to be devoted to frustrating (and often ultimately unsuccessful) efforts to obtain a PhD (p. 177).

In the larger body of doctoral education research, scholars have identified a constellation of factors, rather than a single factor, as important to timely completion and persistence. Of the factors located within this constellation, financial support is often cited as being the most important. Prior research has studied the effects of financial support on enrollment decisions (Ekstrom, Goertz, Pollack & Rock, 1991; Fox, 1992; Heller, 2001; Fox, 1992; Malcom & Dowd, 2012; Perna, 2004; Shapiro, O'Malley & Litten, 1991; Weiler, 1991); average time to degree completion (Abedi & Benkin, 1987; Ehrenberg & Mavros, 1995; Maher, Ford, & Thompson,

2004; Nettles & Millett, 2006) and attrition (Berelson, 1960; Gardner, 2007; Lovitts, 2001; Nettles & Millett, 2006; Strayhorn, 2010). Taken together, these studies demonstrate that money matters in doctoral education (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Breneman, 1976; Gurajau et al., 2010; Nettles & Millett, 2006; Strayhorn, 2010) What follows in this section is a brief overview of the most common types of financial support for doctoral students followed by a review of the impact of financial support on doctoral education. In particular, I focus attention on the relationship between financial support and attrition, researcher productivity, and socialization.

Types of financial support. The three primary types of financial support for doctoral students are fellowships, research and teaching assistantships, and personal sources.

Fellowships. Fellowships are often considered the “top prize” in doctoral education. These institutional financial awards typically provide a tuition waiver and pay individual student fees in exchange for no work requirements (Nettles & Millett, 2006). Fellowships are awarded to doctoral students for previous merit and future academic potential. Graduate programs offer these financial awards to the most academically qualified students because programs believe this financial incentive provided to academically prepared students contributes to successful doctoral degree completion (Nettles & Millett, 2006). According to the 2013 Survey of Earned Doctorates, approximately 30 percent of US doctoral degree recipients held fellowships as their primary funding source.

Research and teaching assistantships. Like fellowships, research and teaching assistantships are a form of institutional financial support. Assistantships differ from fellowships in required responsibilities. Research assistants work closely with professors on research projects. The research assistant may be responsible for running a laboratory, conducting

experiments, or summarizing articles. Teaching assistants assist faculty members with instructional responsibilities, such as, leading recitation sections, developing courses, or grading papers. The responsibilities for teaching and research assistants vary by institution, field, and department. Forty-four percent of 2013 doctoral degree recipients were primarily funded by research and teaching assistantships (Survey of Earned Doctorates, 2015).

Personal sources. Student loans, employer reimbursement, and family contributions (personal savings, spousal earnings, family savings) constitute examples of personal sources of graduate school funding. According to the 2013 Survey of Earned Doctorates, approximately 25% reported personal sources as their primary source of funding. Many students using personal sources to self-finance their doctoral degree enroll part-time and hold full-time jobs.

Financial support and completion. Data from several studies confirms doctoral students with institutional financial support graduated earlier and completed their degrees at higher rates than students without institutional support (Abedi & Benkin, 1987; Bowen & Rudenstine 1992; Ehrenburg & Mavros, 1995; Gillingham, Seneca, & Taussig, 1991; Kim & Otts, 2010 Lovitts, 2001). For example, Abedi and Benkin (1987) conducted a landmark study to better understand the effects of a doctoral student's academic, demographic, and financial characteristics on time to completion. To evaluate the influence of financial factors on doctoral education, Abedi and Benkin (1987) restricted their analyses to the primary type of financial support. The study separated financial support into five categories -- personal sources (e.g., savings, off-campus earnings), family and/or spouse, on-campus employment (e.g., teaching and research assistantships), fellowships and grants, and loans. The study results showed that doctoral students employed as a research or teaching assistant graduated in the shortest amount of time (7.68 years). Similarly, fellowship students graduated in 8.06 years. Students relying on family

support (9.40 years), loans (9.52 years) and their own earnings (10.82 years) had the longest time to the doctorate. In other words, institutionally-supported students had shorter enrollments than their self-financing peers.

Bowen and Rudenstine (1992) examined completion, and conversely, attrition rates among six PhD programs (English, history, political science, economics, mathematics and physics) at ten elite institutions. Similar to Abedi and Benkin (1987), Bowen and Rudenstine (1992) found that institutionally-supported students completed their degrees faster than self-financed doctoral students. Self-funded students on average graduated one year later than institutionally-funded doctoral students. When examining attrition among types of financial support, Bowen and Rudenstine (1992) found research and teaching assistants completed their doctorates at a higher percentage than students primarily supported by fellowships or personal sources. This finding countered the widely held belief that fellowship students are incentivized to complete their degrees faster and more successfully because they have no formal work requirements. The authors suggested that the finding lends credibility to the importance of having a structured relationship with faculty and students that assistantships provide. In contrast, fellowship students and self-funded students may miss out on socialization opportunities and become alienated from the department (Bowen & Rudenstine, 1992; Girves & Wemmerus, 1988).

Lovitts (2001) conducted one of the most widely cited doctoral attrition studies. This mixed-method study analyzed more than 800 survey responses and 60 interview transcripts of doctoral degree “completers” and “noncompleters.” Lovitts’ (2001) research demonstrated doctoral student attrition is a multifaceted process not easily understood by faculty members or students. However, doctoral noncompleters offered several financially linked reasons for

withdrawing prior to completion. Study participants cited several financial concern examples, such as: “not having fellowship support; not being able to continue because support was cut off; and not having financial support in the dissertation stage; thus requiring the student to get a job, which in turn leads to insufficient time and energy to devote to the dissertation” (p.21). This research study highlighted two different aspects of doctoral student financial support. First, doctoral student attrition is often not due to academic ineptitude. Instead, financial factors entered heavily in attrition decisions. Second, many studies have assumed that financial support is continuous throughout doctoral education. Results from the Lovitts study (2001) illustrated that financial support can change during enrollment and can shape the doctoral experience.

Maier, Ford, and Thompson (2004) studied the factors that constrain or facilitate degree progress for women. Their study results showed that participants linked both timely and untimely doctoral degree completion to financial reasons. Several participants described how financial factors influenced their decision to expedite their doctoral program. This subset of participants described a desire to return to the workforce sooner in order to economically provide for their families; however, these doctoral students also lamented that finishing their doctorate quickly may have affected research skill development and impeded their connection to peers and program.

Doctoral students with elongated enrollments in doctoral programs also mentioned financial concerns. Extended time to degree doctoral students mentioned needing to find alternative financial sources to support their degree program. Maier and colleagues (2004) identified erratic funding contributed to lengthening time to the doctorate. A limitation of their study is the authors did not differentiate between different types of funding. Instead, the study

results emphasized the importance of financial considerations throughout doctoral education for women.

Financial support and researcher productivity. During doctoral education, many doctoral students receive instruction on how to conduct research for the first time (Kluever, 1997). Through coursework, faculty and peer interaction, and departmental event participation, doctoral students learn the value of becoming a skilled and productive researcher (Austin, 2002). Doctoral students observe this importance in the emphasis on publishing. Publishing often signals researcher capability and quality to external labor markets. Slaughter and Cantwell (2012) contended that in a constrained labor market, publishing could be the difference in acquiring a research post. Learning to become a researcher is a time consuming process due to trial and error. Students, who do not make the investment in developing this competency, struggle to complete their dissertations and doctorates (Maher et al., 2004). One of the ways doctoral students develop this skill is through mentored learning opportunities with faculty. Faculty members impart knowledge about policies and procedures that help the student conceptualize the research process. Many faculty-student collaborations emerge from relationships developed through teaching and research assistantships. Students lacking peer and faculty relationships may encounter difficulty in identifying research opportunities to further develop and deepen research skills.

Several studies have quantitatively explored the relationship between financial support and researcher productivity (e.g., presenting a conference paper, publishing a journal article/book chapter) (Brewer et al., 1999; Horta & Santos, 2016; Nettles & Millett, 2006). Brewer and colleagues (1999) identified financial aid and structured research opportunities as determinants of publishing during graduate school. The authors contended that financial assistance would free

the student from financial barriers and, in turn, would give the student flexibility to conduct research. A limitation of this study is that assistantships, fellowships, and grants were aggregated into the model. A disaggregated approach would show the impact of individual forms of financial support. Nettles and Millett (2006) corroborated financial support's impact on researcher productivity. Having a fellowship in Education, Social Sciences, Science and Mathematics were predictors of presenting or publishing during a doctoral program. Holding a research assistant appointment in Education, Engineering, Social Sciences, and Sciences and Mathematics also predicted publishing as a graduate student. Among the three institutionally-provided financial award types, teaching assistants had the least amount of success publishing or presenting at a conference. Being a teaching assistant did not predict student research productivity in most fields and negatively affected Sciences and Mathematics teaching assistants' ability to publish or present. This finding is likely attributable to significant teaching responsibilities in those fields. These studies show that financial support often provides the opportunity to invest in developing research skills and mentored relationships that facilitate faster degree progress and overall research productivity.

Financial support and socialization. Studies examining financial support and doctoral student socialization together fall into two categories: (1) socialization while in a role with financial support (e.g., socialization as a teaching assistant) and (2) quantitatively examining how financial support influences doctoral student involvement and interactions. In this section, I synthesize the available literature on the socialization experiences of graduate students with financial support. Second, I discuss studies evaluating financial support's relationship with socializing processes of involvement and interaction.

Socialization in a role with financial support. Students with financial support are often widely assumed to have more time to engage in departmental activities. However, not all studies have confirmed this belief. Bowen and Rudenstine (1992) found fellowship students took longer and graduated at lower rates than students with research or teaching assistantships. The authors reasoned that fellowships lack the structure of teaching and research assistantships. In particular, fellowship students often do not have formal workspaces, and lack structured relationships with peers and faculty. In contrast to fellowship students, assistantship students often have formal meeting times with faculty to discuss their research or teaching assignment and build relationships through these weekly meetings. Also, assistantship students usually have assigned work spaces with other students with similar responsibilities. These spaces lend themselves to getting to know other students and developing strong personal connections. Lacking formalized socialization opportunities for fellowship students may make these students feel less connected to the department. (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Lovitts, 2001).

Other empirical studies have focused on the role of teaching assistantships in socialization (Mena, Diefes-Dux, & Capobianco, 2013; Stanton & Darling, 1989). Stanton and Darling (1989) argued that teaching assistants engage in two types of socialization -- role socialization and cultural socialization. In role socialization, teaching assistants assume the role of becoming faculty members and are gaining “passage into the academy” (p.16). Cultural socialization exposes teaching assistants to “social practices, collective understandings, attitudes and values” about what it means to be a member of academia. Mena and colleagues (2013) interviewed 28 doctoral engineering students about their socialization experiences as teaching assistants. They found that although there were structured interactions with faculty, teaching assistants valued their interactions with peers (43%) more than their interactions with faculty

(36%). One primary difference was the nature of the interactions. Study participants described peer interactions as focusing more on classroom difficulties while interactions with faculty centered on classroom content. These studies shed new light on how doctoral students in teaching assistantship roles learn more about the academic profession; however, these studies did not evaluate whether peer and social interactions made the teaching assistant feel more connected to the department, nor did these studies investigate how doctoral students made the decision to become a teaching assistant.

Financial support and interactions. During doctoral education, students often rely on people inside and outside of their program for support. In particular, relationships with advisors and peers can greatly influence degree progress. Interactions represent a means of socialization and can be especially important as the student progresses through the program. Several empirical studies have quantitatively explored the relationship between how a person finances their degree and the nature of their relationships which can influence socialization (Girves & Wemmerus, 1988; Maher, Ford & Thompson, 2004; Mendoza, Villarreal & Gunderson, 2014; Nettles & Millett, 2006).

In a study of doctoral degree progress, Girves and Wemmerus (1988) found that being a teaching or research assistant correlated with more departmental involvement than doctoral students not receiving institutional financial support. The authors speculated that holding a research or teaching assistantship provided more contact for doctoral students and also encouraged them to make progress on their doctorates. Doctoral students not funded by their department must find alternative ways to finance their degree. These alternative employment opportunities may include, but are not limited to, finding jobs in other academic departments, administrative roles, or off-campus employment. Outside the department employment positions

offer fewer opportunities for doctoral students to connect with peers and faculty or assimilate into academic departments. Doctoral students lacking financial support have to be intentional about their socialization experiences. A “split in time commitment between a student's academic work and a student's employment results in less time in the department, less time for socialization to take place, and perhaps more time for a competing socialization process to take place on the job” (p.186). This quote highlights the socialization challenges doctoral students without financial support can face. Employment plays an important role in socializing doctoral students, but doctoral students funded outside the department must identify ways to intentionally learn the norms, values, and behaviors of their chosen academic discipline.

An important limitation of Girves and Wemmerus (1988) study is the involvement measure. In this study, the authors equated involvement to socialization. To calculate a measure of involvement, the authors used doctoral students self-reported total participation in departmental activities, such as “research projects, seminars, professional or scholarly meetings, discussions with faculty outside the classroom, student study groups, or social activities” (p.174). On average, doctoral students participated in 6 of 10 activities. Involvement had a statistically significant relationship to doctoral student degree progress. The more a doctoral student participates in events, the more likely they are to form peer networks, find faculty mentors and achieve departmental integration. These supports can encourage a doctoral student to make progress on their degree. However, the involvement measure used in this study is insufficient to accurately measure the complex nature of socialization.

Building on the work of Girves and Wemmerus (1988), Nettles and Millett (2006) conducted ordinary least squares and logistic regressions, which found receiving a fellowship, research assistantship or teaching assistantship predicted positive peer interaction. The authors

explained that positive interactions may be a function of having a “greater connection to the department because students are likely to have office space” and conduct business with peers in these spaces (p.156). Similarly, funded doctoral students enjoyed more positive perceptions of their interactions with faculty. Study results also showed not receiving institutional financial support did not significantly predict students’ interactions with peers and faculty. The non-statistically significant result is likely due to the small number of self-funded students in this study. In other words, the Nettles and Millett (2006) study identified the existence of a possible relationship between financial support and socializing interactions; however, a more in-depth understanding of how doctoral student’s financial factors promote or inhibit interactions is warranted.

Finally, Mendoza, Villarreal and Gunderson (2014) used propensity score matching to understand how certain types of institutional financial support (e.g. teaching assistantships, research assistantships, fellowships) promoted within-year retention (enrollment from Fall to Spring of the same academic year). The authors used an integrated socioeconomic and socialization model to evaluate the effects of institutional financial support. Unlike most financial support studies, the authors reported 20% of the sample population had more than one source of institutionally-provided financial support (e.g., fellowship and teaching assistantship). To account for these individuals, the authors re-coded students into the funding source where they received the *most* support (e.g. *Primarily Fellowship*). Similar to findings from other financial support studies, research and teaching assistants had a positive relationship with within-year persistence while fellowship students had a non-significant relationship. The authors echoed the importance of the relationships students on research and teaching assistantships have with peers and faculty on their persistence. Similarly, fellowship students demonstrated that simply

receiving money does not facilitate interaction with peers or persistence. There are several limitations to this study, but I highlight two specific shortcomings. First, the authors only examined the effects for people receiving institutional financial support. Second, the socialization variables did not directly measure socialization. Instead the researchers inserted proxies like culture, climate, and number of student interactions for departmental socialization. This attempt is important, but by the author's own admission does not capture the intricate nature of doctoral student socialization.

Limitations of financial support studies. The financial support studies reviewed in this section highlighted financial support's role in persistence, researcher productivity, and socialization. However, these studies are limited in three ways. First, nearly all of the financial support studies in the literature used data earlier than 2008. The most recent financial crisis of 2008 has changed the way society thinks about money and debt. The Budget Control Act of 2011 increased the debt burden for graduate students borrowing to pay for their education. These are important changes that need to be considered when evaluating studies. Second, the studies reviewed in this section used quantitative measures to evaluate the role of financial support. Quantitative measures are important, but they only shed light on the magnitude of the relationship between financial support and socialization. Thus far, no empirical studies have systematically and qualitatively explored how financial support enables or inhibits a student's ability to engage in socialization-related activities. Finally, financial support is only part of the overall financial picture for doctoral students. Sparse empirical evidence accounts for what other financial considerations doctoral students may be weighing in regard to completion, researcher productivity and socialization. In the next section, I highlight several common financial considerations for doctoral students.

Doctoral Student's Personal Financial Considerations

As mentioned in the preceding section, previous research tends to regard financial support as the full portfolio of financial matters for doctoral students. Using financial support as the full compendium of financial considerations for doctoral students only offers a limited view of the financial factors affecting graduate students. Doctoral students are likely influenced by personal financial circumstances beyond their formal doctoral program. Doctoral students do not enter doctoral education as blank slates. Instead, doctoral student enrollment and subsequent completion of doctoral education are the result of many financial decisions made by the doctoral student. Accounting for these financial considerations offers a more robust portrait of the financial realities a doctoral student may weigh in making decisions about their doctoral education, especially their socialization. For the purpose of this study, financial considerations consist of tangible factors, such as “cost, price, personal income, multiple types of assistantships, and fellowship” and/or intangible components, such as, “personal attitudes toward, understanding of, and psychological approaches to acquiring and using money” (Nettles & Millett, 2006, p.71). What follows in this section is a brief review of the literature on external financial matters doctoral students may consider when pursuing doctoral education. In particular, I focus attention on how presumed value of a doctoral degree, previous work experience, previous student loan borrowing, borrowing to pay for doctoral education, and quality of life may affect doctoral student socialization. Together, these financial considerations begin to inform and expand the literature's understanding of financial factors doctoral students weigh in socialization decisions.

Presumed value of an advanced degree. People often pursue doctoral degrees for the promise of professional, economic and social benefits that are common to advanced degree

holders. A recent US Bureau of Labor Statistics (2013) report indicated that graduate degree holders enjoyed lower levels of unemployment and higher wages. Similarly, Baum (2013) reported that advanced degree holders were less likely to be smokers and more likely to exercise than people with less educational attainment. Prospective doctoral students likely weigh these future economic and social benefits against present value costs (e.g., tuition, foregone earnings) in the decision to pursue a doctoral degree. Presently, no research has examined how, if all, professional, economic, and social benefits weigh into individual student's decision-making process about their doctoral student socialization.

Previous work experience. The first decision a prospective doctoral student makes is deciding when to apply to doctoral programs. There is no universal answer to this question, nor does the literature offer much empirical support for the optimal time. Only Nettles and Millett (2006) discussed previous work experience in the context of doctoral education. Participants in their study averaged two years of employment before enrolling in doctoral education. Several financial reasons emerged as to why people seek employment before pursuing a doctorate. These reasons included being uncertain about graduate school, saving to pay for tuition, fees and living expenses, reducing an existing undergraduate loan burden, and needing work experience before a doctorate (Nettles & Millett, 2006). As people become more familiar with the value and meaning of money, their financial attitudes change (Dodd, 2014; Zelizer, 2010). Previous work experience can equip doctoral students with personal finance skills that shape the decision-making process to spend money while enrolled in doctoral programs. Doctoral students with more work experience may view the role of money differently than doctoral students without work experience. Doctoral students with previous work experience may be more cautious in evaluating financial decisions about developing research skills and collegial relationships. This

study unpacks how doctoral students with varying amounts of work experience weigh previous financial experiences in decisions about their socialization.

Previous student loan borrowing. Several studies have explored the role of undergraduate debt in the decision to apply to or to enroll in a doctoral program and have found differing effects. These studies have found no effects, positive effects, and negative effects (Bedard & Herman, 2005; Kim & Eyermann, 2006; Malcom & Dowd, 2012; Millett, 2003; Nettles, 1989; Perna, 2004; Weiler, 1991). Since the majority of these studies are from the 1980s, I draw upon more recent investigations. Malcom and Dowd (2012) studied the effects of student loan borrowing on graduate school enrollment for students with a bachelor's degree in a STEM-related field. Regardless of race, undergraduate student loan borrowing was found to be a negative barrier to graduate school enrollment. A possible explanation for this finding is that STEM graduates often find a robust labor market where the opportunity cost to attend graduate school over full-time employment can be significant and deter graduate enrollment (Malcom & Dowd, 2012; Millett, 2003). Millett (2003) studied the effects of undergraduate debt on graduate school applications among recent graduates. Findings from this study showed students with student loan debt were less likely to apply to graduate school after completing a bachelor's degree. A limitation of Millett's (2003) study is that the study data was from 1992-93, which was at a time when undergraduate borrowing was less prevalent among students than today. Today, college graduates are completing their undergraduate degrees with an average of \$29,400 in undergraduate student loan debt (The Institute for College Access and Success, 2013). This increased reliance on student loans may encourage a student to delay applying to graduate school. Cunningham and Kienzl (2011) argue that undergraduate debt levels have become unwieldy and will have a long-term impact on the individual's life and consumption choices.

These studies acknowledge that previous borrowing is weighed in the decision to invest years in pursuit of a doctoral degree. However, little is known about the impact of previous student loan borrowing on the doctoral student experiences while in graduate school. Likewise, little is known about the impact of undergraduate debt on doctoral student socialization.

Borrowing to pay for doctoral education. Graduate education is more costly than undergraduate education and has outpaced inflation and growth rates in wages (George, 2007). The National Center for Educational Statistics reported that the cost of graduate education has increased more than 50% over the previous 10 years, while fellowships and assistantships, which a student often uses to finance their doctoral education, have not kept pace with inflation (Kim & Otts, 2010). Doctoral students are receiving institutionally-provided financial support at unprecedented rates. However, doctoral students continue to borrow at the same percentage as doctoral students 10 years earlier (Survey of Earned Doctorates, 2013). Doctoral students typically use federal student loans to pay for monetary shortfalls that occur when doctoral program costs exceed the financial remuneration a doctoral student receives. One can reasonably infer that doctoral students are using student loans to cover unmet expenses such as, tuition and fees, living expenses, and conference attendance. Doctoral students may also be using student loans as a way to provide a financial buffer so that the doctoral student can invest in vital socialization opportunities, such as developing research skills, interacting with peers and faculty, and participating in departmental events. Graduate education debt burdens can weigh heavily on the individual during their doctoral program. Worrying about finances has been found to influence a student's decision to drop out, enroll part-time or expedite their program (Lovitts, 2001; Maher et al., 2004). Doctoral students using student loans can benefit from these financial buffers, but borrowing can also detract from the sharp focus needed to complete a doctoral

degree. More research is needed to understand how doctoral students weigh the decision to use student loans during their doctoral program.

Quality of life. Two recent reports conducted by Johns Hopkins University (2013) and the University of California-Berkeley (2015) highlighted the importance of financial considerations to the quality of life for doctoral students. Johns Hopkins University released a report from the “Committee on the Future of PhD Education” that studied graduate student economic and social well-being. The Committee surveyed current doctoral students and found financial issues central to the student experience. Report findings included “insufficient funding of PhD students leads to financial problems and debt, and that such issues were not just problems for recruitment of good students, but also posed serious hardships for the students we have” (p.12). In response to insufficient funding, doctoral students seek part-time jobs, usually not related to their career, that lengthen their time to degree. Another issue frequently cited was summer funding. Students mentioned how each department has different policies around summer financial support. Some doctoral programs provide year-round funding, while others only offer semester-long or partial-year contracts. During the summer, students, regardless of funding type, are often expected to write for publication and sharpen their research skills. However, students without financial support likely cannot rely on savings, so they must either take out student loans or find a job. Students utilizing student loans may acquire more financial flexibility to focus on degree completion or skill development, but student loans can enhance financial stress on the individual during or after their program. Similarly, students with unrelated jobs may meet their financial demands, but this makes it difficult to focus their attention on learning new skills.

Similarly, the University of California Berkeley surveyed graduate students about what contributes or detracts from their wellness. Researchers found that financial concerns greatly

affected graduate student wellness. Several participants described the financial reality of being a doctoral student:

My husband and I would not be able to get by on this salary without taking loans, were it not for the generous financial support of his parents. Our colleagues are in the same position. Many have taken loans, and many are accepting money from their parents. The situation is even more dismal for graduate students with children.

My quality of life as a graduate student at Berkeley suffers most directly from insufficient financial resources to cover the cost of living

I don't go out with friends because I can't afford it, thus all work and no play.

The only reason that I have been able to live comfortably this year is that a friend is letting me house-sit for half the usual rent. Otherwise money in the past has been so tight that I have to double think whether I can eat out with friends or go anywhere. It is frustrating. (p.4)

These quotes demonstrate the complex role financial considerations play in doctoral education.

Many doctoral students expect that by seeking an advanced degree, they will become financially independent and not have to rely on family, relatives, and close friends. These student quotes reflect that many doctoral students come to rely on familial networks to finance their degree and living situations. More students than ever before are receiving fellowship and assistantship financial support, but the financial remuneration often is simply not enough. Lacking adequate financial resources can affect the academic, social, and personal aspects of doctoral education. Financial factors and doctoral student quality of life are intertwined. A poor quality of life related to inadequate financial resources can impact class preparation, interaction with peers and faculty, and integration into departmental activities (Acker & Haque, 2015).

Summary of financial considerations. In this section, I have highlighted five financial considerations that may impact doctoral student socialization. Sparse empirical literature fails to offer a comprehensive treatment of different financial considerations a doctoral student may

face. However, each financial consideration is likely to factor into decisions doctoral students make about their socialization. Exploring financial considerations in doctoral education has the potential to expand understanding of financial influences on doctoral education and doctoral student socialization.

Summary of Literature Review

Through this literature review, I have argued that socialization provides a useful theoretical perspective to understand the doctoral experience. Despite its theoretical utility, the socialization literature does not adequately account for financial circumstances of doctoral students. I also reviewed financial support literature to demonstrate its influence on the doctoral experience including program completion, research skill development and student interaction. Then, I introduced financial considerations that doctoral students likely contemplate during enrollment. Doctoral students are subject to financial constraints and needs that often go unmet and unheard. We know even less about how doctoral students weigh these financial concerns against the benefits of socialization, nor do we know how these financial considerations influence doctoral students' socialization.

Theoretical Frameworks

Previous doctoral student socialization studies have not accounted for the ways in which financial decisions shape doctoral student socialization. In this section, I describe the two theoretical perspectives guiding this study. Specifically, I draw upon graduate student socialization (Weidman et al., 2001) and rational choice theories to investigate how socialization is influenced by financial choices and considerations. Employing these theoretical approaches allowed me, as a researcher, to more fully understand how economic factors shape an individual's doctoral experience.

Graduate Student Socialization

The use of socialization theory allowed me to understand the process through which an individual doctoral student learns about the behaviors, norms, and values acquired during doctoral education. Many doctoral student socialization studies have examined this process at an organizational level (Bragg, 1976; Golde, 2005; Sallee, 2008; Szelenyi, 2013; Tierney & Rhoads, 1994) while fewer have examined socialization at an individual level (Gardner, 2010; Gardner & Gopaul, 2012; Mendoza, 2007; Weidman, Twale & Stein, 2001). Organizational socialization studies have identified how certain contexts and structures circulate and perpetuate norms, values and behaviors. Fewer perspectives have explored the individual socialization process and how an individual undergoes this process (Antony, 2002; Felder et al., 2014; Gardner, 2007, 2010; Gardner et al., 2014; Gonzalez, 2006; Weidman et al., 2001). To illuminate the individual socialization process, I draw upon Weidman, Twale and Stein's (2001) socialization model for graduate and professional students.

The Weidman et al model (2001) is the most comprehensive and widely cited theoretical framework for understanding graduate and professional student socialization. The Weidman et al (2001) model is composed of four dimensions and four stages that interact with the central doctoral experience. Successful socialization occurs when an individual acquires a “well-developed commitment and identification with the chosen professional career” (p.39).

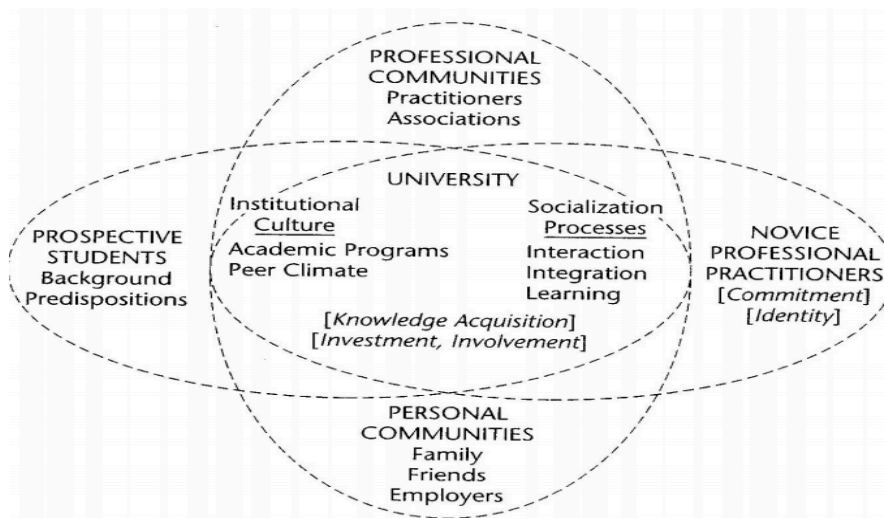


Figure 1. Weidman, Twale, and Stein (2001) Conceptualization of Graduate and Professional Student Socialization. Reprinted with permission from John Wiley & Sons.

Figure 1 graphically depicts the Weidman, Twale and Stein (2001) graduate and professional student socialization model. At the center of this theoretical framework (see Figure 1) is the doctoral education core experience. Embedded within the doctoral experience are institutional culture (e.g., academic programs, peer climate), socialization processes (e.g., [peer and faculty] interaction, [departmental] integration, learning [content]) and core elements (knowledge acquisition, investment, and involvement). The core elements of this model merit additional explanation. *Knowledge acquisition* refers to a graduate student's ability to develop two traits – (1) knowledge and skills for the professional role and (2) an understanding of norms associated with a professional role. As the student progresses through doctoral education, knowledge and skills become more specialized. *Investment* refers to “the degree of time and energy that graduate students put forth in meeting program requirements” (p. 63). The investment made by the individual is limited by the “value placed on the investment action” and “money, time, psychic energy and personal pride” (p.17). Finally, *Involvement* is the measure of a graduate student's participation with peer, faculty, departmental and professional communities.

Surrounding the central doctoral experience are four dimensions with varying degrees of influence on socialization. These dimensions include prospective students (background, predispositions), personal communities (family, friends, employers) professional communities (practitioners, associations) and novice professional practitioners. These dimensions overlap, interact and influence the central doctoral experience.

Weidman and colleagues (2001) assert that socialization occurs through the interaction of the dimensions, experience, and four developmental stages that may be present simultaneously. These four stages are called anticipatory, formal, informal and personal socialization.

Anticipatory Socialization refers to the time when the doctoral student “becomes aware of the behavioral, attitudinal, and cognitive expectations held for a role incumbent” (p. 12). During this stage, an individual is contemplating enrollment in a doctoral program. Prospective students begins to evaluate what requirements are needed to establish membership. These students seek information primarily through observations and interactions with current role incumbents (e.g., faculty, current doctoral students) and alternative sources (e.g., media). The second stage, *Formal Stage*, begins when the student officially enrolls and begins receiving formal instruction on the seminal theories and methods of the field. During this second stage, the primary socialization agents are faculty and peers. At this point, “communication becomes *informative* through learning course material, *regulative* through embracing normative expectations, and *integrative* through faculty and student interaction” (Weidman et al., 2001, p. 13). The third stage, *Informal Stage*, is when “the novice learns of the informal role expectations transmitted by interactions with others, who are current role incumbents” (p.14). In other words, doctoral students observe acceptable behavior, receive behavior cues and respond accordingly. The fourth and final stage, *Personal Stage*, occurs when “individual and social roles, personalities and social

structures become fused and the role is internalized” (p. 14). During this stage, an individual relinquishes former behaviors and begins accepting field and disciplinary norms. Through each of the four stages, a doctoral student transitions from acting less “student-like” to behaving more “professional-like.”

Gardner and colleagues (2014) summarized the interrelatedness of the Weidman model as follows: “students are socialized through interaction with faculty and peers and integrated into the department’s activities and the culture of their disciplines” (p.258). These components unfold across four stages outlined above and occur in a nonlinear and interactive manner. As Figure 1 illustrates, the boundaries among the stages, dimensions and core elements are dotted to indicate permeability. Permeability suggests that a student can be engaged in one or more stages simultaneously. The Weidman model illustrates how core elements of a doctoral program can be influenced by external communities (e.g. professional communities, families, practitioners). Only recently have scholars started to investigate how certain background characteristics like race and gender influence socialization. This study extends this line of inquiry through an investigation of how individual financial considerations shape doctoral student socialization.

Rational Choice Theory

Rational choice theory is an economic theory used to explain decision-making by “rational” individuals. While rational choice is widely accepted as a theoretical perspective, no universal definition of the theory exists. Instead, rational choice theory relies on several underlying premises of microeconomic theory to explain choice. Microeconomics studies how an individual makes resource decisions subject to constraints. These resources need not have actual monetary value, but hold particular meaning to the individual (Frank, 2008). Frank (2008)

contends that scarcity extends beyond just monetary considerations to aspects such as time, energy, and “other things we need to pursue our goals” (p.20).

Three assumptions undergird microeconomics theory, and in turn, rational choice theory. These three assumptions are rationality, cost-benefit analysis, and self-interest. First, an actor is assumed to be rational, which means the individual is capable of making the best decision for him or herself (Monroe, 1991). Second, cost-benefit analyses require individuals to compare the costs and benefits, and the rational actor will select the action where the benefits exceed the costs. Conversely, the individual may select no action if the costs exceed the benefits. This relationship can be expressed as follows:

If $A(x) > B(x)$, do x ; otherwise no action.

This expression demonstrates that if the rational actor assigns a greater value to A than B, then the actor will select A. If A is the preferred option but B has a higher cost, the individual will not act. Third, economic theory assumes that the individual will operate in their best interest. This assumption is what Adam Smith called “the invisible hand,” which assumes individuals are motivated to maximize their own utility.

As mentioned earlier, rational choice theory is not a uniformly agreed upon theory. Rational choice theory is built on certain ideas, or in this case two guiding axioms – completeness and transitivity. The *completeness* axiom stipulates that an individual has well-developed preferences (Frank, 2008; Scott, 2000; Solomon, 2012). These preferences form from opinions the individual may hold. According to rational choice theory, people will always have preferences that can be ranked along a continuum balancing desirability and affordability constraints of the individual. Sociologists have argued that rational choices can also be made in relation to social exchanges (Scott, 2000). Social exchanges may include the approval of others

or other behaviors valued within a group. Second, rational choice theory posits *transitivity* among the different preferences. A transitive approach means that the individual can establish a hierarchy of the preference choices. People must make decisions in light of not being able to acquire all goods or to have complete information (Scott, 2000).

Studies using rational choice perspectives have been employed to understand college choice patterns, educational investments and borrowing decisions (Avery & Turner, 2012; Becker, 1993; Hearn, 1987; Heller, 1997; Perna, 2006; Zhang & Thomas, 2005) In the case of graduate school choice, Hearn (1987) suggested that a student selected a graduate institution to attend based upon the expected future value of having an advanced degree from that institution. Similarly, Zhang and Thomas (2005) found that students weighed the cost and benefits associated with acquiring additional education because of the higher wages correlated with higher levels of education. In the present study, a rational choice theoretical approach explored how doctoral students weigh their socialization opportunities against financial considerations. This research clarifies how, if at all, doctoral students evaluate the role of financial considerations in shaping doctoral student socialization.

Summary

This study draws upon two theoretical perspectives. First, I use Weidman, Twale and Stein's (2001) graduate student socialization theory to (a) introduce financial considerations as an important personal characteristic in doctoral education and (b) to explore how individual financial considerations influence doctoral student socialization. I draw upon economic theory, and more specifically, rational choice theory to understand the costs-benefit analyses that doctoral students incorporate into their decision-making process about socialization opportunities. Together, these theoretical perspectives help to answer the following two

questions: (1) how do doctoral students make decisions about their graduate education when those decisions have financial implications? (2) How do financial considerations shape decisions influencing socialization opportunities?

Doctoral education has received significant scholarly attention in recent years. In particular, scholars have argued that financial considerations are a key ingredient in successful completion of a doctoral degree. Much less is known about how these financial considerations shape decision-making processes and doctoral student socialization. The study explores how doctoral students analyze financial factors as make decisions about their learning, interactions, and integration into their doctoral programs.

CHAPTER 3: METHODOLOGY

This chapter describes the research methods employed in this study. First, I present an overview of the research design and include the research questions governing this study. Second, I discuss the epistemological underpinnings of this research and justify the appropriateness of qualitative research methods to address the study's research questions. Third, I explain the criteria for selecting research sites and disciplines. Fourth, I explain recruitment, data collection, and data analysis procedures. Within the data analysis section, I include a discussion of reliability, validity, generalizability, and researcher positionality. Finally, I outline the study's limitations.

Overview of Research Design

This study employed qualitative research methods to explore how 35 advanced doctoral students make decisions about their graduate education when those decisions involve financial considerations. Guided by a constructivist worldview and drawing from graduate student socialization and rational choice theoretical perspectives, the study is oriented toward answering the following two primary research questions (RQ):

- RQ: How do doctoral students make decisions about their graduate education when these choices have financial implications/considerations?
- RQ: How do financial considerations shape decisions influencing socialization opportunities?
 - SQ1: How do these decisions influence doctoral students' interactions with students, professors and other key socialization agents?
 - SQ2: How do these decisions influence doctoral students' connection to departmental and disciplinary contexts?

Together, the primary research questions generate new understandings of how financial considerations influence doctoral student decision-making and doctoral student socialization.

Research Paradigm

This study employed qualitative research methods following a constructivist / interpretive worldview (Merriam, 2009; Creswell, 2007). The term “constructivist” is often used interchangeably with interpretivism and assumes that reality, or the social world, is socially constructed. In other words, meaning is ascribed to events by the actors involved, often through interactions with others, personal histories, and social contexts (Creswell, 2007; Crotty, 1998; Merriam, 2009). This study explored how financial considerations factored into doctoral student decision-making about their graduate education. More specifically, I investigated the process of how doctoral students accounted for financial circumstances in making decisions concerning doctoral student socialization activities. A constructivist approach is appropriate for this research because participants contextualized their own choices and socialization activities while discussing the importance of financial considerations.

Qualitative Research Methods

Qualitative research methods offered the best approach for answering the research questions governing this study. Quantitative methods are useful in studies where researchers are interested in examining and explaining relationships, while a qualitative approach allows the researcher to inquire about specific individual experiences (Creswell, 2007; Merriam, 2009). Qualitative researchers are “interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam, 2009, p.5). A quantitative study would not be appropriate for answering research questions concerning choice processes and primary influences in making decisions. In this study, a

qualitative research approach highlighted how financial considerations factored into decision-making processes about graduate education and shaped doctoral student socialization opportunities.

As demonstrated in Chapter 2 of this dissertation, quantitative approaches have dominated doctoral education literature on the role of financial factors in timely completion and attrition studies. The exploratory nature of this research encouraged the use of a qualitative research approach, which illuminated the phenomenon and provided rich descriptions that are not possible to obtain through quantitative measures. In sum, a qualitative approach allowed for an exploration of the socially constructed nature of participant doctoral education experiences (Denzin & Lincoln, 2005; Merriam, 2009).

Institution and Discipline Selection

This section provides an overview of the criteria used to select institutions and disciplines for inclusion in this study.

Institution Selection

Patton (2002) suggests that research sites should be “specifically selected because it is not in any major way atypical, extreme, deviant, or intensely unusual” (p.236). With this guidance, I applied two criteria – (1) institutional classification with at least high research activity and (2) ranking among the Top 50 doctorate producing institutions—to narrow the list of possible institutions.

First, the institution must be doctoral granting research institutions with at least a Carnegie Classification of “research university/high (RU/H)” or “research university/very high (RU/VH).” Of the 54,070 doctoral degrees conferred in the United States during 2014, 47,821 degrees were conferred at a RU/VH or RU/H institution. This statistic indicates the lion’s share

of doctoral degree production occurs at these institutional types. According to the Carnegie Classification system (n.d.), 207 institutions have received a classification of RU/H (99) and RU/VH (108).

Second, the selected institution should be among the top 50 doctoral degree-granting institutions in the United States. The top 50 doctoral degree-granting institutions conferred 27,137 doctorates, or 50.2 percent, of all degrees in 2014 (Survey of Earned Doctorates, 2016). The 50th institution (Iowa State University) conferred 349 doctoral degrees, while the University of California Berkeley produced the largest number of doctoral degree earners (915). Selecting an institution among the Top 50 doctoral degree granting institutions will likely have large doctoral student populations to draw a prospective participant pool.

Using these two criteria, I selected two institutions -- Evergreen and Circle City. Both search sites are located in the Midwestern portion of the United States, situated in college towns, and classified as RU/VH institutions. Both institutions are large, public institutions offering numerous doctoral degrees. Evergreen and Circle City have similar characteristics to many other institutions classified as RU/VH institutions. Thus making them appropriate for selection and not atypical in any specific way.

Discipline Selection

After identifying the institutions, I selected three social science doctoral programs – history, political science and sociology – from Circle City and Evergreen. Social science programs have steadily grown in popularity among doctoral degree recipients. For example, production of social science doctorates increased 23 percent from 2004 to 2014 (Survey of Earned Doctorates, 2016). The Council of Graduate Schools, which draws data from the Survey of Earned Doctorates to prepare reports, indicated the average time to degree for social science

students is 7.7 years. According to the 2014 Survey of Earned Doctorates, approximately 46 percent of doctoral degree recipients in the social sciences entered doctoral programs with undergraduate student loan debt. The average undergraduate debt balance was approximately \$9,622. During graduate education, approximately 54 percent of social science doctoral degree recipients borrowed an average of \$26,931. Of the 54 percent borrowing, close to one-quarter borrowed more than \$50,000 during their doctoral programs.

The vast majority of social science doctorates are granted at RU/VH or RU/H institutions. According to the 2014 Survey of Earned Doctorates, of the 8,657 social science doctorates recipients approximately 85% were awarded at RU/VH institutions.

Below I present graduation data from 2014 Survey of Earned Doctorates to support selection of history, political science and sociology:

- History
 - Across the US, 2014 recent graduates from history doctoral program were approximately 55% men and 22.6% US students of color
 - Average time to doctoral degree: 9.0 years across all 2013 history doctoral degree recipients
- Political Science
 - Across the US, 2014 political science doctoral degree recipients were approximately 58.4% men and 27% students of color
 - Average time to doctoral degree: 8.3 years across all political science doctoral degree recipients
- Sociology

- Across the US, 2014 sociology doctoral degree recipients were approximately 60% women and 27.2% US students of color
- Average time to doctoral degree: 8.9 years across all sociology doctoral degree recipients

These social science disciplines have similar characteristics, such as percentage students of color, average time to degree. One primary difference among the three disciplines is sociology tends to skew more towards women than political science and history, which have larger populations of men. Overall, these characteristics contain more homogeneity than heterogeneity among disciplinary characteristics.

Data Collection

Before beginning this study, I applied for Institutional Review Board (IRB) approval (Appendix A). During this approval process, the IRB reviewed my informed consent form (Appendix B), recruitment email (Appendix C), demographic form (Appendix D), interview protocol (Appendix E), and safeguard procedures. The IRB required no amendments before approving this study. After receiving IRB approval, I proceeded with my recruitment strategy outlined in the next section.

Recruitment Strategy

After receiving IRB approval, I utilized two recruitment strategies. First, each of the selected doctoral programs at both Circle City and Evergreen listed public directories of their doctoral students. I compiled a list of all publicly available email addresses and sent 250 customized recruitment emails (Appendix C) to students listed in the public directory. Within the email, I invited interested participants to learn more about the study and to complete a short demographic survey. The information gathered from the short demographic survey includes

contact information (e.g., full name, age, phone number, email address, preferred method of contact, undergraduate education debt information, doctoral education debt information, and length of time in their doctoral program). Second, snowball sampling occurred through happenstance. After conducting interviews with four specific participants, these participants encouraged colleagues in their doctoral program meeting the criteria for the study to participate. Snowball sampling is a strategy that “involves locating a few key participants who easily meet the criteria you have established for participation in the study” (Merriam, 2009, p. 79). Utilizing snowball sampling provided the researcher with the opportunity to identify more participants experiencing the same phenomenon. Through these two recruitment strategies, 85 prospective participants completed the demographic survey.

Participant Selection

After inviting prospective participants, I reviewed the list of 85 people responding to the call for participants. I applied two criteria in selecting participants. First, I selected participants, who were enrolled near the end of their coursework, working on their dissertation, or recently completed their doctoral degrees. The rationale for these advanced doctoral students or recent graduates is students earlier in their doctoral program may not have encountered many decisions with fiduciary implications that can affect learning experiences, departmental integration, and peer interaction. Students near completion, have completed their coursework, or have recently graduated are likely to have had multiple opportunities to undergo formal or informal cost-benefit analyses about their doctoral program.

Second, I was interested in interviewing students using a variety of financial methods to finance their doctoral education. In particular, I searched for participants utilizing second jobs,

student loans, and family savings, as well as participants possessing undergraduate student loan debt.

In total, I invited 45 of the 85 people completing the initial survey to participate and 35 agreed. In the remainder of this section, I summarize pertinent characteristics of study participants. It should be noted that after conducting each interview, I randomly assigned pseudonyms to each participant to obscure identification. The names used in this study do not reflect the actual names of participants. As a strategy to protect the anonymity of participants, I do not disclose race/ethnicity for students of color. A summary of participants follows in Table 1.

In this study, 19 participants attended Circle City and 16 attended Evergreen. Among the 19 participants attending Circle City, seven, four and eight participants were enrolled across history, political science and sociology programs, respectively. One-half of study participants at Evergreen were enrolled in the sociology doctoral program while the remaining eight participants were split evenly across history and political science. In total, eleven, eight and sixteen students collectively enrolled in history, political science and sociology doctoral programs within the context of this study. Participants were enrolled across a number of programmatic years. For ease of use, I have categorized them into Year 3 to 5 (17 participants), Year 6 to 8 (14 participants), and Beyond Year 8 (4 participants).

Next, I provide identity markers: gender, age, student of color, and marital status. Twenty-four participants identified as women with the remaining eleven identifying as men. Participants ranged in age from 25 to 42 years old with the average near 29.6 years old. Seven of 35 participants identified as students of color. Twenty of 35 participants were married or living in a marriage-like relationship.

Finally, I provide financing characteristics: funding status, supplemental income, and undergraduate student loan debt. In this study, 31 of 35 participants considered their doctoral education to be funded. The remaining four participants used a mixture of financial instruments, primarily loans to finance their doctoral education. Fifteen of 35 participants sought secondary employment either on or off-campus, while nine participants took out graduate student loans during their doctoral programs so far. Finally, twelve participants held undergraduate student loan debt when they entered their doctoral programs. Debt amounts ranged from \$8,000 to \$120,000.

Table 3.1 Participant Table

Pseudonym	Institution	Program	Year In Program	Supplemental Income	UG Debt	Gender	Student of Color
Aaron	Circle City	Political Science	6th	Loans, Second Job	No	Man	No
Alice	Evergreen	History	5th	Loans, Second Job	Yes	Woman	No
Abigail	Circle City	History	4th	Second Job	Yes	Woman	Yes
Ava	Evergreen	Sociology	7th	Loans, Second Job	No	Woman	Yes
Agatha	Circle City	Sociology	11th	Second Job	No	Woman	No
Brittany	Evergreen	Sociology	7th	Loans	No	Woman	No
Bob	Evergreen	Political Science	6th	N/A	No	Man	No
Charles	Evergreen	Sociology	7th	Loans	Yes	Man	Yes
Carol	Circle City	Sociology	3rd	Loans, Second Job	Yes	Woman	No
Celine	Circle City	Sociology	3rd	N/A	Yes	Woman	No
Dakota	Evergreen	Sociology	7th	Second Job	No	Woman	Yes
Donald	Evergreen	History	3rd	Second Job	No	Man	No
Eleanor	Circle City	Sociology	7th	N/A	Yes	Woman	No
Elizabeth	Evergreen	Political Science	3rd	Second Job	No	Woman	No
Edward	Circle City	Sociology	4th	Second Job	No	Man	No
Geoffrey	Circle City	Political Science	6th	N/A	No	Man	No
Helen	Circle City	History	4th	N/A	No	Woman	No
Jamie	Circle City	Sociology	7th	Loans, Second Job	Yes	Woman	No
Joan	Evergreen	History	3rd	Loans	No	Woman	Yes
Jerry	Circle City	History	11th	Second Job	No	Man	No
Kelly	Circle City	Political Science	9th	N/A	No	Woman	No
Kendra	Evergreen	Sociology	5th	N/A	No	Woman	No
Kelsey	Circle City	Sociology	3rd	N/A	No	Woman	No
Leslie	Evergreen	History	3rd	N/A	No	Woman	Yes
Lauren	Circle City	Sociology	7th	Loans	Yes	Woman	No
Michael	Evergreen	Political Science	4th	Second Job	Yes	Man	No
Melissa	Circle City	History	7th	N/A	No	Woman	No
Matthew	Evergreen	Political Science	4th	Second Job	No	Man	No
Nancy	Circle City	Political Science	4th	Second Job	No	Woman	Yes
Peter	Circle City	History	7th	N/A	Yes	Man	No
Rebecca	Evergreen	Sociology	4th	Loans	Yes	Woman	No
Sharon	Circle City	History	4th	Loans, Second Job	No	Woman	No
Sam	Evergreen	Sociology	3rd	Second Job	No	Man	No
Sheryl	Evergreen	Sociology	6th	Second Job	No	Woman	No
Taylor	Circle City	History	7th	Loans, Second Job	Yes	Woman	No

Data Sources

After recruiting participants and applying selection criteria to yield a purposeful sample, I conducted 35 semi-structured interviews with selected study participants. The interview protocol was developed through a two-step process. First, the initial draft interview protocol was developed from the thorough literature review presented in Chapter 2. Second, I tested the interview protocol with three advanced doctoral students in disciplines similar to the ones involved in this study. Piloting the interview protocols allowed the researcher to assess whether the interview protocol secured responses appropriate for answering the study's research questions. A secondary reason for testing the interview protocol is to evaluate question sequence and the amount of time to conduct the entire protocol, as well as clarifying the wording of all questions. After the first two pilot interviews, I adjusted the sequencing of specific questions. A third pilot interview was conducted to ensure the appropriateness of the question sequence. No additional changes were made.

At the beginning of each interview, I reviewed the informed consent (Appendix B) and demographics survey (Appendix D) with selected study participants. The informed consent detailed participant's rights, including the ability to withdraw at any point or to not answer specific questions. Participants also provided consent to have the interview recorded using either a digital recorder or a computer-recording program. No participants objected.

Interviews were appropriate for this study because interviews elucidated a "process in which a researcher and participant emerge in a conversation focused on the questions related to the study" (DeMarrais, 2004, p. 55). Due to the sensitive nature of personal finances, a focus group would likely not be an appropriate way to obtain data. In a focus group, participants might not provide detailed information about their personal finances. In this study, I specifically

explored the how financial considerations influence doctoral student opportunities. An interview provided the opportunity for the researcher to investigate aspects that are not directly observable (Patton, 2002). More specifically, I cannot “observe feelings, thoughts and intentions” or “behaviors that took place at some previous point in time. ... We have to ask people questions about those things” (Patton, 2002, p. 340-341). Interviewing presented an opportunity to “collect data from a larger number of people representing a broad range of ideas” (Merriam, 2011, p. 88).

Underneath the umbrella of interview types, standardized, semi-structured, and unstructured interview structures exist (Merriam, 2009). For this study, I used semi-structured interviews due to the flexibility of the protocol, but also specific questions are asked of all respondents (Merriam, 2009). Semi-structured interviews tend to be more open-ended and are usually governed by lists of questions or issues to be explored. An important consideration in this interview format is the ability for the researcher to follow up on specific points made by the subject. Semi-structured interviews allow the researcher to probe deeper, to clarify any ambiguities provided by the participant, and to ask for examples to illustrate the phenomenon being described. In this study, I conducted individual semi-structured interviews with 35 study participants. Interview lengths ranges from 58 to 117 minutes. On average, interviews lasted approximately 90 minutes, yielding more than 52 hours of interview recordings.

Data Analysis Procedures

In this section, I discuss how I prepared the data for analysis. After preparing the data, I highlight the analytical procedures I applied to the study data. Finally, I outline the steps I took to ensure the reliability and validity of the study’s findings.

Preparing the data. The goal of qualitative research is to make sense of the data. Before the actual data analysis commences a researcher must prepare the data to be analyzed. My data

preparation processes included two steps. First, Merriam (2009) suggests that an “interviewer may want to record his or her reactions to something the informant says [and] to signal ... the importance of what is being said” (p.109). Using this recommendation, I created a memorandum memorializing salient ideas and points stated by the participant during the interview. These memoranda highlighted questions that participants spent the most time discussing, identify any emerging ideas or insights from a particular interview, and provide interviewer observations about the interview. Second, all interviews were transcribed verbatim. I used two transcription services to have all 35 interviews transcribed. To ensure transcription accuracy, I re-listened to the audio recording while following along with the completed transcript. Any discrepancies were corrected.

Analytical procedures. In this study, I followed Merriam’s (2009) data analysis steps, which is a process involving the “consolidating, reducing, and interpreting what people have said and what the researcher has seen and read” (p.176). This complex process requires the researcher to sort data and to be responsive to the theoretical underpinnings of the study.

Before beginning the analyses, I reflected on the concept of rationality and what does it mean to make a rational financial decision. I considered several costs and benefits associated with each decision presented in the next chapter. Throughout this dissertation, I make the assumption that individuals believe they are making a decision to better their own self-interest while accounting for different financial costs. For example, prior research suggests that a doctoral program’s prestige within a discipline has a correlation with the likelihood a doctoral student will receive an academic job offer (Burris, 2004). Another example involves the rationale for student loan borrowing. Is taking on student loan debt irrational? The answer to this question is not always no; the answer depends upon the individual. With these thoughts in mind, I

evaluated the rational choice stemming from the rationale participants made regarding their decision for taking on this debt. As I read through the interview transcripts, I asked myself whether I believed the actor was behaving in a way to optimize their future financial return. As I conducted my analyses, I evaluated participant's decision-making process to understand how they weight costs and benefits while deciding on the optimal return in light of perceived costs.

To begin the analysis and answering the research questions, I reviewed each participant's memorandum, their demographic information, and the interview transcript. I made notes about important ideas emerging in each transcript and made connections to the theoretical underpinnings of the study as I reviewed the 35 interview transcripts. As I underwent this analysis, I sketched out a rudimentary coding scheme based on emergent ideas. Merriam (2009) refers to this process as open coding.

Next, I reviewed the emergent ideas and their associated codes to construct categories that attend to the research questions and theories informing the study. Category construction is the grouping of the open codes, comments, and notes that seemingly go together. Corbin and Strauss (2007) refer to this process as analytical coding. During the grouping process, I constructed an overall codebook for this study that pairs codes with descriptions and participant examples.

Once I constructed study's basic codebook, I engaged two peer debriefers with knowledge of the research problem and theoretical perspectives. I asked the peer debriefers to review three interview transcripts and my coding of the data to ensure I consistently applied the codes and did not miss any important insights. Doing so enhanced the rigor of the study, ensuring that as a researcher, I reasonably organized the ideas. After peer debriefing concluded, I

coded the remaining transcripts. More discussion of the reliability and validity measures taken during the study are discussed in the next section.

Reliability and validity. Every qualitative study will be different for a variety of reasons, such as interview location and interview-subject rapport. Within the research community, differing views of research quality emerge (Glesne, 2011). Qualitative research studies should show that conclusions presented are logical (Firestone, 1987). Some scholars argue for “validity” and “reliability” (Merriam, 2009) while others seek “credibility” and “dependability” (Remler & Van Ryzin, 2011) within studies. Because I conducted the analysis following Merriam’s (2009) data analysis procedures, I also followed her recommendations for attending to validity, reliability, and ethical behavior.

In this study, several measures were applied to ensure reliability and validity of study’s findings. Reliability and validity refers to the ability to “trust” research results (Merriam, 2009, p. 209) and provides readers with reliable depictions to act upon (Lincoln & Guba, 2000). In addition to using research methods commonly used in field of higher education, I incorporated the use of multiple data sources, triangulation, peer debriefing, audit trail, and researcher positionality to support the reliability and validity of the findings presented in the next chapter (Merriam, 2009).

First, I collected multiple sources of data in this study. I interviewed 35 participants for this study. Creswell (2007) recommended interviewing between five to 25 participants experiencing a particular phenomenon. Interviewing more participants increased the volume of data, which allowed me to cross-check the study’s themes across different participants with different experiences. By collecting a considerable amount of data I was able to see variations and patterns among participants (Merriam, 2009).

Second, I used “investigator triangulation,” which is when multiple investigators analyze the data. I recruited two peer reviewers to assist in reviewing and applying the coding scheme developed. Using the codebook, I asked each reviewer to apply the coding scheme to three transcripts each. Together, we reviewed the application of the codes together to remediate any differences and to determine if a clearer description for a code is needed.

Third, peer debriefing occurred with two people with understandings of the phenomenon (Merriam, 2009). Peer debriefing serves as a process for the researcher to consult with an independent third party to ensure the emerging results make sense and to understand if the researcher is biasing the findings in a specific way. The peer debriefers and I discussed different possible interpretations of specific quotes. Together, we had a rich discussion about the data and what noticings encountered during the peer debriefing process.

Fourth, an “audit trail” was kept throughout the research process (Merriam, 2009). The audit trail documented all of the major and minor decisions made by the researcher. Audit trails allow other researchers to trace the findings back to the data through the audit trail document.

Finally, researcher positionality plays an important part in interpreting the data from the study. As the researcher, I serve as the “primary instrument for data collection and analysis” (Merriam, 2009, p. 15). Therefore, it is essential for me to disclose my relationships, biases, and assumptions about the topic. Furnishing this information enhanced the reliability and validity of the study.

My positionality has the potential to influence the research in several ways. First, as a researcher, I consider myself an outsider seeking information from insiders (Creswell, 2007). I take this position because each person I spoke with during this study had different financial circumstances. Each participant was an insider with a singularly unique understanding of their

everyday finances and the cost-benefit analyses they conduct, while I am an outsider trying to interpret the meaning and value participants ascribe to financial resources. Second, although I am an Education PhD student, my financial considerations may differ from doctoral students in other disciplines. Before returning to school, I worked professionally for several years as a financial consultant. This professional experience was lucrative and allowed me to grow my savings. These savings have afforded me different opportunities, such as moving 1,000 miles to enroll in my doctoral program and living apart from my partner during doctoral coursework. Third, my previous experience as a financial consultant influences my interest in pursuing this topic. Interview participants may be skeptical of why I am interested in this topic and my intentions. I attempted to mitigate these biases throughout the study. In particular, I recruited and interviewed a sizable number of participants who offered many perspectives. In the end, I wanted to understand how financial considerations influenced a doctoral student's decision-making and experience.

Study Limitations

Although the study design presented in this chapter is well-founded, supported, and grounded within the extant literature, I acknowledge several limitations to the study.

First, all study participants in the study attended two institutions located in the Midwestern portion of the United States. The experiences of these individuals may not reflect the financial considerations of students in large, metropolitan cities, or the U.S. coasts.

Second, the study participants were drawn from public institutions, and although public institutions train a large percentage of doctoral students, financial considerations may be different for doctoral students at private institutions, which may offer additional or fewer financial resources to their students.

Third, twenty-four of 35 study participants attended undergraduate institutions classified as “very high” (RU/VH) or “high” (RU/H) research institutions. Six participants attended selective liberal arts colleges. Two participants attended internationally-located undergraduate institutions or a branch of a flagship campus. One participant attended a community college before attending a selective liberal arts college. In summary, more than 85 percent of participants attended institutions similar to the institutions where their doctoral program were located. Since many study participants attended research intensive or selective liberal arts colleges, they may have been more aware of the importance of attending a well-regarded doctoral program in the social sciences.

Fourth, this study interviewed students in the final third of their doctoral education. Different doctoral education studies suggest that many students will drop out at three timepoints: after the first year, after completing coursework, and during the dissertation phase. In this study, I interviewed participants at the end of coursework, dissertation, or recently graduated stage. Focusing on these stages may unknowingly omit opinions of how financial circumstances influenced socialization for doctoral student dropouts. In this study, no participants had dropped out or officially stopped out.

Fifth, the majority of study participants entered their doctoral program immediately after completing their undergraduate degree. While work experience does not necessarily mean an individual will exercise better financial judgment, participants entering their doctoral programs without working may not have been on their own to pay for their financial expenses. This lack of experience may limit their understandings of financial matters.

Sixth, this study does not specifically address disciplinary differences. Academic disciplines have been defined as “a body of knowledge with a reasonably logical taxonomy, a

specialized vocabulary, an accepted body of theory, systemic research strategy, and techniques for replication and validation” (Donald, 2002, p. 8). Disciplinary differences may shed additional light on how doctoral students evaluate financial considerations.

Seventh, finances may be a sensitive topic for people interested in the study. The possibility exists that people volunteering for this study are interested in participating because they have extremely negative financial situations. These types of participants may skew the data.

Finally, this study uses cross-sectional data at one point in time. Future studies should consider how financial considerations shape doctoral education from entry to completion. A longitudinal study can yield important insights into this process; however, the present study offers the first stepping-stone to understanding this phenomenon.

CHAPTER 4: FINDINGS

Joseph entered the Circle City sociology doctoral program, a program consistently ranked among the best in the country, immediately following the completion of his undergraduate degree at a small, private liberal arts college. Joseph's family was able to provide some financial assistance with his undergraduate degree, but he still amassed slightly more than \$30,000 in student loan debt.

During his senior year, he felt conflicted about what to do after graduation. As the first person in his family to go to college, he was not sure whether he should seek full-time employment or pursue an advanced degree. The summer preceding his senior year, he conducted research for some sociology professors in his undergraduate department. They encouraged him to consider applying to doctoral programs because he did well in courses and possessed genuine curiosity. His faculty member's did not tell him about how competitive the academic job market is or how they spend their time each week on teaching, research, and service, but doctoral education intrigued Joseph. He thought he could be an effective professor.

While he was applying to doctoral programs, Joseph hoped to receive at least one acceptance with a fully funded offer attached. When he asked his faculty member's for letters of recommendation they offered him unsolicited advice on how to evaluate different programs. They shared with him that he should not have to pay for his graduate education. Joseph understood this advice to mean that he would need a funded offer, but he did wonder whether a funded offer would provide him with enough financial support to meet his monthly expenses. All of the professors he received advice from earned their doctorates more than 20 years ago. Fortunately, Joseph received three acceptances with monetary remuneration attached to the admission offer.

Joseph eventually decided on Circle City for three reasons: a funded offer, low cost of living, and the program's academic job placement record. After moving across the country and beginning coursework at Circle City, Joseph found himself sitting in classes where professors encouraged students, especially ones considering faculty roles, to attend conferences frequently and write for publication. Joseph listened to emphasis his professors placed on attending conferences. He attended sociology's largest conference and his sociology subfield's key conference. He attended these conferences based on advice he received from his advisor and observations he noticed about more advanced doctoral students. He particularly noticed that many of the students seeking academic jobs frequently attended these conferences. Academic conferences came at a considerable financial cost because Joseph had exhausted the financial resources his department offered him, and he knew he could not ask his family for any more financial assistance. As a way to pay for these types of socialization expenses, Joseph recognized he had two options – (1) he could take on some hourly work with faculty members who had grants or (2) he could take out some additional loans to supplement his income. Joseph chose the former option for a number of reasons, such as researching along faculty is something he wanted to do after he completed his doctorate and working with different faculty would expose him to new research areas within sociology. Most importantly, Joseph worried about taking out more debt in addition to his undergraduate debt. He questioned whether a professorial job would pay him enough to cover his living expenses and his student loan debt? He also wondered whether prospective employers would take his job candidacy seriously if he failed to attend professional meetings each year.

Joseph's situation represents a single student's unique path to, through, and beyond graduate education. I use this case as a starting point for presenting the findings of this study

because financial considerations varied for different participants. Like Joseph's story, financial considerations influenced participant's initial decisions about whether to go to graduate school and selecting a program. Subsequent decisions with financial implications during doctoral programs centered on issues, such as, academic conferences and secondary employment. The decisions represented in this profile highlight many of the decisions participants in this study faced.

This empirical investigation set out to answer the two primary research questions: (1) how do doctoral students make decisions about their graduate education when those choices have financial implications? (2) How do financial considerations shape decisions influencing socialization opportunities?

Overview of Findings

Preparing for and succeeding in a doctoral program requires an immense amount of time, personal commitment, and financial resources. Participants in this study illustrated how financial considerations shaped decisions about their career trajectories during and beyond graduate study. Furthermore, participants committed considerable institutional and personal financial resources towards their education. Before entering doctoral programs, participants shared how financial considerations shaped their decision to enroll in graduate education and where to apply. Graduate school requires a sizeable upfront monetary investment related to costs associated with taking the Graduate Record Examination (GRE), requesting transcripts, paying application fees and visiting prospective doctoral institutions.

After gaining admission to and matriculating into a doctoral program, even more financial considerations emerged. Participants made decisions about supplementing their income through student loans, securing secondary employment, attending particular conferences, funding

independent research projects, and purchasing professional clothes for teaching positions. These decisions often do not occur in isolation. Numerous participants had families, who created financial challenges or provided financial relief that influenced decision-making processes.

This chapter offers insight into the series of decisions doctoral students make about their education. Study participants demonstrated that they conducted cost-benefit analyses about their doctoral program with particular emphasis on activities known to foster socialization. The purpose of this study was to explore the decision-making process of doctoral students as they make decisions with financial implications about their education. In this chapter, I utilized rational choice and socialization theory to better understand how the decisions made by doctoral students shaped aspects of their educational trajectories. Guided by these theoretical perspectives, participants evaluated financial considerations during five decision-making processes: (1) going to graduate school, (2) selecting a graduate program, (3) financing doctoral education, (4) participating in professional aspects of doctoral education, and (5) factoring family considerations. Study findings illuminated complex financial calculations participants negotiated as they made decisions about their doctoral education.

Deciding to Go to Graduate School

Although making the decision to go to graduate school is a complex process, I analyzed this decision specifically from a financial perspective. Numerous study participants invoked financial considerations in the graduate school decision in four ways: (1) lacking career options, (2) having a degree paid for, (3) seeking positions requiring terminal degrees, and (4) deferring student loans. In concluding this section, I apply rational choice theory to interpret the decision to enroll in graduate school.

Lacking Career Options

For most of the study participants, a chief financial consideration in deciding to attend graduate school stemmed from a lack of career options for social science undergraduate degree holders. In this study and in alignment with Austin (2002), I consider history, political science, and sociology to be social science degree programs. Undergraduate social science majors tend to lack a direct career path compared to students majoring in applied fields (e.g., business, engineering, education). Nearly all study participants communicated having unsure career prospects. For example, Kelsey, a sociology doctoral student, described her pursuit of doctoral education as a function of “happenstance” and having been a “good student” in sociology. She described her decision-making process as she neared the completion of her undergraduate degree:

I was very unsure about what career I wanted to go into. With sociology, there isn't an obvious career option and even if there are some options, I don't feel like there are many great options out there.

In addition to lacking a clear pathway for entry into the labor market, many study participants considered graduate education as an alternative to labor market participation. This line of thinking was consistent across the 24 participants enrolling in doctoral programs without work experience. At the time these participants considered graduate school, America's economic health was slowly rebounding from the Financial Crisis of 2008 and Great Recession. This economic period is best characterized as a time with higher unemployment and slower job creation; thus, these larger macroeconomic influences exerted pressure on study participants as they pondered what to do after undergraduate graduation. Despite the official end of the Great Recession in 2009, many qualified college graduates faced rising unemployment rates, stagnant

wages, and limited advancement opportunities following this recessionary period (Economic Policy Institute, 2015). Several participants directly acknowledged how economic forces shaped their perceptions of career options. Helen, a history student, described how she viewed the economy's influence in her decision to pursue graduate education:

When I graduated college, the economy was not great and the idea of applying for a job was really scary to me. So I knew how to apply to school...I went to graduate school because I didn't know what else to do.

Helen's perception pointed to how a less robust economy shaped her graduate school aspirations because she, like many participants, felt unprepared to apply for jobs in a suboptimal labor market. Instead, Helen applied to graduate school as a way to delay entry into the workforce. Other participants like Kendra, a sociology student, described how a bachelor's degree was not sufficient to be a competitive job applicant. As a result, Kendra weighed costs and benefits of graduate school. She concluded a graduate degree would allow her to maximize earning potential as an advanced degree holder compared to holding only a sociology bachelor's degree. A majority of participants shared their concerns over the economy and their belief that obtaining a graduate degree would enhance their career options.

Having A Degree Paid For

Most study participants considered a variety of graduate degree options (e.g., law, doctoral programs, master's degrees) before deciding on doctoral education. These participants almost unanimously mentioned institutional funding as an important reason for pursuing a doctorate over other educational degree options. Institutional funding refers to fellowship, teaching, and/or research assistantships offered to students to entice them to attend a particular program. In exchange for their services, institutions typically pay tuition costs and provide a

cost-of-living stipend. For example, Melissa, a history student, debated pursuing a master's degree in international relations or a history doctoral degree. She described how she weighed institutional funding against personal financing in her graduate school decision-making process:

I think a bachelor's degree is the new high school diploma and I think an MA [Masters of Arts], JD [Juris Doctorate] or whatever is turning into the new bachelor's degree. And so I knew that I was going to go to grad school in some form, but I didn't want to fork over 60 grand to get a [master's] degree in international studies or something when I could do a PhD and be in a profession I wanted to be in and not really pay for it...taking on all that debt just seemed like a completely ridiculous financial life decision.

Melissa explained how she prioritized a doctoral degree over other graduate degree types because she viewed a funded offer for a doctoral program as “not really paying for” the degree compared to having to “fork over 60 grand” of her own money and possibly having to borrow money to obtain an international studies master's degree. As an added benefit, Melissa believed holding a graduate assistantship position would allow her to obtain teaching and research skills required for an academic career. Similarly, Kelly, a political science student, considered law school and doctoral programs. In the end, the allure of having a degree paid for by someone else held appeal. Kelly described her preference for a doctoral degree over a law degree as a function of costs and benefits. She explained, “I knew I wouldn't have to pay for the PhD, and I didn't really want to go into that much debt over law school.” Echoing Kelly's sentiments, Jamie, a sociology student with undergraduate student debt, discussed not wanting to acquire additional debt for graduate school. Because she had undergraduate student debt, Jamie relied on a funded doctoral program so that she “wasn't taking any more [student loan] money out.” Going into debt over a graduate degree represented a poor investment to Jamie and many study participants.

While a majority of participants identified having a funded doctoral program as a career necessity, some participants viewed funding as a commodity exchanged for services rendered. Sam, a sociology student, consulted several mentors when he contemplated returning to postsecondary education for a graduate degree. His mentors told him that he was academically qualified for doctoral programs. More specifically, they instructed him that if “a program doesn’t offer it [funding] to you, they’re trying to take advantage of you.” They also advised him, “you should wait and reapply and get funding that way” if doctoral programs did not offer him a funding package. Similarly, Sheryl, a sociology student, offered her vantage point on doctoral education funding as an exchange for a service:

I had decided that I’m not gonna pursue a PhD if it was not paid. That was my actual decisive factor...I mean, for me, a PhD is work. You are a researcher. You are creating knowledge and you should be paid for it. So I knew that if I did not get funding, I would just not do it. So that was very important for me and that was also a reason why I went for the PhD and not a law degree because it’s much more difficult to actually find funding for a law degree than for a PhD.

Sheryl argued doctoral degree funding should be treated as employee compensation. “Creating knowledge” benefits not only the individual, but also the institution. Certainly the researcher receives individual credit in scholarly communities, but institutions benefit from the researcher’s affiliation. For example, journalists often use article headings such as “A New Study from X institution found...” Institutions receive credit as much as individual researchers. Sheryl believed doctoral students should be compensated for their scholarly contribution. She was not alone in this feeling. More than one-third of participants shared similar sentiments about funding as an exchange for services.

In summary, having a funded doctoral program factored into the decision to enroll in graduate education. Many participants cited funded doctoral degree programs as a better investment than other graduate degrees where individuals would have to take on student loan debt, pay out-of-pocket, or reduce savings to pay for their degree.

Positions Requiring Terminal Degrees

Possessing a doctoral degree represents both an explicit and implicit financial consideration. Explicitly, doctoral degree holders often earn higher wages than individuals with less formal education (Baum et al., 2013). Implicitly, an earned doctoral degree represents an entry credential to specialized fields. More specifically, participants unanimously expressed that lacking a terminal degree limits their ability to secure a full-time academic position. Academic posts often require terminal degrees for most tenure-track faculty positions, especially tenure-track faculty positions at research institutions, which is the type of institution many participants were socialized to during graduate education (Austin, 2002; Bieber & Worley, 2006). Lacking a doctoral degree can impair a person's earning potential by not meeting the minimum entry qualifications for this specialized labor market.

Nearly all study participants aspired towards the professoriate, so completing a doctoral degree represents an essential entry qualification. For example, Abigail, a history doctoral student, shared that she originally intended to only complete a bachelor's degree, but quickly realized that "in order to do what I initially wanted to do [become a professor]...it would be better to have the highest degree possible, which is obviously a PhD." Earning a doctoral degree would allow Abigail to pursue academic positions upon completion of her terminal program. Similarly, Lauren explained her doctoral pursuits in a matter-of-fact manner: "I know that I want to become a professor, and so, of course, there's just the credentials that are required for the job

that I want to have eventually.” Participants like Jamie shared having a terminal degree would not only make her eligible to become a faculty member, but also provide access to a lucrative career. She viewed academic positions as a way to “be making a lot more money” in the future. Many participants considered their career aspirations and future incomes when deciding to pursue doctoral education. Hence, financial considerations were a factor in the decision to pursue a terminal degree.

Deferring Student Loans

Student loan deferment also played an important role in the decision to enroll in graduate education for a small subset of study participants. Twelve participants carried undergraduate student loan debt balances when they entered their doctoral programs. Individual debt amounts ranged from approximately \$8,000 to \$120,000. When student loan debt holders enroll as full-time students in graduate programs their debt holder status converts from active repayment to deferment. When loans are in deferment, loan servicers do not require monthly payments during full-time enrollment. Deferment of student loans only applied to a small subset of study participants, but for this small group of study participants, deferment served as an important financial consideration. For example, Eleanor, a sociology student, shared that placing her student loans into deferment allowed her to feel more “comfortable” about the “risk” associated with graduate school. Deferment status factored into Eleanor’s decision to pursue graduate education instead of finding full-time employment after she completed her bachelor’s degree.

Taylor, a history doctoral student, borrowed a modest amount to pay for her undergraduate degree. She discussed deferment and how it entered into her graduate school decision:

Oh, you mean if I go to grad school, I can be in deferment? Okay, that sounds good. So that was, you know, all my loans have been in deferment...But I think I have about \$19,000...It's the kind of debt where it's like, it's not great, and when I'm out of school and have to be paying on it, that's not gonna be great. But at the same time, if I get a decent job and we live modestly, which is what we intend to do anyway, I can kill it within a reasonably short amount of time.

Taylor elected to enroll in graduate school because this option meant not having to repay her undergraduate loans immediately after completing her bachelor's degree. Like many indebted participants, Taylor believed entering graduate education would broaden job prospects and allow her to "kill" undergraduate student loan debt in a short period of time after doctoral degree completion. Most participants with student loan debt estimated their future income to be more substantial than their current earning potential. These twelve participants with undergraduate student loan debt cited student loan deferment as an important factor in their decision to pursue graduate education.

Theoretical Applications to the Graduate School Decision

In this section, I analyze study participants' decision-making processes' congruence with rational choice theory's specific emphasis on cost-benefit analyses and self-interest maximization axioms. Study participants considered different costs and benefits in their decision to enroll in graduate education. Financial considerations factored into decision-making processes in different ways as respondents weighed different educational or labor market options as well as their own financial positions (e.g., student loan debt balances). Challenging economic times and non-linear career pathways for social science undergraduate degree holders encouraged participants to view returning to school for graduate education as a future long-term benefit

outweighing any short-term costs for not entering the workforce. Rather than face uncertain employment opportunities, many study participants entered doctoral programs as way of maximizing an investment in their human capital, educational competitiveness, and future earning potential.

Many participants focused on the positive benefits associated with pursuing an advanced degree. Often absent from these benefit discussions were the intangible costs associated with the pursuit of a doctoral degree. For example, Melissa decided that she did not want to take on any debt or pay out-of-pocket for a master's degree. She opted to pursue a doctoral degree in lieu of a master's degree because a doctoral degree met her requirement for having a degree paid for. What she did not consider was her doctoral program took three times as long as her two-year masters program or the earnings she would forego in pursuit of her doctoral degree.

Several participants explained doctoral education operated differently than undergraduate education where undergraduate students have primary responsibility for paying for their education. When study respondents considered enrolling in graduate education, faculty members they consulted in the decision-making process encouraged them to consider only doctoral programs where the cost of education would be covered by the institution. Faculty members conveyed to participants that if they wanted to be competitive for the tenure-track positions they aspired towards, a funded offer would provide them with the opportunity to learn more about teaching and research functions. Some participants also viewed funding as remuneration for services rendered through graduate teaching and research assistantships. For their services, these participants felt stipend and tuition waivers compensated for their time and effort.

In summary, rational choice theory axioms related to cost-benefit analyses and self-interest maximization were apparent in participant's decision-making. Numerous participants

engaged in various financial cost-benefit analyses as they considered graduate school as an option. Study respondents considered a dearth of career options, having a degree paid for, seeking positions requiring terminal degrees, and deferring student loan payments as important financial considerations in deciding to attend graduate school. They perceived graduate school would maximize their future earning potential by enrolling in and ultimately completing a doctoral program.

Selecting a Doctoral Program

After deciding to attend graduate school, study participants discussed the deliberative process they underwent in selecting a doctoral program. The doctoral program where students receive their training has far-reaching implications for future academic employment, placement, and productivity (Fox & Stephan, 2001; Horta, 2009; Burris, 2004; Hermanowicz, 2016; Baldi, 1995). Burris (2004) studied PhD program prestige in the field of sociology and found that “the prestige of the department in which an academic received a PhD consistently ranks as the most important factor in determining the employment opportunities available to those entering the academic labor market” (p.239). Similarly, Hermanowicz (2016) argued “it is graduate education that decisively sets academics on their professional paths” (p. 2). He elaborated on this statement by describing graduate education as the time when doctoral students come to understand and receive training regarding what disciplines values as seminal theories, content and methodological preferences. Scholars of doctoral education have critiqued doctoral training because many faculty members socialize doctoral students in the manner in which they received their training; thus doctoral education holds the potential to shape the way future generations of doctoral students receive training (Austin, 2002; Hermanowicz, 2016).

Hermanowicz (2016) interviewed 55 mid- to late-career academics about their perceptions of their graduate education. Study findings showed that participants receiving doctoral training from less prestigious institutions viewed their programs more negatively than participants attending more highly regarded programs. Hermanowicz (2016) reasoned this discrepancy emerged because participants from lower-ranked doctoral programs felt their colleagues from more prestigious institutions received better training and understanding of faculty reward structures. Merton (1977) coined the term “cumulative advantage” to describe this effect, which ascribes perceived benefits to doctoral students attending higher ranked doctoral programs. In summary, scholars have identified a positive correlation between departmental prestige, future research productivity and academic job placement (Long, 1978; Allison & Long, 1990).

Attributing institutional choice simply to financial factors does not adequately capture the multifaceted nature of this complex decision. Despite the multiple dimensions to be weighed in this choice, several participants mentioned monetary considerations (e.g., stipend size, cost of living, guaranteed funding) as central influences in the graduate school application and selection process.

Many participants fondly recalled applying to graduate school. Participants hoped to gain admission to one or more doctoral programs so that they could actually make a decision about where they would receive their graduate training. The application process often began as a discussion with faculty at their undergraduate institution about their professors’ opinions of different doctoral programs. For example, Kelsey recalled her decision-making process for applying and selecting a graduate program to study sociology. At the encouragement and direction of several undergraduate professors, Kelsey investigated a variety of sociology

programs through the American Sociological Association's website and compiled a comprehensive list of possible programs. She presented the list to her faculty members for their input. Kelsey's faculty provided different feedback about programs such as, this program is "competitive," "funding is not secure there," "beware of the cost of living," "institutional prestige," and "advisor reputation" in her chosen subfield. These conversations encouraged Kelsey to weight financial and non-financial factors, such as: institutional ranking, tuition remission, stipend size, and cost of living. Kelsey narrowed her application process to seven doctoral programs. She had hoped to apply to more programs, but she recalled how "very expensive" the application process was for her. Fortunately, Kelsey had a successful admissions cycle where she received several acceptances. She talked about how she evaluated different doctoral programs that she received acceptances to:

I ended up applying to seven different programs...And I was actually waitlisted at [Circle City]. [Circle City] was the highest ranked program that I applied to. In sociology, it's ranked like 11th or 12th and I was accepted into two institutions that were ranked about 40th immediately and I was rejected by a few others and/or accepted without funding to institutions ranked in the 20s.

Kelsey's narrative implied funding and institutional prestige were key factors in swaying her decision to attend Circle City. Thinking back to her conversations with faculty members at her undergraduate institution, Kelsey stated her key confidants suggested that she should consider only funded offers. When she received her waitlist notification from Circle City, she held on to hope for eventual admittance. Her interest stemmed from the advice of her faculty member's opinions of the program, lower cost of living of Circle City's location, and program ranking. Nearing the national reply deadline (April 15th) to accept a seat in sociology doctoral

programs, Kelsey received an email inquiring about her continued interest in Circle City. The day before the April 15th reply deadline, Circle City's sociology program offered Kelsey admission. She immediately accepted the offer because Kelsey felt Circle City was the right program for her because she did not want to be in an environment where students actively competed for funding. She feared competition for funding might foster less collegial interactions. All Circle City sociology doctoral students received a guaranteed five-year funding offer. Funding offers covered tuition expenses, provided approximately \$15,000 stipend, and paid health insurance premiums. Kelsey perceived this financial overture would allow her to focus on her studies rather than having to continuously compete with classmates for institutional and departmental funds.

Similar to Kelsey's doctoral program selection process, Kelly received history admissions offers to three institutions -- an elite private institution, a prominent public institution in a major city, and Circle City. Kelly discussed the criteria she used to evaluate the three different programs. First, the private institution did not admit her to the doctoral program, but offered her a spot in their master's program without any tuition scholarship or financial stipend. She immediately ruled out the private institution due to not gaining admission to the doctoral program and the prohibitive cost associated with pursuing a master's degree at the elite private institution. Second, the prominent public institution utilized a reverse funding model where students with seniority received funding first and any remaining unallocated funds would be offered to incoming students. Kelly understood this model to mean she would be responsible for paying tuition, fees and cost of living on her own during the first year. Although she had significant interest in attending the prominent public institution, she "didn't want to take out the loans and pay for the first year or deal with all that." Finally, Circle City offered her an initial

five-year funding package with her admissions offer. The funding offer solidified Kelly's interest in Circle City's history program. Kelly discussed how the funding made her decision to attend Circle City easier: she "felt if [Circle City] is willing to fund me from the get-go, they probably wanted me more, so that's why I picked [Circle City]." Kelly believed that Circle City was making an investment in her by offering her a multi-year funding package.

Alice decided to apply to history doctoral programs after having a positive conversation with a faculty member at her undergraduate institution. This faculty member supplied advice to her about applying to and what to look for in different doctoral programs. Alice appreciated her faculty member's advice because this faculty member recently completed her doctoral program and had a realistic understanding of the history academic labor market. As Alice advanced through the application and program selection decision-making process, her faculty member told her:

Only go somewhere if they would pay for it. She said don't go anywhere that's gonna make you pay. And so that really stuck with me and so I ended up applying to eight schools, got into four and got funding at two and took one that I liked best.

Similar to many study participants, Alice received several acceptances and subsequently eliminated programs not offering funding. Alice shared her process about how she ultimately decided to attend Evergreen:

I visited [Evergreen] and just had a really good campus visit experience. Felt really welcome. I really liked Dr. [PROFESSOR] who's my advisor. I just got a feeling that it was the right choice at that point. One of the programs that I got into but wasn't guaranteed funding was NYU and so this big name professor at NYU who I'd read all his books, I had kind of an academic crush on this guy, he calls me up and he says his name.

I'm like oh, it's you, and you know, he told me that, you know, he'd read my application... they could give me a space in the history PhD program but they wouldn't be able to guarantee funding the first year. I'd have to reapply for funding starting the second year. And that seemed really risky, especially living in New York City, expensive. So I told them I got offered full funding at [Evergreen] and heard it's a great program for [SUBFIELD], [Famous Professor said] you should go there. So that seemed like a good endorsement.

Alice's narrative highlighted three important factors in her decision-making process: funding, cost of living, and programmatic fit. Similar to Kelly, Alice perceived Evergreen's history program was making an investment in her academic career. With a vote of approval from the professor at NYU, Alice concluded Evergreen's history program would help her realize her career goals.

Embedded among these three examples and comments from a vast majority of study participants is the recurring narrative about the cost of living. Many participants factored cost of living into their graduate program decision-making process even if they received a funded offer from a particular institution. Participants had to factor these expenses into their doctoral program decision since the financial compensation doctoral students receive from their funded offers would go towards paying for their cost of living expenses, such as housing, food, and entertainment. Doctoral students in this study were directly responsible for paying their own living expenses and therefore had to account for these financial capital outlays. For example, Kelly did not want to risk taking on student loan debt to financially support her decision to attend the prominent public institution in a major city. Alice forecasted how difficult living on a doctoral stipend in an expensive city like New York might be. Echoing Kelly and Alice, Celine,

a sociology doctoral student, recalled making the decision to attend Circle City over a renowned sociology doctoral program because of stipend amount. She stated that she could not afford to live in the city where the renowned institution was located on the stipend offered. To Celine, the higher cost of living reduced her interest in the higher ranked program in favor of Circle City, which provided her with slightly more monthly income and a less expensive location.

In summary, participants considered numerous financial factors as they selected their doctoral program. In this section, I have highlighted how funding offers, stipend size and cost of living were not mutually exclusive financial considerations. Instead, they commingled to “push” or “pull” a student towards a particular doctoral program. Financial considerations took an active role in shaping the program selection decision-making process.

Theoretical Applications to Selecting A Doctoral Program Decision

In this section, I analyze participants’ application of rational choice theory axioms to decision-making processes used in selecting a graduate program. Rational choice theory posits an individual will account for the costs and benefits of a decision before proceeding with an option that will maximize their own self-interest. As I offer my analysis, I point out participants’ congruence and deviation from these guiding axioms.

Numerous respondents discussed receiving advice from their undergraduate program faculty about different factors to consider in selecting a graduate program. The professors that participants consulted during the program selection process emphasized three elements: (1) guaranteed funding, (2) institutional prestige, and (3) advisor reputation. Participants incorporated these three factors to varying degrees during their cost-benefit comparisons and self-interest maximization processes. For example, nearly all participants prioritized securing a funded doctoral program offer. Kelsey, Kelly and Alice’s narratives illustrated the importance of

and desire for funded offers. The funded offer represents a realized financial benefit to the individual because funded doctoral students do not have to pay for doctoral education in the way that undergraduate students pay for their education. This type of financial remuneration factored into the program choice decision because a funded offer would help participants meet their living expenses and reduce worry about paying tuition costs. Like many study participants, Kelly, Alice and Celine worried about being able to afford living expenses. Study participants eliminated doctoral programs from their preference set when they estimated their monthly income would not allow them to meet a certain standard of living without graduate student loans.

An area where many study participants did not behave in alignment with rational choice theory had to do with factoring in institutional prestige and faculty reputation. Many participants received advice from their undergraduate faculty to attend the most prestigious doctoral program offering admissions. Professors may have advised these prospective doctoral students to attend highly ranked institutions because these institutions typically employed faculty with sterling reputations and research training pedigrees. Burris (2004) confirmed the importance of doctoral program prestige on faculty hiring in sociology. In his study, results pointed out that 1171 of 1700 faculty hired at one of the Top 94 sociology programs graduated from a Top 20 sociology doctoral program. Through encouraging students to attend the highest ranked institution, professors wanted to maximize the prospective doctoral students' chances of securing an academic post after completion of a doctoral program.

Professors may have furnished advice to participants, but some doctoral students did not follow these recommendations. In Kelly's example, she eliminated the higher-ranked prominent public institution because funding was not readily available. Although she had received advice to attend the highest ranked institution she received an admissions offer to, Kelly chose to attend

Circle City because she perceived the program invested in her when the history program offered her a funded offer. Alice received admission to several programs. Based upon the advice she received from an undergraduate mentor, Alice immediately eliminated two of the four programs admitting her without funding. She was left with a choice between Evergreen and NYU. Despite NYU being more highly ranked, Alice chose Evergreen for three reasons: (1) the cost of living was less than New York; (2) Evergreen's program supported her research interests; and (3) she felt Evergreen was a good programmatic fit and collegial place to study. Alice weighed financial considerations more heavily than some of the advice she received from professors inhabiting the academic role she coveted at the conclusion of her doctoral program. In spite of their financial considerations, Kelly and Alice may have not abided by self-interest maximization. As studies have shown, doctoral students attending higher ranked doctoral programs often achieve greater levels of success on the academic job market (Burris, 2004).

In summary, rational choice theory axioms were apparent in the program selection process, but not necessarily followed completely. The rational choice model followed by some participants showed that the long-term benefits (e.g., departmental prestige) received from attending a specific doctoral program outweigh some financial considerations (e.g., stipend amounts). Some participants, like Kelsey, selected the highest ranked doctoral program while other participants (e.g., Celine) factored cost of living into their program selection criteria. Participants weighed a mixture of financial considerations (e.g., funded offer, cost of living) and intangible factors (e.g., program prestige) in their decision-making process to select a graduate program. For some participants, financial considerations weighed more heavily than intangibles, while other participants behaved in the opposite way. In either case, participants used a deliberative process to select a program meeting their preferred program characteristics even if

making such a choice violates rational economic cost-benefit analyses and lessens their future self-interest maximization.

Financing Doctoral Education

Doctoral students typically have two routes for financing their graduate education. One pathway is departmentally or institutionally financed, while the other pathway relies on the individual to finance their doctoral education. These routes are often referred to as funded and unfunded, respectively. Thirty-one of the 35 study participants utilized departmental funding as a primary means of financing their doctoral program, while four participants entered their doctoral programs unfunded. Unfunded participants used a variety of financial mechanisms (e.g., student loans, food stamps) to follow their terminal degree dreams. In this study, a number of funded students also considered supplementing their monthly income through graduate student loans and secondary employment. In concluding this section, I apply rational choice and socialization theories to participant decision-making processes.

Primary Funding

Two divergent narratives emerged from participant interviews when discussing primary ways they financed their doctoral education. One narrative, the predominant vantage point, emphasized how funding lessened financial worry, while also facilitating faculty and doctoral student interaction. The other narrative, albeit less common, demonstrated how entering a social science doctoral program without a funded offer can be a perilous academic *and* financial decision.

Funded participants. Thirty-one participants entered doctoral programs with guaranteed multi-year funding packages. These multi-year packages varied in structure, but often included some combination of fellowship, research, and teaching assistantship roles as well as tuition

remission, health insurance and dedicated workspaces. Dedicated workspaces for funded students emerged numerous times in conversation. These communal workspaces often housed numerous doctoral students in one location with proximity to departmental faculty. Given the proximity to other doctoral students and departmental faculty, funded student workspaces facilitated informal interaction opportunities with doctoral students across different years within their program as well as program faculty. For example, Elizabeth described the workspaces for Evergreen's political science students:

All of the first years share an office down at the end of this hallway. It just has these desks with like little dividers around them, they line the walls and so all the first years have a shared space. And it's for everyone, like regardless of what your job is or whatever. And then technically, only graduate assistants get offices but everyone in our department has a graduate assistantship and so everyone gets an office and pretty much everyone shares.

Elizabeth and many other participants explained that funded students had a workplace, which facilitated informal interactions among students. Elizabeth commented that the content of many conversations among doctoral students usually centered on topics, such as, coursework, faculty, and conference participation.

Although stipend amounts and durations of financial support varied, numerous funded students received assurances from their faculty that as long as they made positive academic progress towards doctoral degree completion their department would continue to support them financially. A minor concern for a handful of students was funding beyond their fifth year when many participants' original multi-year contracts expired. At the time of this study, fewer than one-third of study participants had completed their fifth year. Although most had not experienced

what happens after their funding packages expired, many participants observed that more advanced students in their program found departmental financial support beyond their fifth year through teaching or research assistant roles. Eleven of 31 funded participants were enrolled beyond their fifth year. Among these eleven participants, not one participant felt particularly worried about the possibility of losing their funding or failing to find departmental employment. While they certainly had hoped to earn more money given their workload, these eleven participants articulated that their doctoral programs had taken care of them financially when their original funding offer expired. The majority of funded participants believed that “everything would work out” as they had not seen any advanced doctoral students actively making progress towards completion disqualified from receiving departmental funding.

As the remaining 20 funded doctoral students approached the conclusion of their funding package, departmental faculty encouraged participants to explore external funding opportunities as a way of financing their doctorate and advertising their scholarly capabilities. Several participants from each department at Circle City and Evergreen mentioned that programmatic functions (e.g., faculty advising, annual events) socialized them to apply for external fellowships. Departments conveyed these messages through various subtle and overt mechanisms. Departmental faculty subtly advised their students that they should consider applying for external grants, while an example of an overt message occurred within Circle City’s sociology program. Several participants discussed how Circle City sociology’s end-of-the-year banquet was an opportunity for the department to showcase students receiving professional association awards and external funding fellowships. For example, Celine shared her observations about external funding from attending these banquets:

Every year, they [Circle City sociology] have kind of an awards banquet for our department, where they go through, here are all the awards that people have won and one of the things that they talk about is that's when they give, for the next year, the awards for those departmental fellowships and stuff [external fellowships]. So I think since we're expected to go to that [banquet], the expectation is you learn about these things [external fellowships] through that [departmental event]. It's a little bit less clear when exactly in your career you're supposed to apply for some of those things. Like I think it's still too early for me to apply but I'm not entirely sure. And as far as like the NSF [National Science Foundation] stuff, every year, it seems like at least one person in our program wins it, so there's been sort of a grad student culture of doing it [applying for external fellowship awards].

Through the annual banquet, Celine acknowledged that her department socialized her to understand the importance of external funding for receiving public recognition within her department. As her quote indicated, Circle City's sociology department transmits implicit messaging regarding external funding opportunities, which has Celine thinking about the ways in which her department publicly rewards these successes. Furthermore, she believed her department has cultivated a culture of application and selection among students in her program for National Science Foundation and other types of prestigious external funding awards.

Departments in this study socialized their doctoral students to the individual benefits received by external award recipients. Numerous participants shared how externally-funded students had more time to write and publish, while not having to worry about teaching classes or supporting a faculty member's research. A recurring commentary among participants was that they perceived externally-funded students had more time to develop and focus on their

scholarship and found jobs more easily than departmentally-funded doctoral students.

Departments through coursework and departmental faculty communicated the merits of external funding when they invited panels of externally-funded students to speak with first-year doctoral students about their experiences in doctoral education. For example, Lauren recalled a time when several externally- funded students were invited to discuss the publishing process with her class. The invited students, all externally-funded from her department, all had found success in publishing multiple articles in leading sociology journals (e.g., American Journal of Sociology, American Sociological Review). Echoing Lauren's sentiments, many participants perceived the intentionality their doctoral programs utilized in socializing them to the merits of external funding. In essence, participants believed their doctoral departments integrated these panels into coursework to implicitly showcase the freedom stemming from this type of financial award and why doctoral students should seek this type of funding.

Several history students utilized external funding (e.g., Fulbright) to extend their initial funding offers. For example, Alice initially entered her doctoral program with five years of guaranteed funding. After receiving a Fulbright fellowship, Alice learned from other history doctoral students that she now possessed financial leverage within her department. Fellow doctoral students instructed Alice that she could negotiate with the department to extend her initial funding offer since she would be using external fellowship money during her fifth year instead of the departmental funds designated for her. Alice called this informal knowledge a "secret code" that only externally-funded students become privy too.

In sum, few funded students worried about their financial position because they had been socialized to believe their department would take care of them or they could pursue external funding opportunities. Consistent across funded participants was the notion that external funding

is a plus factor that would enable them to use their time for scholarship and as a tool for extending their initial funding package. However, not all students felt so lucky about their funding situations.

Unfunded participants. Four participants did not enter doctoral programs with funded offers. Three of the four unfunded participants identified as racial minorities and first-generation college students. These students' perspectives differed significantly from the other 31 study participants as they described how a lack of funding negatively shaped their doctoral education.

At the encouragement of Evergreen's sociology Director of Graduate Studies (DGS), Ava applied for admission after the program's priority funding deadline. Despite being encouraged to apply, Ava did not realize that prospective students applying after this deadline may receive an admissions offer, but do not receive prioritization in funding decisions. Throughout the admissions process, Evergreen's sociology DGS communicated to Ava that "we want you, but we don't have any money for you." At the time Ava was admitted to the program, she did not know that Evergreen's sociology program "admitted twice as many people than they usually do, so there was a surplus of graduate students." Given the positive interaction Ava had with the DGS, Ava enrolled in Evergreen's sociology doctoral program in good faith that her funding situation would resolve itself during the early part of her first semester. Since Ava did not have departmental funding, she had to pay out of pocket for tuition, fees and living expenses through a combination of student loans and food stamps. Throughout her first semester, Ava applied for "assistantships in my program, and various research positions all across the university," but she did so unsuccessfully. During the second semester, Ava had a realization:

It wasn't really until the second semester I was like, "Oh man." There's something happening here that it started to become obvious to me that I wasn't getting an

assistantship and other people were, and that I was taking out loans and other people weren't.

Ava began to recognize that since she did not have any institutionally-provided financial remuneration, she might continue to rely on student loans and food stamps each semester. Implicit within Ava's narrative is stress stemming from her financial situation. The stress associated with not having funding weighed heavily on Ava and her academic performance during the first year of her doctoral program. She recalled having a conversation with her advisor about her funding situation. She said to her advisor: "I need funding. I need a position." In hearing her plea, her advisor cited Ava's poor academic performance for denying her request: "you haven't demonstrated yourself as a strong student. He was, he was very discouraging." From this conversation Ava came to understand that her poor academic performance also hindered her ability to find departmental funding. Eventually, Ava did find some departmental funding at different points in her doctoral program; however, her sources of income have never been consistent:

It's been spotty. Last year I was a TA all year. This year I'm not... It's [Funding] been here and there. It's been every other semester. Usually in the summer, it's every summer. One semester I taught a class. I was the instructor. It's just been hit or miss. I've also done the research, the hourly wages to get research experience on a team, coding data, and things like that, or doing interviews, but that's all been hourly. Really great experience, which is hourly, you know, nothing [consistent].

Echoing Ava's narrative, Charles, Nancy and Brittany (collectively the "unfunded") described funding as a "semester to semester" process. Charles reported on the various positions he's held during his doctoral program: "I've had research assistantships. I've had teaching

assistantships. I've had hourly positions, and I've taken out loans. I've taken out more loans.”

Without consistent funding, unfunded participants ascribed having difficulty in focusing on their academic studies to their financial situations. For example, Charles readily admitted his doctoral program and perilous financial situation have been

very stressful... You get to the end of the semester or midway through the spring semester and you find out that you don't have a teaching position during the summer.

That's almost three months where you don't know how you're going to pay your rent, buy groceries, and kind of live. You have to stop. I mean not have to stop, but you have to spend a few weeks trying to suture something together so you can make those funds.

Instead of spending time developing research projects or completing course assignments, unfunded participants expended time and energy that should have been dedicated to their doctoral programs on finding employment to make financial ends meet. Charles summarized what all four participants believed about their doctoral programs: “Look. Here's the story. I came because I wanted to come to [EVERGREEN], but I need to find some assistantships or some financial support very soon or I won't be able to stay here.” Charles’s quotation expressed the possibility of dropping out due to financial stress. While no doctoral students in this study left their program, financial stress encouraged all unfunded participants to contemplate withdrawing from their doctoral program.

Findings from this study demonstrate that the financial situations of unfunded doctoral students do not easily resolve themselves. All four unfunded participants utilized graduate student borrowing to finance their lives as doctoral students. At the time of the study, each participant had borrowed more than \$50,000 in graduate student loans to “fund” their graduate education. The unfunded doctoral student experience departs significantly from the funded

doctoral student experience. Unfunded students worried about how they would afford to pay bills, spent time trying to cobble together various financial sources, and engaged in risky financial behaviors. Together, these participants may have worsened their future financial opportunities, reduced their chances at securing academic positions, and limited opportunities to engage in socialization activities.

Supplemental Income Decisions

For some funded participants, financial remuneration from their graduate student stipend did not fully meet their monthly expenditures. A number of participants evaluated a variety of supplementary income options. The two most common ways study participants supplemented their income was through taking out graduate student loans and working second jobs.

Graduate student loans. In the previous section, results focused on how a minority of participants primarily funded their doctoral education through student loans. In this section, I present findings about the ways in which participants evaluated student loans as an income supplement to their primary funding. Before sharing why doctoral students borrowed, I contextualize this finding by pointing out that 26 participants offered some variation of the statement: “I did not need to borrow during my doctoral program.”

Nine funded participants utilized graduate student loans to supplement their monthly income. Nearly all graduate student borrowers grew up in self-described poor or lower middle class backgrounds where they lacked any additional family financial support. Five graduate student borrowers calculated the benefits of taking out graduate student loans. For example, Alice had a private, non-federal student loan from her undergraduate education because her parents could not offer assistance in paying for her undergraduate education and the loan itself “just had insane interest rates.” Instead of accruing interest on the private loan at a higher interest

rate, Alice opted to take advantage of a federal graduate student loan at the beginning of her graduate education to extinguish the private loan. Federal graduate student loans accrue interest at a rate of 6.8% during the life of the loan. Alice compared the value of new, lower interest rate on the graduate student loan against her higher rate on the private loan. Alice judged the new graduate student loan would provide her financial flexibility during her graduate program. Other participants, like Lauren, assumed graduate student loan debt because loans provided her with additional financial means to meet her monthly expenses while also alleviating “financial pressure” from having to find secondary employment. Lauren also believed that while her student loan balances accumulated, the tradeoff would allow Lauren “to focus on my graduate education and that I didn't want to get distracted” by having to figure out alternative ways to finance her life as a graduate student. Later in the interview, Lauren admitted to borrowing too much money as a graduate student, in part due to not really understanding how much she had actually taken out:

Many of us [doctoral students] think that we need to take out student loans because I actually think most of us take out far more student loans than what is actually necessary to get by. If they felt it would reduce their stress to take out some student loans that I think that's perfectly reasonable, but just not to go totally crazy with the amount of student loan taking out. Because they will accumulate and they will sneak up on you. I didn't realize that I had \$70,000 in loan debt until this year, because I wasn't paying enough attention to the notices I was getting from the school every year, in part because I was hiding them in drawers so I didn't have to pay attention to them.

Lauren admitted that she has relied too heavily on student loans to quell her monthly living expenses. Having borrowed more than “\$70,000 in [graduate] loan debt,” Lauren now hid

the monthly loan statements that informed her of her growing loan balances in a bedroom drawer. She originally thought borrowing would relinquish “financial stress” during her doctoral education, but as she now concludes her doctoral program, the amount of money she borrowed to reduce financial stress reappeared as a potential source of distress when she considers monthly repayment amounts.

While most borrowing doctoral students utilized student loans to reduce financial stress, a few participants enhanced their quality of life through graduate student loans. For example, Aaron had extensive debt from a previous graduate degree; yet, he had become accustomed to a certain way of living and sought to maintain that lifestyle as a doctoral student:

I kept taking out loan money because I just wanted more money to do things like travel. It was basically, it was basically like, and I stopped doing that because I realized it was kind of a dumb thing to do. But yeah, I basically took out a few thousand dollars and was able to like go home, visit my parents in [CITY], go to, go on spring break with the person I was dating then, that type of stuff. So that was entirely quality of life.

After the first year of his doctoral program, Aaron realized that continuing to borrow would limit his future earning power moving forward because he would accrue an even larger student loan balance and sizeable monthly payments after he graduates.

Whether participants borrowed to alleviate financial stress or enhance quality of life, these nine participants did not worry much about the effects of borrowing. Even Lauren who hid her loan notices in drawers did not feel much financial pressure while she has been enrolled in her doctoral program. Graduate student loans quelled the financial stress of some participants; however, these students need to pay special attention to the graduate student loan balances they are accruing so that the balances do not become unwieldy and limit their financial futures.

Second jobs. Fifteen of 35 study participants mentioned having a second job while enrolled in their doctoral program. While the connection to financial considerations seems clearly linked, a few participants sought second employment opportunities for a combination of financial, familial, networking and skill-related reasons. For example, Michael discussed having multiple jobs at multiple times during his doctoral program. He sought out secondary employment to support his family financially. Despite having an employed spouse, Michael wanted to provide for his family, especially his young child: “Life with a 2 ½ year old is expensive, especially our daycare. She goes to the university’s daycare but that’s \$12,000 a year so the bill for our daycare is more than our mortgage. And that’s really expensive.” Michael chose to take second jobs as a way to contribute to his family’s total income and “having sufficient cash around to pay for things that might come up or that we want to do.” Before entering his doctoral program, Michael had a lucrative full-time position where he primarily supported his family. As a doctoral student, he made substantially less money and wanted to provide financial assistance. Although contributing financially to his family factored into his decision to find a second job, Michael engaged in a deliberative process to identify career-enhancing opportunities for himself. For example, Michael engaged in research opportunities alongside another professor because, not only did this position provide monetary support, but he also identified this faculty member as a recognized “rising scholar” and “I know that in two years when I need a recommendation [on the academic job market], he’s a person to go to.” As an aspiring academic, Michael evaluated factors such as money, a professor’s reputation and recommendation letters as important variables in secondary employment decisions.

Somewhat differently, Agatha viewed a second job as a financial necessity. She described her academic year income as being “not very much” so she looked forward to substantially

increasing her cashflow through summer employment. She was deeply involved with a summer research institute that was “very lucrative. I’d actually make the equivalent of a year’s salary working for them over the summer for a couple of different courses. That became a very important part of finances for me and my husband.” Agatha perceived the income from her secondary employment provided for both her and her husband. Similar to Michael, Agatha acknowledged her secondary employment influenced future employment options. Agatha explained skills she acquired through secondary employment at the research institute expanded her skill set, while also providing substantial financial support.

Not all participants took second jobs for family financial support reasons. Some participants sought additional cash flow or needed money to cover one-time expenses. For example, Abigail said she made 300 to 400 dollars some weeks doing freelance editing. She used her money on eating meals off-campus and furnishing her apartment. Alice was not employed by her institution during the summer between her first and second year of her doctoral program. During this time period, she was in a car accident that created a complicated car expense:

I totaled my car the following summer which kind of threw a wrench in my plans. I had to buy a new car but be able to get a loan to buy a new, a bank loan to get a new car. I had to prove I was working and since it was the summer, I wasn’t a TA, wasn’t working.

So I got a job at a restaurant in downtown [Evergreen’s City]

First and foremost, Alice accepted the restaurant job because she needed the employment to qualify for a loan. Although she initially took the job as a short-term summer gig, Alice continued employment into the following academic year:

When the school year started again, they [Restaurant Management] were, they trusted me a lot and were flexible with my schedule and I would’ve ideally kept that job but weird

things happened. Professors came in from the department a couple of times and they were clearly uncomfortable with me working at a restaurant and serving them. And I think they were talking amongst themselves about it and so at some point, one of my, a member of my [dissertation] committee kind of pulled me aside and recommended that I focus on more academic work than on service industry work.

She told this faculty member that she needed the money, but the professor questioned her commitment to the academic profession. She shared: “I told them that I needed the money and they were like, well, there are lots of campus jobs. Yes, but not ones that will make me \$300 on a good night.” Alice followed her faculty member’s advice and quit the waitressing job. Instead of making \$300 on a good weekend night, Alice “got a job at the Writing Center on campus which, now it’s \$10 an hour.” Now she has to work 30 hours a week to make the equivalent of what she would make in a single night in her waitressing job.

Taking these additional jobs does come at a price, the price being time and productivity. Participants with secondary employment reported having to be strategic in how they spent their time on academic work. To help them manage their time, several participants turned to their faculty advisors for counsel. Some advisors understood the financial rationale for second jobs, while other advisors encouraged participants to leave their secondary employment positions so that they could focus on their research. Agatha candidly told her advisor “This is my source of income...unless you can help me [financially], I’m not willing to give this up.” Although the second job was a financial boon, Agatha acknowledged her secondary employment slowed her degree progress. She shared that having a second job

slows you down. Even though it’s like only a month of your summer and you think like I’m only teaching two hours a day, you’re teaching two hours a day, five days a week. It

is, that's all I do is just stay current on the email and teach while I'm there. I've not ever been able to accomplish anything else while I'm there. It [Teaching at the summer institute] usually takes several days of preparation. There's an actual move to go there. There's an actual come back. I really have lost a lot of time doing the [Institute] stuff that otherwise allegedly would have been devoted to academic activities, to finishing my program earlier. It's cutting edge. It slowed me down. At the same time, it slowed me down and allowed me to have a better financial quality of life during graduate school.

Most of the 15 participants with secondary employment enjoyed the financial benefits attached to their additional jobs. They explained it was important to be financially-secure as they proceeded through their doctoral programs. Participants did acknowledge that taking on these jobs detracted from their primary job, which is to complete their doctoral programs. Consistent with previous studies on the effects of secondary employment during doctoral education, the positive financial benefit participants received from secondary employment was offset by lengthening their time to degree (Abedi & Benkin, 1987; Nettles & Millett, 2006).

Theoretical Applications to Financing Doctoral Education Decisions

In this section, I apply rational choice and socialization theories to explain participants' decision-making towards financing doctoral education decisions. In particular, I analyze alignment with or departure from these theoretical perspectives. Rational choice theory emphasizes cost-benefit analyses and self-interest maximization while socialization theory posits organizational newcomers learn through instruction or observe different behavioral attitudes, norms and values associated with their chosen profession.

Rational choice theory. Participants, regardless of funding status, engaged in behaviors aligning with and deviating from axioms underlying rational choice theory. First, I focus

attention on the decisions of funded students. At several points, funded participants calculated costs and benefits of financial decisions with the potential to affect their lives during or after graduate education. For example, twenty-six participants evaluated their financial situations and chose not to utilize graduate student loans, although the option was readily available to them. Participants discussed not needing the money because they acknowledged having enough money to make ends meet. Several participants, who did borrow, estimated graduate student loans would be a financially-responsible decision. For example, Alice took on graduate student loan debt because this loan type would extinguish previous debt from a private loan that accrued interest at a higher rate than a federally-originated graduate student loan. Lauren wanted to concentrate her efforts on publishing, so she thought taking on student loan debt was an appropriate tradeoff for her to focus on her scholarship. Simply stated, a number of participants reasoned that taking on graduate student loans would allow them to maximize their time in advancing their research, which in turn, could lead to job market success.

Rational financial decisions did not extend to all participants. The supplementary financing decisions of study participants elicited questions about the limitations of rationality, or at the very least raises questions about the ways in which participants framed their decisions. Funded participants borrowing or taking on secondary employment did not generally conduct an exhaustive evaluation of their supplementary financing options. Rational choice theory suggests that individuals produce a comprehensive list of all options and rank order them based upon utility maximization (Elster, 1986, 2007; Frank, 2008). A subset of participants tended to utilize graduate student loans and second jobs as financing mechanisms with little to no attention given to other options. A few borrowing participants carefully explained the decision to use student loans as an income supplement or to extinguish debt from previous borrowing, while a majority

of borrowing participants acquired unreasonable student loan debt amounts mostly to enhance their quality of life. These situations test the boundaries of what constitutes rational behavior (Elster, 1986, 2007; Frank, 2008). From a rational choice perspective, doctoral students should focus their time on completing their degrees in the shortest time so that they can enter the workforce and claim the higher wages afforded to individuals with higher levels of education (Baum et al., 2010). Instead, participants with secondary employment often lengthened their time to degree while participants not taking on second jobs were able to concentrate efforts on their research and timely completion.

Unfunded participants offered a different situation and encountered challenges not faced by funded students. As unfunded students, they entered their doctoral programs already concerned about how they would pay for their doctoral programs. These participants framed borrowing as a rational decision at the time of initial lending, but these four participants steadily accrued student loan balances in excess of \$50,000. Borrowing so heavily during their doctoral programs will make repayment challenging given each person's aspirations towards academic posts after their doctoral programs. Considering the modest salaries social science professors earn, these individuals are as likely to be as cash strapped after their program as they were during their doctoral programs. Unfunded participants attempted to maximize their self-interest by completing doctoral programs and joining the small percentage of doctoral degree holders among the US population; however, they limited their future upward mobility by behaving irrationally through excessive student loan borrowing.

Socialization theory. Socialization perspectives offer insight into how doctoral students learn about important messages and ultimately adopt skills, values, and behaviors necessary for establishing membership in the academic community (Bragg, 1976; Gardner & Mendoza, 2010;

Merton, 1957; Weidman et al., 2001). Golde (1998) suggested the graduate student socialization process involves a newcomer being “made a member of a community—in the case of graduate students, the community of an academic department in a particular discipline” (p. 56). In this study, the way in which a student financed their graduate education shaped socialization opportunities.

While no participants chose to be “unfunded,” what became clear from interviews was that unfunded students had disparate socialization experiences and opportunities than their funded colleagues. For example, unfunded students are not given departmental workspaces like the funded students in this study. Without designated workspaces, unfunded students discussed having less frequent interactions with other doctoral students and departmental faculty than funded students typically had. Lacking connection might limit the “aware[ness] of the behavioral, attitudinal, and cognitive expectations held for a role incumbent” (Weidman et al., 2001, p. 12). Simply stated, the lack of access and connection reduced unfunded participants’ ability to develop an integrated understanding of important behavioral cues and acceptable behaviors expected of them as doctoral students and aspiring academics. Unfunded participants did not become involved with their peers and faculty in the way that funded students received socialization messages.

Funded participants with secondary jobs had less time to participate in socialization activities. Each week, most funded participants committed 20 hours a week to their assistantship roles, and then parceled their remaining time between healthy habits, class preparation, class attendance, and familial obligations. Working a second job along with the other life happenings of doctoral students can limit their socialization opportunities. Focusing time working on secondary employment can reduce the amount of time doctoral students have to establish content

mastery, conduct research, and develop collegial relationships. Each of these core processes has important ramifications for socialization. A significant amount of time investment is needed to develop proficiency and to become aware of what's expected for professional roles. Not taking the time to develop expertise can limit a doctoral student's development of a scholarly identity, which is a primary goal of graduate student socialization.

The overall goal of doctoral education is to complete the doctorate, while a primary goal of Weidman et al.'s (2001) graduate student socialization model is to forge a scholarly identity. Establishing this identity occurs through developing content mastery, learning about disciplinary norms and values, and cultivating research expertise. Funded participants without secondary jobs in theory have the opportunity to fully commit to developing their scholarly identity. Participants with second jobs have less time to the honing of their craft. Unfunded participants suffer the most in the process of establishing a scholarly identity. The four unfunded participants did not receive a departmental workspace, nor did they have the opportunity to foster relationships with faculty and other doctoral students in the way that funded students had the opportunity. Financial considerations lessened the impact of graduate student socialization through diverting time and attention away from academic roles.

Summary. In summary, the primary ways in which doctoral students financed their doctoral degrees had profound effects on the doctoral experience. Unfunded students, although less common, struggled to make connections with faculty and peers because they lacked the socialization opportunities afforded to funded students. They also spent significantly more time trying to figure out how to pay for their lives as graduate students, which in turn, detracted from research productivity and academic success.

For participants supplementing their income, some participants behaved rationally in making this decision. Rational participants evaluated the benefits of student loan borrowing as a way to free up time for scholarship and additional financial flexibility. However, borrowing might have alleviated financial strain during their doctoral programs, but in actuality, may have increased future financial strain post-completion of doctoral programs. Furthermore, secondary jobs enhanced some participants' skill sets, but engaging in these activities required students to make reductions in how they allocate time to other activities like sleep, class preparation, and familial obligations. Some participants actively weighed the financial benefits of secondary employment against socialization to publishing and presenting during graduate education.

Participating in Doctoral Student Socialization Activities

In this section, I explore how financial considerations shaped doctoral student decision-making processes related to doctoral student socialization activities. Many participants frequently spoke of how spending on academic conferences, research, and clothing emerged as unanticipated costs of graduate school. I conclude this section with a discussion of how decisions about professional aspects of doctoral education align with rational choice and socialization theories.

Academic Conferences

Conference attendance emerged as a recurring financial concern among nearly all participants. When asked about unanticipated costs associated with their doctoral programs, a chorus of participant responses concerned the cost and frequency of academic conferences. Academic conferences hold a prominent place in academic circles because these annual events reflect contemporary national discourses, showcase important disciplinary trends, and chart new research directions. For these and many other reasons, academic conferences attract large

numbers of early-, mid- and senior-career scholars. For purposes of this dissertation, I consider the advanced doctoral students in this study to be included among the early-career scholar population.

Many study participants shared that they participate in academic conferences at the suggestion of faculty and more seasoned doctoral students; these more seasoned informants encouraged study participants to attend conferences each academic year. Participants mentioning academic conferences discussed that they learned more about disciplinary nuances through academic conference participation because these academic spaces provided direct contact with more specialized knowledge of their discipline while educating doctoral students about what constitutes rigorous research and integrating them into wider professional communities (Gardner & Barnes, 2007; Weidman & Stein, 2003). Through participating in academic conferences, study participants forged their scholarly identity and disciplinary expertise through learning “what learners need to learn to become full practitioners” (Lave & Wenger, 1991, p.95).

Many professional associations offer more affordable conference rates to graduate students as a way of enticing student participation. For example, the 2016 American Sociological Association (ASA) conference taking place in Seattle, Washington offers a discounted rate of \$110 for student members while regular members (e.g., administrators and faculty) must pay a \$210 registration fee (ASA, n.d.). However, conference registration only represents one expense among many other conference-going costs, such as travel, hotel, and meal costs. Together, these multiple expenses provide a more realistic appraisal -- a more expensive appraisal -- of how much conference attendance actually costs. For example, Jamie mentioned her conference expenses regularly exceeded \$1000 because “you have to buy tickets to get there and hotels and registration costs, things [other expenses] like that.” As a way to lessen the conference going

financial burden and as a way to encourage student participation, doctoral programs in this study subsidized conference costs through departmentally provided financial resources. But as Dakota succinctly explained, these modest offset amounts are simply “not a lot” or “not enough.” She contextualized her answer by sharing a narrative about the ways in which financial considerations factored into her conference-going decisions:

[F]or our department, you can apply to get funding to go to conferences. Which is great but it’s still not a lot because a lot of the conferences are so far away and so, usually they give you a good amount but they don’t usually give, sometimes it doesn’t cover everything...So I know that’s prevented me from going to different places [conferences]. Even now, I’m thinking about going to, you know, three conferences next year but there’s, two of them, one’s in California and one’s in Washington and I just know my department won’t give me enough to go, you know, to all of them. So I’m trying to decide, I still have to figure out what can I afford to go to. You know, that kinda, it sucks that I have to like choose which one because you know, it would be the best case to go to all of them.

Dakota decided to attend conferences based upon affordability. Similarly, Joan discussed having to “stop” attending conferences because she exhausted departmental or institutional financial resources. During the interview, she talked about attending conferences as a way of learning about emerging trends and sharing her scholarship with relevant scholarly communities, but lacking conference funds encouraged Joan to ask the question “How do you expect me to be competitive in this situation [history academic job market] you've created?” As a doctoral student actively designing her doctoral dissertation and aspiring towards an academic career, Joan was concerned that if she did not regularly attend and present at academic conferences, then

she would not be an attractive candidate for history tenure-track positions. She believed investing in conference-going and sharing her scholarship in a highly competitive academic labor market was a sound investment strategy, but the absence of financial support could disrupt her academic aspirations.

Numerous participants mentioned receiving encouragement from faculty and departmental leaders to attend conferences as a way to strengthen one's curriculum vita (CV), gain academic market exposure, and find mentorship. Jerry succinctly conveyed a popular sentiment across participants about presenting at conferences: "I kinda want the line on my CV." Many participants observed their fellow doctoral colleagues presenting at conferences had an easier time in the job search process. Taylor, a doctoral student currently on the history academic job market, described two primary reasons for attending this year's American Historical Association (AHA) conference:

I have to go because, well, (A) I convened a panel so they really do need me. But (B) that is the preeminent conference in my field, both for presenting, like it is a good idea to have a conference presentation at AHA and me having organized the panel looks really good, too. And so the preeminent, really, that is a CV boost there. And moreover some of the positions that I'm applying to, knock on wood, if they want to interview me, some of them will interview in person at the AHA.

In making the decision to impress potential employers, Taylor viewed the personal financial resources she invested into conference expenses as a necessary expense worthy of "throwing money at" and "writing off." She believed that attending conferences, meeting with prospective employers, and organizing panels to build her CV would be a sound investment strategy.

Taylor and other participants actively on the job market demonstrated a willingness to bear high participation costs related to conference going. Aaron, a political science student, also chronicled his job search conference expenses:

I essentially fill out a form that is a condensed version of my CV and that's, that goes to the [Subfield's Professional Organization] and then you pay into this service, \$500, and then what happens, they send your application, your one page form to all of the schools that are hiring and they send all of the job advertisements out to you. And then what happens is you're automatically registered for the faculty recruitment conference. It's a weekend in October. It was about two weeks ago and you go out to DC...to go on this interview weekend in DC [Washington, DC] cost me at least probably like \$1200 just because I had to go, pay for the registration for that conference, pay for the hotel, pay for the flight, all that kind of [items] and then food is more expensive.

Aaron's narrative illustrated how he paid \$1700 to participate in a single conference. Later in the interview, Aaron shared his department supported his extensive capital outlay by offering \$600 for his conference expenses. In sum, Aaron paid \$1100 out of pocket for participation in a single conference that he hoped would lead to an academic position. The amount Aaron paid out-of-pocket represents nearly ten percent of his annual pre-tax income.

In deciding what conferences to attend, Dakota, like many participants, sought out a specific subfield conference as a way to identify current research trends and to find mentors within her discipline. She shared:

Latino studies, which to me is more important. I like going to those [conferences], you know, being around people that are, not just look like me but also, you know, [share the] same research interests and like I get a lot out of going to that conference and the other

conference which is ASA , the American Sociological Association, which is the nationwide one and I just feel like I don't get as much out of that conference because it is so big and there's so much going on...So just like the type of conference, submission is gonna be a roundtable or like a presentation with a presider and stuff like that. I'd rather go to where I can get more feedback, you know, and grow more as a scholar. I definitely look into things like that.

Dakota attended her subfield conference because it provided her with the opportunity to meet scholars with similar race/ethnic characteristics and research interests, and to receive feedback on her scholarship. She opted to attend a smaller conference because forging relationships with a tight knit group of specialized researchers provided more intrinsic value than attending larger conferences where she might not "get as much out of that conference."

Conversations with participants highlighted how important they perceived academic conference attendance was to not only being socialized to disciplinary contexts, but also as a way of facilitating future career success. Participants carefully compared costs and benefits associated with participation, but more often than not found participation to be a necessity for their induction into the academic profession (Gardner & Barnes, 2007).

Research

More than half of study participants also mentioned research costs as a significant financial consideration during their doctoral program. These participants frequently raised the need for financial assistance in constructing and executing research projects. Advanced doctoral students firmly entrenched in dissertation data collection and writing stages often acknowledged that they did not anticipate having to personally fund so much of their dissertation research. For example, Geoffrey, a political science student, made the decision to use secondary data for his

dissertation. He described how he made this decision: “That was one of my decisions. I would have loved to go collect [primary] data, but it's just too much money and too much time away [from family].” Lauren, a sociology doctoral student, depicted how costly an endeavor primary data collection can be. Her dissertation committee required a minimum of 60 interviews. When she was planning her dissertation project, Lauren pointed out that “nobody says a single word. No one communicates how expensive it is to do a dissertation. Not a single word was ever uttered to me about preparing for the financial cost of dissertation research.” Engaging in such an extensive project Lauren accrued between \$4,000 and \$5,000 in project costs related to interview transcriptions, travel to interview sites, and recording equipment costs. As she became mired in these financial considerations, she discussed a cost-benefit analysis she conducted about research expenses:

It was a question of I can transcribe part of my interviews, I would never transcribe them all, but I could transcribe part of them and stay here an extra year, but the way I thought about it was also like a financially weighing thing. Do I stay an extra year and have a graduate student salary for one more year, or do I take out a few thousand dollars and pay for transcription services and make four times the amount of money I make the following year and pay the rest of that debt off. So I'm finishing on time. It was worth it to me in terms of just the financial bargaining and so forth.

Lauren compared the possibility of remaining enrolled in doctoral education as a graduate assistant against entering the labor market to secure full-time employment. She felt that making the investment into her dissertation research would create value because with a terminal degree in hand, she could potentially quadruple her annual income. In sum, she weighed her current income and research expenditures against possible future income amounts.

Similar to Lauren's decision about research expenditures, several participants selected research sites based on financial circumstances. Dakota, a sociology student, selected her fieldwork sites based on proximity and family. She shared that

[I'm] doing my research in Ohio. Another reason I did it, I know people in Ohio. I have family in Ohio and I could stay with people. If I was to do my research in a different state, which is what I think my committee probably, which probably would've been better like sample-wise to get more of a representative sample but I just knew financially that was gonna be too hard to drive to farther places and then I would have to stay in a hotel.

Dakota had hoped to have a more representative sample in her dissertation research, but her financial circumstances did not allow her to widen the study's sampling frame. While her family did not directly support her research, having the ability to stay with family lessened the financial costs associated with traveling for data collection. Similar to nearly all research studies conducted, limitations based upon sampling exist; however, many participants in this study did not expect financial considerations to feature so prominently into their research projects.

Study participants with international research interests mentioned unanimously the importance of financial support, especially securing prestigious grants in underwriting research efforts. Alice remarked that history doctoral students not studying American History are "very, very much expected [that] you'll do six months to a year overseas researching." The doctoral programs in this study do not pay for these large-scale research expenditures, so most doctoral students with international interests seek external funding to support their research projects. Many participants shared that they received specialized training from grantmaking specialists at both Evergreen and Circle City. Through these grantmaking workshops, participants learned

about various types of funding available for international research opportunities. In particular, participants learned that they should apply to prestigious funding agencies, such as Fulbright, because obtaining prestigious external funding not only adds a line to the individual's CV, but receiving prestigious grants also signals researcher professional potential to the academic labor market. Alice offered an example of the important role financial considerations played in her research. She had received no financial support from her family and held a modest amount of debt from undergraduate and doctoral education, so she felt fortunate for having her research selected for a Fulbright fellowship. Alice shared how her faculty socialized her to think about Fulbright research fellowships: "It's really competitive. It's really prestigious and it's kind of the most money that you can get through Fulbright as a grad student. And so it was kind of, you know, the goal, the holy grail of research fellowships." Fulbright fellowships pay their recipients more each year than funded Circle City and Evergreen students. From their monetary allocation, recipients must pay for travel, living, and research expenditures. On the advice of her doctoral peers, she applied to Fulbright because people viewed this type of fellowship as the "holy grail" of money and prestige.

Fulbright applications are evaluated on specific criteria and often exclude popular countries in Western Europe or North America. Given her understanding of project evaluation criteria, Alice created a project in a country where more points are awarded and would make her application profile stronger for the research money. She reported:

[S]o you get more points if it's sub-Saharan Africa or East Asia. There's areas of the world that gets more points. There are fields that get more points. So for instance, that's why I study public schools because public education was the bonus points area. Certain languages you get bonus points for. So I was like, oh, yeah, Arabic, get some points

there. And so I didn't expect to get it so I kind of made up this project that wasn't related to the migration in Europe project I had initially wanted to do, thinking I wouldn't get it. And I got it. It was like, oh, I'm leaving much earlier than I thought I would and I'm doing a completely different project than I thought I would, which changes the comprehensive exams, changes my dissertation prospectus, so it kind of threw everything off kilter. But you can't say no to the grant.

Alice's desire for research funds influenced her research topic and study design. Despite doing a project very different than her original hopes, she perceived the grant money she received from Fulbright signaled to external markets that she is a capable researcher conducting innovative international research.

Unlike Alice's fortunate research funding opportunities, several participants interested in pursuing international or comparative international topics discussed how a dearth of funding would alter their research projects. Helen, a history doctoral student, suggested her commitment to studying US history stemmed from a lack of interest "to find funding or paying for trips overseas." Other participants with explicit international interests remarked creativity would be required should they not receive adequate research funding. For example, Joan sketched out the details of her ambitious dissertation project involving several countries. When asked how she would pay for this project, Joan indicated that she hoped to receive institutional funding; but, in the event these financial resources were not available, she would need to reframe her project from an international perspective to a more domestic-centered perspective. To this end, she stated: "My project will have to change and be a lot more... US centric." While Helen and Joan selected topics or projected changes to their research based upon financial considerations, a number of participants intended to complete their dissertation research project regardless of

financial costs. Melissa offered a prescient example. During the interview, Melissa shared that she was going to complete the dissertation project she had designed with or without external financial support. Melissa had applied for a Fulbright research grant, but she also utilized institutional networks to assemble a backup plan to support her research. She shared:

[Circle City] has an exchange with universities in Poland and so if I hadn't gotten the Fulbright, I just would have gone on that exchange. So no, I think it still, it still would've been the same project. It just, I probably wouldn't have had the kind of freedom that I did when I was on a Fulbright to do the research that I did. I went to like a bunch of different archives all throughout Poland and so Fulbright gave me a little bit more money so I had more financial freedom to travel when I needed to.

Melissa's narrative illustrated the resolve some participants had in carrying out their intended research project. Although Melissa received external funding for this project, she acknowledged the possibility that lacking financial resources would have altered the scope of the project.

In this study, financial considerations around research expenditures held the potential to modify research projects doctoral students had hoped to complete. Participant narratives illustrated the types of cost-benefit analyses participants conducted in decision-making regarding their research.

Professional Clothing

Another professional activity among the "continuum of experiences" study participants engaged in aimed "toward the goal of professionalization" (Weidman et al., 2001, p. 5) involved dressing professionally. Nearly all participants reported holding a teaching assistantship as a form of funding during the academic year or summer. Mena and colleagues (2013) argued that the teaching assistantship role might be the main source of doctoral student socialization because

teaching constitutes one of faculty's tri-partite responsibilities. Teaching assistants are tasked with instructional responsibilities, which may include grading, teaching sections, and developing their own course materials (Nyquist & Wulff, 1996). Resulting from these responsibilities, teaching assistants "begin to think, feel and act the way teachers do" (Staton & Darling, 1989, p. 17). Furthermore, teaching assistant roles often viewed this experience "as an apprenticeship for being a faculty member" (Wilkening, 1991).

Fourteen of 35 study participants, particularly women participants, mentioned clothing for academic contexts as an important financial consideration during their doctoral program. This subset of study participants discussed the importance of investing financial resources into building a professional wardrobe, especially for teaching and conference-going. Although Lauren "knew" she would need new clothes during doctoral education, she did not calculate how expensive these purchases would be:

I knew that I'd have to get new clothes when I started to teach, but I certainly didn't account for how expensive it would be and there's actually a lot of, they'd actually, it goes back to people don't talk about money in graduate school. Actually [doctoral programs] just assume we have money at our disposal. So there's implicit assumptions that you would have money to pay for a new teaching wardrobe, but that is something that our graduate students have brought up with, brought that up to faculty. How are we supposed to afford a teaching wardrobe that's like, not really feasible but the faculty don't really have an answer for us. They just assume that we should be able to pay for professional attire, because it's expected that we wear professional attire in the classroom.

Similar to Lauren's experience, Celine described "nice clothes" as a necessity in graduate school:

[Y]ou have to have nice clothes and you have to like look nice and in the day to day as grad students, we're allowed to look kinda sloppy if we need to but in the professional context, that definitely costs and you have to have the right, the right kind of clothes and the right kind of appearance and all that stuff. And we're just, we just don't have the income to do that unless we have the sort of background means to cover it.

Celine talked about having “nice” clothes as important to looking professional in specific contexts. She did not factor purchasing these clothing items into her monthly budget and judged “income” as a graduate student to be insufficient. Similarly, Kelsey had concerns about purchasing new clothes:

I really want new clothes right now so it's like probably on my mind but I can't afford it so I haven't bought any... I would like to start to dress more professionally. Especially when I start teaching and that is a little bit of an issue because it's like, you know, I can't just wear my crappy jeans with a hole in them like I do to campus every day. You know, I want to look professional because I want the students to see me professionally. So it does worry me a little bit, like being able to buy clothes and I can buy suitable things. Like I have enough money to buy things to like get by but I guess, it's not like ideal, you know. If I wanta go to a nice store and buy like some quality items, I can't do that.

Participants like Lauren, Celine and Kelsey stated that they wanted to dress more professionally, especially when engaging with undergraduate students in the classroom or during office hours. During their doctoral programs, participants mentioned observing more advanced graduate students transforming their wardrobe from more casual to professional. Many of these participants acknowledged that they hoped to emulate a similar transformation. In essence, they

wanted to portray a very specific image of what it means to be an academic, feeling that professional clothing would allow them to differentiate themselves from the students they teach.

Some participants found it easier to go out and purchase the requisite clothing while others, like Alice and her colleagues, held “clothes swap” events where doctoral students with similar styles and clothing sizes gathered at someone’s apartment and would:

make big piles of here are all the skirts, here are all the pants, here are all the tops, dresses, [and] accessories...that’s a good way to save money on clothes. Otherwise, clothes are so expensive. For teaching and especially for a woman teaching, you feel like you have to present yourself sort of as the authority in the classroom, as professional and especially for me since I came in and started teaching when I was 22, I was younger than undergrad students. So I felt like I needed to set myself apart to gain their respect by dressing nicely, presenting myself well and that can get really expensive and that is stressful.

Dressing more professionally in the classroom featured prominently in discussions with these participants. These participants often felt “worried” that they would not be taken seriously if they did not dress professionally because they were so close in age to the students they taught. Taylor felt that dressing more professionally allowed her to “shore up your situated authority” in the classroom. She recalled a time when she observed an exchange between a fellow doctoral student and a faculty member about dressing a specific way in the classroom. This faculty member explicitly stated that men teaching classes “should be wearing a button down shirt and tie.”

Other participants identified the importance of professional dress from observing job market candidates. All doctoral programs in this study had frequent departmental seminars,

colloquia, and practice job talks. Celine talked about going to a practice job talk for someone in her department. The job market candidate

had new glasses. They had a new haircut...they pulled out their professional wear so it was just sort of like a personal transformation. I see a lot of people when they get to that point, they definitely invest more in their appearance.

Similar to Celine's observation, Taylor talked about a time when she watched another history doctoral candidate attend a job market preparation workshop and receive explicit feedback about appropriate dress. Taylor said, "I was in the job seekers' workshop, which is sort of a clinic on that stuff. We had mock interviews and I did have a colleague who showed up to her mock interview wearing something that was not very professional and she got raked over for the clothes." These study participants observed their peers closest to graduation and found that they made significant investments in themselves to prepare for the job market.

These fourteen participants explained their motives for professional dress during their time as doctoral students. As people interested in entering the academic profession, they hoped that purchasing new clothes would supply them with authority in the classroom. Furthermore, participants became exposed to the importance of purchasing new clothes before going on the job market. Each participant discussing clothes weighed different costs and benefits in making the clothing purchase decision, no matter how inevitable the end result would be.

In this section, I discussed academic conferences, research, and professional clothing as important financial considerations many doctoral students in this study weighed. Many of these participants perceived the investment they were making in these financial considerations would help them forge a more scholarly identity, which is a goal of the Weidman et al. (2001) socialization model. Participant narratives expressed the importance of each socialization activity

as they made the transition from neophyte researcher to seasoned doctoral student to academic aspirant. In making decisions to engage in these three socialization activities, many participants deliberated costs against benefits of these activities. On the other hand, some participants ignored financial considerations, such as dissertation project expenses, and invested their financial resources into completing the research project they set out to do. In the next section, I apply rational choice theory and graduate student socialization theory to explain how participant's made decisions concerning participation in three socialization activities: conference participation, research, and clothing.

Theoretical Applications to Participating in Doctoral Student Socialization Activities

In this section, I apply rational choice and socialization theories to illuminate participants' decision-making concerning participation in doctoral student socialization activities. In particular, I analyze alignment with or departure from both theoretical perspectives. Rational choice theory emphasizes cost-benefit analyses and self-interest maximization while socialization theory posits organizational newcomers learn through instruction or observe different behavioral attitudes, norms and values associated with their chosen profession.

Rational choice theory. Nearly all study participants compared costs and benefits attached to their decisions concerning participation in doctoral student socialization activities. Participants contrasted costs and benefits of participating in conferences, developing research projects, and investing in clothing that would help them present themselves in more professional ways.

Academic conferences. Academic conferences are staples of the academic profession. Study participants often talked about the decision to participate in academic conferences. As they spoke about these particular costs, they focused on how academic conferences were expensive

and unanticipated when entering a doctoral program. Their departmental faculty members and more advanced doctoral colleagues emphasized the importance of participation in these annual meetings. These key informants suggested to participants if they hoped to secure a tenure-track position after they complete their doctoral program, then study participants must attend academic conferences. Influences such as departmental faculty and doctoral students influenced the decision-making process for many participants.

Participants believed a key to finding success on the academic job market stemmed from networking and presenting at academic conferences. Each year, leading scholars in their respective disciplines gathered to discuss emerging trends, engage in scholarly debates, and showcase the latest research. Several participants viewed conferences as necessary expenses to gain access to scholarly networks present at conferences. They weighed these financial expenditures as financial necessities to buttress their academic career aspirations. Many participants evaluated the potential long-term benefit of the decision against the short-term cost. In essence many participants believed that spending a substantial proportion of their annual income on one conference would be worth it if they acquired their desired academic post. As job market participants evaluated options, they often forecasted financial benefits without knowing the true financial benefit of the decision.

On the other hand, participants not yet on the job market (e.g., Dakota, Joan) behaved often within economic reason. These students attended conferences for specific reasons because they had limited financial resources. For example, participating in smaller, specialty conferences where doctoral students could find mentors or connect with scholars with similar research interests possessed more value and importance to these individuals than attending large disciplinary conferences. The investment these participants made expanded their self-interest

maximization by growing their scholarly network while not spending exorbitant amounts of personal money to participate in conferences. These participants viewed conference participation as an essential self-interest maximization component of their doctoral education because conferences provided “direct preparation for their future careers, providing them with skills, connections, and better understandings of what is expected of them in these chosen careers” (Pontius & Harper, 2006, p. 381).

Research. During graduate education, doctoral students undergo a transformation from neophyte research consumers to knowledge producers. Doctoral students enhance and refine their research acuity through coursework, faculty interaction, and independent research. During the coursework stage, faculty teach doctoral students learn the basics of rigorous research while learning to apply specific skills and theories (Gardner, 2007; Golde & Dore, 2004; Weidman et al., 2001). When a scholar begins to conduct their own research independent of faculty members is the time when they learn about the costs associated with research. For many participants, they learned this lesson when they started their dissertation research. Many participants came to understand that they needed either personal financial resources or external funding to support their research projects. Participants weighed the pros and cons of decisions involving research expenses. Should a doctoral student consider delaying graduation by a year because they could potentially create an even larger dissertation project? Or should a doctoral student complete a smaller project, not take out any student loans, and graduate on time. These types of questions represent sample questions doctoral students could and should ask themselves as they make decisions about research expenses.

In this study, several participants illustrated the process through which they weighed specific costs and benefits about research. For example, Lauren’s narrative illustrated how she

hoped to finish her dissertation quickly so that she could compete for an academic job, which would pay her substantially more than her graduate stipend. Instead of transcribing interviews herself, Lauren decided to take out student loans to acquire requisite financial capital to meet her dissertation transcription expenses. She described her thought process considered whether transcribing the interviews herself would be a cost-saving measure. But making this decision would surely delay her graduation timeline and reduce her likelihood of securing an academic job. Alternatively, she could take out a loan to cover transcription expenses. She evaluated each option and decided that earlier entry into the labor market would eclipse additional loan debt. Lauren's behavior was consistent with rational choice theory axioms. Alice maximized her self-interest through receiving a Fulbright fellowship to support her research, but may have violated the cost-benefit analysis principle by creating a project that was not exactly what she wanted to do for a dissertation, but had applied with the hope of receiving feedback to help her craft another Fulbright application.

Many participants insisted on completing the dissertation research they had set out to complete regardless of the financial costs. Participants had received such strong socialization messages about completing large-scale research that participants believed this is something that they had to do regardless of costs. Many participants set out to complete a project that they had envisioned for themselves and would take the necessary measures to see the project through to completion. These participants did not believe that their financial situations should mitigate the research they set out to complete. These participants certainly maximized their own self-interest in the project; however, these participants violated the axiom associated with cost-benefit analyses.

Professional clothing. Participant weighed the perceived importance of professional dress against their financial resources. The participants raising clothing as a financial consideration felt compelled to dress more professionally because their faculty members subtly or overtly suggested how important it is. Many of these participants lamented not having the financial resources to be able to purchase new clothes, so some engaged in clothes swaps where they acquired “new” clothes through an exchange with other colleagues. Observing job market candidates offered participants a stark realization that doctoral students must invest in their personal appearance, if they want to be competitive. However shallow they felt they might think it is to judge someone based upon appearance, participants recognized clothing would be an inevitable financial consideration. Like research expenditures, some participants engaged in behavior consistent with rational choice theory, while some participants were influenced by faculty and other doctoral students into purchasing new professional dress. Participants wanted to look the part of an academic and when comparing costs with benefits, participants perceived the benefits to be more valuable at this juncture in their doctoral programs.

In summary, participants behaved consistently and inconsistently with rational choice theory. Instead of making prudent financial decisions in alignment with axioms undergirding rational choice theory, participants were socialized to understand socialization activities were investing in to support their career aspirations.

Socialization theory. Socialization perspectives offer insight into how people navigate pathways to, through, and beyond doctoral education (Weidman et al., 2001; Gardner & Menoza, 2010). This theoretical perspective illustrates complex ways organizations communicate specific norms, values, and behaviors to organizational newcomers. As participants engage in socialization activities, they become “aware of the behavioral, attitudinal, and cognitive

expectations held for a role incumbent” (Weidman et al., 2001, p. 12). Weidman et al’s (2001) socialization model posits three core elements to socialization --knowledge acquisition, investment, and involvement. *Knowledge acquisition* refers to a graduate student’s ability to develop two traits – (1) knowledge and skills for the professional role and (2) an understanding of norms associated with a professional role. As the student progresses through doctoral education, knowledge and skills become more specialized. *Investment* refers to “the degree of time and energy that graduate students put forth in meeting program requirements” (p. 63). The investment made by the individual is limited by the “value placed on the investment action” and “money, time, psychic energy and personal pride” (p.17). Finally, *Involvement* is the measure of a graduate student’s participation with peer, faculty, departmental and professional communities. In short, participants in this study observed and began understanding the meaning of academic life through participating in conferences, developing independent research projects, and presenting themselves as professionals in academic contexts. In this section, many participants described why they engage in socialization activities like conference going, research, and professional dress. These socialization activities provided participants with the opportunity to envision themselves as members of the academic profession, which is the profession most participants hoped to enter after completing their doctoral degrees (Austin, 2002).

Academic conferences. Academic conferences continue to be a popular socialization activity among doctoral students. Many participants believed participation in academic conferences serves an essential socialization experiences during their doctoral experiences. Unlike involvement at the undergraduate level, graduate school involvement is primarily aimed at professional roles (Gardner & Barnes, 2007). Undergraduate student involvement tends to emerge out of a particular interest or talent, but participating in graduate student activities often

happens from interactions with people deemed successful. To many graduate students, they believe their faculty members are successful people since they were lucky enough to secure an academic job (Gardner, 2009). Many participants came to understand the importance of these academic venues through interactions with faculty and more advanced students. Participants specifically recalled departmental faculty encouraging the submission of conference proposals as a networking tool and as an important way to begin envisioning themselves as independent researchers. Participants received this encouragement directly from faculty during informal conversations and formal occasions such as coursework or when professors hosted invited student panels on the topic of publishing and the academic job search. Participants mentioned the frequency through which they became aware of conferencing as an expectation. The connection to socialization between socialization and involvement was clearly conveyed and adhered to by participants.

Through making the decision to become involved in academic conferences, participants gained more specialized knowledge of what specific disciplines value regarding methodological choices and research interests. Academic conferences exposed participants to the importance of the amount of involvement necessary to succeed on the academic job market. The specialized knowledge and methodological skills gained through academic conference participation furthered preparation for future professional roles. Participants contemplated making a significant investment into their doctoral education. Participants used conferences as a way to become involved in professional communities and establish scholarly networks. For example, Taylor made the monetary investment in attending the American Historical Association (AHA) conference because she organized a panel with preeminent scholars in her field. Having attended the AHA conference several years in a row, she learned about the importance of becoming

involved, disseminating research, and assembling experts on specific topics to participate in panels. Organizing the panel during her academic job search had immense implicit benefits, such as potential connections to employers as well as linking the preeminent scholar to Taylor. Taylor sought out this opportunity to challenge herself and to become more integrated within this professional community.

Participants believed academic conferences were places where doctoral students could present themselves as future faculty members. Doctoral students used academic contexts to learn about disciplinary nuances, forge scholarly networks and present their research. More advanced peers and faculty communicated the importance of these activities in observable ways through their participation and through verbal encouragement. In short, the knowledge acquisition, involvement and investment participants gained through the academic conference socialization experience contribute to the formation of a scholarly identity.

Research. One of the primary outcomes associated with doctoral education is the transition from neophyte to independent researcher (Council of Graduate Schools, 2005; Gardner, 2008b; Weidman et al., 2001). A doctoral degree “requires initiative and creativity, and the award of the degree depends upon the individual performance of a student in completing original research in the area of study” (Council of Graduate Schools, 2004, p. 4). During doctoral education, doctoral students build their capacity for the research function (Gardner, 2010; Lovitts, 2001, 2005; Weidman, 2010). The shift from doctoral student to independent researcher begins during the planning of a dissertation and culminates with dissemination of the research. Katz (1997) described the dissertation as a socialization experience requiring doctoral students to develop the “ability to research a major intellectual problem and arrive at a successful conclusion independently and at a high level of professional competence” (p. 6). The dissertation research

process begins with idea formation, emergent research questions, careful research design, data collection, and analytical procedures. Throughout doctoral education, students are socialized to understand that research serves as a primary marker of success within doctoral education (Austin, 2002; Gardner, 2008a, 2009).

Research holds a prominent role in the tri-partite responsibilities of faculty members. During doctoral education, students learn about research's role in the faculty evaluation process. They soon learn that the more productive a researcher is, the more money a faculty member makes and the higher status in academic communities is achieved (Fairweather, 2005). Even if a doctoral student does not want to achieve a particular brand, research plays an important role in the tenure, promotion, and annual raise calculations (Youn & Price, 2009). With respect to the research function, Weidman et al's (2001) graduate student socialization model suggests that doctoral students enter their graduate programs with a basic understanding of doctoral education, but through socialization process within the doctoral experience, students learn important messages and develop specialized skills.

In this study, financial considerations limited doctoral student socialization activities regarding the research function. During coursework, participants learned how to become a competent researcher and developed basic understandings of best practices (Gardner, 2008b). However, some participants lamented having to modify research data collection procedures in light of financial constraints. For example, Lauren remarked that despite having the opportunity to learn how to research directly from her faculty, she did not become aware in this process just how expensive dissertation fieldwork could be. Similarly, Dakota limited her data collection to one state because her financial circumstances would not allow her to do the national project she had initially intended to complete. Lastly, Joan discussed how lacking adequate funding would

modify her dissertation research from international to domestic. Throughout their doctoral education, many participants received direct instruction on how to conduct research (Austin, 2002; Gardner, 2008b); however, participants had little awareness that their faculty members bore the financial burden for students learning how to conduct research. As doctoral students making the transition from reliant to independent researcher, they soon realized that they needed to make a personal financial investment into their scholarship. So in addition to contributing their intellect, they came to understand independent financial resources are a necessary component of independent research. While it is widely understood that a primary goal of doctoral education is the becoming of an independent researcher (Council of Graduate Schools, 2005; Gardner, 2008a), many doctoral students in this study did not realize financial considerations would influence research, more specifically their own dissertation research and ultimately, their scholarly identity.

Professional clothing. A chief concern among 14 participants involved possessing clothes that would emulate dressing in a professional way. While few participants explicitly received instruction on dressing in a specific way, many doctoral students observed their faculty members and advanced doctoral students wearing professional attire.

During doctoral education, doctoral students often have the opportunity to teach courses to small and large size courses. Before becoming independent instructors, doctoral students serving as teaching assistants observe their faculty members. Through observing their faculty members, doctoral students learn about preparation for teaching roles (McDaniels, 2010; Wulff, Austin & Nyquist & Sprague, 2004). While not explicitly addressed, participants observed their faculty members' clothing and determined that this is something they, too, should invest in. Participants viewed professional dress as a simple, yet, costly way to simultaneously emulate a

faculty member and differentiate themselves from undergraduate students populating their courses. Participants close in age to undergraduate students believed the monetary investment into attire would help them feel more like an academic. Through purchasing professional dress, many participants attempted to develop professional attitudes and habits (Austin & McDaniels, 2006; McDaniels, 2010). Purchasing new clothes constituted a worthy investment since many people believed they would eventually become professors. In summary, participants viewed clothing as a type of socialization “process through which newcomers learn to fit an expected role and pattern of behavior (Austin & McDaniels, 2006, p. 400). Participants attempted to fit a particular role, develop confidence, and formulate their academic persona.

Summary. Findings in this section complement results from studies examining socialization activities, such as conference participation, independent research, and teaching assistantships (Council of Graduate Schools, 2005; Gardner & Barnes, 2007; Gardner, 2008a; Mena et al., 2013). However, this study adds a new dimension to understanding the role of financial considerations in the decision to participate in socialization activities. Previous graduate student socialization studies have emphasized these activities as important to scholarly identity formation (Gardner, 2008a; Tinto, 1993; Weidman et al., 2001); yet, scholars have not focused on the unique financial tension inherent to participating in these socialization activities. Financial considerations influenced some participant’s decisions to participate in socialization activities. A shortcoming of their socialization observations is the role financial considerations play in facilitating each of these activities. Previous socialization models have not accounted for the influence of personal financial decision-making towards socialization activities. These findings highlight the importance of financial constraints in participating in socialization activities.

Family Considerations During Doctoral Education

Like many people in their mid 20s to late 30s, twenty-four study participants navigated their doctoral programs with responsibilities beyond academic work. Participants balanced their academic responsibilities with non-academic roles as partners, and in some cases, parents. These non-academic roles added to the academic responsibilities participants completed each week. Together, doctoral students' academic and nonacademic responsibilities compete for time, attention, and financial resources. In this study, many of these twenty-four participants shared how their non-academic roles created unique financial considerations causing financial challenges while some participants discussed the supplemental financial income resulting from familial roles. I conclude this section with an application of rational choice and socialization theory to financial considerations factoring family into decision-making processes.

Financial Challenges

At various points during interviews, nearly all participants acknowledged having romanticized views of how they envisioned their lives as doctoral students. These visions included fully immersing oneself in scholarly conversation, attending numerous departmental lectures and events, and walking around campus contemplating big ideas; however, for many participants, these dreams did not materialize. Instead, a majority of participants factored other people (e.g., spouse, children) into decision-making processes regarding time and financial resources. In these cases, two common financially-centered decisions emerged: (1) living locations and spousal employment and (2) long distance relationships.

An important consideration when enrolling in a doctoral program is deciding where to live. Most participants described Circle City and Evergreen as "college towns" with lower costs of living compared to nearby metropolitan areas. However, participants cited limited industry

opportunities for people not affiliated with postsecondary education institutions as a significant challenge to living in these college towns. Evergreen's and Circle City's proximity to larger metropolitan cities located 60 to 90 minutes away offered more employment opportunities for the significant others of many study participants. Doctoral students possess autonomy over living decisions; however, one-third of partnered participants reported accounting for significant others in their location decision. Within this subset of study participants, no discernible pattern emerged from interview data about the timing of when participants made this particular decision. Some participants mentioned making living decisions before they enrolled, while others discussed moving to accommodate a spouse during the latter stages (e.g., dissertation writing) of their doctoral program. For example, Kelsey's spouse had a full-time job where they lived before she enrolled in Circle City's sociology doctoral program. Her partner encountered significant difficulty in finding employment opportunities near Circle City. Kelsey described his difficulty with finding gainful employment and how this affected her transition to her doctoral program:

So he searched for jobs here in [Circle City] and he was super stressed out about it. He was not getting, he did not get a single interview. I don't remember how many jobs he applied for, but he didn't get a single interview. We were both pretty stressed out about it at that point because that was a kind of scary situation. You know, oh, are you gonna have a job? How am I gonna support both of us on my grad student salary. But he also at that point wasn't 100% sure, he had said that he probably would not move here with me until he found a job here.

Kelsey conveyed challenges that some participants faced in making the financial decision to uproot their personal and professional lives to begin a doctoral program. At the time she considered enrolling in a doctoral program, Kelsey had been married for a few years. During

the interview, she acknowledged not wanting to go through the doctoral journey without her partner because she counted on him for financial and emotional support. In addition to providing support, Kelsey had particular concerns about how she would be able to support her family financially on a “grad student salary” if her husband moved to Circle City without a job. Fortunately, this situation had a positive resolution. Two weeks before Kelsey started her doctoral program, her husband’s employer changed their stance on telecommuting, which allowed them to live together and to combine her graduate stipend with his job’s salary. Kelsey’s situation highlighted financial challenges and stresses several participants faced in relocating their lives in order to pursue graduate education. Kelsey wanted to feel excited about beginning her doctoral degree. Instead, she worried about how she and her partner would make ends meet, whether she and her husband would have to live on her meager stipend, and how to deal with the possibility of a long distance marriage. Similar to Kelsey’s perspective, a small handful of partnered participants reiterated the challenges they faced as they moved to Evergreen and Circle City to begin their doctoral programs.

Other participants, like Jamie, decided to live a considerable distance from their doctoral programs to further their partners’ careers. Jamie decided to live over an hour away from Circle City based upon her perception that living closer to a metropolitan area would create more employment opportunities for her husband. This perception proved correct when he found a job about two hours away from Circle City. Jamie and her family decided to live in a location “that was right smack in the middle, but still meant he would be commuting an hour north every day and I would be commuting an hour south.” Her husband’s employment provided substantial pecuniary means, which allowed them the opportunity to save money and adhere to a higher standard of living than the prototypical graduate student. Jamie acknowledged her decision-

making process precipitated a trade-off that benefited her family more than her academic career aspirations. Commuting distance hindered Jamie's ability to be on present on campus frequently. She lamented a lack of connection to other doctoral students and infrequent participation in departmental events. When she was on-campus, Jamie attempted to maximize her peer connection opportunities. During her once a month commute, Jamie attempted to maximize socialization opportunities with other doctoral students:

If I'm down on campus, I will text people and we'll go out to lunch...When I'm down there teaching, then usually I do some work in our computer lab and everybody hangs out in the computer lab so I guess that counts as social life because we will talk while we're working and then we'll go get coffee at some point.

Jamie suggested that her living situation was not how she envisioned her doctoral program and to some extent limited some professional development opportunities, however, she perceived living in a location suitable for her husband to find gainful employment allowed her to make this sacrifice. Eschewing living close to campus in favor of financial security for her family proved more valuable to Jamie.

Seven participants discussed living apart from their significant other or relocating away from their doctoral institutions after their coursework to enhance career opportunities for their partners. These participants approached cost-benefit decisions from a financially-oriented perspective. For example, Geoffrey and his partner entered into a long distance relationship during the coursework stage of his enrollment in Circle City's political science doctoral program. Although he and his partner both had intended to move to Circle City together, his partner received a lucrative and career-enhancing job offer in their hometown that his partner simply could not refuse. Given the possibility of not finding a job or comparable employment near

Circle City, they elected to enter into a long-distance marriage. Geoffrey shared “we couldn't afford for her to come stay. It didn't make any [financial] sense whatsoever.” One weekend each month, Geoffrey drove 8 to 10 hour to see his partner. After completing his coursework, Geoffrey, like most participants in this situation, moved closer to his family. In making this decision, Geoffrey consulted with his faculty members about his situation, and they all affirmed his decision. Similar to Jamie's narrative, Geoffrey reported a lack of significant relationships with fellow classmates due to the extensive traveling his external life required. Even though he did not feel connected to his fellow doctoral students, he valued the financial relief from his situation more than peer connection.

Before moving closer to his partner, Geoffrey attended to financial factors related to his doctoral program. Geoffrey negotiated a remote research assistantship as a way to waive tuition costs. Had he not acquired this type of funding, he would have been responsible for paying tuition out-of-pocket and may have reduced his ability to afford his doctoral program. After securing institutional funding and factoring in his wife's salary, Geoffrey felt his family's financial situation far outweighed remaining physically in Circle City to complete his doctorate. He judged that renting two apartments in two different cities did not make “financial sense” for them. Geoffrey's decision centered on satisfying his personal life's demands more so than his doctoral program's requirements.

Two participants discussed how their partner's employment satisfaction and stability shaped decisions about their graduate education. When Michael entered his doctoral program, he believed he could complete his program in about six years. Michael's plan changed during his third year, when his partner conveyed unhappiness about her employment situation at which time, she urged him to complete his program in less time. His partner's employment situation

provided significant financial support to Michael and his children, but the unhappiness associated with her employment shaped Michael's time to completion trajectory. Michael felt that the condensed timeline required him to be more strategic in making publishing and collaborating decisions to ensure he would be competitive on the political science academic job market.

Echoing Michael's sentiments, Eleanor expedited her time to completion and placed academic career aspirations on hold due to her husband's employment situation. She discussed how her husband's employment situation shifted her approach to her career:

Because my husband, the company that he was working for collapsed, he was out of a job in the middle of the summer. He found a job quickly, but during the time I was like, "Well if we need ... We don't want to stay in [Circle City's Location] forever." We know we want to be in [CITY]. If we need to move now, I'm fine with, just trying to finish my dissertation, but from afar, and not focusing on the academic job market.

Eleanor factored her family into the decision about her career. During the interview, she mentioned how this particular situation highlighted how important it was for her to think about more than her academic career. Although she aspired towards academia when she entered her doctoral program, she recognized that both people being happy in their relationship was an important aspect of life.

Overall, partnered and parent participants discussed having to factor in more than themselves into decision-making processes. Participants in this study explained that their families featured prominently into decisions regarding where to live, living apart and spousal employment opportunities.

Supplementary Financial Income

In contrast to participants who had to make financial decisions accounting for other people, a sizable proportion of participants discussed how supplemental financial support from parents and income from partners buffered them from financial stress. More than twenty of the 35 participants described receiving financial support from family or through savings their parents set aside for their education. For example, Jerry discussed how his family placed money in an account for him to draw upon while he was enrolled in his doctoral program:

I can call my mom up and say can you call your stockbroker and tell her to release \$1000 from the “strategic reserve” and actually, that’s what I asked my mom to do a few weeks ago. I think there’s about \$17,000 left in it and she was like, I hate to see you spend that money. I’m just going to cut you a check. And I, you know, I protested and argued but ultimately ended up taking the check. So I’ve been blessed that I have that. And again, I know plenty of people who, whose families come from more modest circumstances and haven’t had that safety net that I’ve had and I’m very aware of how blessed I am to have it and how privileged I am to have it.

Jerry acknowledged his family buffered him by providing a financial “safety net” during the duration of his doctoral program. His parents planned ahead for Jerry and invested in his future educational pursuits. In acknowledging his privilege, Jerry implied his family buffered him from feeling the effects of financial issues. Similarly, Sam discussed coming from an “affluent family” and wished that his family would have been more strict about teaching him about

conserving money, being frugal and all that... the biggest message [about finances] I get from them [my parents] even now is we have money. If you need it, we’ll send it to you...I’m glad that’s the case but at the same time, I feel that I have a harder time being

frugal...not only do I have my own little buffer but I've got them [my parents] in case I need any, anything like really serious, like car repairs or something like that

In the above quote, Sam mentioned feeling conflicted about the financial support he receives from his parents. On one hand, he is glad that he does not have to worry about money, while on the other he recognizes that he could be more thrifty with the way he spends money. Sam acknowledged that he did not have to worry about his finances because if he was indeed in dire financial straits, all he has to do is ask for assistance, and his parents would send money to him. Finally, Ava summarized how she felt about the financial support she received from family: "In some ways, I'm like a grown up child. I haven't really been fully pushed into the adult world." Although Ava no longer can be claimed as a dependent on her parents' tax return, she still depends upon her family to assist her financially during her doctoral program.

Partner income also created more financial flexibility during doctoral programs for some participants. For example, when Abigail entered the history doctoral program at Circle City, she had a substantial undergraduate student loan debt balance. The debt burden was so severe that student loan servicers called her frequently at night and caused her distress. Soon after entering her doctoral program, Abigail began dating a wealthy individual who eventually paid off her significant student loan debt. Abigail reported that dating a wealthy individual alleviated her financial concerns:

My fiancée, he's older than me, and he's in a totally different field than I am. He's not a graduate student; he's an older adult who has a real job, and savings, and stuff like that. Now I do live above my means, my personal means, and more within his means, but I still pay for my everyday food and things like that, but he will pay for where we live. We live together.

Abigail stressed that her fiance has a *real* job and savings. Extinguishing her debt and combining her financial assets with his allowed Abigail to feel more comfortable and less stressed about her financial situation as a doctoral student.

Likewise, Edward acknowledged that having a second income from his wife allowed him to have a more balanced life. During the early part of his doctoral program, Edward worked multiple jobs to earn extra money and make financial ends meet. Although he enjoyed these various positions, he acknowledged that these outside efforts required substantial periods of time, which detracted from his academic focus. During the third year of his doctoral program, his partner completed her graduate program and started a new job. Edward shared how having a second income afforded his family the opportunity to think about their future together as well as engaging in leisure activities to reduce graduate school related stress:

I mean, being almost 30-years-old and living on a graduate stipend, I've definitely had to make decisions about how I prioritize things. Now that my wife has a teaching job, teachers don't make much but they make considerably more than graduate students, so that's starting to open up more opportunities of some leisure things and more just like life outcome stuff.

Edward and his partner earned a modest amount of money, but as he points out, her teaching salary exceeded his graduate stipend. He shared how feeling less stressed out about his financial situation allowed him to focus on regaining balance between work and life. As part of his prioritization process, Edward concentrated more time on preparing papers for publication, which he perceives to be valuable for his academic career aspirations.

Similarly, participants with young children often spoke about how having multiple incomes eased financial burdens. For example, Agatha, a Circle City sociology student with a

small child, described how having a second income allowed her to hire childcare during her doctoral program:

Having two incomes has allowed us to hire help... my daughter is in daycare. That [a second income] makes a lot of this possible. Money makes that possible. If we couldn't afford a daycare, I would have to rely entirely on my husband to take care of her [daughter] if I didn't have income to be able to hire a sitter. It isn't cheap.

Agatha pointed out that the second income from her partner allowed daycare as an option. While her child is enrolled in daycare, Agatha focuses her energy towards her dissertation that she hoped to defend soon after the interview. Together, Agatha and her partner designated money from the second income towards their childcare expenses since they believed it would facilitate a speedier time to degree.

Supplemental financial income for a number of participants derived from parental financial support and partner salaries. These financial affordances increased financial flexibility for many participants in this study. Participants receiving supplemental financial relief from their families and partners acknowledged that they worried less about financial issues than participants with fewer financial resources. The income supplement supported the academic pursuits of many study participants. Rather than worrying about financial turmoil, financial easement allowed participants to devote more time to focusing on and completing their doctoral education. Participants receiving supplemental financial support perceived this income supplement buffered their doctoral experiences.

Theoretical Applications to Decisions Factoring In Family Considerations

In this section, I apply rational choice and socialization theories to the ways in which doctoral students factored family considerations into their decision-making process. In particular,

I analyze alignment with or departure from these theoretical perspectives. Rational choice theory emphasizes cost-benefit analyses and self-interest maximization, while socialization theory posits organizational newcomers learn through instruction and experience. Doctoral students also receive socialization cue through observation of different behavioral attitudes, norms and values associated with their chosen profession.

Rational choice theory. Participants in this study exhibited behaviors consistent and inconsistent with axioms of rational choice theory. Examples of inconsistent rational behavior came from several participants. Participants (e.g., Jamie, Graham) described their decision-making process towards living a considerable distance from where their doctoral program was located. Participants framed their living decisions beyond just the doctoral student himself or herself. The majority of participants had responsible for or to other people that needed to factor into their decision-making process. In particular, living location decisions factored in employment opportunities for partners. A rational choice perspective would suggest that a doctoral student would live close to campus in order to maximize socialization opportunities and exposure to other doctoral students and departmental faculty. Living away from their doctoral program reduces informal interaction opportunities that scholars have identified as key factors in socialization (Gardner, 2007).

Nearly all participants aspired to professorial roles after their doctoral programs. Working closely with faculty on their research would offer the opportunity for a doctoral student to publish with their faculty. If a doctoral student is not frequently around on campus, faculty may not remember to invite certain students to work with them on their research. Furthermore, several participants mentioned their decision to live far-removed from campus influenced their relationships with colleagues. For example, Jamie and Graham shared feeling less connected to

other doctoral students because infrequent interaction made cultivating collegueship difficult. Making the decision to live away from campus benefitted personal relationships lasting beyond the doctoral program; however, these relationships may adversely affect personal connections with other doctoral students and departmental faculty.

Like the decision to live away from their doctoral programs, several participants noted engaging in long distance relationships to further their educational endeavors. In these cases, participants maximized their learning opportunities and self-interest in engaging in socialization while minimizing familial relationships. Several scholars have suggested significant others furnish support to students during doctoral education (Girves & Wemmerus, 1988; McCallum, 2014; Millett & Nettles, 2010; Nettles & Millett, 2006; Price, 2005). Price (2005) found that married doctoral students performed better on several outcomes, such as completion rates, time-to-completion, publishing, and securing tenure-track positions. However, Price's study did not consider the proximity of the significant other.

What becomes evident in this study is that numerous participants felt their relationships with peers lacked connection because instead of being close to campus, long-distance participants traveled several times a month to see their significant other. Participants living apart from significant others weighed the tradeoff between friendships with other doctoral students and their partner's happiness. From a rational choice perspective, a doctoral student should be developing relationships with colleagues because many people met along the doctoral journey will become future colleagues and potential research collaborators. Instead, most long-distance participants placed more emphasis on their relationships. The latter challenges the way in which we consider rationality in traditional economic terms.

Not all participants felt financial challenges stemming from their non-academic roles. A number of participants discussed the ways in which family considerations buffered financial challenges. Several participants mentioned having a secondary income from family or a partner allowed an increased focus on academics and socialization activities. Unlike Gardner's (2008b) study studying socialization among doctoral students with children, participants in this study discussed having family support as a tool for facilitating participation in socialization activities. For example, Agatha pooled her assistantship income with her partner's salary provided them with the financial flexibility to place their child in daycare. This decision allowed Agatha to focus on finishing her dissertation. Agatha and her partner underwent a deliberative process recognizing that despite allocating significant funds towards their daycare expenditures, investing money on this expense afforded more time to complete her dissertation work. Having supplemental financial support from family allowed these participants to not have to make specific choices based upon their financial situation. Instead of worrying about spousal employment or long-distance relationships, supplemental financial support from family lessened financial worries for a group of doctoral students.

In summary, numerous study participants factored their families into decisions about their graduate education. Some decisions demonstrated conformity with rational choice theory, while some decisions did not. Participants deviating from rational choice axioms illustrated traditional economic principles may not appropriately account for individual decision-making. Participants factored a range of family considerations into their decisions. In these decisions they had to balance employment opportunities for partners and consider living in a complex long distance relationship. In some ways, socialization opportunities maximized participant investments into their careers while minimizing personal relationships. Alternatively, some participants weighed

the happiness and opportunities of spouses as the expense of social opportunities. In sum, participants engaged in their own cost-benefit calculations to identify what they considered to be the most important features. The ways in which participants placed value on their spousal or family happiness offers an important implication in evaluating doctoral students' financial decisions.

Socialization theory. Doctoral student socialization requires doctoral students to master content and to make an original intellectual contribution (Gardner & Mendoza, 2010; Gardner, 2010; Lovitts, 2001). In completing these socialization aims, a significant time commitment is required by the doctoral student. Few studies have studied the ways in which nonacademic roles shape doctoral student socialization opportunities. This study's findings add to knowing more about a group Gardner (2008a) called "not fitting the mold of graduate school." She described this group as "largely young, White, single, male population" (p.126). This study adds new socialization understandings to students not fitting the "single" mold. In this study, nonacademic roles, such as being a partner or parent, provided some financial challenges or buffered financial decisions. Twenty-four of 35 student participants had families that they factored into decision-making processes. Scholars have often wondered whether having familial support in the doctoral journey makes a difference during the experience (Nettles & Millett, 2006; Millett & Nettles, 2010; Price, 2005). Price (2005) found that married doctoral students performed better on several outcomes, such as completion rates, time-to-completion, publishing, and securing tenure-track positions. Participants in this study often described how their nonacademic responsibilities competed for their time, attention and financial resources. Study respondents illuminated how doctoral students negotiate and structure time for socialization activities (e.g., working in

communal spaces, collaborating on research projects, attending departmental events) to take place.

Socialization theory identifies student and faculty interactions as key factors for learning more about disciplinary contexts (Weidman et al., 2001). Participants discussed the ways in which financial challenges and financial supplements regulated decision-making around socialization activities. For example, Jamie chose financial security from her husband's employment opportunities over implicit socialization opportunities that may have been available had she have lived near Circle City. In a similar financial conundrum related to spousal employment, Kelsey should have entered her doctoral program filled with hope and promise. However, she felt conflicted about her enrollment in her doctoral program while her partner struggled to find employment. Instead of forging early relationships with peers, her focus centered on trying to figure out how to make her life as a doctoral program financially viable. Other participants described how their connection to other students was limited because they made the decision to live away from their program for spousal employment reasons or because the participant traveled so frequently to invest in relationships with partners.

Instead of worrying about the influence of family financial situations, some participants found the supplementary financial support as an aid to socialization opportunities. For example, Jerry and Sam did not have to worry about being able to afford conferences. Their families encouraged them to fully participate in their doctoral program and should they need any financial support to just ask. Agatha and her partner could afford to place their child in daycare. This decision allowed Agatha to focus her time and energies towards the completion of her doctorate. Participants benefitting from these financial supplements were able to fully immerse themselves in their doctoral program and socialization opportunities.

Participants shared how they envisioned their doctoral program, but the financial reality compromised some of those dreams. An array of family financial considerations influenced decisions participants made about their socialization opportunities. Financial circumstances may have reduced the extent to which participants effectively received certain socialization messages and limited their peer collegial relationships. In this study, significant others competed with classmates for time and attention. In the case of these participants, family financial considerations weighed heavily in doctoral student's decision-making and their socialization opportunities.

Summary of Findings

Through this study, I investigated the ways doctoral students incorporated financial considerations into their decision-making processes about their doctoral education with a specific emphasis on doctoral socialization opportunities. Rational choice and socialization theoretical perspectives guided this empirical investigation into the complex decision-making processes doctoral students engage in to make decisions about their education. This study adds to the understandings of graduate student socialization through differentiating socialization experiences by individual characteristics. Table 2 summarizes the major themes, sub-themes, and the Weidman et al. (2001) core element(s) affected by financial considerations.

Table 4.1 Summary of Financial Considerations Influence on Doctoral Student Socialization

Decision Point	Financial Consideration	Influence on Weidman et al. (2001) Socialization Core Element(s)
Going to Graduate School	<i>Lacking Career Options</i>	N/A
	<i>Having a Degree Paid For</i>	N/A
	<i>Positions Requiring a Terminal Degree</i>	N/A
	<i>Deferring Student Loans</i>	N/A
Selecting a Doctoral Program	<i>Funding</i>	N/A
	<i>Cost of Living</i>	N/A
Financing Doctoral Education	<i>Primary Funding</i>	Knowledge Acquisition, Investment, Involvement
	<i>Supplemental Income Decisions</i>	Knowledge Acquisition, Investment, Involvement
Participating in Doctoral Student Socialization Activities	<i>Academic Conferences</i>	Knowledge Acquisition, Investment, Involvement
	<i>Research</i>	Knowledge Acquisition, Investment
	<i>Clothing</i>	Investment
Family Considerations	<i>Financial Challenges</i>	Involvement
	<i>Supplemental Financial Income</i>	Investment

In this chapter, I described five decision points doctoral students encountered during their journeys to and through their doctoral programs. These decision points dovetailed with implicit and explicit financial considerations. Financial considerations played an important role in the decision to consider graduate school, enroll in a doctoral program, finance doctoral education and participate in professional aspects of doctoral education. For a smaller subset of participants, families mattered financially in decision-making processes. In the next chapter, I discuss implications of these findings for theory, research, and practice.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

The primary purpose of this study was to investigate how doctoral students made decisions about their graduate education when those decisions involve financial implications/considerations. I also explored how these decisions with financial implications shaped doctoral student socialization opportunities. To address these study aims, I conducted and analyzed interviews with thirty-five advanced doctoral students. Study results highlighted how financial considerations influenced five decisions involving access to and success during doctoral education: (1) deciding to go to graduate school, (2) selecting a graduate program, (3) financing doctoral education, (4) participating in professional activities, and (5) incorporating family financial considerations into decision-making processes.

This chapter consists of three sections. First, I address the study's research questions and discuss the study results within the literature. Second, I offer implications for theory, practice, policy, and future research. Finally, I conclude this dissertation with a summary of key findings and important takeaways from this empirical investigation. Throughout this chapter, I link study findings with connections to extant literature and provide broad discussions of the study's findings.

Research Question 1

The primary research question, how do doctoral students make decisions about their graduate education when those decisions have financial implications, makes a contribution to the study of doctoral education. Typically, doctoral education studies center attention on three main topics: attrition, timely completion and socialization. A robust body of literature within doctoral education correlates the importance of financial support to timely completion and attrition (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Gardner, 2008a; Lovitts, 2001; Maher,

Ford, & Thompson, 2004; Nettles & Millet, 2006; Strayhorn, 2010). Thus far, no studies have investigated the role of financial considerations in doctoral student's decision-making processes about their graduate education or decisions aimed at fostering doctoral student socialization. This study contributes to this latter line of inquiry by exploring perspectives from 35 advanced doctoral students concerning how financial considerations influenced decision-making processes in graduate school with a specific emphasis on socialization activities, such as academic conference participation, research expenses, and professional dress.

Overall, participants in this study illuminated a complex and nuanced decision-making process doctoral students undergo as they evaluate decisions concerning their graduate education. In particular, many participants offered stories in support of a non-linear, not-so-straightforward approach when arriving at a decision concerning their graduate education and socialization opportunities. In making some decisions discussed in the preceding chapter, a variety of external factors (e.g., economy, cost of living) and key actors (e.g., parents, partners, children) influenced decisions. The effects of these influences external to the doctoral experience are discussed in this section.

Economic considerations and the influence of key actors weighed heavily into decision-making processes of doctoral students in this study. Participants continuously referenced the economy's influence on their initial decision to apply to doctoral programs. These participants referenced a lack of employment options stemming from their undergraduate majors. Students majoring in political science, sociology, and history often do not have a clear career pathway, nor do these low-paid majors possess lucrative pathways without graduate degree attainment (Mullet et al., 2003; Zhang & Thomas, 2005). As a way of enhancing employment opportunities, participants believed that they needed a graduate degree. The findings from this study about the

influence of the economy on graduate school enrollment is consistent with current literature showing a relationship between economic fluctuations and graduate school enrollment (Bedard & Herman, 2008; Hearn, 1987; Heller, 2001; Malaney & Isaac, 1988; Sax, 2001; Zhang & Thomas, 2005). Like the decision to enroll in graduate school, participants tended to weigh three factors in selecting a graduate program: (1) funding, (2) institutional prestige, and (3) faculty reputation. Although the people doctoral students consulted in making this decision, the decision often came down to cost of living. Several students went against their faculty's suggestions by choosing lower ranked institutions due to the cost of living.

A number of key actors internal and external to doctoral education influenced participants' decision-making processes. Internal actors, such as faculty and more advanced doctoral students, influenced a number of decisions doctoral students made about their graduate education. Participants often described observing and emulating the behaviors of these role models. In essence, faculty and more senior doctoral students socialized participants to what they should be doing in order to be considered a successful student (Gardner, 2009). During the observation process, study participants internalized what they observed: "A successful graduate student is one who functions as and sees herself or himself as not simply a student but a candidate member, an apprentice member of this profession" (p.396). Faculty members and advanced doctoral students play integral roles during doctoral education. In this study, many participants relied on advice and observed the behavior of their faculty members and senior doctoral students. Their influence was paramount to the decisions highlighted in this study. For this reason, study findings point to the influential role of internal actors on decision-making processes for more junior doctoral students.

Like internal actors, actors external to doctoral education influenced doctoral student decision-making as well. Pertinent to this study are the influences of parents, partners, and children. Numerous participants explained that their parents' financial support buffered them from financial issues. As Jerry and Sam shared in the previous chapter, they only had to ask their parents for money. Not having to worry about their financial situation allowed many participants to concentrate on their academic studies and to not factor financial considerations into their decision-making processes. On the other hand, some participants mentioned the pressure stemming from being married during graduate school. These participants tended to focus their attention on increasing the employment prospects of their partners. While doctoral students should seek out opportunities to maximize their connection to their doctoral program, they have to consider employment opportunities for partners. Previous studies focusing on the role of marriage and financial support during graduate education, often point out the benefits for doctoral students and doctoral education outcomes (Millett & Nettles, 2010; Nettles & Millett, 2006; Price, 2005). However, a shortcoming of these studies is that they do not directly address location proximity to or distance from their doctoral program. Evidence from this study suggests that parties external to doctoral education influence decision-making.

In general, doctoral student decision-making focused on the long-term impact of the decision. Most of their attention evaluated the long-term career/professional benefits of their choices. Many participants gave minimal or no attention to the long-term financial consequences of these decisions. In particular, many participants failed to consider how negative financial behaviors can shape their future. Several examples emerged within this study. First, approximately 1/3 of the total study participants borrowed during their graduate education. While approximately one-half borrowed for good reason, other participants borrowed for

irrational reasons (e.g., lifestyle choices) and borrowed irrational amounts. Each unfunded participant had borrowed in excess of \$50,000. Borrowing so heavily during graduate education may limit career options after completing the doctorate. Borrowers generally did not consider how much of their future monthly income will go towards student loan repayment. Instead of focusing on these consequences, participants framed their decision from a necessity point-of-view, which emphasized a terminal degree is necessary for a tenure-track job. The effects of undergraduate student loan debt on graduate school aspiration and enrollment are well-documented (Fox, 1996; Hearn, 1987; Heller, 2001; Malcom & Dowd, 2012). Within the extant literature, no studies have examined the effects of graduate school debt on career choices. Participants, especially borrowing students, failed to consider the long-term consequences of their decisions.

A second example of only focusing on long-term career influences emerged when participants discussed attending professional association conferences. Many participants, especially participants in or nearing the job search process, attended multiple conferences each year. Several participants noted investing money into these annual events would allow them to network with potential employers, showcase their research, and develop professional skills (Gardner & Barnes, 2007). Given the emphasis their faculty placed on conference-going and its perceived importance in securing a faculty job, participants received socialization messages emphasizing that they should attend conferences. These events are costly and rarely did participants factor these financial considerations into their decision-making processes. Many participants weighed conferences as a necessary expense and a necessary experience if they ever hoped to obtain an academic position.

In summary, financial considerations mattered less to doctoral student's decision-making than I expected. Nevertheless for some students particularly students of color, unfunded participants, and lacking family financial support, financial considerations do factor into decision-making processes. Through this study, participants considered the role of the economy and consulted internal and external parties in their decision-making process. Although participants discussed the importance of financial considerations, a takeaway from many interviews suggested that impact of financial considerations during decision-making was muted by the role of family financial support and the need to participate in essential socialization experiences.

Research Question 2

The second research question, how do financial considerations shape decisions influencing socialization opportunities, offers new insight into doctoral student socialization. Socialization theory is the most prevalent theory used to explore doctoral education (Austin, 2002; Boden, Borrego & Newswander, 2011; Ellis, 2001; Gardner, 2007; Gardner, 2008a, 2008b; Gardner & Mendoza, 2010; Gardner et al., 2014; Golde, 1998; Golde, 2005; Gonzalez, 2006; Mars, Bresonis & Szelenyi, 2014; Mendoza, 2007; Szelenyi, 2013; Weidman, Twale & Stein, 2001). Among the different socialization theories used to understand doctoral education, the Weidman et al. (2001) conceptualization of graduate student socialization has received the most attention among scholars and guided this inquiry. Despite widespread acceptance, few studies have empirically tested the Weidman et al. (2002) model in full or in part. This study investigates how a force external to doctoral education – financial considerations – exerts influence on the socialization process Weidman and colleagues (2001) illustrate in their doctoral student socialization model.

This study contributes to the growing interest in forces external to doctoral education. My specific emphasis evaluates the role of financial considerations in decision-making aimed at fostering doctoral student socialization. Throughout this study, I assumed that a doctoral student's life *outside* of their doctoral program can have substantial effects on outcomes *inside* doctoral education, such as attrition, time to completion, and salient to this investigation, socialization. Previous studies have evaluated the ways in which gender, race, family encouragement, and faculty grantsmanship behaviors influence doctoral student socialization processes (Felder et al., 2014; Gardner & Gopaul, 2012; Gonzalez, 2006; Mars et al., 2014; McCallum, 2015; Mendoza, 2007; Sallee, 2011; Szelenyi, 2013). Using rational choice theory and socialization theory to study the decision-making process aimed at activities fostering doctoral student socialization, I found that participation in socialization activities highlighted in this study was modestly influenced by financial considerations. The greatest influence on doctoral student decision-making about socialization activities derived from interactions with faculty and observations of successful job market candidates. These decisions were guided by the student's desire to be successful in finding a job at the conclusion of their doctoral program.

Overall, participants in this study suggested that the career they aspired to, the professoriate, influenced the ways in which they thought about participating in socialization activities (e.g., conferences, research). Nearly all participants mentioned entering their doctoral programs with the intention of pursuing a tenure-track job at the completion of their doctorate. As doctoral students proceeded through their programs, many invested financially in a variety of socialization activities because they believed participating in these activities would help them achieve their goal of securing a faculty career. In making their decisions to go to conferences, pay for individual research, or purchase new clothes, many participants believed they were

making an investment into their future roles and used these socialization activities as a way of merging these activities with scholarly identities, a primary goal of the Weidman et al. (2001) model.

As participants made the decision to enter doctoral programs, they typically consulted their undergraduate faculty members. These key informants suggested that the prospective student attend only doctoral programs offering a funding package and select the program with the highest ranking. More than 30 participants followed the first message about funding. Thirty-one of 35 participants entered their programs with funded offers. An area where participants diverged from socialization messages was around issues of program prestige. Some participants selected the highest ranked institution that they received an admission's offer from, while other people chose programs based upon fit and cost of living expenses. These participants weighed the prestige of the doctoral program against the amount of their stipends and realized that they may have to go into debt over their graduate education. Taking on debt was not something many participants were willing to do.

Funding "often require[s] students to work with faculty on research projects or instructional activities, can be most valuable for their associations and the apprenticeships they provide to students in preparation for professional careers" (Nettles & Millett, 2006, p.74). Many doctoral students found that receiving funding during their program aided their socialization opportunities to interact with departmental faculty and doctoral student peers (Mena et al., 2013). The funded doctoral students in this study experienced doctoral education differently than their unfunded counterparts. The unfunded doctoral students struggled to make connections with their peers and faculty because they did not have the same ease of access as funded students. An often-cited critique of the Weidman et al. (2001) graduate socialization model is that this process

assumes socialization applies uniformly across people (Gardner, 2008a, 2008b, 2009, 2010). Little attention has focused on the ways in which funding influences the ways socialization happens. On one hand, funded students experienced socialization in informal (e.g., departmental workspaces, informal interactions) and formal (e.g., classroom) contexts. On the other, unfunded students only had access to the formal socialization opportunities. Certainly exposure to the seminal disciplinary knowledge is essential for preparation for professional roles, but Weidman et al (2001) posit being integrated within the department and developing relationships with professors and other doctoral students are also key ingredients. Lacking socialization through informal contexts may not fully prepare doctoral students for their first professional role beyond their doctoral programs.

Participant discussed how decisions involving socialization activities were guided by their understandings of the academic job market. Participants came to understand attending academic conferences regularly as a key part of academic life. At the encouragement of faculty and advanced doctoral students, conferences became a socialization activity integral to learning more about their future roles as professors (Gardner & Barnes, 2007). In particular, participants made the decision to attend academic conferences as a primary means for advancing their disciplinary knowledge, developing scholarly networks, and sharing their research. Participants treated conference-going as an essential element of their doctoral program and prioritized attendance at these academic events.

A primary goal of doctoral education is the transition of a neophyte scholar to independent researcher (Council of Graduate Schools, 2005; Gardner, 2008b). This transition tends to emerge throughout the dissertation's design and execution process. With regard to participants' research activities in this study, many doctoral students believed their dissertation

research should be fundable, novel and completed regardless of personal financial costs. The dissertation project gives doctoral students first-hand experience in conducting research beyond their formal coursework. This process often has many starts and stops, as well as big ideas narrowed to smaller, more manageable ones. Several participants discussed not really knowing how much research costs until they found themselves doing their dissertation project. Though coursework offers a chance to learn the craft of research, many course projects are typically small-scale and require a minimal amount of expenses. As a person aggregates all of their research expenses, they may come to realize that research requires considerably more money than anticipated.

Through conducting their own research, participants learned quickly that financial considerations can influence a project's research design and data collection procedures. Although they were socialized to complete the best possible dissertation project, some participants did not follow these messages. These participants reduced their research project's scope in order to accommodate financial considerations. Other participants receiving the same socialization messages perceived the importance of creating the right research project. Participants in this latter category believed completing a bigger project would help them to become more successful in the job search process. In making decisions regarding research, participants weighed the completion of a doctoral dissertation against the socialization messages they received from their faculty. Fiscal constraints limited these projects for some participants, while playing no role for other students. Fiscal constraints also socialized participants to the importance of securing money for research (Szelenyi, 2013). As they aspired to academic roles, the exposure to the need for financial resources to meet research expenses proved important. After they complete their doctoral degree, they will likely not be able to independently fund their research expenses.

A number of participants also raised the importance of professional dress as an important socialization activity. Through attending departmental functions and observing their faculty members, many study participants felt dressing more professionally was an important investment in their future careers. During graduate education, doctoral students are not only exposed to important skills, they are also introduced to certain behaviors norms. Antony (2002) suggested that doctoral students can reject these norms and, instead, adopt the behaviors they see fit. Students in this study thought dressing more professionally would comply with the norms and expectations of people employed within the academic profession. Another consideration in the decision to invest in professional dress centered on teaching roles. Many participants in this study held teaching assistantships, which provided them with face-to-face interaction with students, many close in age to the doctoral students in this study. Doctoral students did not want to be perceived as an undergraduate student so they thought professional attire would create differentiation. As participants forged their scholarly identity, they also wanted to dress the part. Study participants had become socialized to understand the importance of dressing appropriately as they traversed their doctoral experience. They believed the financial investment made into improving their professional wardrobe would help them transition to their new scholarly identity.

In summary, socialization activities were modestly influenced by financial considerations. The clout of people that doctoral students sought advice from within their doctoral program had substantial influence over the decision-making process concerning socialization. Participants shared that they believed socialization activities played a pivotal role in the formation of their scholarly identity and future employment opportunities.

Summary of Research Questions

In the two preceding sections, I answered the two research questions governing this study. The first research question pertained to how financial considerations influence the decision-making process for doctoral students. The answer depended upon the context. As doctoral students made decisions about their graduate education, their decision-making became less consistent with rational choice theory and more influenced by key socialization agents (e.g., faculty, peers). Many participants incorporated financial considerations into their decision-making, but the relative financial support of parents and partners muted financial influences.

The second question addressed how financial considerations shaped doctoral student socialization opportunities. Many participants cited the receipt of funding as an important socializing tool. Receiving funding allowed many students to concentrate their focus on their academic studies, while also gaining exposure to more advanced doctoral students and departmental faculty, who began to show more junior doctoral students what is expected of them to become a successful academic. In building their academic portfolio, doctoral students discussed academic conferences, research, and clothing as unexpected, yet necessary, socialization factors. Participants weighed the relative financial costs against the socialization opportunity. Socialization influences overwhelmingly shaped doctoral student's decision-making process.

Implications for Doctoral Education

Study findings raise important questions concerning the role doctoral education plays in the production of the world's leading scholars, administrators and policy-makers. What became clear from this study is the continued presence of stratification among the study participants enrolled in the highly-ranked history, political science, and sociology doctoral programs at

Evergreen and Circle City. Stratification revealed itself in two ways: (1) students with disadvantaged characteristics (e.g., student of color, highly indebted from undergraduate education, first generation) found their doctoral programs more difficult to navigate than participants, who have parents with advanced degrees or financial resources to minimize financial concern and (2) the vast majority of study participants did not worry much about financial considerations during their graduate education.

Doctoral education constitutes a process of self-selection. Prospective doctoral students investigate different programs and institutions they are interested in attending. They also must take an entrance examination, the Graduate Record Examination, to even be considered for admission. While the focus of this study did not evaluate graduate school criteria, the product of this study offers a glimpse into who enrolls in prestigious graduate programs. Overall, fewer students of color, indebted students, and first-generation students enrolled in the doctoral programs associated with this study. People from lower social class backgrounds often view education as a beacon of social mobility, but the representation of students in this study conflicts with the goal of creating additional opportunities for minority students and students from lower socioeconomic backgrounds. Given how less represented these students populations are within doctoral education, a larger divide emerges between who can be a knowledge creator, particularly at well-respected doctoral programs.

The doctoral programs represented in this study offered a narrow perspective of doctoral education overall. The six doctoral programs studied carry prestige and attract academically prepared students. Many participants discussed the importance of getting into the best possible doctoral program to increase chances of securing an academic post. These participants represent a range of research interests and backgrounds, yet, the overall pool of participants lacked

socioeconomic diversity. Few participants worried about their financial positions during the lengthy time to degree completion. The study findings warrant future researchers to pursue questions about the socioeconomic composition of doctoral programs, particularly at well-regarded doctoral programs.

Implications for Theory

The present study used graduate student socialization and rational choice theories to explore the process of how doctoral students make decisions about their graduate education when these choices have financial implications. Findings from this study illustrate the complexity of financial decision-making, while also pointing out limitations of graduate student socialization and rational choice theories, respectively. Both theories offer limited perspectives on the decision-making process and should be expanded to provide a more robust understanding of doctoral education and individual decision-making.

The dominant models of undergraduate and graduate student socialization primarily focus on what happens *inside* educational contexts (Gardner, 2010; Weidman et al., 2001). While socialization theory offers important insight into happenings inside the experience, much can be gleaned from studying forces external to the educational context. Socialization theory is the prevailing way to study doctoral education; however, very little attention is given to external forces (e.g., family, financial resources) in facilitating or limiting socialization opportunities (Weidman, 1989; Weidman et al., 2001; Gardner, 2008b; Tierney & Bensimon, 1997). The Weidman et al. (2001) model nods to external forces'/parties' influence on doctoral student socialization, but their socialization model lacks clarity as to how externalities actually interact with or direct attention away from the doctoral experience.

Socialization scholars posit that doctoral education is the time period where individuals learn particular meanings of teaching, research, and service within the academy (Austin, 2002; Gardner, 2008). The ways in which a person is socialized can have profound repercussions on how a doctoral student thinks about, conducts, and disseminates research (Austin, 2002; Gardner, 2008; Lovitts, 2001). While many study participants worried less about financial considerations because their family supplied them with financial resources, some participants did make decisions about their graduate education based on their financial circumstances. Previous research has sharpened focus on the role of external forces like family, race, and gender influence on doctoral student socialization (Ellis, 2001; Gardner, 2010; Gonzalez, 2006; McCallum, 2015). Within the context of the present study, the ways in which participants received socialization messages had powerful effects on their financial decision-making, especially when it came to engaging in socialization activities. For example, the allure of the academic job market often took precedence over rational financial decisions. Some participants explained attending conferences to present their research should be completed at any financial cost because this would help the participant land a tenure-track position. They came to this conclusion based upon conversations they had with their faculty and more senior doctoral students, who impressed upon these participants that conference attendance and participation were paramount to finding a job. In addition to the direct advice participants received, they observed successful job market candidates and assumed presenting at conferences was an important milestone to achieve during their doctoral programs. In contrast, not all participants could financially afford to engage in socialization activities like attending conferences, conducting independent research, and purchasing teaching clothes. These participants worried that they might be at a disadvantage when it comes to the academic labor market. Despite these

financial barriers, many participants relied upon financial support from family or borrowed money through student loans to achieve socialization aims. Socialization theory does not acknowledge the ways in which a person's socialization may be mediated by financial circumstances. The present study demonstrates the need for exploration into the external forces impeding or facilitating doctoral student socialization.

The second implication for theory focuses on the use of rational choice theory. In this study, participant narratives highlighted several consistencies with and limitations of rational choice theory. Many doctoral students consistently placed greater importance on their long-term professional utility over short-term financial concerns (Kahneman, 2011); however, this was not the case for all participants. Students of color and first generation students disproportionately suffered from a dearth of financial resources and lack of information about doctoral education. Information constraints that participants faced and the limited information they possessed about doctoral education encouraged many doctoral students to overestimate their future return on investment. This was particularly evident among doctoral students borrowing large sums of money to fund their doctoral education. These participants estimated that they would make significantly more money after they secured academic positions, but they did not contemplate how much of their monthly income would be allocated to their debts from graduate school from their hypothetical faculty salary. Participants potentially overestimated their future returns by only focusing on their future income and not the expenses incurred during doctoral education.

Very few participants considered a variety of alternatives in their decision-making processes. Rational choice theory argues individuals will create an exhaustive list of *all* possible alternatives and select the optimal choice. However, my study findings challenge, or at the very least create tension with, whether individuals can truly meet the axioms undergirding rational

choice theory (Conlisk, 1996; Simon, 1955). Findings from this study suggest a possible application of concepts from behavioral economics as an enhancement to rational choice theory. Behavioral economics concepts might yield useful insight into further explaining decision-making processes that doctoral students engage in as they move through their doctoral education (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981).

Framing effects and time-inconsistent preferences -- key concepts of behavioral economics -- offer new scholarly understandings of decision-making processes. While traditional economic theories like rational choice theory evolved from economic assumptions (e.g., self-interest maximization, cost-benefit analyses), the concept of framing effects derives from social psychology and stems from the ways a choice is presented to an individual. Tversky and Kahnemann (1981) conducted a famous experiment, which presented individuals with the opportunity to choose between two situations about the spread of a deadly disease. In Scenario 1, the researchers asked people to choose between (1) a treatment that would save 200 of 600 people with certainty and (2) a treatment that would have a one-third chance of saving everyone and two-thirds chance of saving no one. In Scenario 2 the researchers asked people to choose between (1) a treatment where 400 of 600 people would die with certainty and (2) a treatment with a one-third chance no one would die and a two-thirds chance that everyone would die. In essence, the researchers presented study participants with a “certainty” and “risky” option. With the first group, the choices were “framed” positively with an emphasis on saving lives. For the second group, choices were “framed” negatively with an emphasis on death. Although the outcomes in both scenarios were the same, 70 percent of people in Scenario 1 chose the “certainty” option -- 200 being saved—while less than 25 percent chose the riskier option where 400 people die. In Scenario 2, less than twenty-five percent chose the “certainty” option where

400 people would die over the riskier option where a one-third chance everyone lives existed.

The ways in which people understand the choices presented to them can yield important insights into people's choice-making process. In the above scenario, decisions framed from a more positive perspective (e.g., living) were preferred over the negative outcome (e.g., death).

Applying a framing effects approach to an example from this study, we return to Melissa's narrative where she discussed choosing to attend Circle City for a history doctoral program. She discussed her decision to attend graduate school:

I think a bachelor's degree is the new high school diploma and I think an MA [Masters of Arts], JD [Juris Doctorate] or whatever is turning into the new bachelor's degree. And so I knew that I was going to go to grad school in some form, but I didn't want to fork over 60 grand to get a [master's] degree in international studies or something when I could do a PhD and be in a profession I wanted to be in and not really pay for it...taking on all that debt just seemed like a completely ridiculous financial life decision.

In this narrative, Melissa framed her decision to attend a doctoral program more positively than a decision to attend a masters program. Her primary metric for evaluating the decision centered on whether she would have to take on debt or utilize her own money to fund the degree. While the decision to attend a master's degree may prove more costly, Melissa did not spend much time considering how long a doctoral program would take, or the amount of foregone earnings she would lose.

A second behavioral economics concept -- time-inconsistent preferences -- offers new insight into rational economic behavior. Traditional economic models assume that when an individual is presented with the same options at different times, the rational actor will remain consistent and make the same choice time and time again. For example, a person offers

to set aside a day of work to attend a professional development workshop or conference, that preference should hold whether the workshop or conference is in a few days or in six months... the same people who are willing to register for a conference several months into the future may be considerably less willing to commit to giving up a day to attend the same conference next week (Castleman, Baum & Schwartz, 2015, pp. 12-13).

Essentially, preferences change over time and need to be evaluated accordingly. Traditional economic models do not account for time in the same way that behavioral economics does. If we apply time-inconsistent preferences to Lauren's discussion of student loan borrowing:

Many of us [doctoral students] think that we need to take out student loans because I actually think most of us take out far more student loans than what is actually necessary to get by. If they felt it would reduce their stress to take out some student loans that I think that's perfectly reasonable, but just not to go totally crazy with the amount of student loan taking out. Because they will accumulate and they will sneak up on you. I didn't realize that I had \$70,000 in loan debt until this year, because I wasn't paying enough attention to the notices I was getting from the school every year, in part because I was hiding them in drawers so I didn't have to pay attention to them.

In the above narrative, Lauren offers insight into how she framed her decision while also discussing her inconsistent preferences over time. She borrowed to fund parts of her life as a graduate student. Her income has not increased significantly during her graduate school enrollment, but she did not think borrowing would be the best idea moving forward. Her preferences changed over time as new information came to light.

Behavioral economics offers an extension of rational choice theory's cost-benefit model as people make decisions and accept decision-making as a not-so-straightforward process. In

particular, behavioral economics, also called “choices under uncertainty”, employs a method of economic analysis combining traditional economic principles with psychological advances as a way to explain behavior (Kahneman & Tversky, 1979; Thaler, 2015). Simply stated, behavioral economics may begin to more clearly show how individual decisions can be influenced by environmental and social influences, as well as financial considerations.

Implications for Practice

In this section, I present five implications for practice. Implications for practice are generated from the findings discussed in the preceding chapter. The suggested practice implications discussed in this chapter are: faculty advising, financial counsel, funding duration, verifiable employment data, and socialization activities.

Faculty Advising

The first implication for practice relates to faculty advising. What became clear from conversations with participants is that they primarily relied on the advice of their faculty members at their undergraduate institution before pursuing a doctorate and transferred advising responsibilities to doctoral faculty after matriculating into their doctoral programs. Since all but one participant entered their doctoral program with intentions of becoming a faculty member, participants listened closely to the advice imparted by their undergraduate faculty members. For example, many participants discussed receiving faculty encouragement for going to graduate school and making them aware of the importance of specific doctoral program characteristics

As I documented earlier in this dissertation, some participants openly discussed their financial situation with their faculty advisors because they perceived their faculty could advise them about financial issues related to their program. Some advisors supported their doctoral students by affirming their decision to take on second jobs, assisting them in locating summer

funding, or supporting their decision to move closer to their family during the latter stages of their doctoral program. A few participants received less than positive advice from their faculty members. For example, Alice was told that she should at minimum not be working off-campus. Ava asked her adviser in helping her to find funding so that she could stop taking out student loans. Her faculty member told her that since she performed poorly that he could not help her find funding. The interrelatedness between academic performance and financial stress was apparent, but not alleviated. Faculty members should work with their students to locate funding should the need arise. Helping their students succeed financially may have important ramifications for student success, socialization and retention.

Financial Counsel

A second recommendation for practice relates to providing financial counsel to doctoral students. Despite participating in the most elite form of education available, several study participants demonstrated a propensity for exercising poor financial judgment. Engaging in negative financial behaviors not only lengthens the time to becoming financially independent (Arnett, 2000), but ill-advised financial decisions during graduate school can sabotage an individual's future financial solvency and introduce adverse effects into their lives. For example, student loan debt has been shown to affect marriages, family formation, home purchases, and investments (La Mort, 2010). Findings from this study suggest that doctoral programs should involve financial aid offices in actively engaging doctoral students in discussions of finances, especially for students using graduate student loans. In the latter case, doctoral students using student loans should be required to meet with a financial aid officer to discuss how much would be owed in repayment. Doctoral programs should be discussing with their doctoral students the range of salaries recent graduates earned after they completed their doctoral degrees. With proper

support, doctoral students would be better situated to appraise their financial circumstances and be equipped with the information to make prudent financial decisions.

Funding Duration

A third recommendation for practice relates to funding duration. This study's findings suggest assistantships should span 12 months rather than a semester or academic year. While this approach would likely cost departments significant amounts of money, students on assistantship throughout the calendar year will likely remain better connected to their doctoral programs and may even shorten time to completion. Extending assistantships beyond a semester or academic year would also benefit faculty. Doctoral students serving as teaching or research assistants take several weeks to develop a routine and relationship with faculty members. Just as doctoral students develop a routine over the first couple weeks of the semester, lacking a firm assistantship commitment beyond the semester might divert the student's attention to identifying where they will work the following semester or wonder how they will pay their bills during the summer? Previous workplace studies have cited financial stress as a detractor from employee productivity (PricewaterhouseCoopers, 2014). Knowing that you will receive a stipend *every* month would allow the doctoral student to concentrate on their work. Working with the same faculty member throughout the year would allow doctoral students to understand the behavior of the faculty member they are supporting by anticipating requests. Departments and their students would benefit from lengthening their assistantship assignments.

Profiles of Successful Doctoral Students

A fourth recommendation relates to developing an accurate profile of successful doctoral students. Findings from this study suggest doctoral students were influenced by perceptions of the academic job market, the lore of the successful doctoral student, and observing advanced

doctoral students. Participants often framed their decisions from the perspective of being competitive on the academic job market. As they made decisions concerning participation in socialization activities, many participants cited its importance for the job market. Participants created this specific narrative through the lore of a successful doctoral student. They often believed that participating in socialization activities mirrored the behaviors of successful doctoral students. Participants relied on the lore of the prototypical candidate without really knowing whether these activities helped them find employment. At minimum, doctoral programs should keep student-level records (e.g., checklists) of the socialization activities their students engaged in during each academic year. Building this type of data repository would allow current students to consult these records and discern for themselves whether those activities made a difference during the job market search.

Socialization Activities

Findings from this study indicated socialization activities, such as academic conference participation and independent research investments, were affected by financial considerations.

Academic conference participation. A number of professional association's annual meetings offer discounted rates for doctoral students. Like Gardner and Barnes (2007)'s study examining graduate student involvement, this study's findings point to the importance of academic conferences for professional success and career preparation. Nearly all participants acknowledged the costliness of academic conferences. In some cases, the cost to participate proved prohibitive because numerous items, such as airfare, conference registration, and meals, need to be factored into the total cost of conference going. I recommend that professional associations continue to offer discounted registration rates and try to find additional ways to

lower participants costs for graduate students as a way to offset larger conference-going expenditures and encourage participation.

Individual research expenses. Developing research skill and expertise are at the core of doctoral education (Austin, 2002; Gardner, 2008). Through coursework and faculty research projects, many students become exposed to research fundamentals. However, an area where many doctoral students do not receive much guidance relates to how expensive research can be. Many participants mentioned that they did not receive instruction regarding this expense until it came time to actually conduct their dissertation study. As Lauren pointed out, “No one said one word” about the expenses related to research. Furthermore, Geoffrey elected to use secondary data because he did not want to incur the expense associated with primary data collection. During doctoral education, participants should be introduced to the costs of conducting research prior to their dissertation. Doing so would allow doctoral students to have a better appraisal of how much their research will cost and enable them to modify research plans.

Social Class Issues

A sixth recommendation for practice relates to having a greater awareness of social class differences within doctoral programs. Social class issues are often studied within undergraduate contexts, but have received little attention at the graduate level. Issues stemming from socioeconomic disparities are important to understanding the experiences of graduate students, particularly those students, who have parents with less formal education. Like social class issues emerging at the undergraduate level, graduate students from lower socioeconomic backgrounds may lack access to resources and the knowledge of how to navigate these new environments. In turn, students from a lower social class may further disadvantage themselves as the attempt to use graduate education as a mechanism for social mobility (Haveman & Smeeding, 2006;

Walpole, 2003). For example, doctoral students turning to student loans may lessen their future purchasing power by having to juggle student loan payments against their other monthly expenses. Some doctoral students in this study from lower class backgrounds decided that they needed to borrow more money through student lending to achieve the same outcomes as their more affluent peers.

Another example involves seeking out mentorship during doctoral education. Doctoral education follows an apprenticeship model where doctoral students interact with peers and faculty members as they establish their scholarly identity. Doctoral students from lower social class backgrounds may not recognize that seeking out mentors is a process often driven by the doctoral student and may miss out on important relationships. As more and more students from lower social class backgrounds enter graduate education, greater attention to this student population is necessary. In particular, doctoral degree granting institutions and doctoral programs should be working together to create structured opportunities for students needing support during graduate education that they might be missing from having parents who lack discretionary resources and/or advanced degrees.

Unfunded study participants remarked that they had less of a connection to their peers and faculty than the funded students. Given the day-to-day interaction opportunities for funded students, unfunded students did not receive the same opportunities. Unfunded participants like their funded counterparts aspired towards the academic profession, yet, they did not have similar types of opportunities. Doctoral programs would be better served to connect their unfunded students.

Implications for Policy

In this section, I offer recommendations aimed at improving institutional and federal policy concerning graduate students' financial considerations. Graduate education is designed to produce the world's leading scholars, administrators and policy-makers (Walker et al., 2008). A clear need for a well-educated populace is vital to supporting the recovering economy and advancing knowledge in general. Findings from this study demonstrated that individual financial considerations shape educational trajectories of graduate students. Universities and the federal government should develop policies enabling individuals to successfully participate in graduate education without mortgaging their future financial success.

Institutional Policy Recommendations

Institutional policy recommendations are directed towards individual doctoral degree granting departments. First, doctoral admissions committees need to take a closer look at the demographic composition of their doctoral programs. Unlike undergraduate admissions where university employees (e.g. admission counselors) make admissions decisions, disciplinary departments convene a doctoral admissions committee charged with recruiting and admitting prospective doctoral students to join their program. Posselt (2014, 2015, 2016) conducted an ethnographic case study of the "prevailing theory, epistemology, methodology, and practical priorities shap[ing] the evaluation criteria and decision-making processes that faculty use" in doctoral program admissions (2015, p.808). The present study's findings dovetail consistently with Posselt's study in her assertion that doctoral admissions committees "redefine and reproduce the boundaries and futures of the field" (2015, p.827). In essence, study participants embodied the "reproduction" Posselt detailed in this study. Many study participants were well prepared academically having received acceptances to multiple doctoral programs and offered

funding packages. Funding offers signal the doctoral program's interest in recruiting prospective students. A student receiving multiple admissions offers and funding packages often came from households where family members at minimum had completed a bachelor's degree. In this study, students not receiving funding offers tended to be from backgrounds (e.g., students of color, lower socioeconomic status) less represented in doctoral education. Given doctoral education's importance in advancing knowledge production within society, institutions should work to build doctoral student cohorts comprised of both racial and ethnic diversity, as well as socioeconomic diversity.

Second, funding packages require more transparency not only in the way they are awarded, but also, more clarification is warranted about funding duration and guaranteed summer funding. What became clear during participant interviews was that doctoral programs offered no more than five-year funding packages. While this length of time may appear reasonable, participants discussed not knowing until they entered their programs that the average time-to-degree across all six departments was approximately seven years. Similarly, many participants mentioned scrambling to find summer funding. When they accepted their offer of admission and the financial remuneration associated with acceptance, many assumed funding was offered year-round. Instead, most contracts lasted only for the academic year and students found they would need to find their own source of summer funding. Departments should make it a point to advertise this information, even if it means losing prospective students. Doctoral students should be fully aware of their financial circumstances so they can make rational decisions regarding their doctoral education.

Federal Policy Recommendations

Previous studies have identified undergraduate student loan debt as a deterrent to enrolling in graduate education (Kim & Eyermann, 2006; Malcom & Dowd, 2012; Millett, 2003). Findings from this study have three primary implications for federal financial aid policy. First, only one-third of study participants possessed undergraduate debt when entering their doctoral programs. According to the national average, 69 percent of undergraduate degree holders graduated with student loan debt (TICAS, 2015). This percentage translated into a number exceeding 37 million Americans possessing undergraduate student loan debt. The small percentage of students with undergraduate student loan debt enrolled in graduate education reflects a more affluent population enrolled in prestigious doctoral programs. Although the option of attending graduate school is available for all bachelor's degree holders, undergraduate debt has been found to deter graduate school enrollment as an option (Malcom & Dowd, 2012; Millett, 2003; Nettles & Millett, 2006). More affluent students lacking indebtedness may find graduate school a more attractive option since this student population is not accruing any interest on their student loans or have financial worry about repayment in the future. This begs the question whether graduate education is a public good? Unlike undergraduate education where state government's invest directly in institutions, graduate education lacks this type of direct investment. Federal policymakers need to closely examine the composition of students in graduate education, not just on the merits of racial and ethnic diversity, but also socioeconomic diversity. If society expects doctoral education to produce the world's leaders, policymakers, faculty, and administrators, policymakers need to ask the question: how do we reduce the social stratification present in graduate education? Creating federal policies supporting doctoral

students on characteristics such as socioeconomic status may support the enrollment of less wealthy students.

Second, some debt holders decided to pursue graduate education in spite of their financial circumstances. During interviews, many borrowing participants did not consider how much of their future monthly salary would be directed towards their student loan balances. Indebted students were more concerned with completing the degree than thinking about future debt burdens. Although the federal government offers financial relief to full-time graduate students with subsidized undergraduate student loan debt burdens, some undergraduate borrowers also borrowed during their graduate education deepening the total amount they would have to repay in the future. Study participants offered myriad reasons why they borrowed during their graduate education. Most often borrowing was related to emergency expenses (e.g., car accidents, healthcare) and lack of departmental financial support (e.g., assistantship, fellowship). Several participants discussed having particular concerns about how they were going to make ends meet, but the ease of graduate student borrowing allowed them to easily take out the amount needed to sustain their lifestyle. Federal policy should ensure people borrowing to pay for doctoral degrees have a greater understanding of repayment scenarios. Since the US government can show consolidated federal student loan debt amounts across undergraduate and graduate school, federal financial policy can show borrowing students what they owe compared to the average salary for someone in a particular discipline. Several participants in this study did not realize how much they had borrowed, nor had they contemplated how much of their salaries would be diverted towards student loan bills. This finding reveals the importance of these financial disclosures during the borrowing process. Having real information as they make these important decisions might allow participants to make better and more rational financial decisions.

Third, study findings connect with larger discussions about graduate financial aid policy. Graduate students borrowed more than 35 billion dollars in student loans during academic year 2011-12 (College Board Advocacy and Policy Center, 2012). The 35 billion dollars represents a doubling of borrowed dollars occurring over the last ten years. Only nine study participants borrowed during their graduate education. While less than 25 percent of student participants borrowed during their graduate education, federal policymakers should look more closely at the demographics not only of *who* utilizes graduate student lending, but also the characteristics of the doctoral programs and institutions of the borrowers. Having a greater understanding of these characteristics should help federal policymakers craft policies designed to help graduate students succeed to, through, and beyond their doctoral programs.

Implications for Future Research

The findings and research design of this study provide guidance for future scholarly investigations into the financial decision-making of doctoral students. This study offers at least 9 future research directions. These recommendations are placed into three student categories: (1) currently enrolled in doctoral education, (2) before doctoral education, and (3) after doctoral education.

Currently Enrolled in Doctoral Education

Similar programs at different institutional types. As noted in the study limitations, the present study was conducted at two institutions classified by the Carnegie Classification system as “very high” research institutions (RU/VH). While a large percentage of doctoral degrees are awarded at these institutional types, far less scholarship has investigated “high research” (RU/H) or “doctoral research universities” (DRU). Doctoral granting institutions in these different Carnegie classification categories may offer different types of financial packages and attract

differing student types. Future research should explore these institutional types to offer a more nuanced understanding of doctoral education.

Participants with different career aspirations. Nearly all participants in this study entered their doctoral programs with intentions of pursuing academic posts after their doctoral program concluded, which may skew the findings from this particular study. Participants actively on the academic job market invested significantly into socialization activities that they hoped would yield a future job offer. Future research should investigate if entering career aspirations influence the financial behaviors and the ways in which people make financially-implicated decisions around their graduate education.

Different doctoral programs at similar institutional types. Within the present study, all doctoral programs were highly ranked in their respective disciplines. According to *US News and World Report*, history, political science and sociology at Evergreen and Circle City were ranked in the Top 30 or higher in their respective disciplines. These social science disciplines may differ from less regarded programs at these institutional types. Future research should explore how financial considerations in different doctoral degree programs at Circle City and Evergreen may produce different results.

Before Doctoral Education

Undergraduate debt. Studies examining undergraduate student loan debt on graduate school have found mixed results. In some cases, undergraduate student loan debt has no effect or a positive influence on enrolling in graduate education because students will not have to repay their undergraduate debt while maintaining full-time enrollment in graduate education. For other students, undergraduate debt hampers an individual's decision to pursue graduate education. Approximately one-third of study participants held undergraduate debt when they entered their

doctoral programs. Given that so few participants had undergraduate debt, future research should qualitatively investigate the effects of accumulated undergraduate debt on how people make decisions to enter the labor market or apply to graduate school.

Graduate school aspiration and choice. Future research should empirically examine graduate school aspiration and graduate school choice using longitudinal and national datasets. A longitudinal approach studying graduate school aspiration may allow researchers to better understand the process through which individuals make the decision between enrolling in graduate education or entering the labor market. Within the last few years, a few scholars have started to examine what contributes to or detracts from graduate school aspiration (Kilgo & Pascarella, 2015; English & Umbach, 2016). These studies have used large databases (Wabash National Liberal Arts) and national (Baccalaureate and Beyond) data sets to examine relationships among variables and graduate school aspiration. Similarly, national data sets provide an opportunity to examine myriad factors inhibiting or facilitating graduate school aspiration. A recent study by English and Umbach (2016) utilized the nationally representative data set Baccalaureate and Beyond 2000/01 data set to examine graduate school aspiration and choice. While the inferences drawn from this study are useful for refining theoretical understandings, the environmental external to higher education has undergone significant changes since the data were collected. In particular, more students are completing their undergraduate degrees with more graduate student debt, while facing a competitive labor market. More recent data sets should be utilized to better understand how these factors contribute to graduate school choice and aspiration.

After Doctoral Education

Financial considerations' influence on early faculty careers. This study explored how doctoral students make decisions about their graduate education when these decisions have financial implications. Many study participants entered their doctoral programs with the intention of trying to find employment as a tenure-track faculty member. The consequences of decisions these participants made about their graduate education may not be readily apparent or may have far-reaching impact on participants' career beyond the time of the study. Future research should include doctoral education dropouts and graduates a few years post-PhD to understand how their financial decisions shaped career opportunities.

Effects of graduate school debt on career outcomes. A growing number of studies have examined the effects of undergraduate debt on graduate school aspiration and enrollment (Hearn, 1987; Heller, 2001; Kim, 2007; Malcom & Dowd, 2012). Thus far, no studies have examined the effects of graduate school debt on doctoral education outcomes. Future research should examine the effects of graduate student borrowing on specific outcomes, such as finding full-time tenure-eligible employment versus contingent work, homeownership, marriage, and other contributors to financial independence. Very little is known about the effects of debt from doctoral programs on life outcomes post-doctoral program. Future research should investigate these important issues.

Effects of socialization activities. Future research should understand the impact of the decisions doctoral students made during their graduate education and the decisions' relationship to post-doctoral program success. The following types of questions should be asked: Did attending more conferences help a student land a faculty job? Did not taking advantage of a socialization opportunity hinder specific outcomes (e.g., graduation, time to completion,

productivity, research collaborations)? How do social science students think about alternative academic careers (e.g., university administrators, think tank positions, policy roles) in light of how much money they might not make in the future? These types of questions should be posed in future studies to clarify the effect these socialization activities have on career outcomes.

Summary

In this chapter, I first presented the study's findings as a response to the study's research questions. I discussed the study's findings within the context of extant literature. Second, I used the study's findings to generate important implications for theory, practice, policy and future research. Implications stemming from this scholarship provide reasonable guidance for policymakers, doctoral programs, currently enrolled doctoral students, and prospective doctoral students to consider as they choose to enter a doctoral program.

Doctoral students in this study accounted for financial considerations in decisions about their education. In particular, participants invoked financial considerations in decisions concerning going to graduate school, selecting a doctoral program, financing doctoral education, participating in professional activities and incorporating family. This study helped to clarify doctoral student decision-making and its influence on participation in socialization activities.

APPENDICES

APPENDIX A: IRB APPROVAL LETTER

Dated: 10/8/2015

Dear Investigator(s),

Your new application has been approved.

Title: Exploring How Financial Considerations Shape Doctoral Student Socialization

IRB Number: x15-1032e; i049596

You may view and print the approval letter and any corresponding documents from the on-line system by clicking on the IRB number. Select record action for the specific application number (i.e., the “i” or “r” number), select view approval documents and click “Go!” There will be a hyperlink for each individual approval document. Please note, the primary investigator is responsible for ensuring that all individuals involved with this protocol have successfully completed IRB human subject training prior to any contact with human subjects or their identifiable data. Such training must remain valid during the duration of the research project.

Please do not respond to this e-mail. If you have questions or concerns regarding your IRB protocol, please contact the IRB at irb@msu.edu.

Good luck with your research.

IRB Staff

APPENDIX B: INFORMED CONSENT FOR INTERVIEW

IRB # x15-1032e; i049596

This is a consent form to participate in an interview that is part of the dissertation study focusing on financial considerations influence on doctoral student socialization. Your participation will contribute to our understanding of how financial considerations shape doctoral socialization.

This study is conducted under the direct supervision of Dr. Roger Baldwin, a full professor at Michigan State University.

Your participation is completely voluntary. However, if you are under the age of 18, you cannot be interviewed. You may choose not to participate at all, or to answer some questions and not others.

Your personal identity will be kept confidential. You will be asked you for a pseudonym to use for the study. The results of the study may be published or presented at professional meetings, but the identities of all research participants will remain confidential through the use of pseudonyms.

Your responses or decision whether or not to participate in this study will have no penalty of any kind and will not have an effect on your status as a student. Your confidentiality will be protected to the maximum extent allowable by law.

Your participation is important to better help prospective doctoral students, departmental administrators and institutional leaders about the importance of financial support during doctoral education. Participation will include one interview at a time and location of your choice. Any information you provide will be anonymous. For participating in this study, you will receive a \$20 Amazon Giftcard after the interview.

If you have any questions about this study, please contact Dr. Roger Baldwin, Full Professor of Educational Administration, 417 Erickson Hall, Michigan State University, by phone: (517) 355-6452, or email: rbaldwin@msu.edu. If you have any questions or concerns about your role and rights as a research participant, you would like to obtain more information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University Human Research Protection Programs at (517) 355-2180, fax: (517) 432-4503, or email: irb@msu.edu or regular mail at 202 Olds Hall, Michigan State University, East Lansing MI 48824.

You indicate your consent and voluntarily agreement to be in this research study by participating in the interview.

Thank you for participating!

APPENDIX C: RECRUITMENT EMAIL

Dear [STUDENT FIRST NAME]

My name is Dave Nguyen and I am currently a doctoral candidate in the Higher, Adult & Lifelong Education program at Michigan State. I would like to invite you to participate in an interview to understand how financial considerations have shaped your doctoral experience.

Your participation is important to better help prospective doctoral students, departmental administrators and institutional leaders about the importance of financial support during doctoral education. Participation will include one interview at a time and location of your choice. Any information you provide will be anonymous. For participating in this study, you will receive a \$20 Amazon Giftcard.

If you are interested in participating in this study, please follow the link below to complete a short information survey and to provide preferences about how and when to contact you. Please forward this email to anyone you think might be interested in this study.

FOLLOW THIS LINK TO THE SURVEY:

Take the Survey

Or copy and paste the URL below into your internet browser:

[INSERT LINK]

Follow the link to opt out of future emails:

Click here to unsubscribe

If you have any questions about the survey, please direct all inquiries to David Nguyen (nguye327@msu.edu).

Thank you for your time,

Dave Nguyen

Doctoral Candidate of Higher, Adult, & Lifelong Education

Michigan State University

APPENDIX D: DEMOGRAPHIC SURVEY

Personal Information

First Name

Last Name

Contact email address

Phone Number

What is your preferred way for the researcher to contact you about participating in the study?

- ☐ Email
- ☐ Text
- ☐ Phone call

Please select the Doctoral Degree Program(s) You Are Enrolled In?

- ☐ History
- ☐ Political Science
- ☐ Sociology

Do you identify as a

- ☐ Man
- ☐ Woman
- ☐ Gender Nonconforming/Genderqueer
- ☐ Do not wish to disclose

Are you the first person in your immediate family to go to college?

- ☐ Yes
- ☐ No

When did you enter your doctoral program?

- ☐ Fall 2015
- ☐ Fall 2014
- ☐ Fall 2013
- ☐ Fall 2012
- ☐ Fall 2011
- ☐ Fall 2010
- ☐ Fall 2009
- ☐ Other Please Specify (___)

How does [INSTITUTION] classify you as a student? Domestic includes US Citizen, permanent resident, resident alien status?

- ☐ Domestic, In-State Resident
- ☐ Domestic, Out-State Resident
- ☐ International Student

Which of the following best describes your Racial/Ethnic background? (Please select all that apply)

- ☐ White
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Latino or Hispanic
- ☐ Hawaiian or Pacific Islander
- ☐ Native American or American Indian
- ☐ Do not wish to disclose

How would you characterize your relationship status

- ☐ Never Married
- ☐ Living in a marriage-like relationship
- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Other (____)

Please identify any dependents, if any

- ☐ No additional dependents
- ☐ Spouse/Partner
- ☐ Child(ren)
- ☐ Other Family Members

Primary Source of Funding (Select one)

- ☐ Research Assistantship
- ☐ Teaching Assistantship
- ☐ Fellowship / Scholarship
- ☐ Employer Reimbursement / Assistance
- ☐ Student Loans
- ☐ Personal Savings
- ☐ Spouse's, partner's, or family's earnings or savings
- ☐ Off-campus Job

Secondary Sources of Funding (Please check all that apply)

- ☐ Research Assistantship
- ☐ Teaching Assistantship
- ☐ Fellowship / Scholarship
- ☐ Employer Reimbursement / Assistance
- ☐ Student Loans
- ☐ Personal Savings
- ☐ Spouse's, partner's, or family's earnings or savings
- ☐ Off-campus Job

When you entered your doctoral program, did you have a student loan balance remaining from your undergraduate education?

- ☐ Yes
- ☐ No

If yes, approximately how large was your loan balance when you entered your doctoral program?

- ☐ None
- ☐ \$1 to \$10,000
- ☐ \$10,001 to - \$20,000
- ☐ \$20,001 to - \$30,000
- ☐ \$30,001 to - \$40,000
- ☐ \$40,001 to- \$50,000
- ☐ \$50,001 -to \$60,000
- ☐ \$60,001 -to \$70,000
- ☐ \$70,001 or more, please- specify amount

Have you borrowed to pay for your doctoral education?

- Yes
- No

If yes, approximately how much have you borrowed during your doctoral program?

- ☐ None
- ☐ \$1 to \$10,000
- ☐ \$10,001 to - \$20,000
- ☐ \$20,001 to - \$30,000
- ☐ \$30,001 to - \$40,000
- ☐ \$40,001 to- \$50,000
- ☐ \$50,001 -to \$60,000
- ☐ \$60,001 -to \$70,000
- ☐ \$70,001 or more, please- specify amount

How would you like to be interviewed for this study?

- ☐ Face to face
- ☐ Over the Phone
- ☐ Via Skype / Google Hangout

APPENDIX E: INTEVIEW PROTOCOL

1. Why did you decide to pursue a doctoral degree? **[PRQ1]**
2. How did you choose [INSTITUTION] to pursue a doctoral degree in [DISCIPLINE]? **[PRQ1]**
 - a. When deciding to pursue a doctoral degree at [INSTITUTION], what factors were important to you as you made your decision?
 - b. How important were financial factors in your decision?
3. As you were growing up, what messages did you receive from your family about money? **[PRQ1]**
 - a. Can you provide a few examples of how these messages about money influenced any significant decisions you've made or put off during your doctoral program?
4. What messages have you received from your family about debt in general? **[PRQ1]**
 - a. What messages have you received from your family about debt for educational purposes?
 - b. When you finished your undergraduate degree, did you have any student loan or credit card debt?
[If yes] How, if at all, has this debt influenced any subsequent decisions you made?
[If no] How has not having any debt influenced any decisions you made after your undergraduate degree?
5. What rules or guidelines do you use to make decisions (that involve) about money? Can you tell me about a time during your doctoral education where you applied these rules? **[PRQ1, PRQ2]**
6. Can you tell me a little bit about how you pay for your doctoral education and life as a doctoral student? **[PRQ1]**
 - a. How did you find [SOURCE of FUNDING]? What options did you weigh in making that decision?
 - b. Has your funding changed since you entered your program?
 - c. Have you had to seek out or have you taken on any additional jobs in addition to your primary source of funding?
 - d. On the survey form you indicated that you DID / DID not borrow, why do you borrow? ==what influenced this decision?
 - e. Whom did you consult in thinking about how to finance your degree?
 - f. What question(s), if any, about monetary aspects of doctoral education do you wish you asked?
7. Have there been any times where your financial circumstances influenced any of your learning opportunities as a doctoral student? **[PRQ1, PRQ2]**
 - a. If yes, can you tell me about some of these times and how you made these decisions?

8. How would you describe your social life as a doctoral student? For instance, how often do you socialize outside of your home? **[PRQ2]**

- a. [If not explicit] Who do you hang out with? People from your program?
- b. Have you had to forego socializing with peers or faculty due to financial circumstances? For example, you may not go out for coffee or drinks after class because of your concerns over your financial situation.

9. Please describe your relationship with your department faculty members? **[PRQ1, PRQ2]**

- a. How, if at all, do you think your financial circumstances influence your interactions with departmental faculty?
- b. Have you been receiving the mentoring you need to be successful as a student?
- c. Do you ever discuss any of the financial challenges

10. How often do you participate in departmental events? **[PRQ1, PRQ2]**

- a. How do you decide whether to participate in departmental events?
- b. How would you describe your relationship with your department as a whole? Here I'm thinking about department in the broad sense of positive or negative feelings.
- c. Is the way you view this relationship affected by funding?
- d. What messages does your department convey about financing of your degree?

11. How, if at all, has your financial situation influenced your academic experiences as a doctoral student (e.g., class preparation, participation in projects or work products)? If yes, please provide some examples. **[SQ1]**

12. How do you prioritize how you spend money on different aspects of your life (e.g., personal, professional, social) as a doctoral student? Why do you think that way? **[PRQ1, PRQ2]**

13. Now that you are a closer to earning your doctoral degree, what are your career goals? **[PRQ1, PRQ2]**

- a. Since you've entered your program have changed, what experiences or influences account for those changes?
- b. How prepared do you feel to assume that first job after your PhD?

14. What advice would you give to future doctoral students about financing life as a doctoral student? Why do you say that? **[PRQ1, PRQ2]**

15. Have you been worried about making ends meet during your time as a graduate student? If yes, can you tell me about a time?

16. Aside from the questions I've asked you about today, are there other ways your financial situation has influenced aspects of your doctoral experience and life as a doctoral student?

[PRQ1, PRQ2]

17. Are there any things that we have not spoken about that you think would be relevant to this study?

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