

“IF IT WERE EASY, EVERYONE WOULD HAVE A PH.D.”

DOCTORAL STUDENT SUCCESS: SOCIALIZATION AND
DISCIPLINARY PERSPECTIVES

By

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A dissertation/thesis submitted in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

WASHINGTON STATE UNIVERSITY
Department of Educational Leadership and Counseling Psychology

MAY 2005

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation/thesis of
SUSAN KRISTINA GARDNER find it satisfactory and recommend that it be accepted.

Chair

ACKNOWLEDGEMENT

My deepest and sincerest gratitude to all those individuals who have assisted and supported me throughout this process. First and foremost, to my committee members: Drs. Phyllis Erdman, Chris Golde, and Michael Hayes, and most especially to Dr. Kelly Ward, who has given me endless patience, support, and guidance. I am extremely fortunate to have had someone like you in my graduate experience and in my life. I am inspired daily by your abilities, your talents, and your knowledge; if I become even a little of what you are, I will have gone far. You are truly my mentor and my friend. Thank you for everything.

Secondly, many thanks to my wonderful friends and colleagues who have been with me every step of the way. To Tracy Banaszynski, who survived and lived to tell me about it, to Nancy Schmidt, who has experienced it along with me; and to Lisa Laughter, Heidi Stanton, and Jennifer Cowgill who have also given me endless support and advice. I thank each of you for your support, advice, and friendship.

I must also thank each of the graduate students who participated in this study. I appreciate your time, your willingness to share your experience with me, and your support of my efforts. Equally, I thank the administrators at both of the universities studied who allowed me the opportunity to investigate the topic and the access to the information.

Finally, I give my deepest appreciate and gratitude to my mother, Patricia Gardner. You are my hero, my biggest fan, my best friend, and my inspiration. Thank you for all the support, love, and guidance you have given and your endless belief in me.

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Abstract

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May 2005

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Socialization is an integral part of doctoral education, with successful socialization serving as a requisite for persistence. The purpose of this qualitative study is to examine the socialization processes of doctoral students in the disciplines of chemistry and history at two research-extensive institutions in the United States. A combination of interviews, document analysis, and informal observations assist in better understanding the contexts and cultures in which socialization takes place and the processes that help or hinder the student toward degree success.

A total of forty doctoral students at three programmatic phases were interviewed for the study. This includes students from the period from application to the initial days in the program, or Phase I, the time encompassing both coursework and candidacy examinations, or Phase II, and the research and dissertation phase of the program, or Phase III. Findings were distinctive by programmatic phase, discipline, and institutional context, with overall findings pointing to the need for faculty and peer support for doctoral students in order to ensure retention in their programs. Recommendations for policy, practice, and further research are also presented.

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CHAPTER I: INTRODUCTION

Todd is preparing to graduate from his doctoral program in history. Enthusiastic and affable, Todd has a ready wit and positive outlook that he shares while recounting his many experiences in graduate school. He tells of a bumper sticker he saw the other day that read, “Graduate School: It’s Not Just a Job, It’s an Indenture,” and he laughs. Todd’s entry into his program was initially rocky and at times filled with confusion and ambiguity, yet he feels that he overall has had a very positive experience. He believes that his rigorous undergraduate experience and his relationships with his advisor and peers were what best prepared him for his experience and assisted in making it ultimately successful. Nevertheless, Todd realizes that graduate school has been tough on him at times, and he sees how difficult it can be for new students; but he shrugs and tells me, “If graduate school was easy, everybody would have a Ph.D.”

Liam, a doctoral student in chemistry, also shared with me many of the elements that made his experience in his program successful. As I watched Liam being hooded at the recent commencement ceremony, I recalled his comments about his advisor, his insecurities about successfully completing his dissertation, and the ever-present issue of balancing his time with his responsibilities. Liam repeatedly told me about the lack of clarity in his program and how this ambiguity often left him and his fellow students confused and incorrectly proceeding in their programs. I realized as I watched him walk across the stage that he made it through; he succeeded. Even with all the confusion he encountered in his program, he told me at the end of our interview: “Overall, I have had a good experience here,” and I believe that he did.

Then there is Jenny, another doctoral student in chemistry. Now completing her fourth year in her program, Jenny has been through quite a lot in graduate school. She looks at me,

sighs, and says, “I just want to graduate.” I’m amazed Jenny has made it as far as she has. At every turning point in her program, from beginning to end, Jenny has experienced stress, conflict, and a lack of support. After being accepted into the chemistry program, Jenny was without funding or assistance the summer before classes began which resulted in her becoming, essentially homeless and living in the basement of what she refers to as a crack house. Once her program began, her first encounters with peers were extremely negative and left her without support from either her peers or the professor for whom she came to work. She tells me, “It was just miserable.” Jenny felt disappointed by her coursework, isolated from her peers and other faculty members, and alienated by the staff in the department. Jenny’s only solace in her program has been her relationship with her husband and the determination she has to finish the program. Jenny, despite many odds, has persevered. She tells me, “I’m going to get a Ph.D., come hell or high water. It will happen, but I really don’t think I can stand this much longer.”

Jenny is determined that she will finish, and I do not doubt that she will do so. Sarah, however, will not. A 25-year-old, doctoral student in the discipline of history, Sarah is now beginning her third year in the program, but plans to leave at the end of the semester. Unlike Jenny’s at times almost humorous accounting of her negative experiences, Sarah seems bewildered by the repeatedly negative experiences she has encountered in graduate school thus far. Despite the immense amount of preparation she feels she did in order to choose the right institution and the right advisor, her dissatisfaction with her program and her experience has been a shock. She says to me, blankly, “I thought I did everything right coming to this school and I was still surprised.” While neither Jenny nor Sarah have experienced positive relationships with peers or faculty, Sarah is unwilling to continue in her program without them. These relationships, for Sarah, combine to form an investment that others in the program have in her.

She remarks, “Honestly I feel at this point that the institution doesn’t have an investment in me and I don’t know why they want me to stay. And if they don’t want me to stay, then I can go get my doctorate somewhere else.” She is disappointed, unhappy, and perplexed by her experiences – experiences that resulted in her “falling to pieces,” and seeking professional help to get through it.

While Sarah and Jenny were not the only doctoral students with whom I spoke who had such negative experiences, there were also many others like Todd and Liam who talked glowingly of their programs, relationships, and experiences. I began to wonder what makes the difference for these students? What experiences did Sarah and Jenny have that resulted in their negative experiences, versus the other students like Todd and Liam? What made Jenny decide to leave her program, but influenced Sarah to stay? And, equally, why was it, in these situations in particular, that the women were less satisfied with their experiences than the men?

Many of the students with whom I spoke talked repeatedly of the concerns they had beginning their programs, the expectations they had for their graduate education, and the relationships they formed throughout their experiences. Whether positive, negative, or somewhere in between, the doctoral students in this study, and doctoral students in general, encounter many new experiences, relationships, and processes that ultimately influence their graduate programs and their success in them. For students like Liam and Todd, these experiences and processes resulted in a positive graduate school experience, but for Jenny and Sarah, the culmination of many negative encounters led to an overall negative experience, which in Sarah’s case, have resulted in her departure. Sarah is not alone. The number of doctoral students who leave their programs is alarming, with projections regarding attrition rates in doctoral education ranging from 40 to 70 percent (Berelson, 1960; Bowen & Rudenstine, 1992;

Noble, 1994; Tinto, 1993). In disciplines such as those in the humanities, attrition rates like these translate into only one of every three entering students actually earning the doctorate (Smallwood, 2004).

Called a “scandal” and “the central issue in doctoral education in the United States today” (Smallwood, 2004), doctoral student attrition, or the rates of students who do not complete their degree programs, has become the focus of considerable research (Baird, 1993; Berelson, 1960; Council of Graduate Schools, 1990; Golde, 1998; Lovitts, 2001). Why does doctoral student attrition matter? In financial costs, doctoral student attrition is extremely expensive for institutions. In its study of doctoral student attrition, the University of Notre Dame found that it would save \$1-million a year in stipends alone if attrition went down by 10 percent (Smallwood, 2004). In costs to the individual who leaves, the expense can be immeasurable. Lovitts (2001) states, “The most important reason to be concerned about graduate student attrition is that it can ruin individuals’ lives” (p. 6). With such devastating effects, a greater understanding of the reasons for and the influences upon doctoral student attrition, and its reverse, doctoral student retention, is needed.

Attempts to better understand and subsequently improve doctoral education are underway through efforts such as the Carnegie Initiative on the Doctorate, directed by the Carnegie Foundation for the Advancement of Teaching. Graduate education and the doctoral process have also been subject to a plethora of research over the past two decades. Much of this research has focused particularly on doctoral student attrition and retention, including the related topics of the graduate student experience and socialization. While numerous studies have attempted to understand issues related to graduate student attrition and retention, including those of Tinto (1993), Baird (1993), and Lovitts (2001), no known studies have attempted to address the

experiences and socialization processes of doctoral education within specific disciplinary contexts as a possible influence upon student success and achievement.

Antony (2002) describes socialization as “a process of active social engagement in which one individual directly influences the perceptions, behavior, and skill acquisition of another individual” (p. 361). Inherent within the definition of socialization are the processes and people by which the individual is being influenced. Sherlock and Morris (1967) define socialization processes primarily within the context of professional socialization, wherein the student learns the roles necessary for a profession through an institutionalized sequence of processes. These processes are generally acquired through the academic policies, procedures, and traditions of the institution and tend to reflect the norms and expectations of behavior for that given profession. The processes of socialization are also discussed at length by Van Maanen (1978). He describes socialization processes as “the manner in which the experiences of people learning the ropes of a new organizational position, status, or role are structured for them by others within the organization” (p. 19).

This study focuses on these processes of socialization within the context of higher education. Socialization in higher education is described by Tierney and Bensimon (1996) as “a ritualized process that involves the transmission of the organizational culture” (p.36). Golde (1998) describes the process of graduate school socialization as one “in which a newcomer is made a member of a community – in the case of graduate students, the community of an academic department in a particular discipline” (p. 56). Cumulatively, the process of socialization in graduate school is of utmost importance to the doctoral student as he or she learns what is expected and what is needed to succeed; in fact, Turner and Thompson (1993) believe socialization to be integral to the success of the graduate student and his or her

persistence. In essence, to be successfully socialized into the degree program translates into persistence on the part of the graduate student, whereas a lack of proper socialization may signify attrition. Socialization in academe can range from an understanding of the political decision-making process within the department to the comprehension of the role and status of each of the key players within its structure.

Much of the research on the graduate student socialization experience, however, is theoretical in nature, deriving very little from the actual lived experiences of the doctoral students and the specific contexts in which they study. Moreover, the research on graduate student socialization is generally portrayed at a macro level, overlooking the specific disciplinary differences and cultures that affect the student experience. This study personalizes the experience of doctoral students in multiple disciplines through a qualitative approach. In this context, qualitative methodology is preferable in that it allows for a better understanding of the experience from the perspective and context of the individuals studied (Bogdan & Biklen, 2003). A qualitative approach allows for the individual graduate students' voices to be heard and to be understood through their own words and experiences. The understanding gained from this approach is helpful in explaining how the socialization processes of doctoral students affect their progress and success throughout their graduate programs. Further, through the study of different disciplinary contexts and cultures in which the students experience their graduate education, a more contextualized and accurate accounting of their socialization processes can be realized.

A qualitative approach to this study is anchored by the conceptual framework of socialization. The work of seminal theorists in the area of socialization including Merton (1957) and Van Maanen (1977; 1978) are paired with scholars working in the specific area of graduate student socialization, such as Lovitts (2001), Weidman, Twale, and Stein (2001), and Tinto

(1993). The lens of socialization assists in better understanding the experiences of the doctoral students interviewed and how these experiences influence the students' success and retention. Through a combination of the general research in socialization as well as the more focused work in graduate student socialization, this study contributes a more disciplinary specific understanding of the socialization processes of doctoral students and the contexts in which they study.

The purpose of this study is to investigate the socialization processes experienced by doctoral students throughout the multiple phases of their programs. This qualitative study investigates the experiences of 40 doctoral students at two institutions within the disciplines of chemistry and history through semi-structured interviews. Document analysis of corresponding website information, handbooks, and paperwork is also included in order to gain a better understanding of the processes the doctoral students must navigate in their respective programs. The interview protocol, participant recruitment, and analysis of the data were all conducted in alignment with a three-phase model of doctoral degree progress. Unlike other, existing models of graduate student socialization that encompass only programmatic events in the student's experience, this model was designed in order to better describe not only the event within the degree program, but also to characterize the interpersonal and personal development occurring throughout the student's experience. Phase I includes the period from application to the initial days in the program, the time encompassing both coursework and candidacy examinations, or Phase II, and the research and dissertation phase of the program, or Phase III.

The following questions are addressed in this study: What socialization processes do doctoral students experience in their programs? How are these processes experienced at

different phases or times of their programs? How are these experiences shaped by discipline?
How do these experiences compare by institutional setting?

This study consists of a review of the literature relevant to graduate student socialization, retention, and attrition, as well as the doctoral student experience in Chapter II. Chapter III includes the research design and methodology, followed by Chapter IV that entails the context of the study, including the two institutions, the disciplines, and the departments studied. The findings of the study are divided into two areas, with Chapters V, VI, and VII detailing the experiences of the students in the study by phase in their degree programs, and Chapter VIII presenting an overview of the transcendent findings from the study. The study concludes with Chapter IX, which includes the study's conclusions, and recommendations for research, policy, and practice.

CHAPTER II: LITERATURE REVIEW

Literature in the area of doctoral education and the graduate student experience can be divided into the five main topics of (1) socialization, (2) the history of graduate education, (3) demographics on the graduate student population, (4) doctoral student attrition and retention, and (5) the graduate student experience. A brief overview of the concepts of socialization and graduate student socialization in particular begin the literature review, followed by the history and purposes of graduate and doctoral education, data on the current status of doctoral education, and concluding with an overview of each of the topics of attrition and retention and the graduate student experience. For the purposes of this literature review and the remainder of the study, the terms “graduate” and “doctoral” will be used interchangeably to describe this level of education and its students, as is often done in the literature.

Socialization

A central component to understanding the life and experience of the graduate student is socialization. Socialization, generally defined, is the process through which an individual learns to adopt the values, skills, attitudes, norms, and knowledge needed for membership in a given society, group, or organization (Merton, 1957). The concept of socialization as it relates to graduate education and the students’ role in it, however, is best understood through the lens of organizational socialization. Van Maanen and Schein (1979) describe organizational socialization as “the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role” (p. 211). Socialization is generally transmitted through the existence of the organizational culture. Tierney (1997) describes organizational culture as “the sum of activities – symbolic and instrumental – that exist in the organization and create shared meaning. The definition of socialization pertains to the successful understanding

and incorporation of those activities by the new members of the organization” (p. 3). Borrowing from Merton, Tierney states, “Culture is the sum of activities in the organization, and socialization is the process through which individuals acquire and incorporate an understanding of those activities” (p. 4). He continues, “An organization’s culture, then, teaches people 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” (p. 4).

Organizational socialization typically occurs through two major stages. The initial phase is generally referred to as anticipatory socialization, and often begins before the individual makes the decision to join the organization, as he or she learns about the organization through the recruitment and selection process (Tierney & Rhoads, 1994). Anticipatory socialization is the period when individuals take “on the values of the non-membership group to which they aspire” (Merton, 1957, p. 319), aiding the individual in adjusting to the group and becoming assimilated to its norms, values, and attitudes (Tierney & Rhoads, 1994). After successfully gaining entrance to the organization, the individual enters the stage of socialization referred to as role continuance (Tierney & Rhoads, 1994). This stage consists of the time when the individual experiences the socialization processes that will ultimately influence his or her decision to remain in the organization and to adopt the values, attitudes, and beliefs of the culture (Tierney & Rhoads, 1994).

Socialization of an individual occurs through experiences with various processes, traditions, relationships, and rules that govern the culture of the particular organization, be they formal or informal (Sherlock & Morris, 1967; Tierney, 1997; Van Maanen, 1978). The processes existent in socialization are also discussed at length by Van Maanen (1978) as “the

manner in which the experiences of people learning the ropes of a new organizational position, status, or role are structured for them by others within the organization” (p. 19). Sherlock and Morris (1967) similarly discuss socialization processes in the context of role preparation in educational settings: “Professional roles are acquired through an institutionalized sequence of processes. The processes...are reflected in the school’s policies, procedures, and traditions” (p. 31). It is the desire to better understand these socialization processes, particularly in the graduate school setting, that guides this study.

The Stages of Graduate School Socialization

Golde (1998) describes the process of graduate school socialization as one “in which a newcomer is made a member of a community – in the case of graduate students, the community of an academic department in a particular discipline. The socialization of graduate students is an unusual double socialization. New students are simultaneously directly socialized into the role of graduate student and are given preparatory socialization into graduate student life and the future career” (p. 56). Tierney and Bensimon (1996) lend a clearer understanding of how the socialization process functions for all newcomers in academe: “The beliefs one holds about the academy inevitably frame how one acts in a postsecondary institution” (p. 5). It is this understanding of how to act, what role is to be played, and how that role relates to others that is an inherent part of the socialization process for graduate students. Taken together, socialization is integral to the success of the doctoral student and to his or her progression through the degree process (Turner & Thompson, 1993).

The socialization of graduate students tends to occur in stages or developmental phases. Lovitts (2001) offers a four-stage model of graduate student development, beginning with the Stage Zero, or anticipatory socialization into the degree program, to the first stage, occurring

simultaneously with the first year, as the period of Entry and Adjustment. In the Entry and Adjustment Stage, the transition is made as the student moves from the feeling of being an outsider to that of an insider in the system. Stage Two, the Development of Competence, also corresponds to the second year of the student's program, and persists through the completion of all course and examination requirements, or candidacy. Finally, the Research Stage constitutes Stage Three, and encompasses the time period from the beginning to the completion of the dissertation, where the student decides upon a dissertation topic, organizes a doctoral committee, completes the research work, and finally writes and defends the dissertation.

Lovitts' (2001) model parallels that of Weidman, Twale, and Stein (2001) and their theory of graduate student socialization. Weidman, Twale, and Stein describe graduate student socialization as "the processes through which individuals gain the knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialized knowledge and skills" (p.iii). According to Weidman, Twale, and Stein, socialization for graduate students occurs in four developmental stages: Anticipatory, Formal, Informal, and Personal Stages.

The Anticipatory Stage occurs primarily as students enter the program, and need to learn new roles, procedures, and agendas to be followed. These students will tend to seek information and listen carefully to directions. This stage can be described as the student becoming "aware of the behavioral, attitudinal, and cognitive expectations held for a role incumbent" (Weidman, Twale & Stein, 2001, p.12). In other words, in this stage the student comes to understand the roles and expectations that are expected of other graduate students. The Formal Stage is characterized by the graduate student observing roles of incumbents and advanced students, while learning about role expectations and how they are carried out. Students in this stage are

primarily concerned about task issues, and communication at this stage is informative through course material, regulative through embracing normative expectations, and integrative through faculty and student interactions. The Informal Stage is described as the stage in which “the novice learns of the informal role expectations transmitted by interactions with others who are current role incumbents” (p. 14). At this stage, the graduate student receives behavioral cues, observes acceptable behavior, thereby responding and reacting accordingly. At this stage, the students’ cohorts are those with whom most interaction occurs. The student will begin feeling less student-like and more professional at the Informal Stage. The final stage, the Personal Stage, is characterized as the students’ “individual and social roles, personalities and social structures become fused and the role is internalized” (p. 14). During this final stage, the graduate student accepts a value orientation and adjusts his or her behavior to meet the expectations that exist. The conflict that exists between the former graduate student identity and the new professional identity is resolved, and the graduate student will be able to separate from the department in search of his or her own identity.

Finally, Tinto (1993), while known primarily for his work on undergraduate student persistence, also developed a working theory of doctoral persistence, which follows closely to existing models of graduate student socialization. His theory is clearly linked with socialization, implying that successful socialization results in persistence on the part of the graduate student. Tinto’s theory of graduate persistence includes three stages. The first stage, Transition, typically covers the first year of study. During this stage the “individual seeks to establish membership in the academic and social communities of the university” (p. 235). This stage is shaped by social and academic interactions, especially those interactions within the graduate department. Persistence at this stage is marked by the student making a personal commitment to the goal of

completion, which will depend upon the desirability of membership and the likely costs and benefits of further involvement. The second stage, Candidacy, “entails the acquisition of knowledge and the development of competencies deemed necessary for doctoral research” (p. 236). This stage will depend greatly upon the success in the individual’s abilities and skills as well as the interactions with faculty. The final stage, Doctoral Completion, “covers that period of time from the gaining of candidacy, through the completion of a doctoral research proposal, to the successful completion of the research project and defense of the dissertation” (p. 237). At this stage, the nature of the interaction with faculty shifts from interacting with many faculty to interacting with few; as in the case of the dissertation advisor. Tinto asserts, “The character of the candidate’s commitments to those communities, such as families and work, and the support they provide for continued study may spell the difference between success and failure at this stage” (p. 237).

Socialization is integral to the success of the doctoral student in his or her degree attainment (Turner & Thompson, 1993). However, socialization is not always an equitable process for the graduate student. Given the graduate student’s role in the socialization process, wherein the student is more acted upon than actor, graduate students’ needs may often be overlooked. Further, the socialization process is one that traditionally assumes that all its players are homogeneous; with the demographic changes in graduate education occurring today, the socialization process for graduate students is one that does not meet or encompass all needs (Turner & Thompson, 1993). Knowing that attrition rates reflect the issues evident in graduate education, hearing the graduate students’ voice and creating change that supports their needs can assist in a beneficial socialization process, and ultimately, persistence.

Socialization and Disciplinary Contexts

In order to understand the process of socialization at work in graduate education, one must look to the discipline in which the graduate experience is situated. A discipline is located organizationally within the department in an institution of higher education, and it is often the discipline and the department that most profoundly affects the doctoral experience. Golde (in press) states that “the department, rather than the institution as a whole, is the locus of control for doctoral education” (p.5).

Academic disciplines in American colleges and universities, according to Clark (1987), stemmed originally from the Germanic model of specialization, with the American disciplines as they are known today taking shape in the 1880s and 1890s. According to Clark, the diversification of academic disciplines over time became the hallmark of the American higher education system. This diversification has resulted in a categorization that is generally well known to most in academia as a breakdown by the physical sciences, including disciplines such as mathematics, chemistry, and physics; the social sciences, including psychology, sociology, and political science; the “hard” professions, including engineering, agriculture, and nursing; the biological sciences, including biology, biochemistry, and physiology; the humanities, including disciplines such as English, history, and philosophy; and the “soft” professions, including disciplines such as education, business, law, and journalism (Clark, 1987). Becher and Trower (2001) use an associated categorization of disciplines, grouping them by the pure sciences, the humanities, technologies, and applied social sciences.

Regardless of the type of classification, disciplines have their own particular qualities, cultures, codes of conduct, values, and distinctive intellectual tasks (Becher, 1981) that ultimately influence the experiences of the faculty, staff, and most especially the students within

their walls. Becher and Trower (2001) underscore this point: “We may appropriately conceive of disciplines as having recognizable identities and particular cultural attributes” (p. 44). Within the context of this study, these cultural attributes are important in understanding how the socialization process as a whole works within the particular disciplinary setting. In recent studies such as those by Golde (in press) and Lovitts (2001), disciplinary context is an important condition for understanding not only socialization but attrition and retention among graduate students as well. Lovitts posits, “The intellectual organization of the discipline structures the academic and social interactions of its members and is responsible for the characteristic and stable patterns of attrition across disciplines” (p. 47). Golde also points out, “...the structures and culture of the department, do, in fact, shape student experiences which in turn influences decisions about persistence or attrition” (p. 38).

Disciplinary organization can be seen across the categorizations given by those such as Biglan (1973) and Becher (1981). Lovitts (2001) and Golde (1998) both describe the structures of disciplines in the sciences being highly structured, with subject matter and experiences closely linked to the research enterprise. Students in the sciences tend to choose advisors or research directors very early in their programs and subsequently begin work on their dissertation research very early as well. Stable funding is also generally provided for the doctoral student in the sciences, and much of the research done is completed in teams. On the opposite end of the disciplinary continuum exist the humanities, which are organized more around the experiences of coursework that focus on a broad area of knowledge. Instead of working directly in the research enterprise, financially supported humanities’ students will spend more of their time as teaching assistants. These students generally do not make a significant connection with the advisor until later in the program, often only after completing the qualifying examination process. When the

student begins the research endeavor, it is generally completed in isolation (Katz & Hartnett, 1976).

Lovitts' (2001) work also corroborates the work done by Clark (1987) and others in stating that the disciplinary context keenly affects the overall culture of the department. Lovitts states, "Differences in cultures and their value systems shape the nature of the relationships between and among the members of the departmental community and, in the process, influence persistence outcomes" (p. 48). She continues, "Departments that are collegial and that provide structures and opportunities for interaction and intellectual and professional development, should and do have lower attrition rates than departments that are less collegial and that offer few opportunities for integration" (p. 48). Equally, in its large-scale evaluation of history doctoral programs, Bender, Katz, and Palmer (2004) state, "The culture and daily practices of a department constitute a powerful hidden curriculum that is very important in the professional formation of graduate students" (p. 47). Again, it is this understanding of the disciplinary context and departmental culture that will lend to a more inclusive view of graduate student socialization and its effects on persistence and success.

Much work remains to be done in the area of disciplinary influence on the socialization processes of graduate students. While Golde (in press) has begun this endeavor, research in each of the disciplinary categorizations as well as the individual disciplines themselves must be continued in order to truly understand the individualized socialization processes at work.

History of Doctoral Education

The present conception of the American university was born in the Middle Ages in Europe. It may have been Wilhelm von Humboldt, a Prussian philologist, who first conceptualized graduate education as it is known today. Humboldt's ideal was to develop a

research university, where the creation of knowledge was as important as teaching (Noble, 1994). Upon designing the new system of higher education, with the first university in Berlin in 1810, the professors were chosen not only for their ability to teach, but also for their reputation and willingness to do original research.

The first doctoral degrees granted in Europe were in the areas of law, medicine, and theology. The first known doctoral degree granted, the Philosophiae Doctor, was conferred at the University of Paris in the 19th century. However, it was in the German-speaking parts of Europe that the modern conceptualization of the doctor of philosophy degree gained prominence in the 19th century (Noble, 1994). Those initial doctorates were based upon two groups of studies: the quadrivium, which focused on areas of math, astronomy, geometry, and music, and the trivium, that focused on logic, grammar, and rhetoric. The most important part of doctoral studies by far, however, was that of Aristotelian philosophy (Noble, 1994).

In the United States, as the colonial colleges rose to prominence in the 18th and 19th centuries, many American citizens went abroad for their advanced studies. In fact, it is estimated that 10,000 Americans attended European universities in the 19th century, with more than half of those attending German universities in particular. With this demand, the American institution of higher education was not far behind in expanding their programs to include advanced studies, and in 1861 the first doctorate degree was granted at Yale (Noble, 1994). With their German-educated faculty, institutions such as Johns Hopkins were founded with the express purpose of producing knowledge and research. By 1900, more than 50 institutions offered the doctorate and had produced nearly 1,500 graduates (Toma, 2002).

The first graduate programs in American universities included two years of post-baccalaureate study, a final exam, a thesis, as well as proficiency in both Greek and Latin

(Noble, 1994). By the end of the 19th century, standards such as having an earned bachelor's degree at matriculation, residency requirements, the comprehensive exam, and the thesis that embodied original research had become common (Toma, 2002). By the beginning of the 20th century, the Ph.D. was almost a mandatory requirement for anyone seeking a professional appointment at a leading university in the United States (Noble, 1994).

Throughout the doctorate's history in the United States it has undergone many changes while also retaining many of its original tenets. Noble (1994) comments upon four significant developments in the history of the doctorate in the United States: first, the thesis was always published in some form; second, the widespread granting of doctorates to women, with the first doctoral degree granted to a woman at Boston University in 1877; third, the requirement of competence in two or three languages that has lost support over the recent decades, with research coursework taking its place in the curriculum; and finally the move to professionalization of the doctorate degree and its focus on practicality, with many new professional doctoral degrees coming to fruition that are intended to enhance practice rather than merely inform.

Graduate education in the United States has clearly undergone significant changes since its inception in 1876, however, the old adage still pertains: The more things change, the more they stay the same. Berelson (1960) comments, "...The graduate school has always been accused of abnormal resistance to change by those who had a reform to introduce" (p. 40). Graduate education has changed its structure insofar as eliminating certain program requirements and the shifting demographics of its students, but it still remains an institution focused on producing knowledge and research.

Today's Doctoral Students

Current enrollment in graduate education across the United States is high but has slightly decreased over the past ten years. United States Census data report over three million citizens enrolled in graduate education nationwide, with approximately six percent of all citizens holding a Master's degree and one percent holding a doctorate (U.S. Census Bureau, 2000). Bowen and Rudenstine (1992) reported from UNESCO data that the percentage of the population in the 25-and-over range achieving a postsecondary level of education is higher in the United States than in any other country except Canada. With graduate education including those enrolled and pursuing master's degrees, professional degrees, and doctoral degrees, graduate students comprise a diverse and growing population in American institutions of higher education.

The National Center for Education Statistics (2003) reports doctoral student enrollment had been steady at about 1.3 million in the late 1970s and early 1980s, but rose about 38 percent between 1985 and 2001. According to the 2002 Survey of Earned Doctorates (Hoffer et al., 2004), American universities awarded 39,955 doctorate degrees during the 2001-2002 academic year, which was down two percent from the previous year. The number is now at its lowest point in a decade, and down about six percent over the last five years (Smallwood, 2003). In the next 10 years, enrollment in doctoral education is projected to increase to 46,800 in the academic year 2011-2012 (National Center for Education Statistics, 2003). The increases and decreases in enrollment over time may be due to several factors, including market demand for particular professions as well as economic variability in society.

Enrollment by gender in doctoral education has also changed over the past 20 years in the United States. In 1987, more men than women were enrolled in doctoral degree programs (National Center for Education Statistics, 2003). Since then, female enrollment has risen

dramatically with only small increases in male doctoral enrollment. In 2001-2002, for the first time, more women received doctoral degrees than men in the United States (Wilson, 2004).

Disciplinary differences and societal demands may account for much of the shifting demographic tide in the past 20 years. For example, as more women enter postsecondary education, they are more apt to pursue postgraduate degrees. Furthermore, as the doors of traditionally male disciplines begin to open, such as those in the sciences and engineering, more women have entered these disciplines. Nevertheless, the increasing numbers of women earning the doctorate do not necessarily translate to more positions, equal pay, or equal representation in academic posts (Wilson, 2004).

Enrollment by race and ethnicity has also changed over the past 20 years. Minority enrollment in graduate programs increased 167 percent, while White enrollment increased 13 percent, with enrollments among Chicano/Latino students and Asian/Pacific Islanders seeing the greatest growth (National Center for Education Statistics, 2003). Of the doctorates earned by U.S. citizens, nearly 19 percent went to members of minority groups -- the largest percentage ever. While the total number of Americans earning doctorates has decreased in the last five years, the number of Asian-Americans, African-Americans, and Chicanos/Latinos earning doctorates has increased, with 40 percent of the doctorates awarded to African-American students in education, and one out of three doctorates awarded to Asian-Americans in the life sciences (Hoffer et al., 2004).

Another piece of the changing graduate student demographic includes that of part-time and full-time students. For the last 25 years, the majority of graduate students have been enrolled part-time. Currently, 59.5 percent of all doctoral students are enrolled full-time, while 40.5 percent are enrolled part-time (National Center for Education Statistics, 2003). Additionally, in

2002, more than one-third of all doctorate earners reported being first-generation, with neither of their parents having earned a bachelor's degrees, with 56 percent of the African-American graduates and 51 percent of the Chicano/Latino graduates being first-generation students (Hoffer et al., 2004).

The implications that result from the changing demographics in graduate education today are far-reaching in terms of attrition and retention. Without the willingness to change much of its operating structure and format, graduate education has not been responsive to the needs of the new students that are entering its doors each day (Atwell, 1996; Berelson, 1960; Heiss, 1968). This immobility in the face of changing needs and changing students can result in graduate students not feeling welcomed and not feeling integrated into the culture of graduate school (Ellis, 2001). This alienation may result in the graduate students' needs being unfulfilled and their subsequent departure from their programs, adding to the growing rates of doctoral student attrition in this country.

Doctoral Student Attrition and Retention

A large majority of the literature that surrounds doctoral education exists in the area of doctoral student attrition and retention. Attrition refers "to the failure of a student who has been enrolled to continue his or her studies" (Isaac, 1993, p. 15). Doctoral student attrition rates in the United States range from 40 to 70 percent (Berelson, 1960; Bowen & Rudenstine, 1992; Noble, 1994; Tinto, 1993). Literature in the field of graduate student development points at causes for attrition being multi-faceted; there is no one specific reason why graduate students decide to leave their programs (Baird, 1993; Cook & Swanson, 1978; Girves & Wemmerus, 1988; Golde, 1998; Lovitts, 2001; Nerad & Miller, 1996; Tinto, 1993). However, from the

attrition studies that exist, time to degree, lack of financial support, and the lack of peer and faculty relationships are among the most prevalent reasons for doctoral student attrition.

Time to Degree

One of the largest issues, as well as one of the oldest in doctoral education (Berelson, 1960) is that of time to degree. Defined by Bowen and Rudenstine (1992) as the estimate of the total amount of student time that has had to be invested in order to produce one Ph.D., time to degree is one of the most disputed and most misunderstood issues in doctoral student retention and attrition. Throughout the history of graduate education in the United States, time to degree rates have risen dramatically (Berelson, 1960). While more programs seem to be moving toward stated estimates for completing the doctoral degree, the majority of programs do not have such stated times, and estimates such as eight to ten years to finish a degree are still prevalent (Bowen & Rudenstine, 1992).

Time to degree has become somewhat of a scarlet letter in higher education, with many calling for more published rates of time to degree as a component of truth in advertising to potential graduate students (American Association of University Professors, 2000). Time to degree, however, is not only an issue that is relevant to students, but to institutions as well. The costs resulting from high rates of time to degree are high, not only for the student but also for the institution (Lovitts, 2001), through lengthening financial commitments like loans for students and by funding continuing assistantships for departments. In those disciplines in which time to degree is extremely high, such as in the humanities, there may be a direct connection to high attrition rates as well (Bowen & Rudenstine, 1992). If the student is unable to continue funding to support a lengthy time to degree or is unable to maintain focus for undue periods of time, the

student may be more apt to leave his or her program, resulting in higher attrition rates (Abedi & Benkin, 1987).

Baird (1993) discusses the many factors that may affect a student's time to degree. Primarily, the pursuit of a degree at an institution different from the bachelor's institution may greatly affect time to degree. This change in institutional type or environment requires adjustment on the part of the student and possible changes in degree requirements. Additionally, many students may change disciplines from their undergraduate to graduate degrees, which may translate into beginning a new program and losing time. The employment situation of the student is another factor that may interrupt the progress of the student and the amount of time spent on pursuit of the degree. If the student is required to work outside of the academic environment, the amount of hours spent doing that work can be detrimental to the student's progress. The presence or absence of fellowships or assistantships is yet another factor, which may also translate into lost time if the student is unable to secure funding within the academic environment. Clearly, the status as a full-time or part-time student will dramatically affect time to degree, as well as the student's marital and familial status, which relate to issues of time spent away from the program and another factor related to time to degree, that of support (Baird, 1993).

Support and Attrition

Support, or the lack thereof, greatly impacts a graduate student's decision to persist in his or her program. Support for graduate students can come in many forms: financial, familial, peer, faculty, and departmental. Abedi and Benkin (1987) studied a wide range of variables and their potential influence on graduate student time to degree, finding the most important variable to be that of support. Increased amounts of support for the students in the study signified less time to

degree rates and higher persistence. Another issue that has been shown to influence graduate student attrition or retention is that of financial support (Abedi & Benkin, 1987; Allan & Dory, 2001; Girves & Wemmerus, 1988; Lovitts, 2001; Tinto, 1993). This support may come in the form of assistantships, fellowships, scholarships, or loans. A lack of such support may lead to graduate student attrition (Lovitts, 2001). Support from faculty and peers are also important (Lovitts, 2001), along with peer mentoring (Grant-Vallone & Ensher, 2000), and advising relationships (Bargar & Mayo-Chamberlain, 1983; Girves & Wemmerus, 1988; Lovitts, 2001). Without the network of support provided by peers, faculty, and funding, graduate students may be more apt to leave their programs.

Challenges in Studying Attrition

While understanding attrition in doctoral programs is clearly vital to graduate education it is nonetheless a difficult area to study, thereby explaining the lack of data available. Isaac (1993) discusses the lack of structure and the increased individuality in graduate programs, as opposed to more organized undergraduate programs, that may add to problem of data collection. This lack of structure may lead to this paucity of data in the area on a nationwide, and many times, on a local level as well. Lovitts (2001) also states that with the frequent lack of a cohort of students in programs, it is difficult to ascertain who may be missing from that cohort. Students may also choose to leave their programs with the plan to return at a later time, in what is generally referred to as “stopping out” (Council of Graduate Schools, 2004). For those that decide to permanently leave, Lovitts found that many of these students tend to leave their programs quietly, rarely notifying a department or faculty member about their departure.

The lack of national data on graduate student retention and success is a clear indicator of the need for further study in this area. Graduate education, and graduate students in particular,

have been virtually ignored in the overall workings of institutions of higher education in the United States (Bair & Haworth, 1999). Developing a greater understanding of the graduate student experience and how institutional and departmental contexts influence this experience will aid in developing a better understanding of how to retain graduate students in their programs.

The Graduate Student Experience

While still undergoing much development, the study of the graduate student experience has expanded greatly over the past two decades. The graduate student experience encompasses the programmatic, personal, and interpersonal aspects of the doctoral program, lending to a clearer view of the complex roles and needs that the graduate student possesses throughout his or her program. As the graduate student often must meet competing demands for time including class work, research, and assistantship time, understanding these demands and needs will lead to a better understanding of the graduate student overall. The knowledge gained from studying the graduate student experience will aid in comprehending why graduate students leave their programs and how best to meet the needs they possess during different times in their development. Research in this area has included the influence of peer networks, the advising relationship, graduate student quality of life, and the dissertation and examination experience.

The Peer Network

The peer network and its influence on the graduate student experience are a prevalent part of the overall literature on the graduate student experience. This network of peers is important to the student not only in terms of social needs and feeling a part of the larger social system, but also for academic support and program guidance. Lovitts's (2001) work discusses the need for graduate students to integrate into their department both academically and socially. Academic integration is the obvious primary purpose of graduate education, with social integration an

unintended consequence of academic integration, allowing students to formally and informally socialize with faculty and peers. Within these two systems of integration, Lovitts discusses the concept of socioemotional integration, which describes the need for affiliation and close proximity with members of a community who share common interests and problems. This social integration is closely linked to that of successful socialization into the profession and the role the graduate student must play now and in the future (Austin, 2002; Lovitts, 2001). Furthermore, Tinto (1993) found this social integration to be closely tied to academic success and integration for the graduate student as well.

Several authors have suggested peer mentoring to increase graduate student support and to positively influence the social integration of the graduate student (Baird, 1990; Boyle & Boice, 1998; Valdez, 1982; Ward, 2001). Grant-Vallone and Ensher (2000) studied a peer mentoring program that matched first year students with more advanced students in order to reduce the anxiety experienced by the new graduate students. The results of the study demonstrated that peer mentoring provided students with both increased levels of psychosocial and instrumental support. While further study of the influence and need for peer support is warranted, it is clearly an important part of the daily life of the graduate student and aids greatly in a feeling of belonging and adhesion to the departmental culture.

The Advising Relationship

“Selecting an advisor is probably the single most important decision a graduate student makes during his or her graduate career” (Lovitts, 2001, p.131). A more and more frequently studied area of interest to the graduate student experience is the advising relationship and its importance to graduate student success. Lovitts (2001) asserts, “The advisor is often the central and most powerful person not only on a graduate student’s committee, but also during the

student's trajectory through graduate school...affiliation with the proper advisor can often spell the difference between completion and non-completion" (p.131).

A relationship with an advisor, or chair, can begin as early as the first days in a program. Many graduate programs will assign graduate students to faculty members, and other programs only accept students that have already been chosen to work with specific faculty members. Additionally, it is this relationship with the advisor that will have one of the greatest impacts on the graduate student (Girves & Wemmerus, 1988; Lovitts, 2001). The reputation of the potential advisor in the larger disciplinary field is likely to influence the future of the student. The positive advisor relationship with an established scholar in the field, or the lack thereof, leads to accumulated advantage or disadvantage (Clark & Corcoran, 1986) over the career development of the graduate student. In academe, in particular, the status and reputation of the advisor is often a contributing factor to the student's networking connections in the field, access to fellowships and scholarly opportunities, future placement in professional positions, and future success in general.

Bargar and Mayo-Chamberlain (1983) studied the advisor-advisee relationship from a developmental stance throughout the programmatic phases of the student's experience in graduate school from both the perspective of the advisor as well as the advisee. They remark upon the change that needs to occur for graduate students at this level, wherein the student must transition from the observer and more dependent role to that of participant and creator of knowledge.

Many programs assign temporary advisors to new graduate students, allowing them to later change or choose a new advisor at a later time. This temporary advisor may assist the student in the early phases of the program and may lend helpful advice. However, Lovitts (2001)

found in her study that many of the graduate students who were assigned advisors upon entering their program felt no connection with them but still remained with them throughout their programs. When these students were asked why they had never changed advisors, they responded that it had never occurred to them or that they did not know it was an option. Conversely, Lovitts found that “students who work with advisors by mutual choice are more likely to get the advice and guidance they need to progress smoothly through their programs and into their careers, to be academically and socially integrated with their advisor, to be very satisfied with the relationship, and to complete the Ph.D. than students who have little or no say in the manner” (p.164). Therefore, the choice of the advisor is an important step in the development of the graduate student and for his or her future.

Fischer and Zigmond (1998) identify several items graduate students should keep in mind when choosing an advisor: talk to other graduate students to discover their experiences with individual faculty members and not choose someone that the graduate student thinks he or she can merely survive, but someone with whom the student can be a true partner. The graduate student should ask the faculty member several questions, including what they feel the student’s role in generating research questions should be, their opinion on ownership of ideas and authorship on publications, and the advisor’s definition of an adequate doctoral dissertation. The student should not shy away from asking the potential advisor about their policies on feedback, deadlines, and working styles, as these policies will all be highly influential in the life of the graduate student in the time to come. Finally, Fischer and Zigmond stress, “No one person can satisfy all of [the graduate student’s] needs” (p. 32), and they encourage students to seek out a group of mentors from whom they can seek advice and guidance. Again, the relationship with the advisor is an important part of the graduate student experience. Assisting students in the

steps involved and questions to be asked when choosing an advisor is invaluable to students' future success in their programs and in their careers.

Graduate Student Quality of Life

The quality of the graduate student's life is an integral part in understanding the overall graduate student experience. Clearly, the life of the graduate student is one that is often filled with stress, competing demands, and concerns that are often unheeded by others. Recently, several researchers have attempted to better understand the programmatic needs of graduate students. Graduate student socialization encompasses many of the studies on graduate student quality of life, which attest to the stress and pressure that face graduate students. Baird (1990) discusses graduate education as ambiguous, unclear, less structured, and more individualized than other professional fields, demanding of the graduate student unusual coping strategies and emotional stress. The more critical of the authors in the field point to emotional and psychological distress by graduate students (Hinchey & Kimmel, 2000), with one author suggesting specialized psychological treatment after the termination of graduate study (Kerlin, 1995). A quantitative study by Valdez (1982), focusing on first year doctoral students and stress, found a considerable number of life events occurring during the first year of graduate school that may lead to considerable stress and subsequent illness on the part of the graduate student.

Finally, Hartnett and Katz (1977) summarize the five major disappointments and stressors involved in graduate education. While their study was conducted nearly 30 years ago, it remains significant to graduate students today:

- (1) Students hope to join a community of scholars. Instead, they find themselves being pushed into relative intellectual isolation from other people and concentrating in a narrow specialty that few can share with them.
- (2) Students desire to work with

professors who will guide them and reflect on their work. Instead, they find access to professors limited and at times they are subjected to treatment they consider demeaning. Women students and minorities still confront considerable discrimination. (3) Students want to engage in learning that will enhance their capacities. Instead, graduate students may find themselves held to inquiries that reflect not their own interests and intellectual predilections, but that of their professors. What is worse, they often labor on dissertations that drag out and are doubly difficult to finish because the subject that they are inquiring into is not in agreement with their own talents, motivations, and curiosity. (4) Most graduate students express a strong interest in teaching. Yet usually they are taught to neglect teaching if not to have contempt for it. Adequate training for teaching rarely exists. (5) Students would like to advance on the road to independence and adult identity that they began in their undergraduate years. Instead, upon entering graduate or professional school they are often treated like college freshmen. Their status in graduate school often drives these young adults back to infantilized patterns of behavior and feelings (p.381).

These findings are substantiated by other research (e.g., Austin, 2002; Nyquist et al., 1999) indicating that graduate students often feel misguided, neglected, and lost in the shuffle of graduate education.

Clearly, the socialization experiences of graduate students throughout their programs and their lack of agency in the academic hierarchy play a dominant role in satisfaction persistence. The stresses experienced by doctoral students are important to understand in order to provide the support that is needed and to ease the transition to new phases in development.

The Preliminary Examination and Dissertation

An evident stressor in the lives of doctoral students is the preliminary or comprehensive examination and the dissertation research. Representing the culmination of the academic coursework, the examination and dissertation begin a new phase for the doctoral student, in which he or she moves away from the more rigidly structured part of the program to the clearly ambiguous side of independent exploration and research.

The preliminary examination and dissertation have become one of the most contested and controversial parts of the doctoral experience (Bender et al., 2004; Berelson, 1960; Biaggio, 2002; Goodchild, Green, Katz, & Kluever, 1997; Isaac, Quinlan, & Walker, 1992). As Berelson (1960) states, “The demands of research and training for research, culminating in the doctoral dissertation, have been at the heart of controversies from the start” (p. 12). The Council of Graduate Schools (1990) describes the dissertation phase as “an intensive, highly professional training experience, the successful completion of which demonstrates the candidate’s ability to address a major intellectual problem and arrive at a successful conclusion independently and at a high level of professional competence” (p. 21). The dissertation serves as an original and significant contribution to knowledge (Berelson, 1960), but the problems surrounding it have lingered throughout higher education’s history, including the time necessary to complete the dissertation as well as the ever-expanding length of the work. Furthermore, in disciplines such as the natural sciences, the concept of the independent research is muddied by the fact that many graduate students work within a team, wherein the student is not completely independent in his or her research (Berelson, 1960). Finally, regarding the preliminary or comprehensive examination, many changes have also occurred in the history of graduate education. Generally taken at the culmination of the doctoral coursework and marking the passage of the student from

doctoral student into doctoral candidate, the preliminary examination originally existed as a required oral examination. Scholars, like Berelson (1960), comment that while the examination process has undergone many changes throughout its history, it has now become more perfunctory as a rite of passage with little meaning.

Regardless of their purposes or history, many doctoral students are unprepared to face the challenges that the doctoral examination and dissertation present, resulting in failure and the often-dreaded ABD (All But Dissertation) status. Lovitts (2001) refers to the dissertation and examination phases of graduate education as more complex processes which most students have little familiarity or prior experience, leading to problems for the graduate student in successfully completing these tasks, an issue found in several other studies (Allan & Dory, 2001; Biaggio, 2002; Brause, 2001; Huguley, 1988).

Even with the many criticisms and concerns regarding the examination and dissertation in doctoral education, they still exist as some of the oldest traditions within graduate education in the United States. While many believe that the examination and dissertation requirements will always remain in place in some shape or form (Berelson, 1960; Noble, 1994), it should nevertheless remain an important part of further study. The structure of graduate education allows the student to be a part of the larger social arena of coursework, following a guided and supervised path through course requirements. However, the examination and dissertation processes exist as predominately solitary tasks, that require the student to be highly self-motivated and self-directed. This lack of structure and understanding about the examination and dissertation processes are often very stressful times for the doctoral student, and may result in other emotional and psychological issues for the student as well (Baird, 1990)

Conclusion

Today's doctoral student faces new challenges and old traditions. With an ever-changing demographic representation among its students and an ever-present hold on the past, graduate education must find ways to navigate the tensions created by new demands on old structures. Attrition rates are one of the most pressing concerns in doctoral education today and a clearer understanding of the support structures, the socialization processes, and the needs possessed by graduate students can aid in designing programs that encourage persistence. The literature clearly delineates the need for further research and understanding in all aspects of the graduate student experience. While the overall literature in the field on graduate student needs and graduate student development is sparse, the seminal work in graduate student socialization (Golde, 1998; Lovitts, 2001; Tinto, 1993; Weidman et al., 2001) is helpful in understanding the underlying issues and culture for graduate students. Unfortunately, many of the studies that have been done are primarily theoretical. Additionally, while there do exist several empirical studies in the area of graduate student socialization processes, these studies are quantitative in nature and do not lend a holistic view of the graduate student experience within the academic environment. Further, the literature that exists generally deals with the graduate student after graduation or termination of the program. As Golde and Dore (2004) state, disciplinary differences account for much of the experience of graduate students overall. While the work done on graduate student socialization is helpful in initiating a wider understanding of the phenomenon, research must be conducted at the disciplinary level in order to truly understand the socialization process and experience of graduate students. Finally, little research has been done with graduate students at different phases of their programs in order to better capture the needs and development of the graduate student within developmental stages in the program of study.

This study, further described in Chapter III, addresses these inconsistencies and gaps in the literature through a deeper understanding of the socialization of the graduate student within a variety of contexts. Giving voice to doctoral students through a qualitative approach will provide a deeper understanding of their experiences. The study views differences in discipline, year in the program, and institutional setting from the perspective of the graduate student, understanding that it is the student who will develop and interpret meaning from his or her own background and view of the world. Socialization, used as a conceptual lens, guides the design, analysis, and overall understanding of the study. The research design is the subject of the next chapter.

CHAPTER III: METHODOLOGY

To better understand the socialization of doctoral students, this study is guided by the following questions: (1) What socialization processes do doctoral students experience in their programs? (2) How are these processes experienced at different phases or times of their programs? (3) How are these processes shaped by discipline? (4) How do these processes vary by institutional setting? The frameworks and methods utilized to address these questions are the purpose of this chapter.

Methodological Framework

This study is qualitative in nature, focusing on the lived experiences of the graduate students in the study and the contexts in which they conduct their graduate studies.

Qualitative research is described by Denzin and Lincoln (2000) as:

...A situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations...at this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (p. 3).

Within qualitative research, the researcher exists as the instrument (Denzin & Lincoln, 2000), trying to give meaning to what is seen, heard, or experienced.

The qualitative approach is particularly relevant to give voice, especially within the context of graduate education where the tendency exists for graduate students to be acted upon rather than explicit actors. Subsequently, the graduate student role is marked by a lack of agency in which the graduate student is often unable to express concerns and to offer suggestions to the

department that may assist in successful navigation of the socialization process. This study therefore seeks to more fully describe the graduate student experience by hearing it through the voice of those experiencing it – the students. This understanding leads to greater insight about what socialization experiences doctoral students have in their programs and throughout different phases of their education.

Naturalistic inquiry (Lincoln & Guba, 1985) was the foundation used to conduct this qualitative study. Naturalistic inquiry rests upon the tenet that multiple realities exist within the participants' lives and in the accounting of their experiences. The naturalist paradigm is distinguished by fourteen characteristics that allow for the qualitative study to take place: (1) The naturalist elects to carry out the research in the context or setting of the research participants, (2) The naturalist is the primary data-gathering instrument, (3) The naturalist uses tacit knowledge in order to fully describe the nuances of the multiple realities expressed by the participants, (4) The naturalist uses qualitative in order to adapt to the multiple realities expressed by the participants, (5) The naturalist incorporates purposive sampling to increase the likelihood of all realities being expressed, (6) The naturalist utilizes inductive data analysis in order to identify multiple realities found in the data, (7) The naturalist prefers to have theory derive from the data in order to encompass multiple realities present in the accounts of the participants, (8) The naturalist allows the research design to emerge rather than constructing it *a priori*, thereby allowing for multiple realities to emerge, (9) The naturalist prefers to negotiate meanings and interpretations with the participants in order to accurately describe their realities, (10) The naturalist utilizes the case study reporting model to best describe the multiple realities present in the study, (11) The naturalist uses idiographic interpretation, or the description of particulars of the case rather than generalizations, in order to best describe the individual realities

present in the data, (12) The naturalist is hesitant about making broad application of the findings because of the multiple realities present in the participant's accounts, (13) The naturalist sets boundaries on the inquiry related to its emergent focus, allowing the multiple realities present to define the focus, and (14) The naturalist defines special criteria for trustworthiness in order to better identify the multiple realities and confirm these with the participants and their accounts (Lincoln & Guba, 1985). These 14 characteristics are mutually reinforcing and play a synergistic role in the research study. The characteristics of naturalistic inquiry were utilized in this study and are described in more detail in the following sections.

Conceptual Framework

The conceptual framework of socialization guides this study. Socialization, and graduate student socialization in particular, is the chosen lens through which the research questions were formulated, the interview protocol was designed, and the data collected from the study were analyzed and are presented. While discussed in more detail in Chapter II, Mortimer and Simmons (1978) describe socialization as a two-fold process: "From the perspective of the group, socialization is a mechanism through which new members learn the values, norms, knowledge, beliefs, and the interpersonal and other skills that facilitate role performance and further group goals. From the perspective of the individual, socialization is a process of learning to participate in social life" (p. 422). Within this context, the many facets of the doctoral experience are integral parts of the socialization process. This understanding facilitated the development of the research design and the subsequent analysis of the data. Seeking to understand how socialization affects the doctoral students' experiences, their attitudes about particular events in their programs, and their overall satisfaction level were relevant to the study

throughout its entirety. In particular, socialization theory was used to focus the analysis – described in more detail later in the Analysis section.

From the work of Lovitts (2001), Tinto (1993), Nerad and Miller (1996), and others, the graduate school experience can be defined and outlined by several stages or phases. In Lovitts' model, this consists of four stages, in which the student goes from Stage 0, or anticipatory socialization in their undergraduate program, to the first year in the program, followed by attaining candidacy, and finally the research stage. Tinto's theory of graduate persistence is marked by three stages, including the first year, or transition, the stage of candidacy, and the final stage of doctoral completion. Nerad and Miller's model consists of five stages, including the first stage, taking courses, the second stage, preparing for and taking qualifying examinations, the third stage, finding a dissertation topic and writing the proposal, the fourth stage, the research and writing stage, and the fifth stage, the professional position search and application.

Based on the data from this study and analysis and synthesis of the literature, I believe the stages of graduate school socialization are most aptly defined in three phases. In short, the first phase of the model consists of the time of admission to the program until coursework begins. The second phase of the doctoral program includes the time spent mainly in coursework, and the third phase marks the culmination of coursework through the dissertation research, or the period generally referred to as candidacy. While formed partially from the previous models of Lovitts (2001), Tinto (1993), and Nerad and Miller (1996), this conceptualization is unique and is an addition to the current body of knowledge in that it not only discusses the phases of the doctoral experience from the programmatic perspective, but also from the developmental and

relational perspectives wherein the student not only changes professionally, but personally and interpersonally as well.

The phases are described in order to allow fluidity in transfer from one phase to another. Therefore, this model is not static, suggesting that events or interactions only occur in one phase, but are fluid in nature, often occurring in several phases or times in the degree program. For example, while the model describes Phase II as the time when the student forges relationships with peers and faculty, certainly these relationships begin to form at the earliest moments in the student's experience. This model is primarily intended to give structure and focus to the multiple events and relationships that occur during the doctoral program thereby facilitating a better understanding of the student's experience and needs at particular turning points. Inasmuch as socialization is a reciprocal process, both influencing and being influenced by the student (Tierney, 1997), the doctoral student in this model is also an integral part of the socialization he or she receives and affects this socialization process as much as he or she is being affected by it.

This conceptualization is used throughout the study and consists of three phases of doctoral education, wherein Phase I encompasses the period of time of initial interest in the graduate program through admission, Phase II as the period of coursework through examinations, and Phase III as the time of dissertation research through graduation. This model was used to guide the interview protocol, the analysis, and the organization of the findings.

Research Design and Methods

A qualitative approach guided by the tenets of naturalistic inquiry is utilized to better understand the socialization processes of doctoral students at various phases in their programs. The study describes the point of view of doctoral students at two institutions and within two disciplines. The study primarily relied on the use of semi-structured interviews (Bogdan &

Biklen, 2003). Bogdan and Biklen describe interviewing in qualitative methodology as a technique that is “used to gather descriptive data in the subjects’ own words so that the researcher can develop insights on how subjects interpret some piece of the world” (p. 95).

An initial pilot of the study was conducted in January and February of 2004 in order to test and augment the initial protocol. This pilot included 10 doctoral chemistry students at the institution identified as Land Grant University. After the pilot study was conducted, the interview protocol (see Appendix A) was updated and questions were reworded for clarification. This revised protocol was used in the remainder of the study. While semi-structured to focus around specific needs and phases of development in the students’ lives, latitude still existed to explore other topics that arose in the course of the interview. Each interview lasted one to two hours and was audio-recorded and transcribed verbatim.

The second portion of data collection included document analysis of relevant handbooks and websites, including general information on department and college websites, course handbooks, catalogs, and departmental guidelines. Departments use such information to communicate guidelines, deadlines, rules, and regulations of their programs. The graduate student consults these documents for guidance, and an understanding of the relevant policies, gaps in those policies, and possible problems associated with them assisted in gaining a larger view of the socialization processes the students experienced and the departmental and disciplinary contexts. These documents were collected before the study commenced and during the visits to the individual departments. Documents were read closely, compared with one another, and saved for later incorporation into the study.

The final portion of data collection consisted of informal observations. Interactions between graduate students, the physical environment in which their department resides, and the

visible dynamics within the department were informally observed in order to better understand the culture of these students and their environments. These observations occurred during my initial visits to the departments as I met with department chairs and graduate representatives, as well as before and after the interviews with the students that elected to meet in their respective buildings. Data collected from the informal observations were kept in my journal and later analyzed and incorporated into the study. The combination of interviews, document analysis, and informal observations allowed for a richer understanding of the context in which these graduate students and their departments exist, as well as allowing for triangulation of the data (Bogdan & Biklen, 2003).

Site Selection

Two institutions were chosen for inclusion in this study: one public, land-grant institution, hereafter referred to as “Land Grant University,” and one large, Association of American Universities (AAU) member institution, or “Flagship University.” Both institutions are classified as Doctoral Extensive in the Carnegie Classification (McCormick, 2001) and are state-supported universities located in the same state, albeit in different geographic locations. The institutions in this study are given pseudonyms in order to protect the identity of both the participants and the institutions.

Contacts at each institution were made primarily with the graduate deans to explain the details of the study. Both deans then referred me to the chair people in the departments of chemistry and history at their respective institutions. I sent emails to the chairs of each of the departments requesting to meet with them in order to discuss the study, and received replies to confirm such a meeting, or in the case of the department of chemistry at Flagship University, to meet instead with the graduate coordinator. These meetings occurred in late spring of 2004 with

the faculty and staff of Land Grant, and in early summer of 2004 at Flagship, thereby affording me explicit permission to continue with the study in their departments. At each of these meetings, a brief interview of the individual also occurred (see Appendix A) in order to better understand the programmatic structures and supports for doctoral students in the departments. At this point the research protocol and human subjects applications were approved through the institutional review boards at both of the institutions.

Study Participants

The subjects for the study include 40 doctoral students from the two disciplines of chemistry and history at the two separate institutions. The disciplines of chemistry and history were chosen for their representation of the natural sciences and humanities respectively, as well as their focus within the Carnegie Initiative on the Doctorate. The Carnegie Initiative on the Doctorate, sponsored through the Carnegie Foundation for the Advancement of Teaching, is “a multi-year research and action project to support departments' efforts to more purposefully structure their doctoral programs...[fostering] discipline-based conceptual work and design experiments in a small number of selected departments. Carnegie will collect, examine and disseminate findings from this significant discussion and related experiments” (Carnegie Foundation for the Advancement of Teaching, 2003). Washington State University was a participating institution in the Carnegie Initiative on the Doctorate during the time of this study. The connection to the Initiative and its staff at the Carnegie Foundation assisted to identify relevant literature, resources, and initial contacts for this study.

The 40 participants include 10 students from the disciplines of chemistry and history at both of the institutions. The participants included 14 males and 26 females (see Table 1) and with the exception of three Asian Americans and one African American, all other participants

were Caucasian. Lists of doctoral students at Land Grant University were provided through departmental listings of all doctoral students, who were subsequently contacted via e-mail and telephone. Due to differences in human subjects protocol at Flagship University, I was unable to contact students directly. The graduate staff offices in each of the departments sent e-mail notices to all doctoral students, requesting they contact me if they were interested in participating in the study.

Table 1

Breakdown of graduate students interviewed by gender, discipline, and institution.

Gender	Institution 1 “Land Grant”		Institution 2 “Flagship”	
	Chemistry	History	Chemistry	History
Male	5	3	2	4
Female	5	7	8	6

Although unable to do so at Flagship University, I purposely contacted students at Land Grant University based on the year they were admitted into the program. This contact was made randomly from the lists from the graduate coordinators, resulting in students being assigned to one of three programmatic phases (see Table 2). As previously discussed, the three phases were developed based on the socialization models of Lovitts (2001), Tinto (1993), Nerad and Miller (1996) and Bowen and Rudenstine (1992), as well as an understanding of the personal and interpersonal development that occurs throughout the doctoral experience. This model is, in turn, my conceptualization of the socialization process in doctoral education and was used as part of the study to guide the interview protocol, the analysis of the data, and the organization of the findings. The phases are discussed more fully in Chapters V, VI, and VII.

Several doctoral students from the individual departments represented each of the phases in the study. This sampling was intentional at Land Grant, but resulted serendipitously from the voluntary participants at Flagship University. Purposeful sampling of this sort allowed for a deeper understanding of the distinct needs experienced by graduate students in each of the disciplines throughout the various phases of their graduate education, rather than simply interviewing students that had completed their programs who would thus have to recall their concerns from the past or a different time in their programs. Students in Phase I were asked questions related to that phase (see Appendix B), students in Phase II were questioned in relation to the experiences in both Phases I and II, and students in Phase III answered questions related to their experiences in all three phases. In this way, students were able to specifically address the concerns and details that presently affected their experience in the program, but were also able to reflect back on earlier phases of their programs. I also made every attempt to maintain an equal balance of males and females in the study, but due to the voluntary nature of the participation of students from Flagship this was not entirely possible.

Table 2

Breakdown of graduate students interviewed by phase in program, discipline, and institution.

Phase	Institution 1 “Land Grant”		Institution 2 “Flagship”	
	Chemistry	History	Chemistry	History
1	2	2	0	0
2	4	3	5	5
3	4	5	5	5

After establishing initial contact with study participants, I met each of them at a location of their choice on or near each of the campuses for one-on-one interviews. Due to scheduling conflicts or location, five of the students were interviewed over the telephone. Each of the telephone interviews was guided by the protocol and was audio taped for later transcription. All interviews for the study were conducted between January and October 2004.

After gaining permission from each of the participating departments, I visited each department on at least two occasions prior to beginning the interviews and repeatedly during the interviews as well in order to informally observe departmental dynamics and culture. I also collected departmental and programmatic documents that related to the graduate students' experiences at the institutions, including handbooks, forms, and written guidelines. While many of these documents were collected via the departments' web sites, I also obtained documents from the graduate coordinators in each of the departments.

Each of the participating students was assigned a pseudonym and the coded list of participants was maintained separately from any corresponding documents that might identify the students. Fieldnotes of observations were coded for possible emerging themes and were kept confidential and secure.

Data Analysis

The data were analyzed using the constant comparative method, "a research design for multi-data sources, which is like analytic induction in that the formal analysis begins early in the study and is nearly completed by the end of data collection" (Bogdan & Biklen, 2003, p. 66). The steps of the constant comparative method, according to Glaser (1978) include: (1) Begin collecting data; (2) Find key issues, events, or activities in the data that become main categories for focus; (3) Collect data that provide many incidents of the categories of focus; (4) Write about

the categories explored, keeping in mind past incidents while searching for new; (5) Work with the data and emerging model to discover relationships; and (6) Sample, code, and write with the core categories in mind. The steps of the constant comparative method occur simultaneously during data collection until categories are saturated and writing begins. This study utilized Glaser's steps in data analysis as well as the original research questions. This process allowed for emergent themes to develop from the data and provided a means by which large amounts of data were compressed into meaningful units for analysis.

The conceptual lens of socialization also guided the analysis of this study. In essence, socialization theory provided a lens through which to view the findings and data in the study. Through this analysis, emergent themes on the issues and experiences of the students studied were sought from the interviews conducted, as well as the interplay of the roles and experiences of the students in their academic and programmatic contexts. As previously discussed, my conceptualization of the socialization process resulted in a three-phase model, which also assisted in analyzing the data. As interviews were conducted and data were analyzed, findings were grouped by the different aspects of socialization that the students experienced, tying each of these experiences to the relevant phase of their program.

Analysis through the constant comparative method (Bogdan & Biklen, 2003) and the conceptual framework resulted in a series of codes, which were then compiled into a larger set of themes. Fieldnotes from observations and document analyses were also compiled with the larger set of themes that emerged from the interview data. Data were analyzed keeping in mind the disciplinary, institutional, and programmatic phase differences in the students' experiences.

Trustworthiness

The credibility of the data collected is paramount to establishing validity in the overall study. Lincoln and Guba (1985) discuss four factors of trustworthiness in qualitative research: credibility, transferability, dependability, and confirmability. Lincoln and Guba describe credibility as being equivalent to the quantitative notion of internal validity, transferability as being related to external validity, dependability as connected to the concept of reliability, and confirmability as equivalent to objectivity. In order to assure credibility, or internal validity, in this qualitative study several methods were used. Primarily, was the use of triangulation, which according to Lincoln and Guba, involves the use of multiple and different sources of data in the study. The study utilized different approaches in order to garner a broad view of the graduate student experience. These methods include interviews, informal observations, and document analysis.

Secondly, peer debriefing assists in ensuring trustworthiness and credibility. Peer debriefing is "...a process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind" (Lincoln & Guba, 1985, p. 308). This study incorporated feedback of transcript analysis from two peers, which allowed for alternative explanations of the data. Each peer was sent several representative transcripts from the study and was asked to provide their estimation of the overriding themes and concepts that emerged from their analysis. These findings were then corroborated with my own analysis.

Another method to ensure trustworthiness of the data was through the use of member checks. Member checks allow for data and conclusions to be tested and checked by the individual participants in the study (Lincoln & Guba, 1985). Member checking occurred with

transcripts from each department studied, wherein two students from each department were given an overall analysis of their interview as well as a copy of Chapter IV that describes the context of the institutions and departments. The students were asked to confirm the study's findings and discuss with me any needed changes or misperceptions. Suggestions they provided were incorporated into the analysis.

Additionally, thick description assists in confirming trustworthiness. Thick description can be understood as defining parameters and boundaries of the research site, participants, and culture that allows for a deeper understanding of the research setting and context (Lincoln & Guba, 1985). In the presentation of the data, thick description is used to allow the voice of the graduate students in the study to emerge and to provide as much of the description of the students, their contexts, and cultures necessary for the reader to understand the findings. Thick description was utilized in this study through the use of multiple forms of data, including interviews, document analysis, and informal observations.

Finally, in order to allow for dependability and confirmability (Lincoln & Guba, 1985), a paper trail was maintained that includes notes on interviews and analyses, a running log of thoughts regarding the study, and possible biases in the study. Cumulatively, these methods documented and ensured trustworthiness and validity in the data collected and worked toward maintaining integrity in the study.

Limitations

As in any study, there are several limitations inherent in this study that may limit its findings. As the purpose of qualitative research is not necessarily to generalize to a larger population (Bogdan & Biklen, 2003), this study is not intended to generalize findings to any other population but to describe the concerns and issues relevant to these individual students in

these individual settings. Accordingly, the descriptions I provide of the students, departments, and institutions are limited by my personal interpretation of the factors I observed, the time constraints present in which to study all elements fully, and the information provided to me by the students and the departments. I made every effort to validate these accounts through member checks as well as the triangulation of the data, but the inherent limitations are nevertheless present in the analysis.

Related to this is the limitation offered by the students' descriptions of their experiences. While many of the students interviewed offered very detailed accountings of their experiences, several students seemed almost reluctant to offer such information. Further, students in the earliest phases of their programs also had generally less to share with me when compared with the students nearing completion of their programs. Consequently, it was the students in the latest phases of their programs that had the most to offer, which may skew the interpretations of the data. Additionally, students who had dramatically negative experiences in their programs tended to discuss these issues with me in more detail than the students who had overall positive experiences.

As I focused this study on the experiences of the students in the departments, any holistic description of the departments, the institutions, and the programs are thereby limited by the exclusion of faculty, staff, and administrative perspectives on these issues. These stakeholders' perceptions of the issues I raise in the study may dramatically differ, but it was the perceptions and experiences of the students that I sought to understand and relay in this work.

Limitations were also present in the analysis I made of the interview data. Due to the size differences between Land Grant and Flagship, I interviewed what amounted to a large proportion of the department's students in the programs at Land Grant and a relatively small proportion at

Flagship. This difference in departmental representation could affect holistic interpretations of student experiences and culture. Therefore, what may have resulted in one or two students' accounting of an experience may have been overlooked as a major theme in the study if more students had been interviewed.

Inclusion of student quotes and expressions was another limitation of this analysis and study. I tried at all times to maintain the integrity of the students' statements during my transcription and writing, but my interpretation of these comments may not necessarily be the actual representation of how these students intended to voice their statements. I believe that by contextualizing their comments as much as possible as well as using their verbatim quotations will help in portraying their feelings and associations on these issues. If words or phrases were omitted from the quotations used in the text, it was only those that represented "space fillers" (e.g., um, er, uh), false starts, or hedge phrases (e.g., you know, whatever, like).

The next chapter of the study includes an overview of the institutional, disciplinary, and departmental contexts of the students interviewed. An understanding of these contexts is necessary to understand the socialization processes and experiences the students undergo and how these contexts influence the overall retention and success of the students involved.

CHAPTER IV: THE CONTEXT

In order to better understand the doctoral students' experiences in this study, it is first important to understand the context in which each is situated. The context includes not only the institution, but the discipline and the department as well. The cultural aspects of the students' context are important to better understand the socialization processes they experience and how the context influences their satisfaction and success in the program. The information presented in this chapter is based on the data available about the institutions and the departments, the research on disciplinary organizations, and my interpretations of these contexts based on the interviews conducted, the documents analyzed, and the informal observations made. This chapter provides important foundational elements that contextualize the data that follow in Chapters V through VIII, as well as to situate the experiences of the students in the study.

The Universities

Two universities, both located in the same state in the United States, were included in this study. At the request of the administration of each institution, both universities have been assigned pseudonyms to maintain anonymity. Hereafter referred to as "Land Grant University" and "Flagship University," both institutions are classified as Doctoral/Research Extensive by the Carnegie Foundation (McCormick, 2001), indicating that they both award more than 50 doctoral degrees per year in at least 15 disciplines. With total student enrollments reaching over 40,000 at Flagship and nearly 20,000 at Land Grant, each institution is able to support substantial graduate programs throughout the curriculum. Total graduate enrollment beginning in the Fall 2004 term is reported at over 10,000 students at Flagship, or nearly 30 percent of the total enrollment (Flagship University Web Site, 2005), and nearly 2,500 students at Land Grant, or 10 percent of the total enrollment (Land Grant University Web Site, 2005).

While both universities declare themselves to be ranked among the top research universities in the United States (Flagship University Web Site, 2005; Land Grant University Web Site, 2005), the 2005 edition of the U.S. News and World Report Listing of the Best Graduate Schools reports Land Grant to be placed in the top 100 universities and Flagship to be ranked in the top 50 institutions (U.S. News and World Report, 2005). Furthermore, Flagship University is a member of the Association of American Universities (AAU), an elite membership of the top research institutions in the United States and Canada (Association of American Universities, 2004), making Flagship the more elite and prestigious university in regard to ranking between the two institutions studied.

Land Grant University is located in a rural setting in the state, while Flagship University is located in an urban area; the location and size of each university makes an impact on the students' decisions to attend, with many of the graduate students in the study commenting on these factors. The student demographics at each institution are similar, with a total ethnic minority population of approximately 13 to 14 percent, and with women making up more than 50 percent of overall enrollment (Flagship University Web Site, 2004; Land Grant University Web Site, 2004).

Structure and Importance of Graduate Education

Within the past several years each institution has experienced changes in its graduate school administration. These changes have influenced the overall structure of graduate education at the individual campuses, which has trickled down to the individual departmental levels as well. At Flagship University, an increased focus on graduate education has resulted in multiple university-wide initiatives and data collection efforts that have assisted them in making informed decisions about the status of graduate education overall (Flagship University Web Site,

2005). Land Grant University has also made a public commitment to improving its graduate education, including this goal in both its strategic planning efforts and its benchmarking process (Land Grant University Web Site, 2005). Both institutions have also undergone leadership changes in the past several years, with new dean appointments and a shifting of strategic priorities. Nevertheless, the relative size of the graduate programs at each institution appears to make a dramatic difference in their importance and focus in the overall institutional mission. With Flagship's graduate enrollment of nearly 30 percent of its total enrollment, compared to the 16 percent of total enrollment at Land Grant, the respective focus and attention given to institutional data and initiatives are understandable.

The structure of graduate study at each institution is similar, in that graduate students must receive a certain number of graded credits as well as dissertation or research credits in order to be awarded the degree. Doctoral students at each institution are expected to complete coursework, an examination process, and the dissertation in order to receive the Ph.D. As is traditional across programs, this process is facilitated through the assistance of an advisor or chair as well as a committee of faculty members or specialists in the disciplinary area.

The Disciplines

Before a discussion of the individual departments begins, a brief description of the disciplinary contexts and environments is a necessary part of the larger understanding of how the departments function. The two disciplines chosen for the focus of this study are chemistry and history. The choice of each discipline for this study was made in regard to the differences between the two fields of inquiry, facilitating the contrasts and comparisons made in the analysis. Much of our understanding about disciplinary differences and categorizations are based on the work by Biglan (1973), in which he was able to discern the cultural and social structures of

academic disciplines thus resulting in a classification labeled as hard or soft, pure or applied, as well as life versus non-life system. Biglan's work was a testament to the concept that studies of academic cultures and contexts cannot be generalized across disciplines. Work done by Becher and Trowler (2001) further explicate disciplinary differences, grouping chemistry within the pure sciences, or those disciplines that result in discovery and explanation, and history within the humanities, or those disciplines that result in understanding and interpretation. At Flagship University the discipline of history is located within the realm of social sciences, while it is traditionally placed in the division of humanities at Land Grant University. Chemistry at both institutions is located in the division of sciences, located under the College of Arts and Sciences at Flagship University along with history, and under the College of Sciences at Land Grant University.

As Lovitts (2001) and Clark (1987) have pointed out, differences in fields of study affect the overall culture of a discipline and department. Organizationally, disciplines in the humanities are focused on what Golde (in press) explains to be an emphasis on teaching and an "essentially solitary nature of scholarship" (p. 14), surrounding multiple sub-fields that dictate all parts of the departmental culture and bureaucracy. The sciences, however, are organizationally situated around the laboratory or the "lab" (Golde, in press), with the faculty member, or principal investigator, serving as the lead for a group of graduate students and often post-doctoral students as well. This organization creates an environment where the bulk of learning that occurs for the students is situated within the laboratory setting, rather than those disciplines in the humanities that are focused around the classroom as the primary source of learning and culture.

The location of the discipline within the particular institutional context is manifested organizationally through the department. Clark (1987) speaks to this point, “The department becomes the basic unit of organization because it is where the imperatives of the discipline and the institution converge.” Similarly, Kolman, Gallagher, Hossler, and Catania (1987) state, “For studying the outcomes of graduate education, the appropriate unit of analysis is the college or department, not the institution as a whole. The department level is where experiences actually occur and the unit with which students actually identify” (p. 108). The next section addresses the academic departments included in this study and how the disciplines they represent associate with the larger institutional contexts.

The Departments

At both Land Grant and Flagship Universities, the departments of chemistry and history and their doctoral students were included in the study. Differences in the institutional characteristics of each university generally affected departmental differences between disciplines, with size accounting for the largest difference overall. Commonalities existed within the structural and programmatic processes for the departments, such as the organization of the departments’ fields of study, processes required for degree completion, and administrative hierarchies. Information regarding each program is presented in addition to program rankings in relation to national averages.

The chemistry department at Land Grant University is made up of 28 faculty members, governed by a new female chairperson in the 2004-2005 academic year. The department is made up of eight areas of study, including the traditional divisions of analytical, physical, organic, inorganic, biological systems, environmental, materials, and radiochemistry. With a current population of 49 doctoral students and seven master’s students, the chemistry department at Land

Grant admits approximately 15 new graduate students each academic year. New graduate students begin and remain close in contact with the staff person in charge of graduate studies, with students repeatedly commenting on her assistance to them and her helpfulness in programmatic matters. This department, like all of the others in the study, appears to be divided by subject areas, but the relatively small size of the program allows for graduate students to interact more readily across field divisions.

Flagship University's department of chemistry is large. Consisting of seven divisions within the department, including analytical, biochemistry, inorganic, materials, organic physical, and theoretical chemistry, the department boasts a faculty of over 40 individuals and 170 graduate students. The chairperson and graduate studies advisor of the department have a large responsibility for the coordination of these many efforts and individuals. While the chairperson of this department did not meet with me, I was able to secure a substantial amount of time with the graduate studies advisor, a faculty member who is evidently concerned about the welfare of the graduate students in the department. He works closely with the staff in the department to facilitate coordination of communication for the students and seems aware of the issues that pertain to graduate education overall. Students in this department are relatively isolated from one another due to the field divisions that exist, and the faculty appear equally isolated in this regard. The large size of the program, further splintered by subject divisions, separate the students into their laboratory groups. Students repeatedly comment with concern that they interact only with students in their own laboratory groups and divisions, and rarely with students in other areas.

When contrasted with national averages and norms, the chemistry programs at both Land Grant and Flagship are distinct in size and structure. The American Chemical Society (2002)

reports the average program size to be 84 students and the average size of the graduate faculty as 22, making Flagship's program relatively large and Land Grant's program average among its peers. Ninety-three percent of chemistry graduate students nationally serve as teaching assistants at some time during their Ph.D. program (American Chemical Society, 2002), a statistic that equals the programs at both Flagship and Land Grant, where all students serve initially as teaching assistants during the first year of the program. Nationally, an average of 5.1 years was required for chemistry doctoral students to complete the degree program, something again echoed by the chemistry departments in this study.

The history department at Land Grant is made up of 25 faculty members and nine adjunct instructors. A total of 40 graduate students are enrolled in the department each year, but only 24 of those students are given teaching assistant appointments each year. The department covers nine areas of study, including U.S. history, European, Asian, Latin American, environmental, women's history, public history, world history, and American Studies. The chairperson of the department is an austere man, having served in this role since 1993. Based on my interview with him and comments made by several students, the chairman's connection to the graduate students and to graduate studies in the department appears to be peripheral. The chairperson directs all inquiries regarding graduate studies to the graduate studies director, occupied by a different faculty member in the 2004-2005 academic year. Students in the study repeatedly commented on the former graduate studies director's lack of attention to their needs, so perhaps the new appointment will assist in the overall coordination of efforts in the department. Again, the size of this department appears to facilitate graduate student interaction across subject areas, a point reiterated by students in the study.

Forty-one faculty members, 16 adjunct professors, and nearly 75 graduate students make up the history department at Flagship University. The department is large, consisting of a total of 15 divisions, over which are the broader areas of European, Russian, Asian, Middle Eastern, African, Latin American, and U.S. history as well as the history of science and comparative history. The department touts a highly selective acceptance rate, admitting only 16 new graduate students each year from the over 200 applications received. Also governed by a chairperson, graduate studies in this department instead fall under the purview of the graduate studies office, run by two administrative faculty members. In the opinion of the graduate students interviewed for the study, the relationship between the graduate studies office and the graduate students is often tense. Past issues with funding cuts and allocations have left a rift between the graduate students and the administration of the department, and the divisions between the subject areas further isolate the students from one another.

The American Historical Association (2004) also conducted a nationwide survey and study of history doctoral programs, which places the history programs at Land Grant and Flagship among their peers in regard to disciplinary norms. The study reports a national average of 25 faculty members per department, making the program at Land Grant average among its peers and Flagship's program relatively large in comparison. The American Historical Association (2004) reports average student enrollment at approximately 65 students, making both programs in this study relatively average among their peers. Average time to degree is reported at nine years nationally, a measure repeated by administrators in both programs in the study.

Space and Facilities

Due to the sizes and differences between the institutions, it is not surprising that there is also a disparate allocation of space and facilities. The departments of history and chemistry at Land Grant University are housed within larger buildings that generally encompass several different departments. The history department is located on the third floor of a building that is home to many departments in the humanities and located in the central part of the campus. It is arranged across the floor with many faculty and graduate student offices interspersed, but with little centralized space for general interaction. There exists a centralized bulletin board for graduate student information, including a bulletin board featuring the TAs in the department, which symbolizes the importance of the TA role in the department. The general set up of the space inhibits much interaction between faculty and students, and the halls appeared relatively quiet and abandoned during the time I visited the department.

The chemistry department at Land Grant University, while having much more dedicated space, is spread over an entire building. This arrangement seems to stifle interaction between graduate students and faculty. Located at the periphery of campus, the building has been partially renovated, and the newer portion of the building is much preferred to the older and darker part of the building. There does not seem to exist any congregation space in this department, either, and graduate students generally remain in their laboratory spaces and offices. Near the central department office, however, another bulletin board exists with pictures and names of all graduate students in the department, lending to the belief that all graduate students are equally important to the department.

The facilities and structure of Flagship University, in contrast, are much larger. The history department at Flagship is also located in a building in central campus that it shares with

several other departments in the humanities, but its own space is larger in comparison to Land Grant. Nevertheless, the halls are also empty of interaction between graduate students and faculty, but a graduate student lounge facilitates some interaction between students. Graduate student offices, while relatively few, are scattered throughout the building. One student commented that few classes in the history department are even taught in the building, lessening informal interaction between students and faculty throughout the day. The chemistry department of Flagship, however, is impressive. With a new addition to the original building, the department now occupies two large buildings in the center of campus, as well as several offices in a neighboring building. Many of the students in the study had their offices located in the newer of the two buildings, one that was bright, airy, and welcoming. While there does not appear to exist any congregation space in the department for graduate student interaction, a coffee shop becomes a central meeting place for many of the students in the building beyond their laboratory offices. The chemistry department also features a centralized bulletin board with photos of every graduate student in the department, an overwhelming number when first observed.

Conclusion

The context of each institution studied is integral to understanding the socialization experience of the doctoral students in this study. The institutional, disciplinary, and departmental settings in which these students study combine to form unique contextual and cultural influences upon the student experience. While these settings will be discussed in more detail throughout the remainder of the study, this chapter laid the foundation for a preliminary understanding of these individual contexts.

The following chapters discuss the findings of the study located within these contexts. Findings in this study are two-fold. While Chapters V, VI, and VII detail findings by phase of the degree program, Chapter VIII discusses the overall findings transcending the phase structure. Chapter IX offers final conclusions and recommendations for further study.

CHAPTER V: PHASE I OF DOCTORAL EDUCATION

This chapter details the findings of the study that correspond with Phase I and is organized primarily with a description of the phase, followed by a description of how experiences in the phase are manifested in the institutional, disciplinary, and departmental contexts, and concludes with the personal and interpersonal development experienced in this phase as well. Chapters VI and VII detail findings within Phases II and III, respectively, and are organized similarly.

Phase I: Admission

Phase I is described as the time leading up to admission into the doctoral program until the period when coursework begins. This phase generally only lasts a few months, but according to the students in the study also impresses greatly upon the rest of their program and solidifies their decision to attend one institution over another. Tasks and experiences at this phase include applying to prospective programs and institutions, submitting requisite materials to the programs such as GRE scores, visiting programs, meeting and talking with faculty members, staff, and graduate students in these prospective programs, making a final decision in regard to the program of choice, moving to the new location, and attending orientation. At this phase students are also meeting many of their new colleagues and faculty and settling into their roles as doctoral students before classes begin. In regard to socialization, this time is integral to the rest of the students' experience and marks what is typically referred to as the period of anticipatory socialization (Lovitts, 2001; Merton, 1957; Tierney & Rhoads, 1994).

Institutional and Disciplinary Structures

During Phase I, students face several structural components of their experience that are manifested similarly between institutions, but quite differently at the disciplinary and

departmental levels. This section describes these structural components, supplemented with the students' accounts of these structures and throughout Phase I in general.

Institution and Program Choice

For the prospective doctoral student, the decision to choose one institution and one program over another is based on several different needs and desires. For the students in this study, their decision to ultimately attend Land Grant or Flagship University was similarly the result of several different needs and desires. Land Grant University and Flagship University are located in the same state in the continental United States, but beyond that, share little in common. As previously indicated, Land Grant University is located in a rural part of the state, while Flagship is located in a large, metropolitan area. Land Grant has a total student population of 20,000 in comparison to Flagship's nearly 50,000. This size difference is also translatable to the departments. Land Grant's history department currently has 49 graduate students in their program, while Flagship's current graduate enrollment is 75. Land Grant's chemistry department presently enrolls 49 graduate students in comparison to Flagship's 170.

When discussing their choice to attend their particular institution, many students mentioned the location of the university as a deciding factor. Students at Land Grant were primarily from the neighboring regions in the state and seem to have chosen Land Grant for its location as well as for the connections they had with faculty or the department's emphases. Students at Flagship, however, generally hailed from many other states, with very few of the students coming originally from the state in which the institution is located. These students discussed their institutional choice owing to Flagship's urban location. Students from Flagship repeatedly commented on the opportunities and experiences that this urban locale offered, whereas students from Land Grant often discussed the lack of activities and opportunities outside

of the university. Scott, a chemistry student at Land Grant, comments, “It is pretty isolated here and that was a big frustration for me because I came from a fairly large town. Here we are just in the middle of nowhere.” Brenda, a history student at Land Grant, talks about the location of the university as a detriment to recruiting new faculty to the program. She laments, “Living here is a nightmare.” Michael, another chemistry student at Land Grant discusses location issues related to student recruitment, “A lot of students who come out here see [this town] and they say, ‘Whoa! I don’t want to come here!’ They like the department, but they just can’t fathom the notion of living out here.” In contrast, many of the students at Flagship commented warmly about the location of their institution. Stacy, a chemistry student at Flagship, says, “I love this campus...I love this city.”

While many of the students were drawn to their particular institution for its location, others discussed the size of the institution playing a major role in their experiences in graduate school. The relatively large size of Flagship came across in the interviews as a detractor from the students’ experiences in their programs. Over half of the students interviewed for the study came from small, private, liberal arts institutions for their undergraduate education, and the transition to such a large institution was often difficult for the students. Melanie, a history student at Flagship, plainly remarks, “It was hard to get used to.”

Size also played out in the students’ discussions of relationships with peers and faculty in the program. Students at Flagship repeatedly commented that they knew relatively few people in the program, that they often met people who worked in the department that they had never met, and that they felt isolated from other individuals in the department. Sarah, a history student at Flagship comments, “There’s no sense of community in this department. I don’t know probably 60 to 70 percent of the people in this department.” Stacy, a student in chemistry at Flagship,

says, “You’re mostly friends with your lab group and that’s pretty much it.” Eric, another chemistry student at Flagship, remarks upon the lack of personal attention at the institution, “Being at such a large school, no one’s special; everyone’s the same.”

In contrast, students at Land Grant were pleased with having such close relationships with their peers, the faculty, and having talked to or met everyone in the department at one time or another. Leslie, a new doctoral student in history, comments, “The faculty in the department [are] so open with us and because we don’t have a huge department they really get to know each of the students on an individual basis.” Gloria, another history student similarly remarks, “[The professors have] all been really supportive and really helpful and they’re all intent on making me a better scholar and I think that [in] some of the bigger schools there’s just too many students to do that.”

Prestige

Related to the size and location of each of the institutions, Phase I students were also concerned about the level of prestige that the universities held. While not discussed extensively in the literature on graduate education, prestige or reputation of the prospective institution is an important factor in institutional choice (Kallio, 1995; Poock & Love, 2001). For the two institutions in this study, the level of prestige played out in different ways. Flagship University is a member of the Association of American Universities (AAU), a mark of institutional prestige. Membership in AAU is by invitation only, and presently only 60 institutions of higher education hold this credential (Association of American Universities, 2004). Moreover, Flagship University is ranked in the top 50 universities in the *U.S. News and World Report* (2005) ranking, while Land Grant is ranked in the top 100.

While the issue of prestige came up in nearly every interview, it arose in different ways depending on the institution. Students at Flagship discussed its prestige during the interviews, but often alluded to it negatively, especially within the context of the undergraduates in the classes they taught. Lynn, a chemistry student, when discussing the relatively larger size and prestige of Flagship in relation to its undergraduate population says, “You look at [Flagship] as this prestigious state university, it’s the main state university...it’s the one that’s always held up as this really great place to go and yet...they provide an environment that’s going to turn most [undergraduates] off and they’re not going to learn.” Sarah, a student in history, comments about undergraduate preparation in a similar vein, “This university is being held to a standard of such a great university and that makes me feel kind of ashamed that I’m getting my university degree here. I want to know that the students are of a certain caliber and that’s been disappointing for me.”

Students at Land Grant were equally cognizant of the level of prestige that their institution held, although in different ways. David, a history student at Land Grant, comments on Land Grant’s lack of prestige when thinking about his marketability on the job market, “[Land Grant’s] great, but it’s not Cornell, or Harvard, or Berkeley, or one of those big history programs.” Deborah, another history student remarks on her realization of Land Grant’s lack of prestige when she went to her first academic conference, “Your name means nothing, it’s what school are you fastened to...[Land Grant] in the history world is not a real prestigious place.” History students at Land Grant also commented on what they perceived to be the department’s desire to become more prestigious, and the belief that the means to this end is through recruiting higher-level students, something that rankled many of the students. Deborah comments, “The professors are always complaining about the quality of the students they get, which doesn’t make

us feel great. To have to hear that all the time – how are we going to raise the quality of the students we’re getting into the program – and well, we all think that we’re fine.” Brenda comments about a faculty member’s attitude toward the department’s students, “Basically he’s decided that the students in our department are sub-par and doesn’t give us the time of day.”

Students in chemistry at Land Grant rarely commented on the prestige of the university except to say that the lack of prestige translated into a more hospitable atmosphere. One of these students, Kevin, remarks, “The chemistry department here isn’t as stressful or some other departments that are more, I don’t want to say ‘name brand,’ but at a larger research university, some of those are very, very stressful for the graduate students.” The perceived lack of prestige for the students equaled an overall lack of competition, which they appreciated. Students from both departments at Land Grant commented frequently on the lack of competition they felt must be present at other, more prestigious institutions. Katie, a chemistry student, tells me about her decision to attend Land Grant as being based on the lack of a competitive environment, “That was a big thing. I didn’t want to go to a school that was really competitive and so much stress that you couldn’t do anything else.” Meredith, another chemistry student, remarks, “It’s not a really competitive program. Everybody just kind of does their own thing and are pretty laid back.” Amber, a Phase I student in history, equally notes, “History has a really good environment...there’s not a lot of competition.” Ultimately, the level of prestige and competition in a department make up part of the overall climate that the students experience. This climate, according to Weidman, Twale, and Stein (2001) plays an important role in the students’ socialization.

Admissions

The vehicle for the first formal contacts the student will have with the prospective department and the institution is the admissions process. While many of the students in the study had conducted background research on the programs through the Internet, the admissions process was the time when they made personal connections with either a faculty member in the program or the program staff. In regard to socialization, these early contacts with the department and its faculty and staff factor into the student's anticipatory socialization, which ultimately affects later experiences and satisfaction in the degree program (Lovitts, 2001).

According to the students, the admission process for the chemistry department at Land Grant University is a relatively smooth and easy process. While the majority of the students that choose to attend Land Grant enter immediately after their undergraduate work and remain through the completion of their Ph.D., several of the students began their doctoral programs after they had completed a master's degree elsewhere. Likewise, a small number choose to leave after the completion of the master's degree instead of remaining to complete the doctorate. Land Grant chemistry students repeatedly commented that it was a very easy process to apply to their program in comparison to many of the other schools to which they had applied. Kevin, a student now completing his degree, states, "[Land Grant] had the most streamlined process." Many of the students learned about the program through connections they had with undergraduate advisors and other faculty in their undergraduate programs, thus facilitating entry and admission to the program.

The history students at Land Grant also were satisfied with the admissions process, commenting positively about the process in general. The students in the department equally commented on their choice of the department owing to the connections their undergraduate

faculty had with those at the institution. Todd, who has now graduated, remarks, “The reason that I came [to Land Grant] was because my [undergraduate] mentor got his Ph.D. here.”

The admission processes at Flagship University are relatively similar to those of Land Grant, except in regard to the Graduate Record Examination (GRE) in the chemistry department. Several students in the chemistry department at Flagship were surprised they were not required to take the subject examination for the GRE in addition to the general exam. In some cases, they seemed to believe that this was correlated with a lack of rigor in the program. Similarly, many of the students at Flagship commented on the rating of the department in national reports as being rated lower than many of the other programs to which they had applied. Again, many of the students in both of the programs reported that their interest in the institution had stemmed from connections their undergraduate faculty had with the department. These associations assisted them in forming early relationships with faculty at Flagship, many of whom came to be their advisors upon entering the program.

Recruitment Weekends and Efforts

An additional aspect of the admissions process at both of the institutions was what one student referred to as “courting.” Within both of the chemistry programs, this courting typically occurs during the recruitment weekends and other recruitment efforts offered by the department. These weekends are typically arranged in the spring months, allowing students to visit the universities and to meet faculty, staff, and other graduate students. Recruitment weekends and visits generally include meals, formal meetings with the faculty, and informal social time with those involved in the program. During these events, the doctoral students form initial impressions that often remain through their programs. Again, experiences that occur prior to the

student's admission into the program constitute much of the anticipatory socialization that will later affect the student's overall experience in the degree program (Lovitts, 2001).

One student at Flagship, Stacy, talked about her prospective weekend. Coming from a small, liberal arts university, Stacy felt overwhelmed by the size of the department. She comments, "It was much less intimate of an environment, which intimidated me a lot right away and I was extremely turned off." Even with her primarily negative impressions of the department, however, other aspects of the program and the institution made even greater impressions. She says, "I was very taken aback, but it's funny, though, because slowly but surely throughout the week it grew on me more and more and more, and by the time I left I was almost positive this is where I was coming." When asked about what exactly had changed her mind, this student, and many others like her, discussed the positive interactions with the faculty and other graduate students in the department. Stacy points out, "I got to hang out with some of the current grad students, and they seemed like pretty good people and they liked it here. I ended up talking to my current advisor and really liked the research that he was doing...so that interaction was a big part of it."

Conversely, however, are the students whose negative impressions made early in their experiences stay with them, like Jenny, a chemistry student at Flagship University. Jenny came the summer before her program began to work in a lab and to gain some early experience. This experience, however, resulted in negative interactions with other graduate students in the department. She tells of the senior graduate student in her lab treating her shabbily and her lack of contact with the faculty member for whom she had come to work. About this situation she laments, "I had an absolutely miserable time." This negative experience led Jenny to choose a completely different research group when the time came, whereas other students who came for

these summer opportunities tended to remain in those initial groups. Due to this experience, Jenny missed out on the opportunity to build early relationships with her peers, a factor related to retention and success (e.g., Baird, 1990; Lovitts, 2001).

While both chemistry departments bring prospective students to events like on-campus weekends and summer research programs, this is not typically something that is done in history. However, some students received more pre-admission attention than others in the study. This attention often included things such as personal phone calls and email from faculty in the department, many times offering funding and other incentives to join their program. The students who later found out that certain students had been given this attention often expressed disbelief and even bitterness in regard to the disparate treatment. Steve, now completing his history dissertation research at Flagship, remarks, “Why are they getting this and not me? That was a little off-putting for me.”

Orientation

Each of the departments included in the study offered their students some form of orientation upon entering their programs. Orientation serves the socialization process as it provides not only information about the degree program and structure, but also provides social integration into the department; all important aspects of the socialization process (Lovitts, 2001). In the current study, orientation ranged anywhere from a general university orientation to a more specific TA training orientation for those with appointments, lasting anywhere from two days to an entire week. Overall, however, most students commented on their disappointment with the orientation process, expecting something other than their actual experience.

Students expected to receive more information on how to handle initial concerns upon entering graduate school, but felt overwhelmed with the amount of information “thrown” at

them. Likewise, students commented on receiving information they did not find relevant to their concerns at that time. Sarah, a history student at Flagship who is intending to leave at the end of the quarter, remarks, “You don’t retain 70 percent of the stuff that you learn [in orientation]. You’re handed a million pieces of paper that you’re never going to look at again. It didn’t really help. Did it prepare me for what was about to happen? No.” Even for the students who felt they were prepared for what graduate school had in store for them made comments like, “I knew what to expect in graduate school, but I wasn’t sure exactly what to expect from the department...it’s not a very good orientation,” and “I was expecting a little bit more of an introduction to what you need to be doing right away...so [you don’t have to] flounder in figuring out what needs to be done.”

The students in the study similarly looked down upon TA orientation. Phrases were frequently uttered like, “waste of time,” “poorly done,” and “not all that helpful.” While many of them appreciated the effort made by the departments to inform them of the process of teaching, most felt that any orientation like this would fail to meet their needs as a new TA. Several students who had previously taught in the K-12 system expressed their disdain at the lack of preparation they and other graduate students received in order to teach. Lynn, a Flagship chemistry student comments, “Having been a teacher I was really shocked at how poor it was and how unprepared. I mean, I felt prepared because I had taught before, but a lot of my fellow students hadn’t taught before or had [taught] very little, and it didn’t seem like there was an emphasis on getting them ready for that.” Stacy, another student at Flagship, states, “It was like, here’s how to be a TA and then it’s like being thrown to sharks or something.”

What students did seem to appreciate most, however, in the orientation process at each institution was the chance to meet and interact with other graduate students in their cohort. The

students commented most frequently about this peer interaction and there was an overall consensus that there needed to be more of interaction built into the orientation process. Concomitantly, many of the students expressed a desire for more formalized interaction with the faculty members as this may be the only chance for the students, especially at Flagship University, to ever meet many of these individuals in their programs. Lovitts (2001) found this type of social integration to be extremely important for students' retention, and the work by Baird (1990) similarly reinforces the notion of integration for positive socialization of graduate students in their programs.

Doctoral Student Development in Phase I

Beyond the programmatic structures such as admissions and orientation, doctoral students in Phase I are experiencing developmental issues as well. Similarly, many of the events that characterize Phase I are accompanied by other experiences for the doctoral student.

For many of the students in the study, the stress involved in their first moments in a new program and institution comes from the move itself. Stacy, a chemistry student from Flagship, says, "It was very overwhelming transplanting myself halfway across the country, basically starting my life by myself." Scott, a chemistry student at Land Grant, was discouraged by the process of locating an apartment while being in another city. He says, "Trying to figure out where to live here was my biggest concern."

In this phase, students are also concerned about the general expectations of graduate school, of the program, and their roles in it. This is especially salient for first generation doctoral students, or students who are the first in their families to attend graduate school. One such student is Lynn, a chemistry student at Flagship. She comments:

I think the hardest part for me, anyway, is that sense of really not knowing what the program was. I mean, you've got some documents that tell you what the professors are doing, but I didn't have any family to go to and say, "What's graduate school like?" I don't have any colleagues who have [gone to graduate school]. I came in just totally not sure at all what this was going to look like. I figured I'd probably take some classes, do some research, but other than that I didn't really have a picture of what this was going to be. You don't know how to prepare yourself for it or how to figure out how it's going to fit into your life. So the first couple of months were a little stressful because of that.

While much of the literature that exists on first generation students is focused on undergraduate populations (e.g., London, 1996; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996), more first generation doctoral students are also entering graduate school. The National Center for Education Statistics (2003) reports that more than one-third of all doctoral students in 2002 were first-generation students. At this point, however, no known studies have addressed the experiences of first-generation graduate or doctoral students. The transition to graduate school for these students is often a difficult process and an unknown entity to the student. Jenny, another first generation graduate student, made this comment: "When you go to college [as an undergraduate], you see college on TV and there's college in all sorts of different movies and whatnot and you kind of get a good idea of what college is about, but graduate school is a different beast." James, another first generation student in chemistry, says, "I don't think I would have known exactly what to expect before I got here. I think that is the case for a lot of people going to graduate school; they don't know the questions to ask and they don't really know what to expect and sometimes they're disappointed."

Related is the shift from the expectations of undergraduate education to the new expectations of graduate school. Wendy, a chemistry doctoral student at Flagship rejoins, “The shift from doing something for somebody else, like turning in your assignments to get a certain grade whereas in graduate school it’s really about what you know.” She continues, “You know that you’re going to need to know this one day so it becomes a lot more important for you to do well and it’s a lot more stressful and you spend a lot more time making sure you do a good job.” There were a multitude of students interviewed who expressed similar concerns, especially in regard to making the transition from private, liberal arts colleges to these larger, state institutions. In fact, more than half of the students in the study came from private, liberal arts undergraduate backgrounds. It was therefore telling to hear how many of them felt overwhelmed by the completely new atmosphere of a large university and large department. Lovitts (2001) discusses similar findings with her study, commenting that the anticipatory socialization these students experienced in their undergraduate programs did not align with the actual experiences they encountered once in graduate school, then resulting in less than satisfactory experiences later in their programs.

Conclusions and Recommendations

The premise of this chapter was to establish the first of my three-phase model of doctoral student socialization. The transitions and important landmarks of the three phases correspond to the models of doctoral student progression developed by scholars such as Lovitts (2001), Tinto (1993), and Nerad and Miller (1996), while adding to them the personal and interpersonal development that occurs simultaneously with the programmatic experience. It should be noted, however, that my point in this model is not to necessarily delineate a rigid structure or progression that all students must and will follow, but to focus on frequently occurring

experiences that affect these students at certain key points in their programs. By better understanding these experiences and their typical occurrence, students, and the faculty and staff that work with them can be better prepared to address them and to offer solutions and structures to combat the typical pitfalls that occur as well as assisting in a better socialization experience.

For example, for students in Phase I, ensuring open and consistent communication with students is integral for their success. Staff and faculty in communication with these students should be friendly and knowledgeable and should be able to point students to the needed resources and information required. Concomitantly, departmental web sites and associated literature should be clear, consistent, and easily accessible by students.

Initial communications with students should also be thoughtful and helpful. Disparate treatment of students or favoritism of one student over another in Phase I can later become issues of conflict between the student and the program staff or even between students, if it is known. Similarly, ensuring that students have key contact people with whom to communicate in this initial phase of their programs is important when problems or conflicts arise. Early problems and conflicts can often spell a disillusioned student later in the program.

Orientation programs should be developmentally appropriate and address the concerns that students consider most relevant and should be accompanied by documentation and resources that students can later access. A one-shot orientation program, as the students in this study can corroborate, is neither helpful nor appropriate as many of these students are feeling overwhelmed by their new environment and what they consider to be the ambiguous expectations of graduate school. Therefore, an initial orientation for new students should only address the issues that are most clearly relevant to them in their first days in the program. As the program continues, orientation information can be disbursed or shared with the students that meet later occurring

needs and concerns. In this way, the orientation becomes more of an induction program, as it will continue to support students throughout their degree programs rather than only for a few hours in the beginning of it.

Peer mentoring programs, to be discussed in more detail in the following chapters, can also be extremely helpful to the new doctoral student. By pairing new students with veteran students early in Phase I, new students have a contact within the department who may be able to answer many of their questions, provide needed advice, and offer general support to them throughout this tenuous time in their experience.

Finally, students in Phase I must be watchful and wise consumers of the graduate experience. Institutionally, location and size were important parts of the decision-making process for these students to attend their respective universities, but size can also play a detrimental effect on the students' experience. For the students at Flagship University, the large size of their programs, and the large size of the institution in general, isolated them from program faculty as well as other students. These students felt overwhelmed by the size of their program, while students at Land Grant were satisfied with the smaller sizes in their departments. While programmatic and field divisions will separate students and faculty from one another in any discipline, more awareness of program size at the graduate level is needed. Program size influences the potential relationships these students will form with the faculty and their peers, and as previously noted, these relationships are extremely paramount to socialization and success in graduate school (Baird, 1990; Bargar & Mayo-Chamberlain, 1983; Lovitts, 2001; Tinto, 1993).

Location was equally relevant in the discussions of each of the institutions in the interviews. It appears that the isolated, rural location of Land Grant played out as a deficit to

many of the students in the study and their perceptions of recruitment issues related to its location, whereas the more exciting, urban location of Flagship was a relative advantage for the students who attended that institution. While, obviously, Land Grant is unable to change its location to satisfy students, many of the students also commented on the proximity of Land Grant to family, friends, and hometowns. Its role as a regionally serving institution appears to be the major draw for many students at Land Grant, and this service may need to be emphasized more often as an asset rather than a detriment for the departments, especially in the department of history. Moreover, there are prospective students seeking quieter, rural locales for their education; appealing to these students in regard to location may be another strategy needed for recruitment at Land Grant.

Analysis of the prestige of the institutions held several interesting and unexpected findings. Students at Land Grant, while aware that their institution did not necessarily hold much prestige, were nevertheless more satisfied with their experiences in this regard than Flagship students. This ever-present awareness of prestige and ranking is something that has concerned higher education scholars for some time (Boyer, 1990; Clark, 1987; Shulman, 2000), and as has been shown in this study, prestige does not necessarily relate to better educated or more satisfied students. Perhaps it is better for institutions to begin to focus on the strengths they have to offer students, such as smaller program sizes and the intimacy of the department, rather than ranking systems that do not reflect the totality of the graduate experience.

Furthermore, seeking out information and establishing contacts within the prospective program will be helpful to sorting out much of the confusion and trepidation that accompanies this phase. Many of the students in this study also recommended consulting peers for much of the information and advice that would have helped them at this phase. Choosing an institution

and graduate program is a daunting process, but one made easier by attaining the appropriate information and advice from others knowledgeable in this area.

Phase I completes as the student formally begins his or her program and coursework. A discussion of the findings of Phase II continues in the next chapter, along with the programmatic structures and student experience that characterize this time of the doctoral program.

CHAPTER VI: PHASE II OF DOCTORAL EDUCATION

Phase II: Integration

Phase II generally encompasses time in coursework, but also represents much of the social and academic integration that the students will experience. During Phase II students also prepare for the final phase of their program, their candidacy, which constitutes preparing for and taking the candidacy examinations and accompanying rites of passage such as the oral defense. Overall, Phase II encapsulates an important part of the students' experience and socialization as they become integrated into the program, take on the work that characterizes their discipline, and prove their competency to others around them. Much like Chapter V, this chapter details the findings that make up Phase II, including how these findings differ by institution and disciplinary setting, followed by other developmental issues relevant to the students in this phase.

Institutional and Disciplinary Structures

Phase II encompasses the time after which the doctoral student begins his or her actual program through the onset of candidacy status. This phase includes not only the coursework, but the other parts of integration into the program, including social integration with peers and faculty, the eventual choice of an advisor and committee, preparation for examinations, and, for many students, the experience of an assistantship. Altogether, these formal and informal gateways through which the student must pass mark important parts of the overall socialization process (Rosen & Bates, 1967).

Coursework

Within each of the programs, students are expected to complete a specific number of graded coursework credits in order to earn the degree. In regard to socialization, coursework encompasses the formal knowledge that characterizes the student's chosen discipline (Weidman,

Twale & Stein, 2001). At Land Grant University, the amount of coursework is governed by the institution's graduate school, calling for a total of 34 graded hours of coursework, followed by a minimum of 20 credit hours of research. Within the history department, this amount of credits stands solely as a minimum requirement. The students in the chemistry department, however, repeatedly expressed their concerns regarding what they considered to be an excessive amount of coursework required for their degree. When compared to Flagship's requirement of only 18 credit hours of coursework and the national average of 22 credit hours (American Chemical Society, 2002), Land Grant's requirements do appear excessive.

Coursework in the chemistry Ph.D. programs at both institutions encompasses mainly the first year of their programs, whereas the history students generally spend the first two years working on their coursework. These courses include general requirements across each of the departments as well as specialized coursework in their chosen fields, seminars in their areas of study, and in the case of students in history, many independent studies. Especially for the history student in less popular fields, independent studies can make up the majority of the student's coursework experience. This experience leaves students feeling isolated and unhappy with their coursework. One student, who is choosing to leave her program due to this isolation comments:

I do a lot of independent studies because...there's only one, maybe two people [in my area of study], so basically what we do is our own thing. I read my books, I go have an hour meeting with my professor, write a paper, and that just sucks. Most of the students take classes [that enroll] eight people and they get a lot more interaction with each other. I just don't have that.

Overall, however, most of the students in the study were satisfied with their coursework, generally commenting that it more or less aligned with their expectations. They felt their

coursework was an important part of their experience and readied them for future professions. Denise, a chemistry student at Land Grant, remarks, “I think the classes we take are just really good classes. They make me feel like I’m learning all the right stuff.” If there were concerns about the coursework in the program, these concerns stemmed from what they felt to be either a lack of rigor in their coursework or, in the opposite extreme, an unrealistic expectation in regard to assigned work. Elaine, a history student at Flagship, comments, “One or two of them were useful, but other than that I think they were pretty much just a waste of time.”

The Assistantship

Another experience that was a typical part of the doctoral experience for the majority of the students in the study was that of the teaching or research assistantship. The literature on graduate education discusses the importance of the assistantship in the overall socialization and satisfaction of students in their degree programs (Ethington & Pisani, 1993; Lovitts, 2001; Nyquist & Wulff, 1996; Perna & Hodgins, 1996). The teaching assistantship (TA) appointment, funded by the department, generally encompasses working with a faculty member and assisting him or her with preparation for classes, grading of student assignments, assisting in study sessions, and possibly, as in the case of the chemistry students, in leading laboratory sections. The research assistantship (RA) appointment, not typically present in history departments, generally consists of the student working on a research project funded through the principal investigator, which in the case of the chemistry departments, will eventually become the student’s advisor.

While not all students will receive an assistantship as part of their financial support from the department, most of the students in this study had this appointment as part of their experience. Within the chemistry programs, the TA appointment was given to all incoming

students for their initial year of support in the department, with some appointments extending beyond the first year if there were funding issues in the chosen research group. In each of the history departments, the assistantship appointment is always at the level of TA. However, a shortage of TA positions in both departments left students feeling disgruntled and concerned about future appointments.

As one would gather from the disparate cultures of history and chemistry, while the TA appointment in history was a highly coveted position, many of the chemistry students felt the TA appointment to be a distraction from research. By and large, chemistry students were pleased if they were able to leave their TA appointments early, or were displeased if they had to TA beyond the first year. The TA experience in each of the history departments was a mark of status and even of existence within the department. One student commented, “Once you’re a TA you’re brought into the system more. If you’re not a TA, you’re ignored. There’s no identity to you if you’re not funded.”

For many of the students, however, the TA appointment became part of the overall workload balance they had to manage, with many of the students commenting that 20-hour per week expectation for the TA appointment was far from realistic. In the history department at Flagship, recent changes in the funding structure for TA appointments resulted in what came to be known as “Super TAs,” or TAs that served solely as graders for large lecture classes, with these students having to grade 70 to 80 undergraduate papers each week. Overall, however, the TA experience was looked well upon by many of the history students at each institution, with many of them commenting that it was this experience that made them want to continue teaching in the future and to find an academic position at an institution that emphasized teaching. In this regard, socialization into the academic profession was an important part of their TA experience.

While not a common part of the graduate experience in history, the research assistantship (RA) is the coveted appointment for chemistry graduate students immediately upon entering their programs. Many of the students in both chemistry programs in the study desired to enter into their RA appointments as soon as possible in their programs, as this appointment generally signifies the beginning of their work on the research project that will ultimately lead them to a completed dissertation. The RA appointments in the chemistry departments are provided through the student's advisor, or what the students generally refer to as their "boss," as part of research grants that are procured to pursue a particular project. Unlike RA appointments in other disciplines, research assistantships in the sciences are typically conducted in laboratory groups, thereby giving the student immediate access to a peer group who will become an important part of their graduate experience.

Peer Interaction

In Phase II students are also interested in forming relationships with their peers. Peer relationships in the academic department are an important part of the socialization process in graduate school and are central to satisfaction and retention (Baird, 1990; Boyle & Boice, 1998; Lovitts, 2001). Lovitts (2001) states, "Other graduate students make an important contribution to individual students' learning experiences. They are a significant source of intellectual stimulation and social support both inside and outside the classroom" (p. 126). In the current study, this social integration and relationship building occurs as the students move through coursework and their TA positions. The students build friendships and bonds with their peers through these experiences, which they consider one of the most important and valuable parts of their graduate experience. Melanie, a history student at Flagship comments on how her TA experience assisted her in developing relationships with her peers: "It helped a great deal when

you're a TA because you sort of have a built in cadre of people that you interact with because you see them at training, you share offices with them, you see one another in classes and you see them once a week for two hours." These relationships are extremely important to the students.

Many of them made comments like Steve, another history student at Flagship:

They're at the same level you are, they've experienced some of the things that you're experiencing now, or they've experienced it before so they can tell you what to expect and you can interact with them. There's not that social distance that exists initially between graduate students and faculty members because of the difference in status. I immediately fell upon other graduate students as a sort of support group.

Eric, a chemistry student at Flagship, similarly comments, "The most important people [when I began] were my fellow students." Repeatedly, the students in the study commented on their peers, the support they receive from them, and how important these relationships were to them throughout their programs. The support the students received from their peers was mentioned over and above any other type of support, even that of their advisor. Indeed, the literature on socialization discusses the importance of peers in graduate student success, as this relationship is often more influential than that the students have with the faculty (Bragg, 1976; Van Maanen, 1978; Weidman et al., 2001).

Another aspect of graduate student interaction in each of the departments is through formal graduate student organizations. Research has shown that involvement in activities such as in co-curricular organizations positively influence student learning and retention (Astin, 1984). One such organization is the history graduate student organization at Flagship University. A doctoral student member of the organization explains its purpose: "The goal is, for the history department and for the faculty especially, to have a certain group of students they can turn to

when there are departmental matters that they want graduate student feedback on.” These elected students are also given the chance to sit on faculty committees, have a voice in faculty hires, as well as organizing social events with faculty and students each month. A year ago, the organization conducted a satisfaction survey with the graduate students in the department in order to better understand the issues and concerns at hand. Each of the departments in this study had a similar graduate student organization, but to a lesser degree than the history organization at Flagship. Nevertheless, these organizations offer the students not only social outlets for interaction, but peer-mentoring opportunities and professional development experiences such as seminars. Baird (1990) states the importance of this type of interaction as it relates to the socialization process: “One effect of greater interaction with other graduate students seem[s] to be greater commitment to the field” (p. 377).

A great deal of informal social interaction also occurs in each of the departments studied. Within the chemistry departments, this interaction is centered around the lab group in which the student is situated. These students spend large amounts of time with one another, often reaching 60 to 70 hours a week. The interactions these students have with one another are one of the most important parts of their overall graduate experience, with many of them commenting on the mentoring they received from their more advanced peers in their labs. Lynn, a chemistry student at Flagship, remarks, “The main resource [for me] has been the students who are one year ahead of me, being able to go to them and relying on their experience.” The work in chemistry, as well as the relationships these students form, is highly group-centered and collaborative. At both institutions, nearly every chemistry student commented upon their reliance on their peers for assistance and support. Rebecca, a first year student at Land Grant, tells me, “One thing that has

been helpful, especially in my first few weeks here, is talking to the other grad students in the group. They have been through everything I'm doing now so they can help me out in that way."

Many of the students similarly discussed their choice of a lab group as being based on the graduate students in the lab rather than the faculty member in charge. Peter, a Flagship student, explains, "For me it's less about the advisor and more about the research group. I mean, you're going to be spending at least 40 hours a week for the next four or five years of your life with the several people that are in your research group so if you like the advisor a whole lot but don't like the research group members, you're not going to have a fun time." Maya, another Flagship student, concurs, "Make sure you like the advisor, I guess, but more important, I think, is that you like the group you join because of course the advisor is important but you work less with them than the people in the group."

Faculty and Advisor Interaction

Doctoral students are concurrently developing relationships with their faculty in this phase. For most students it is during this phase when they will choose a faculty advisor and committee. Through the courses they take with faculty members and through informal interactions, the students ultimately choose the people with whom they will have extremely important relationships for their remainder of their programs and beyond. This relationship, according to Melanie and many of the students in the study, is "the most critical relationship you'll have in this program." It is not surprising, therefore, when students express concern about the lack of opportunities to interact with the faculty during this phase. Steve comments, "I think there ought to be some greater interactions initially between students and faculty. I mean, I still run into faculty members I don't even know." Sarah has similar concerns: "I felt very distant from the faculty; I still do. The faculty aren't really involved with the new students unless the

new students really seek them out and I think that sends a really negative message to new students.”

In each of the departments, the time and process for choosing an advisor is completely different. Commented on frequently in the literature and by the students in the study as one of the most important decisions a graduate student will ever make (Bargar & Mayo-Chamberlain, 1983; Clark & Corcoran, 1986; Fischer & Zigmond, 1998), choosing an advisor and making connections with faculty is an important part of the socialization process in graduate school (Lovitts, 2001). For doctoral students, the correct choice of an advisor can signify retention, higher satisfaction in their degree programs, and successful careers in the future (Lovitts, 2001; Clark & Corcoran, 1986). Advisor choice in the departments studied can range anywhere from a decision made as the student is applying, in the case of the history department at Flagship, to a decision made later in the first year of the program, as in the chemistry department at Flagship. As per the culture in chemistry, the choice of advisor is not merely the choice of one individual and subject area with whom the student will work for the remainder of the graduate program, but a choice of the peers with whom he or she will also work. Therefore, while the choice of an advisor is a major decision for all graduate students, it is certainly a more daunting one for the chemistry students in this study as they choose not only their advisor, but their peer group as well.

To facilitate the choice of lab group, the chemistry department at Flagship requires students to seek out and speak with five faculty members in charge of prospective research groups that they might like to join before making their final decision. This decision generally has to be made before the last quarter in the students' first year. This, of all the departments in the study, is the most structured and assisted process for the students in making their advisor

choices. At Land Grant University, advisor choice in the chemistry program is facilitated through departmental seminars at the beginning of the fall semester in which each faculty member presents his or her research for a short period of time to the new students. Students are encouraged to have follow-up discussions with prospective faculty members and to even spend time in the lab group to assure best fit. Nevertheless, the students are expected to have finalized their choice of advisor and research group within their first year, generally by the beginning of the second semester.

The history students in both departments are expected to choose an advisor upon application to the program, and the relationship between the advisor and the student is expected to grow throughout the student's experience. The discipline of history, like many in the humanities, is traditionally isolated in its work and research (Nerad & Cerny, 1993). Students in history are therefore highly dependent on their advisors for guidance, mentoring, and understanding of the expectations in the program. In each of the departments studied, students studying relatively obscure fields often commented on their palpable sense of isolation. June, a Flagship history student, remarks, "I would like to have more students in my fields because I have had to do a number of independent studies which is probably one of the reasons that I've got such great relationships with my professors because I work one-on-one so much. I think I'm the only one in my particular field."

Relationships with faculty members are extremely important to the history students. While the chemistry students remarked more often about their reliance upon one another, the history students expect and demand a certain quality of relationship with their faculty that is characterized by a close, personal relationship in which the student and advisor see each other on a regular basis. While many of the history students also discussed their dependence on their

peers for guidance, it was their general expectation that their faculty and advisors would supply the main advice and guidance for their experiences. Correspondingly, students in both of the history departments were distraught by the lack of contact with their faculty and advisors, particularly during sabbatical leaves. Students repeatedly commented that contact time was a major influence on a positive relationship with an advisor and that a supportive advisor was often more important than having an advisor with a particular research interest, and that, furthermore, without such a relationship, their entire graduate education experience is difficult. Melanie, a Flagship history student, comments about choosing advisors, "It's the most critical relationship you'll have in this program. If you are miserable with your advisor, you will be miserable in graduate school." Sarah, another Flagship student, similarly remarks, "Try to be as careful as you can because in the end, no matter how exact your research interests may be if you can't maintain a good personal relationship, you're going to be miserable."

Staff Interaction

Another relationship formed during this phase, but not discussed in the literature, is the relationship these students have with staff members in the department. This relationship is often overlooked as staff members are generally regarded as invisible to the larger academic culture. Staff may work with the students to understand requirements or may make keys available to them for their offices, but in whatever capacity they serve, these students' interactions with these people are also important to them and their success in the program. While students at Land Grant talked positively of their interactions with the staff members, the students in both departments at Flagship were unhappy with these interactions and expressed disdain regarding their relationships. Dean, a history student at Flagship, remarks, "We don't feel we have good interactions with staff. They're totally unresponsive most of the time, they cop an attitude with

graduate students and people get really offended by that.” While the reason for this discrepancy between institutions is altogether unknown, the relative difference in size between Land Grant and Flagship may be relevant. Therefore, while not often discussed, relationships with these members of the department are as important to doctoral students as all the other professional relationships they make during their time in the program.

Examinations

After forming these relationships and working through their coursework and other responsibilities, the students then begin to focus on their examinations, which tend to occur during or near the end of their second year in the program. The examination process marks the end of Phase II, as students thereby gain candidacy status. Preparation for their examinations is a major concern for students in this phase and one that causes a great amount of stress for them, a point confirmed by literature on the topic (Baird, 1990; Bender et al., 2004; Berelson, 1960; Lovitts, 2001). Grace, a first year student in her history doctoral program comments, “Everyone I talked to and everyone I’ve known that’s taken [the exam] says it’s the worst thing in the world and you have all these doubts like you’re not going to pass and it’s really a hellish time.” The use of words like “hellish” and “miserable” were generally used to describe the examination experiences, with some students discussing their need to seek counseling and take anti-depressants to get through their examination stress. This phase was the most stressful for a majority of the students, and for the students who were planning to leave or had considered leaving their programs this was the phase at which they chose to do so.

The examination process in each of the departments consists of a relatively long written examination generally followed by an oral examination with their committees, and in the case of the chemistry programs, with their peers and other faculty members as well. In the history

programs, there is not only a comprehensive or qualifying examination that must be passed, but also a language examination in many cases. At Land Grant, history students must pass at least one foreign language exam, and in the case of the students studying foreign history, sometimes two. This language exam is a major point of contention to the students in this department, with many of them commenting that it slows their progress and is often a wasteful process if the language is not required for their research. This process is more narrowed at Flagship, and many of the students can bypass the language requirement upon entering the program with their undergraduate work; only those students requiring foreign language for their research are expected to complete additional requirements.

The general examination process is a lore-laden process in each of the departments, with many rumors and fear instilled into the students' earliest days in the program mostly by the veteran students, resulting in a stressful and dramatic process. Paul, a chemistry student at Land Grant, says this about his perceptions of the examination process: "It seems like what they want to do is scare you into studying really, really hard. I'm not sure I'll be ready for it." Once completed, however, the examinations are much less daunting in retrospect, and sometimes even a disappointment after the students' constant worry and stress. Kevin, another Land Grant chemistry student, remarks, "It seemed like an impossible task at the time, but looking back at it, it's not that bad." Jenny, another chemistry student from Flagship, similarly comments, "I was so nervous, but it was anti-climatic. It was like, don't I get a ribbon or applause or something?"

Overall, however, many of the students were uncertain of the purpose of the examinations, with the process itself remaining unclear to them even during the examination itself. One student in history at Flagship, Steve, commented, "I saw it as a hoop that I had to jump through." Nevertheless, according to the students interviewed, a sufficient number of

students in each of the departments had not passed the examination during their tenure in the program, resulting in the students' apprehension in regard to the exams. While students who failed the exams were given opportunities to retake them or to address unsatisfactory areas of performance, other students left the programs at this point in feeling that they might not want to repeat the process.

Doctoral Student Development in Phase II

Beyond the general programmatic expectations and relationships these students form, Phase II also encompasses much personal and interpersonal development in the students' experience. Similarly, Golde (1998) discusses the four tasks of initial socialization to graduate school, including intellectual mastery, learning the realities of graduate student life, learning about the chosen profession, and integrating oneself into the department. Much of the personal and interpersonal development that the students in this study discussed centered around these socialization tasks.

Once they begin their programs, the main concern for many of these doctoral students is their ability to do the work and, as one student explained, "to prove yourself." Many of the newer students expressed concerns like Meredith: "I thought I knew exactly what I was getting into, of course once you get there it's always a little bit more overwhelming than you anticipate. The first semester was pretty stressful, you know, am I supposed to be here kind of thing." Wendy, a chemistry student at Flagship intending to leave at the end of the year, also remarks, "I think that a lot of people coming in just feel overwhelmed, they're like, 'Oh my God, I'm not smart enough to be here, there's no way.'" Another student, Ruben, talks about his experience as he returned to graduate school after a long absence: "I was somewhat intimidated by the students, by their intellectual ability; I've been playing some catch up since then."

For Stacy, the difficulty came in dealing with what I term the “big fish syndrome,” wherein the students who are accustomed to being at the top of their undergraduate programs suddenly find themselves competing with others with similar backgrounds. She says, “It became very apparent to me that it was very hard and that I was no longer at the top. I was average at best and that was something that was difficult for me initially.” Meredith, a chemistry doctoral student at Land Grant reiterated this concern: “I think it was more about me trying to meet my own expectations that was difficult.”

Once coursework begins, the immediate need is to not only complete the work but to balance the workload with the other duties of a new doctoral student. The issue of time and balance is one discussed further in Chapter VIII, but also appears to be a salient concern during Phase II. Pamela, a phase three student in chemistry at Flagship says, “The first quarter was rather stressful and difficult because we had homework every week and tests.” Amber, a new doctoral student in history at Land Grant talks about balancing the workload in her courses: “The first few weeks were really stressful because you’re trying to figure [it all] out. You get all the stacks of reading and you try to figure out how in the world you’re ever going to read this and adjust.” Scott, a second year student in chemistry at Land Grant, comments, “I am figuring out what kind of time I have to commit, how much time I don’t, and how to budget my time.”

Students also talked about Phase II as being a time when they began to doubt themselves and their abilities as a graduate student. These doubts and concerns resulted in at least four of these students seeking professional help and taking anti-depressants to deal with the stress. Sarah, one of these students, was distressed during her first few months in graduate school. A history student at Flagship, Sarah is planning to leave her program at the end of the quarter. She tells me, “Graduate school slowly started picking me apart...I called my parents and cried

because I just couldn't deal. I wasn't sleeping – I had total anxiety all the time. It was humiliating and I realized I had to go get help and for me going to talk to a total stranger and saying I have problems was the worst thing ever, like I failed as a person, like I can't keep my shit together, you know?"

Conclusions and Recommendations

Phase II consists of several major programmatic events as well as many developmental concerns for the students in this study. Phase II students are chiefly preoccupied with doing well in their coursework, balancing their many new responsibilities, and forging positive relationships with their peers and their faculty, from whom they will make the important choice of advisor and committee, as well as preparing for the examination process.

Departments and program staff can assist students throughout this phase of doctoral education by structuring opportunities for interaction and providing necessary information. For example, Phase II students require consistent interactions with one another as well as with faculty and staff, and the process for choosing advisors and committees should be a structured and assisted experience. The relationships these students forge with faculty and their peers are important and necessary bonds that need to be encouraged and facilitated by the students and the departments as well. In chemistry, the bonds these students make with one another are integral to their success in their lab groups and assisting them in this selection as a more formalized process may be of value to these students. Several of the students mentioned the idea of lab rotations, in which students would get a chance to join several groups for short periods of time during their first year in order to make a more informed decision. Social events and other departmental activities such as brown bag discussions should also be organized in order for

students to meet more informally outside the classroom and to meet potential faculty advisors in a more interactive environment.

In the history departments, students should also be encouraged to interact regularly with their peers in more informal settings in order to facilitate the needed bonds between graduate students. However, these students also require more interaction with faculty than the chemistry students appear to need. The relationships these students will make with their faculty advisors are important to their success and satisfaction in their programs, and as such, should be encouraged and facilitated throughout the graduate program. For example, as many of these students were required to choose their advisors upon application to the program, more information and opportunities to meet and connect with potential advisors should be encouraged, or the process should be delayed altogether. Furthermore, there were several students who felt like their relationships with their advisors had gone awry but did not feel they were easily able to change advisors due to the perception that this decision might negatively affect their degree progress or their future prospects in the field. In both history departments, the guidelines and paperwork required for changing advisors is not clearly detailed in any of the documentation, and when referred to at all, is done so in a very cursory manner. Therefore, policies regarding advisor changes should be emphasized to students, and faculty members should be open to the possibility that changes, when needed, are required for student success and satisfaction.

Similarly, the department should facilitate structured and informal opportunities for interaction with faculty and other graduate students not only throughout the first weeks of the semester, but throughout the students' programs. Additionally, providing peer mentoring structures and collective office spaces for students will assist them in forming the greatly needed support among their peers.

Feeling a level of competence in their work is also essential to doctoral students in this phase. To facilitate this, students should receive regular updates and feedback from their faculty and departments on their progress, and structured opportunities to gain this feedback from their advisors should be part of departmental protocol. Equally, the examination process should be demystified as much as possible for these students as well as a general evaluation made by a group of faculty and students of the process overall. Research in education has shown that high stakes examinations are not pedagogically appropriate (e.g., Kohn, 2001), and since many of the students did not see this experience as a relevant part of their education, the process itself must be redefined and evaluated if it is to continue.

Students during Phase II should also be aware of their responsibilities within their doctoral programs. Seeking out information and clarifying processes can be facilitated through peer interactions and by consulting knowledgeable faculty and staff. Similarly, attending departmental events and student get-togethers can assist them in developing important relationships in their programs. Several of the students in the study also commented on the overwhelming amount of negativity and fear that was shared by veteran graduate students in their programs regarding the examination process. These students felt that it was often necessary for them to avoid negative commentary as much as possible as it did little for them besides instilling more fear of the process.

As students move through Phase II into Phase III, or candidacy, they experience a new set of programmatic structures and challenges that are detailed in the following chapter.

CHAPTER VII: PHASE III OF DOCTORAL EDUCATION

Phase III: Candidacy

After dealing with the structures and tasks of Phase II, students move into the final phase of their doctoral experience. Phase III marks the period after which students have passed the examinations, or candidacy status. At this phase, students are focusing primarily on their research and looking toward the future. Programmatic structures in this phase include the dissertation research, generally consisting of an early proposal for research typically completed during the examination process in Phase II or a brief prospectus completed soon after the examination process is completed, as well as the actual conducting of the research, the writing of the findings, the preparation for the job search or post-doctoral appointment, and concluding finally with graduation.

Institutional and Disciplinary Structures

The main tasks associated with this phase of the students' programs include those related to the dissertation and the preparation for the future career. The institutional and disciplinary structures in Phase III transfer directly to the students' socialization as they learn to write and present themselves to the profession and discipline. Katz (1997) discusses the dissertation process as "an intensive, highly professional training experience" (p. 6). She continues, "Successfully completing a dissertation demonstrates the candidates ability to research a major intellectual problem and arrive at a successful conclusion independently and at a high level of professional competence" (p. 6). Therefore, the successful completion of the dissertation translates to the successful socialization of the student to the profession.

Dissertation Research

After successful completion of the examination process, students are admitted to candidacy status and able to begin work on their dissertation research. According to the students, and the program handbooks, the preparation for the research phase is at times incorporated into the examination process, but is more often a separate proposal process that occurs once students complete the exams. In the case of the history and chemistry departments at Land Grant University, students are required to complete a dissertation proposal, generally only consisting of a few pages, which they will discuss with their committees before the research commences. In the history department at Flagship University, students are generally given a question on their examination that refers to their research, facilitating the process of the dissertation. This also occurs in the chemistry department at Flagship in their examination process, with many of the students already beginning their research in the earliest months of their programs.

Data Collection

Once the research topic and plan has been approved, students then begin the process of collecting data. In the discipline of history, this is often the lengthiest as well as the most solitary portion of their programs. These students often travel to different parts of the globe to spend months and often years in archives sorting through documentation and personal contacts to formulate their research. This time abroad requires large amounts of financial support, as many of the students will have exhausted their TA funding by this point, and in most cases must be away from the campus for an extended period of time. Students in the study often discussed the early search for this funding, generally before their examinations were taken, in order to secure it by the time the research phase approached. There is generally no finite amount of time in which

these students can expect to complete their research, and as stated previously, this time can stretch on for years.

Chemistry students at both Land Grant and Flagship have similar experiences in regard to data collection. Since much of the research these students choose for their dissertation begins well before the examination process, chemistry students must find a piece of that research that they and their committees feel will likely produce results. Students in the study often commented that if an experiment does not work, they have often lost many months and even years in the process and must begin again with a new project. One such student, Eric, at Flagship talks about his biggest stressor: “I’m really worried that what we’re trying to do might not work.” Students also repeatedly discussed the need for patience in the scientific process and hoped their own research would produce fruitful results in the end, like Michael at Land Grant, who was frustrated initially by the scientific process. He says, “I’ve been struggling because at certain points in my graduate time here I’ve had to sort of sit down and redefine where I’m going in my thesis because my initial project was just completely abandoned.”

The Writing Process

As the students’ data collection concludes, they begin writing their results in a variety of formats. In the chemistry departments, the students may choose to work on several journal articles that they are simultaneously trying to publish and incorporate into their dissertation. While a few students in the chemistry departments choose to write a traditional dissertation, most of the students work toward collapsing several of these articles into the document that will ultimately become the dissertation. In history, students are expected to publish their dissertation as their first book, which often delays the completion of their programs. While some of the students in the study expressed their enthusiasm over their dissertations already having been

accepted for publication, other students seemed stymied by the expectation for immediate publication and simply desired to finish. Elaine, a student at Flagship, discusses her frustration with her advisor's pressure to publish: "I want to write it and get it done. I'm not really interested in whether or not it gets published or it's publishable, whereas my advisor's more like just sit down and write the book or whatever."

In either case, the process of writing the dissertation is often a lengthy one, requiring many drafts, much editing, and collaboration with committees along the way. In the chemistry programs, the students discussed writing their findings as several journal article style documents, whereas the history students write the dissertation in book form. The time required to write the dissertation in each discipline varies widely, depending on the student's writing abilities and, often, their motivation to complete the project. While several students in chemistry discussed writing their entire dissertation in a span of a few months, many history students talked about a series of years needed to complete the writing.

Speaking with the students who have completed the dissertation, these students are content, but nevertheless exhausted, and look forward to beginning their careers. This time is also a stress-laden period for the students, one that many of them feel unprepared to tackle. Todd, a history student at Land Grant, discusses writing his dissertation: "You hear people talk about the light at the end of the tunnel and I wasn't seeing it...just feeling like the wheels were turning but I wasn't getting anywhere." Brenda tells of her experience, "Basically just sitting there and trying to find the answers and sometimes the most frustrating part about that is that there is no answer to the question and how do I fill in that blank?" Claudia, who recently completed her history degree, also speaks to the writing process. She says, "When I needed to

get something done I go crazy until I get it done – that’s why people complete the Ph.D. program because they can’t do anything else.”

The Job Search

Another obvious part of the last phase of these students’ programs is the job search. In the discipline of history at each of the institutions, the academic career trajectory is frequently a foregone conclusion for many of the students, if not for their advisors. Students who were planning to pursue any other type of career, such as public history in the case of Grace at Land Grant University, and academic publishing in the case of Elaine at Flagship, felt much resistance from the department and their advisors regarding this decision. Elaine comments, “I have become less and less interested in getting an academic job after I finish and I think that’s been frustrating for my advisor who has all this time been trying to school me for some teaching position at a university.” Equally, students were concerned about the issues related to the glutted job market in the humanities and their prospects of finding an academic position upon graduation. Steve, a Flagship student, says, “I don’t tell my advisor this; I don’t tell him this because I know how he would react if I told him, but I’m not convinced that I can get a job in academia. Which is not to say that I’m not capable, but with the competition so high and all that, I think it’s important for historians to break out of academia.” David, a student at Land Grant, similarly comments, “The job market for history Ph.D.s and M.A.s right now is so incredibly atrocious. I tried to have these conversations with other grad students and they’re *completely* oblivious – they have absolutely no idea how bad the job market is...they have no idea. A lot of these people are going to be in for a really rude awakening.”

In chemistry, however, students have varied plans for alternative career paths and plans after graduation. In contrast to the history students, chemistry students who were months and

even days away from graduation had no definite plans for careers after completing their degrees. Much of this is easily explained by the postdoctoral appointment phenomenon that occurs in the sciences, wherein the students are expected to obtain a postdoctoral appointment for several years before entering the job market. This time can serve almost as a buffer for the students, a chance for them to gain more experience and to therefore postpone their career decisions until that time is completed. Katie, a chemistry student at Land Grant who is a few months away from graduation, illustrates this lack of urgency regarding future career decisions when asked about her future plans. She says, “Well, I don’t really have – I don’t know – I know I’m going to do a post-doc and I should probably figure that out soon. And then, I don’t know.”

Regardless of the career path eventually chosen, the chemistry students felt they had multiple options to consider once the postdoctoral appointment was completed. This stands in clear opposition to the history students who feel they are only prepared in their graduate programs to do one thing: to obtain a position in academia. Compounded with this, history students also face a competitive academic job market (Jones, 2003), narrowing future career choices even further. The fact that both chemistry departments prepare students to pursue multiple career paths, including industrial research, governmental work, as well as academia, may also account for the lack of stress these students appear to exhibit around the topic of careers.

While large differences existed between the disciplines in regard to the job market and future career plans, the one opinion that students shared across all the departments in the study was that of the professoriate as a career option. While many of the students planned to eventually pursue an academic career, their experiences in graduate school soured them toward pursuing a position in a research-extensive institution. Twenty-seven of the 40 students in the

study received their undergraduate degrees from private, liberal arts institutions and this experience weighed heavily upon their perspectives on academia and their related disillusionment with the model of the professoriate they were experiencing at their research universities. As previously stated, and as is reinforced by the studies by Nyquist, et al. (1999), Austin (2002), and Golde and Dore (2001), the socialization these students are receiving are turning them against academic careers similar to those of their faculty advisors. In this study, the students planning to pursue academic positions wanted these positions to be in small, private, liberal arts institutions, rather than research universities. June, a history student at Flagship, echoes many of her peers when she says, “I see myself more at a small university.”

Doctoral Student Development in Phase III

Much like Phases I and II, a great deal of personal and interpersonal development also occurs in Phase III. Like the development that occurs in the other two phases, development in Phase III translates directly to the socialization of the students. The development and socialization in this phase is related to the preparation for the professional role as the student becomes more independent and experience less structure in their programs.

Many students commented on the changes they experienced when moving from Phase II to III, like Brenda, a history doctoral student completing her program at Land Grant. She says, “That’s where the true distinction lies; you’re no longer a Ph.D. student, you’re a Ph.D. candidate, and that’s the real change. Post-prelims has been very weird.” Pamela, a chemistry student at Flagship also remarks on this transition: “After going through the courses and jumping through the hoops, all the courses and taking your second year exam, and finally in your third year you take your general exam. It was nice to be able to kind of take a breath after that and [then] all you have to do is just jump through one more big hoop.” Gloria, another history

student at Land Grant, talks about how her relationships changed once she reached candidacy status: “I’d have to say that I always thought my professors treated me as a peer or an equal, but once I became ABD (all but dissertation), there was something different in the dynamic.”

Indeed, the transition these students perceive in their relationships with their faculty is one that Weidman, Twale, and Stein (2001) describe as occurring during the later stages of socialization in their model.

The issue of independence is also an integral part of Phase III. The majority of the students interviewed were unaware of the lack of structure and self-direction required in this phase of their studies; something that many of the students felt unprepared to face. It is perhaps not remarkable that the students in Phase III discussed the issue of independence most often in the study, as students at this stage are beginning to work on their research and are transitioning from the more structured, and delineated coursework phase that characterized the majority of their previous educational experience. For students transitioning from a private, liberal arts background, which was the case for the majority of the students in the study, the transition to independence was even more difficult. Melanie, a history student at Flagship, explains, “The sort of independence that comes with being in graduate school was all new to me. I came from a very personalized educational format. You worked one-on-one with people all the time and there was a lot of collaboration and this is a much more independently based academic program where you do your own work and a lot of your own planning.”

Many students, like Stacy, a chemistry student at Flagship, have issues with this newly gained independence and the lack of structure that generally accompanies it. She explains, “I’ve realized that I’m not good without structure, I don’t do well without defined goals. I need concrete things to work toward. I need to find ways to give myself these goals because it’s not

going to be given to me in the lab that I've chosen." Jenny, another chemistry student at Flagship, feels stymied by the lack of direction given to her at this phase in her program. She says, "There are no expectations for me to do anything, no clear expectations of what I should do to better myself." Michael, another chemistry student, explains his realization about the independence needed especially in scientific research, "With research there's no solution manual for the research, there's no one to check it and say, 'Oops, no, you did this wrong here.'"

As these students transition to this level of independence and self-direction, they feel the need to strike the delicate balance with their advisors between being given too much independence and not enough, as Michael emphasizes, "I guess there's a fine line – what's too much and what's too little?" The phrase the students used repeatedly in the interviews to describe the phenomenon of independence versus dependence with their advisors was "hand-holding." Brenda, a history student at Land Grant, explains this delicate balance: "If someone holds your hand too much you'll never learn to think for yourself and if someone doesn't hold your hand enough you'll fall flat on your face." She continues, "In order to finish you don't need an advisor who's in your dish all the time, but you need an advisor who's in your dish enough to kick your ass when you're not doing things you're supposed to...giving you enough rope to hang yourself but never letting you hang yourself." Karen, another chemistry student at Flagship, discusses her experience with this delicate balance and her advisor:

He told me recently how I need to become more independent because he wants to train someone who can be an independent researcher, which is great, I love that, but at the same time he completely is micromanaging my work and when I have a different idea about how to do something, he just gets pissed off and ignores me for some number of months and then eventually comes back and still harps on me and gets me to do it his

way. He believes he's teaching people to be independent researchers but he does it with his hands around your throat. In the sciences, the advisor has to live through the student because the student is the one who actually does the research, so the advisor's intellectual expression comes through the student. He genuinely wants to train us to be independent researchers and that is his goal but because he can only live through his own creativity - his own creativity has to be expressed through the students - it drives him to really dig his heels into your work.

A related concern of the students at this phase in their programs is the isolation they feel. Often, this isolation is connected to the transition to independence the students are experiencing. This feeling is especially germane for the doctoral students in history. Melissa, a history student at Flagship, comments on her feelings of isolation: "When you get to the dissertation process, you're rarely around the department, you're not TAing any longer, so you don't have interaction with the program...now that I'm finishing the dissertation I have basically very little interaction with anybody." This lack of interaction also occurs in regard to the students' relationships with their advisors, especially for the students who are off campus completing their research. Elaine says, "There is this disconnect that you feel between sort of the department and you - it's obvious. There are little things you don't expect, like I didn't expect to lose contact with my advisor like I did." Again, the isolation and independence the students experience are parts of the larger socialization processes inherent in graduate education, as the student dons the identity of independent scholar, one necessary in the professional realm (Bowen & Rudenstine, 1992; Katz, 1976; Rosen & Bates, 1967).

Conclusions and Recommendations

While Phase I students were concerned with admission guidelines and their choices in an institution, and Phase II students devoted much of their attention to coursework, relationships, and balance, Phase III students are mainly focused on their dissertation research, completing it in time, and their future plans upon graduation. Phase III students, however, are also making the transition from student to independent scholar and this change often influences their interpersonal development as well.

It is generally understood that the purpose of the Doctor of Philosophy degree is the creation of an independent scholar, or a scholar that independently produces original research (Council of Graduate Schools, 1990). In this study, the concept of independence was often discussed not only in respect to research, but in many other ways as well. The students in this study were concerned with the transition they were making to the more independent and less structured environment of graduate school, with the differences they perceived in their relationships with faculty members as they began their research, and with their overall need to become more self-directed in their programs and future. Several scholars have commented on the issue of independence in doctoral education, including Rosen and Bates (1967), who comment:

The student is urged to be independent in scholarly endeavor. Training an individual to be independent in an authoritarian social structure has a potential paradoxical quality that is not always recognized by the agent. In effect, professors say to students, 'Become an independent thinker; be critical, innovate, and question the established body of knowledge; but remember, we will be the sole arbiters of what you must do and how well you go about it' (p. 81).

Egan (1989) similarly states:

This level of independence is not consistent with earlier educational experiences, which accept passivity and encourage students' dependence on professors. New students may not be ready for such independence, but the structure does not encourage them to admit this fact. Asking for help may be interpreted by students as an inability to do what is expected of them (p. 202).

Indeed, this is the paradox that many of these students discussed in this study, as they try to balance the independence they feel is expected from them while learning to conduct the research that is required. A constant need for support and guidance from their faculty is often tempered by the need to feel competent and independent from them as well. From the standpoint of socialization, this process of becoming independent is required for successful acceptance as a potential scholar who must also be independent within the professional world, but is often a drastic transition for many of these students who have become accustomed to the structure of their previous educational experiences, the point upon which Egan (1989) expounds above. Therefore, while the need to become an independent scholar is necessary for the students' professional socialization, earlier and much longer socialization experiences have often prepared students to become anything but independent.

Program staff and faculty can work with doctoral students as they transition toward independence by structuring multiple experiences before the research phase that requires original thought and independence. This might be accomplished through coursework experiences or other curricular opportunities that allow the students to work independently on large-scale research projects that prepare them for their own dissertation research, or through collaborative projects with peers that ready for them for habits of mind that are required in original research

and independent work. Furthermore, faculty advisors should be aware of the tenuous nature of independence as the students begin their dissertation research and should remain in touch with their advisees. Advisors should also work with students at this phase to structure periodic checkpoints during their research in order to provide feedback and guidance as needed.

Workshops and brown bag seminars could also be offered that alert students to these transitions toward independence in their experience, and time management workshops for dissertators should also be offered to assist them in confronting the task ahead of them and structuring it for success. Finally, programs and students should seek opportunities for support through the transition to independence, such as the formation of writing support groups and continued mentoring relationships between peers.

Equally of concern is the expectation for immediate publication in history departments. This expectation is an unrealistic one that adds unneeded stress and time to this phase of the students' programs and one that accelerates the socialization of the student to the profession at an unrealistic rate. While high standards should be maintained for the writing of the dissertation, students should be primarily focused on completion of the work as a dissertation rather than as an immediate publication.

Finally, much literature has been devoted to the subject of the shrinking academic job market and career paths for Ph.D.s (e.g., Geiger, 1997; Goldman & Massy, 2001; Jones, 2003; Kuh, 1996), and this concern was reiterated by the students in this study. History students, in particular, repeatedly expressed their concerns about their future career prospects and their uncertainty about the future in this regard. As has been suggested in the literature, graduate programs should be forthright regarding employment for prospective students considering doctoral degrees in the humanities. Information regarding future career prospects is paramount

especially for first generation students who may be unfamiliar with the context and culture of academia. Similarly, history programs should foster alternative career preparation with their students, giving them the opportunity to gain knowledge and skills for occupations other than academic positions.

For those students choosing to pursue academic positions, there was a large disconnect in the students' minds between what they were observing and experiencing at their research institutions and the type of positions they wanted to obtain in the professoriate. Programs such as the Preparing Future Faculty project (Council of Graduate Schools, 2003) work with graduate students interested in pursuing academic positions by explaining the differences in institutional type as well as through offering participating students opportunities to be mentored by and work with faculty members at these different institutions in order to expose students to more holistic views of academia.

Career guidance and preparation are also important to all students, regardless of their career interests and future paths. While there seems to be a general expectation that this guidance will occur through the mentoring relationship between students and advisors, sole dependence on this assumption may be problematic for students who have difficult or poor relationships with their advisors. Programs and institutions can offer graduate students career counseling through already existing university offices and through workshops and brown bags on these topics. Students should be informed as much as possible regarding career options and opportunities as well as how to best prepare themselves and structure their graduate experiences for particular career trajectories.

While the findings within each of the phases described in this study coincided with particular experiences and developmental issues of the students interviewed, many of the

students' experiences cannot necessarily be designated as occurring in one particular phase versus another. Equally, many of the experiences that occur predominately during particular phases of these students' programs are also simultaneously occurring throughout all phases. The next chapter will focus on the experiences and developmental issues that transcended the phase structure and that were prevalent throughout the doctoral student experience at both institutions and disciplines.

CHAPTER VIII: OVERALL FINDINGS AND CONCLUSIONS

The purpose of this study was to investigate the socialization processes experienced by doctoral students throughout the multiple phases of their programs in the disciplines of chemistry and history at two institutions. While the findings of the study were predominately based on the distinctive contexts of the students (i.e., their institutions, disciplines, departments, programs, and phases), several larger themes also emerged across all the students' accounts, which contribute to the socialization processes these students experience. Therefore, while the bulk of the findings from the study were very much context-specific in terms of phase of the program, disciplinary and institutional settings, five themes emerged from the interviews that transcend these contexts and lend to a better understanding of the experience and socialization processes of all doctoral students in general. These themes include (1) Ambiguity; (2) Priorities and Balance; (3) Development; (4) Fitting the Mold; and (5) Support. A description of each of these themes is the purpose of the following chapter. Each of the themes is accompanied by a set of corresponding recommendations and then followed by overall conclusions.

Ambiguity

“You’re kind of on this strange torpedo and you’re riding it and you think you know where you’re going, but you don’t, you really don’t. I still don’t know where I’m going”
(Paul, Chemistry, Land Grant).

Throughout all phases of their programs, the forty graduate students interviewed in this study discussed their feelings of uncertainty, a lack of clarity, and overall ambiguity associated with what they were doing, where they were going, and what was awaiting them. Ambiguity appears to be part and parcel of the culture in doctoral education. Many scholars have commented on the problematic nature of ambiguity in doctoral education (Altbach, 1970; Baird,

1990; Bowen & Rudenstine, 1992; Nyquist et al., 1999). Altbach (1970) comments, “The fact remains that there is a great deal of ambiguity, arbitrariness, and often injustice in American graduate education. That the system has functioned reasonably well so far is more of a tribute to the adaptability of the individuals involved in it, both professors and students, than to the inherent merits of the system” (p. 570).

For students in Phases I and II, the concept of ambiguity surrounded program requirements, expectations, and what comes next. Many new graduate students are unsure about the path on which they are about to embark, and these feelings can leave them with unanswered questions that become problematic as they progress through their programs. James, a chemistry student at Land Grant, comments, “I don’t think I would have known exactly what to expect before I got here. I think that is the case for a lot of people going to graduate school, they don’t know the questions to ask and they don’t really know what to expect.” As previously discussed, first-generation graduate students, like James, do not have what Lovitts (2001) refers to as a cognitive map of graduate school, and they are uncertain of what awaits them in their experiences and in the relationships they need to form to be successful. Sylvia, a chemistry Land Grant student now in Phase III, remarks, “Nobody explicitly stated what it meant to be in graduate school and it took me probably until last year to really understand what the expectations are and I think that’s one of the big troubles in this department is that they don’t say, ‘All right, this is what is expected of you.’” Steve, a history student at Flagship, similarly opines about his graduate experience:

I think in a lot of ways I wasn’t really fully prepared. I mean, I had an intellectual understanding of say, the credit requirements, I knew what courses were available, I knew what I would need to take, I knew the sort of strict on paper requirements of what I

would need to do in order to earn a degree, but the intangibles – what the culture would be like, how graduate education is run, how it's different from undergraduate education, I don't think I was really prepared for that and I didn't think that I really could be unless I actually experienced it.

In general, it was these expectations that students perceived to be the most ambiguous in their programs and what often caused them the most stress. Several students felt that there was an underlying layer of unspoken and implicit guidelines expected of them. Rob, a history student at Land Grant, points out, "I quickly discovered there [were] the written guidelines and then there were the actual guidelines."

The lack of explicit, written guidelines and expectations are sources of much stress and consternation in the students' experiences. David, a history student at Land Grant, comments, "At really no point do they go over the program requirements or give you any type of guidelines. They say, 'Well, it's on the Internet.' But the program guidelines on the Internet are very unclear and incomplete." Melanie, a history student at Flagship, retorts, "I think it could be spelled out a little more clearly rather than handing somebody a document and saying, 'Be familiar with everything that's in this.'"

Ambiguity is also prevalent in the lives of the students who are making transitions between phases. These transitions occur most often for these students when they begin the program, when they choose their research groups, when they are taking their preliminary examinations, and when they are working on the dissertation research. Due to the lack of clarity regarding the expectations for the different phases and experiences in their programs, these transitions become stress-laden for the students. Rebecca, a Phase I chemistry student at Land Grant, just recently joined a research group, leaving her TA duties behind. She remarks, "This is

the time when I've felt most uncertain in a way, just because I'm trying to figure out exactly where I'm going next."

For students in Phase III, this ambiguity is identified with their research. Choosing and carrying out a research topic is a time fraught with ambiguity. Michael, a fifth year chemistry student at Land Grant, says, "I've been struggling. It's because at certain points in my graduate time here I've had to sort of sit down and redefine where I'm going in my thesis. Initially, I worked on a project and my initial project was just completely abandoned." Sylvia, another chemistry student at Land Grant who just recently began Phase III comments on the ambiguity related to the research enterprise: "Nobody tells you how to do this – nobody teaches you how to do research. You come in and you're expected to know how to figure out what the next step is. You're expected to know, if someone presents you with a problem, how you're going to go about solving it. For me, I didn't know how to do that."

The path these graduate students need to follow is another source of ambiguity and uncertainty. Paul, the third year chemistry Land Grant student who commented on the "strange torpedo ride," also makes this comment: "I still have this perception of where I think I'm going; it's not really initially what I thought was going to happen. I think that's kind of frustrating because, I mean, I've kind of made some brutal assessments of the situation and it's not originally what I thought." Rob, a history student at Land Grant, expresses the ambiguity he associates with his future academic career: "It's really odd and I'm getting these really odd comments from professors that my life isn't going to be getting any easier. And I keep thinking that this is the hard part and after I get done I'll just settle into the routine. It would be nice if I thought to myself that this is the end of a long, torturous process, but apparently it's just the beginning."

Ambiguity: Conclusions and Recommendations

Ambiguity was clearly present in all of the students' experiences in this study. While the form this ambiguity may have taken varied across experience, each of the students nevertheless discussed some part of their experience being ambiguous and lacking clarity at one point or another. This ambiguity may have taken the form of a lack of structure and clarity regarding program guidelines and timelines, ambiguity around expectations for the students and other stakeholders in the students' experiences, or ambiguity about the future these students may pursue.

While certainly some ambiguity is an integral part of the intellectual discovery process, there also exists a certain layer of ambiguity associated with programmatic structures in the student's degree programs that is altogether avoidable and unnecessary. The purpose of ambiguity as a socialization process in doctoral education is altogether unknown, but it is interesting to note that literature regarding faculty socialization also discusses a culture of ambiguity for new faculty especially in regard to the tenure process (e.g., Tierney, 1997; Tierney & Bensimon, 1996). Could it be that the ambiguity and lack of clarity these doctoral students experience is intentional, thereby preparing those students choosing academic positions for the ambiguity they will experience in that profession? Much of the literature on doctoral student attrition describes a certain degree of "survival of the fittest" attitude (Bowen & Rudenstine, 1992; Lovitts, 2001), that only certain students possess the stuff of scholars and therefore able to persevere to graduation; and this belief was echoed by many of the department chairs and graduate studies advisors in each department with whom I spoke. It is doubtful, however, that much of this ambiguity is altogether intentional, especially when considering the large amount of financial capital these departments invest in their doctoral students through assistantships and

fellowships, as well as the human capital invested in the relationships between faculty and students.

For the doctoral students in this study, much of their stress regarding ambiguity and an overall lack of clarity of expectations, guidelines, and timelines could be easily avoided. Students and programs alike are responsible for ensuring that expectations and guidelines are as clear as possible. Program staff and faculty should ensure that all guidelines and expectations are explicit and available in written form, preferably in several places. Similarly, this information should be well known and accessible to all staff and faculty in the program. Students should be able to ask and seek reliable and knowledgeable assistance from several people, rather than only one person.

Furthermore, information should be available as a resource to students throughout their experience, but students should also be given smaller, more manageable portions of this information as they progress through their programs rather than overwhelming them in the first week of their programs. This might be accomplished through an initial orientation session and presenting to students the resources they have available to them, and then setting up subsequent orientation luncheons or brown bags throughout the academic year to alert them to further needed information as they progress and at important scheduling dates and transitional periods. Resources should be available online, but they should be clear, well organized, and searchable. Alerting students to the presence and functioning of these resources is something that is also important during the early days in their experiences. Finally, programs should also initiate peer-mentoring programs for new students in their programs, pairing students up with a more advanced student in their potential research areas before classes begin. New students can

therefore seek answers to their questions and make important early connections to their peers upon whom they will largely depend throughout their experiences.

Concomitantly, students should be prepared to seek out correct information as soon in their programs as possible from the appropriate individuals and resources. Many of the students discussed the concept of “having a plan” upon entering their programs and being cognizant of the resources available to them, the paths they plan to pursue, and the assistance needed to get them there. While many students may later change these plans, being aware of and proactive in their experiences will assist the students in being responsible stakeholders in their own education. Traditionally aged students, or those entering graduate school directly from their undergraduate education, must also be aware of the transition they are making. Many undergraduate programs are highly structured and students are generally offered much assistance through academic advisors and counselors. Students must be aware that graduate school is much less structured and highly dependent on them to guide their experience. Being an aware and proactive partner in the educational process will assist students in having more fulfilling and successful experiences.

Priorities and Balance

“You just kind of learn...you’re going to have to learn what to do and what not to do”

(Melanie, History, Flagship).

Not surprisingly, the issues of time and the balance of duties were major themes that emerged for all of the graduate students in the study. As previously discussed, while this finding was particularly salient for students in Phase II, students in all phases experienced the need to balance and prioritize their work and lives outside of graduate school. These students watch their faculty mentors and see how they try, sometimes unsuccessfully, to balance their own time,

and are aware that they must manage to do the same. Students in the earlier phases of their program, like Scott, a second year chemistry student at Land Grant, need to find a way to balance their TA duties along with their own work and the search for their research group:

[My biggest stressor is] finding time to get things done. I'm still a TA so I still have lab reports to grade, and really, most weeks I have a stack that's a couple inches thick. [And, then,] keeping up with my own coursework and trying to do homework, and then finding time to go to the lab and do some research. And, at the same time, maybe try to find a minute or two to find a life outside of this.

Many times these students find themselves having to prioritize and try to decide what needs to get done now and what can wait until later. Common statements were those like Melanie's above and that of Adam, a Land Grant chemistry student, who says, "Once I get done with this [part of my program], I'll have more time to do class work and stuff." Sarah, a history student at Flagship, equally professes her concern over her own expectations and the time available to get it all done: "I think I was doing far more work than was expected of me and then it took me a while to learn that it's not possible to do all the work that I expected myself to do."

Issues of time and balance seemed to reverberate more with the students in the first and second years of the program in terms of their own schedules, but the students in the later phases of their programs, like Liam in his fifth year of the chemistry program at Land Grant, are worried about finishing everything so they can graduate. He says, "Sometimes I wake up at two in the morning thinking [about] getting loose ends tied up and making sure it's all going to flow together. Just, you know, I just want everything to be done. It feels like time is sort of pressing...I just hope I'm going to be done by August, but I know how fast things go; time just flies. I just got to get it all done." Equally, students working exclusively on their research in

Phase III find that the lack of externally-imposed structure, such as was previously present during their coursework, soon becomes an issue of balance and prioritizing as well. Lily, a chemistry student at Flagship, discusses her concern with trying to balance her research schedule: “It’s hard to balance the time put in on the work and time to go home and sleep and eat, you know. When you’re taking classes, [it’s] a pretty easy workload for the most part, but when it comes to research, it’s like anytime goes. I find myself here on weekends and at night and it’s really stressful on personal lives.”

Like Lily, many other students discussed priorities and issues of balance in regard to their external relationships and commitments outside of graduate school. Eric, a chemistry student at Flagship, comments on the balance inherent between external relationships and graduate school responsibilities. He says, “I know for people who have significant others it can be a lot of stress.” Especially for students with spouses and children, this balance is particularly delicate. Sylvia, a chemistry student at Land Grant, is pregnant with her third child – all of whom were conceived and birthed while in graduate school. She tells me, “I’m trying to balance a lot here; I’m doing the best that I can.” She clearly understands her priorities, however, and she remarks, “My family is so important to me. If anyone ever made me choose between my family and graduate school, I would 100 percent choose my family.”

However, even students without external relationships are cognizant of the effect that graduate school has on their possibilities of forming such relationships in the future. Sarah, a history student at Flagship, expresses her concern about this issue:

I think a lot of people that I’ve talked to are really bitter about them being like 20-something and not having been able to maintain a healthy relationship for more than a few months. You need to be aware of the fact that it’s going to take a toll on your

relationship; [graduate school] could have very negative effects on your relationship because it is so time consuming and emotionally consuming. You need to understand as a student coming in that it's going to affect your personal life in a way that I think you don't expect it to.

Students in their final phase of their programs equally remarked about the need for balance and priorities in their lives. For many of these students, their own experiences translated into advice for future graduate students. Melissa, a history student at Flagship, offers this advice in relation to balancing life and the dissertation: "Life interferes and you need to remember that. You need to keep in mind that if something happens in the family or whatever it is, that's okay – it's just a dissertation, it's not the end-all-be-all of your life. These things take time...you just have to go with what happens and that's hard because it becomes your life." Pamela, a chemistry student at Flagship, concurs, "Don't let your work consume you...find some other releases. Work is work but you also have to set your priorities and do what's really important in life – the people around you; your family."

Priorities and Balance: Conclusions and Recommendations

Prioritizing and balancing duties, responsibilities, relationships, and time was another part of the socialization experience for the students in the study. They experienced stressful periods in which they learned to balance TA duties with coursework, external relationships with their programs, and to prioritize one type of work over another. The concept of prioritizing and balancing is equally prevalent in the literature on faculty socialization, as new faculty members learn to balance their many responsibilities (Tierney, 1997; Tierney & Bensimon, 1996). The students in this study witness faculty members in their departments similarly prioritizing and balancing their many duties and responsibilities. Balancing and prioritizing may therefore be an

intentional socialization process that these students experience, not only for those pursuing academic careers but for all career paths as well.

Departments can assist students with the stresses of balancing and prioritizing through several strategies. The use of peer mentoring can offer students the ability to witness more advanced students in their own examples of balancing and prioritizing. Orientation programs that alert students to the many turning points and changes in workload ahead of time may assist students in understanding the obstacles that are yet to come and how they might best plan for them. Similarly, workshops and brown bags on the topic of time management may be helpful to new graduate students, while priority and goal setting workshops for more advanced students conducting their research are equally appropriate. Further, as more non-traditional students enter graduate school, programs should offer support services and information to students with children and students with external responsibilities. These services might include workshops on balancing graduate school with families, or offering flexible options in course scheduling and work responsibilities. Faculty members should be equally aware of the changes in the student demographic and work with their students to assist them with this process.

Students also share equal responsibility for optimizing their graduate experience in regard to the balancing and prioritizing that they must do. It is imperative that students are aware of the different responsibilities and duties needed throughout the different phases of their programs and seek assistance when needed to accomplish these duties. Again, understanding the independent and self-structured nature of graduate school before beginning their programs can equally assist students in preparing themselves mentally for the challenges ahead.

Development

“In some ways graduate school for me has been an educational experience, not just in the classroom, but just watching in the department because someday, believe it or not, I’m going to be faculty somewhere and I take all of these things, this sort of interpersonal sort of communication that happens, and try to internalize those and then I’ll be able to take those with me later, and hopefully, will reflect on them” (Todd, History, Land Grant).

While each of the phases described particular issues of development that were relevant at that time, the overarching theme of development in this study encompassed three specific types, including professional, cognitive, and personal development. Kuh and Thomas (1983) forward that socialization is generally the model used to describe the type of development that occurs in graduate school. Student development theories, predominately used for undergraduate populations, generally include psychosocial, cognitive/behavioral, and typological theories to describe the development that students undergo during their experiences in education (Evans, Forney, & Guido-DiBrito, 1998). The following section discusses these findings by the sub-categories of professional, cognitive, and personal development.

Professional Development: Grooming

Professional development is generally referred to as professional socialization in the literature (Antony, 2002; Baird, 1990; Clark & Corcoran, 1986). In the current study, this socialization, or in the words of several of the students, “grooming,” occurs throughout the phases of the degree program and consists of the development of a set of skills and dispositions that the students need to obtain before graduating. The acquisition of these skills translates into the student also learning how to present him or herself as a scholar in the public arena. Without

these skills and dispositions, the graduate student is unable to pursue careers or post-doctoral appointments successfully. The faculty with whom the students work initiates much of this socialization or grooming, but there also exists a layer of grooming that originates with the student. Some of this grooming may also be implicit for those students who had close relatives or parents that went through graduate school in the past, but for those students who are first-generation, many of the skills that need to be developed began occurring in the undergraduate years and are now slowly beginning to be honed.

Overall, it was the advanced graduate students in Phases II and III that predominately discussed the concept of grooming. This seems to lie in relation to the skills these students are developing and the next steps they feel they have to take. In history, these skills include learning how to write effectively and conducting their research, and in chemistry, what one student, Paul, a chemistry student at Land Grant, refers to as preparing oneself for “the chemistry state-of-mind.” He comments about his weekly meetings with his research group: “You’re being primed to defend your ideas and also further develop those communication skills and really hammer home the techno lingo because, I mean, that’s the language of science; the language of chemistry.”

Presenting at national conferences and publishing are also important parts of the doctoral experience for the students in this study. Deborah, a history student at Land Grant, expresses her enthusiasm for this part of her experience: “I think going to national conventions and presenting papers was the best thing of the whole program for me. It was such a growth experience; it was fantastic. I think more students should be doing it because, boy, once you get out there and listen to everybody presenting their papers, and see what the cutting edge of that field is, it’s really exciting.” For Claudia, another history student at Land Grant, her opportunity to work with a

faculty member as the assistant editor of a professional journal assisted her in obtaining a position after graduation.

Paul, a chemistry student at Land Grant, sees much of this grooming and skills development as the ticket to later mobility in a future career. He remarks, “You have to keep yourself packaged appropriately at all times in the sense that you have to have the skill set, and you better tout that skill set, make people aware of it, and again, sell yourself.” Michael, the chemistry student at Land Grant, gives this advice to new graduate students:

My advice is to start getting in the research mindset as soon as possible. Whether that means joining a group and taking a look at what other people do or reading the literature and trying to even just visualize how they’re doing things and the problems that can be associated with that. Because the sooner you get into it, the less of a slap in the face it’s going to be once it’s hitting you full on.

Cognitive Development

As Michael’s comment illustrates, the development of professional skills and socialization occurs simultaneously with cognitive and epistemological development for these students. Cognitive development in graduate education has been explicitly studied by those like Baxter-Magolda (1996; 1998) and indirectly through the research on adult education (e.g., Imel, 2001; Naylor, 1985). In this study, many of the advanced graduate students, in particular, were able to look back at what they had learned since their undergraduate years and feel that they had grown not only in skills, but in understanding as well. Brenda, a history Land Grant student, comments about this development, “[Graduate school] really pushed me to be more analytical and it pushed me to think more critically about everything and reach my own decisions instead of as a historian just regurgitating other people’s decisions.” Wendy, a chemistry student at

Flagship, similarly remarks, “The idea of going to graduate school is to learn how to think analytically about a problem that you know nothing about and trying to be creative in proposing solutions for that.”

The graduate students in this study are aware of the differences they are experiencing now when compared to their more passive, undergraduate learning experiences. This understanding of their graduate education and the more active role they play in it is something that Scott, a chemistry student at Land Grant, comments upon: “I’m not studying to remember, I’m studying to learn the material. I’m studying to learn how to use it and apply it to what I’m doing. That’s what’s changed a lot. You first come into an undergraduate class and you study for the tests - it’s not like that - you’re actually trying to learn, to teach other people or to use it in your research.” Students at this level are also seeking out opportunities to increase their learning, and pushing themselves to expand their epistemologies. June, a history student at Flagship, talks about this need in regard to choosing a committee, “I think you almost need somebody that you’re more like-minded with and then from there have someone you’re not as like-minded with because then I think you’re – it will force you to branch out and to think differently.”

For students who are returning to academia after working in the professional sphere, the cognitive tasks required for graduate school were initially difficult. Dean, a history student at Flagship, says, “I kind of had to train myself to write again like an academic and to train myself to read like an academic again.” Nick, another history student at Flagship, makes this comment, “I had to really realign my thinking and part of it was I had to get confident again. I just had to relearn how to look at a book, for example, because for eight or ten years I didn’t read critically, I read for enjoyment. There was a learning curve that I had to put myself through.”

Personal Development

The final aspect of development that the doctoral students in this study related was that of a certain level of personal and psychological development that occurred as a result of their graduate experience. Many of them see graduate school as something that has changed their lives in ways they never could have expected. Sylvia, the chemistry student at Land Grant, remarks, “I think [a Ph.D. is] a wonderful thing to have and I think that it’s a good experience. It certainly teaches you a lot about yourself and other people in your life, but it’s also very hard.” In this manner, while some of this development was welcome and helpful to the students, other students, like Pamela, a chemistry student at Flagship, were unhappy with the changes they had undergone as a result of their graduate school experience. She explains, “I used to be such a people-person and feel very sensitive and understand people’s emotions. Going back to school has made me, I don’t want to say cold and callous, but I’m just very rational and kind of hard. I know it’s definitely changed me.”

Several of the students also discussed the emotional and psychological toll graduate school has taken on them. Sarah, the history student at Flagship who will be leaving her program, talks about graduate school in this way. She says, “I think it’s a huge financial commitment, but it’s also an emotional commitment and I think a lot of people don’t realize how much of an emotional commitment it is and how demanding it’s going to be.” Sylvia, a chemistry student at Land Grant, similarly remarks, “I guess what continues to surprise me is how hard [graduate school] is and why I can’t figure out why it’s so hard. I think I’ve just determined that it’s just emotionally taxing for some reason, and part of it is that everyday you’re trying to defend yourself and I don’t think it’s very good for self-esteem, personally.” Pamela, another chemistry student at Flagship, equally replies about her graduate school experience, “It’s

not the work that gets to you, it's more the mind games and the whole psychology of it. I think it's more of a test if you can handle it mentally versus actually doing the work because the work is not that difficult."

Many of the students, like Meredith, a chemistry student at Land Grant, talked about their experiences in graduate school as very much a developmental process, something that changes and evolves throughout time. She says:

A lot of graduate school is about building you up and then breaking you down. So you're going through periods where you say, "Yeah, I'm smart, I can do this," but then you also go through periods where you feel like an idiot, and that's just par for the course. You're not an idiot, you're not – that's just kind of the nature of it. It's not unusual to go through those times where you think, "What have I gotten myself into?" And so just being aware that everybody goes through that – it's normal – it's not fun, but it will pass.

Development: Conclusions and Recommendations

Students undergo much development as a result of their experiences in graduate school (Antony, 2002; Baird, 1990; Baxter-Magolda, 1996; Katz & Hartnett, 1976; Kuh & Thomas, 1983). For the students in this study, this included professional development, cognitive development, as well as personal development. However, very little research has been done on the reasons for and the results of the development that graduate students experience in their educational programs. Most literature on student development exists at the undergraduate level, which has influenced the delivery and structure of programs and experiences to that population (Evans et al., 1998), but has nevertheless left a gap in regard to graduate student populations. Further, it appears that student affairs practitioners have undertaken much of the recent work that has been done on linking practice to student development theory rather than faculty members per

se (Evans et al., 1998). Therefore, it is not surprising that graduate students have been left out of this equation as student affairs practitioners generally work at the institutional level with undergraduate populations, whereas graduate students typically locate their experiences solely within the academic department. Programs and faculty should nevertheless work with graduate students to assist them through the developmental processes they will experience as a result of their graduate programs. I also propose an expanded role for student affairs practitioners in graduate education.

While much research yet remains to be completed in the area of graduate student development and this study only scrapes the proverbial surface of the issue, it is apparent that the students in the current study definitely experienced much development throughout their educational experience in graduate school. First and foremost, faculty members and program staff should be aware of the developmental issues that face their students; a mere awareness of this issue will assist greatly in better understanding the totality of the graduate experience. Secondly, faculty and staff should work with students to alert them to the potential development issues they will experience throughout their programs. This awareness could be shared in the orientation programming that the department offers to incoming students as well as brown bag seminars or workshops throughout their experience. Thirdly, counseling services (generally free to graduate students through university offices) should be more publicly advertised to students upon entering the program as a resource to them throughout these developmental periods. Finally, and again, peer-mentoring programs can be equally helpful to students in this regard, as students can have readily available mentors who have experienced similar feelings and transitions themselves. Similarly, graduate students entering their programs should be aware of the many changes they will undergo as a result of their educational experience. While students

cannot mentally and emotionally prepare themselves for all potential changes and happenings in their future experience, an awareness that these changes may likely occur will assist them through the process.

Fitting the Mold

It is interesting to note that it was women exclusively who talked about the emotional and psychological stress of graduate school in the previous section. Three of these individuals were also women of color and women who had children. Why only women? Further, why did students of color discuss the emotional and psychological stress of graduate school more than the Caucasian students? And why is it that the students who were typically part-time or who had children that were typically the least integrated into their programs? One explanation for all of these situations is that these students did not “fit the mold” of graduate education.

The concept of “fitting the mold” can be easier understood through the contextual lens of socialization. The concept of socialization is one that is very much based on normative assumptions and behaviors of the individuals to be socialized (Van Maanen & Schein, 1979; Ward & Bensimon, 2002). In this way, the process of socialization generally acts upon individuals uniformly, not allowing for many individual differences. Indeed, when individual traits or characteristics are present that are not necessarily the norm, the process of socialization may not be as successful (Van Maanen & Schein, 1979). Therefore, the experiences of the students in the study who do not fit the mold of the typical graduate student in their programs are explainable in that these students’ socialization experience is not entirely normative due to some difference in their individual characteristics.

The students who did not fit the mold in this study were the women, the students of color, older students, students with children, and part-time students. Their experiences, which are

detailed below, illustrate that the socialization processes in these departments do not take into account the diversity of backgrounds and experiences that today's students will bring to the table. While their often times negative experiences cannot be entirely attributable to their differences in the socialization process, my point here is that these differences do play a part in the students' overall satisfaction and integration into their programs.

Women

"It's a rough campus for women. It's not a female-friendly campus" (Deborah, History, Land Grant).

While it was not every single female student interviewed that expressed concern regarding her experience, comments did arise throughout the study to draw attention to the matter of sexism and the experiences of female students overall. Women students at both institutions and within both disciplines discussed issues related to their gender and how this at times affected their experiences. This is particularly interesting since the students were never directly questioned about issues related to gender in the study. Moreover, it was interesting to note that the students who talked about leaving, who planned to leave, were taking antidepressants, or who had to seek professional help to assist them through their degree programs were all women. Again, while definitive connections between these students' gender and the lack of satisfaction in their programs cannot be made, there was enough attention brought to the matter by the students themselves to warrant comment.

While science-related fields, like chemistry, have made recent inroads in regard to recruiting and hiring more female faculty, the discipline is still predominately male-oriented and male-governed (Wilson, 2004). Recent comments by Harvard President Lawrence Summers suggesting that women do not hold elevated positions in the sciences due to innate inabilities,

further illustrates the preponderance of sexism that still exists in academia (Fogg, 2005). Even with the expanded role of women in humanities-related fields in the recent past, it is still more often men who are tenured and given the rank of full professor (Wilson, 2004).

It was therefore not surprising that in both disciplines studied, the women in the study often commented about the male-dominated environments around them. Karen, a chemistry student at Flagship, remarks, “[There are] a lot of gender issues; it’s a heavily male-dominated field and...a lot of sexist attitudes.” Equally, many of the women referred to what they deemed the “Old Boys’ Club.” Brenda, a history student at Land Grant, opines, “Women who make inroads are very threatening.” Deborah’s above comment similarly resounds in this context, pointing to the students’ awareness that sexist attitudes prevail and influence their overall experiences in graduate school. Only the female chemistry students at Land Grant never discussed issues of sexism in their experiences. It may be that the appointment of a female as the chairperson of the department speaks loudly to the overall culture of the department, as one that supports its females and allows inroads to power. Lynn, a chemistry student at Flagship, however, points out the difference in her institution: “There are very few female faculty in the department.”

Students also see discrimination in faculty hires and are concerned about how this might affect their future job searches. Deborah, the history student from Land Grant, says, “I’ve watched the last six hires at the two schools [I attended, and] the last six or seven searches that ended up in a tenure-track hiring were all young, white males. I mean, I’m not *that* stupid to recognize a pattern.” Brenda, another Land Grant history student, talks about the lack of female hires in the department. She whispers as she says, “There is a dynamic afoot in this department that is anti-feminine.”

Several of the heterosexual female students, like Sarah, also discussed how their status as a graduate student has affected their ability to form lasting, external relationships with members of the opposite sex. She says, “What I’ve found is that the guys I date aren’t in graduate school and that they are very, very intimidated by the fact that I’m in graduate school. And I don’t know if that’s just going to take time and if they just need to get used to the fact that women are smart.”

Even several of the male students in the study discussed issues of gender. Dean, a history student at Flagship, talked to me about the survey their graduate student association conducted on student satisfaction in the department. He tells me, “The department’s had trouble retaining women graduate students and they don’t know why.”

Students of Color

Owing to the few students of color in this study, I make tentative comments about their overall experiences and the existence of any particular issue that stems from their commentary, but I must nevertheless state that the four students of color with whom I spoke remarked upon issues of integration and a general lack of satisfaction in their overall experiences. While the numbers of students of color in graduate education in the United States has recently risen, the predominant racial demographic nevertheless remains Caucasian (National Center for Education Statistics, 2003). This predominance points to the issue of socialization to normative characteristics, when the individual does not fit the typical mold of graduate education.

Karen, the female chemistry student at Land Grant, discussed the issue of race more often than any other student. She talks to me about her transition to academe from a position in industry for many years:

I worked really, really hard when I was in industry and of course I suffered a lot of discrimination. I'm a minority and I'm a woman and [there are] tons of ways for me to be discriminated against. I worked really, really hard to get myself into a position where I could just be acknowledged and respected and awarded for my own personal contributions and I come here and I think it's worse.

Older Students

In this study there appeared to be a typical age range of the students in their programs. Most of the students came directly from their undergraduate programs at age 21 or 22 and began their graduate studies. However, 16 students in this study were over the age of 30. Each of these students was keenly aware of the difference that their age made in their programs, frequently commenting about this issue and expressing their concern about how this aspect of their experience did not necessarily fit the mold of graduate school.

The students in the chemistry departments felt this age difference most acutely. In an essay on doctoral education in chemistry, Stacy (2003) comments on the difficulties non-traditionally aged students face, stating that it is "almost impossible for older, mid-career students" to enter chemistry doctoral programs (p. 4). In this study, Michael, a chemistry student at Land Grant, described these difficulties as he repeatedly made allusions to his age, feeling old, or his desire to complete his program before he got any older. In Michael's department, he is the only other graduate student interviewed over the age of 30. He says, "I'm old. I'm going to be 34." Michael also comments on his concern about his age and beginning the program:

I was worried about how old I am and how long it would take me to get the degree, because when I first inquired at [Land Grant], the professor that I wanted to work for seemed a little surprised that I was old as I was. He said, 'Well, I just want to break it to

you now that it takes graduate students in [this field] about six to six-and-a-half years on average to finish their degree.’ So that was pretty depressing for me.”

Michael later jokes about getting his research done in time and says, “I may be old, but I still have a lot of energy left in me.”

Deborah, a 52-year-old history student at Land Grant, is much more non-traditionally aged than Michael. Nevertheless, Deborah was aware of the role her age would play in her experience and therefore felt somewhat prepared for it, and remarks, “I knew there would be age discrimination.” She talked to me at length about her experiences with professors in relation to her age, and relates:

They seemed a little wary of having an older student - I felt that much of the time - a little worried because [Land Grant] is not the kind of school that has a lot of older students. Being a campus school, a residential school, you don’t get a lot of older students. A lot of teachers don’t like older students and they find them annoying; I tried not to be annoying, I tried never to talk out, I tried not to ask a lot of questions deliberately because people get real annoyed at older students because older students do that. So I was purposeful about it. Sometimes a professor would say, “You’re not participating.” I thought it was hard for me to figure out what my role would be. I was always feeling old at [Land Grant].

Ruben, a history student at Flagship, also discussed his concern regarding his age and his fit in graduate school. Now 67-years-old, Ruben has returned to school after a long career in another area. He talks about his issues with integration in the department as related to his age and says, “I had a lot of difficulty connecting with the other graduate students. I’m old enough to be most of their fathers, so I’m afraid that’s caused some problems.” Because of this, Ruben

staunchly advocates for support for non-traditionally aged students, a population that Ruben regards as “just the tip of the ice berg” in academia today, as many of the Baby Boom generation begin to retire and choose to return to school.

Students with Children

There were eight students with children that were included in this study. Not surprisingly, the women students with children discussed this issue more often than the men, but it was nevertheless an issue for all of them. Sylvia, the chemistry Land Grant student with her third child on the way, is the most illustrative of the issues related to being a parent in graduate school. She spoke often of the inner conflict she experienced when having to choose between spending time with her children and her graduate work. She says, “I wanted to stay home and just be a mom. It was a very tough time for me.” For Sylvia, the best way to deal with this conflict is to work at night, so she can spend the daytime with her children while her husband is at work. Obviously, however, this schedule separates her from the other graduate students. She remarks, “I’m very isolated that way.”

It seems that the culture of the sciences, surrounding a laboratory setting, is even more difficult for students with children, as it emphasizes an almost never ending work schedule (Grant, Kennelly, & Ward, 2000). For students like Lynn, a chemistry Flagship student, the pace of the research culture was particularly difficult for her family. She explains that she had to choose her research division based on its flexibility for her family, “I can’t be an experimentalist; it doesn’t work for my lifestyle. I have a family; I have a life outside that’s very important to me.”

As discussed earlier, balancing of time and priorities is particularly relevant for students with children. Gloria, a history student at Land Grant, comments, “I have to do this whole

balancing thing with wife, mother craziness. I think my biggest concern is finding time for that.” Rob, another history student at Land Grant, similarly explains, “It’s awfully painful when your children or your son wants to go out and play catch and you can’t.”

Part-time Students

The last group of students interviewed that discussed issues of separation and a lack of integration, or fitting of the graduate school mold, were the part-time students. Another growing sector of the graduate school demographic, part-time doctoral students currently constitute 40.5 percent of the total doctoral student population (National Center for Education Statistics, 2003). In this study, only three of the students interviewed were part-time, but this status seemed to affect each of these students’ experiences nevertheless.

The majority of the interaction part-time students have in the department is with their faculty members rather than other graduate students. Many of these students expressed remorse that they could not spend more time with their peers, thereby feeling that they were missing a large part of the overall graduate experience. Nick, a history student at Flagship, works on his degree part-time. He comments, “It would be nice to see them (the other graduate students) a little more outside the classroom, but that just hasn’t worked out.” June, another Flagship history student, equally notes, “I haven’t really gotten to know other students that well, I think, because of my situation.”

Fitting the Mold: Conclusions and Recommendations

The socialization process of “fitting the mold” in this study was something that was not particularly expected in the findings, but is nevertheless prevalent in much of the literature on graduate education (e.g., Clark & Corcoran, 1986; Ellis, 2001; Margolis & Romero, 1998). In this study, students who did not fit the mold of their programs were those who felt keenly aware

of the individual differences they possessed that made them somehow different from the departmental norm. These differences played out in terms of gender, race, age, enrollment, and familial status, and the students' awareness of them resulted in what was often less than satisfactory experiences.

While much of the literature on organizational socialization forwards that there exists much room for individuality and personal diversity in the socialization process (e.g., Tierney, 1997; Van Maanen, 1978; Van Maanen & Schein, 1979), I posit that there nevertheless exists a certain level of conformity that must occur for the individual to primarily enter the organization and to subsequently persist. For example, certain requirements and related behaviors and attitudes are often needed for entrance and acceptance into an organization. Within the context of graduate education, these requirements generally include a minimum grade point average, satisfactory scores on the Graduate Record Examination, a prior knowledge of the discipline as witnessed through an undergraduate major, and letters of reference. Moreover, students generally receive anticipatory socialization (Merton, 1957) in their undergraduate experience that allows them to understand, at least to a minimal extent, the culture of which they desire to be a part. Therefore, for example, it would be generally difficult, if not impossible, for a prospective student with an undergraduate major in history to be accepted into a graduate program in chemistry, or vice versa. Similarly, behaviors and attitudes gained through undergraduate experiences and anticipatory socialization allow students to be relatively successful in transitioning to new, graduate environments. An example of this might be the communal learning process and behaviors evident in the laboratory sciences compared to the relative isolation of academic pursuit in the humanities. It is not therefore surprising that many of the students from private, liberal arts backgrounds in this study expressed concern over the

discrepancy between their expectations and the reality of their experiences in graduate school, as many of them received anticipatory socialization in a culture that was very different from that of large, public research institutions. Therefore, while many scholars discuss the reciprocal nature of socialization, in that the newcomer may affect and influence the socialization experience and culture of the organization (Tierney, 1997; Van Maanen & Schein, 1979), the individual must nevertheless possess a certain level of acceptance, and therefore influence, in this new organization to make such changes.

In regard to fitting the mold of graduate education, several groups of students in this study had disparate experiences resulting from their differences, including many of the female students, the students of color, the older students, the students with children, and the part-time students. These students' prior socialization did not necessarily prepare them for the reality of the socialization they were entering in graduate school. It may be that these students had successful socialization in dramatically different undergraduate cultures, that a large amount of time passed between their undergraduate experience and their entrance to graduate school, or that dramatic life changes had occurred between these times. Regardless of the difference, however, many of these students expressed concern at their "different-ness" and related how these differences negatively influenced their overall satisfaction and integration into the departmental culture. While I certainly cannot conceive of a total overhaul of the culture of academe, I can nevertheless advocate that program staff and faculty be aware of the differences that this new generation of graduate students possesses. If the current demographic shift of entering graduate students (see Chapter II) is any indication of the changes at hand, many more non-traditional students will be entering graduate education in the near future.

Staff and faculty should be cognizant of the diversity of students that enter their graduate programs. While the norm of an entering graduate student was once a twenty-something, white, single, male, current graduate student enrollment is much more diverse. Although much discussion has occurred surrounding the need for faculty of color mentors for students (e.g., Ellis, 2001), other underrepresented student populations must also be able to find and connect with mentors who have had similar life experiences. Furthermore, support services and information should be available not only to these students who are entering graduate school, but to those faculty, staff, and other students who will be working with them. This might be accomplished through university and college-wide professional development on diversity issues and through university support services.

Awareness is only the beginning, however. Faculty and staff should also take into account the existing socialization processes and experiences in their programs, and how these experiences may unduly influence students who do not fit what has traditionally been the norm. For example, is the process of choosing an advisor for female students more difficult when there are only male professors from which to choose? Similarly, what experiences do part-time students miss out upon that could otherwise be incorporated into their programs? Understanding and being aware of both the explicit and implicit socialization processes existent in their programs will better assist staff and faculty in helping non-traditional students to be successful.

Further, a peer-mentoring program that matches students with those who have had similar experiences may assist students in understanding and successfully navigating their own experience. Support groups and opportunities for interaction could be similarly structured with these student populations at either the departmental or institutional level, and referrals to support services should also be available for students upon entrance to their programs. Students should

be equally involved in transitioning to these new environments and being aware of how their individual characteristics may influence their educational experience. Seeking support is a necessary part of the experience, but so is offering solutions to programmatic and cultural issues through involvement in graduate student organizations and departmental committees.

Support

“Just knowing that someone’s going through this with you at the same time and struggling with the same issues really helps keep you sane” (Brenda, History, Land Grant).

Cited often in the literature as an important factor for graduate student success and satisfaction is the concept of support (Abedi & Benkin, 1987; Baird, 1990; Grant-Vallone & Ensher, 2000; Hodgson & Simoni, 1995; Lovitts, 2001). For the graduate students in this study, support came in three different forms: financial, faculty and advisor, and peer support.

Financial Support

Financial support is paramount to the success of graduate students (Abedi & Benkin, 1987; Bowen & Rudenstine, 1992; Hodgson & Simoni, 1995). While history students in this study repeatedly discussed the need for continued financial support of their education, the chemistry students in the study rarely discussed this issue. As financial support in the sciences is generally a foregone conclusion, it may be that funding exists as a non-issue for these students. However, for the chemistry students whose funding was not available or disappeared, the issue was as omnipresent in their discussions as it was with the history students. For example, Jenny, the chemistry student at Flagship who, for all intents and purposes, was homeless one summer due to her lack of funding, and Karen, another chemistry student at Flagship, who had to seek out

her own funding due to her advisor's lack of support. In both cases, financial support was very much a concern in their experiences.

The issue of funding surrounded much of the students' experience and was often the difference between completion and non-completion of their degrees. The literature discusses the relationship between funding and time to degree rates (Bowen & Rudenstine, 1992), and the students in this study discussed similar connections in their experiences. In both of the history departments, students were generally only funded for the first few years of their degree programs, leaving the students to seek out external funding to support their research. Brenda, a history student at Land Grant, remarks, "The longer we stay here the more we have to pay." History students, in particular, find how important funding is to their experience in graduate school. Elaine, a history student at Flagship, tells me, "If you're going to commit eight years of your life to this, you need to know where the money's going to be."

Faculty and Advisor Support

The students in the study frequently commented on the connections and relationships they had with their faculty. The students are highly attuned to the relationships that the faculty have with one another, the conflicts they are having, and the politics that surround much of the faculty dynamics in the department. While the graduate students seem to feel that much of the departmental politics are a normal part of any group, they are concerned about faculty who do not get along and about the political environment that impacts their own work. Scott, a chemistry student at Land Grant, rejoins, "Generally, there's some crap that shouldn't be going on." Brenda, a history student at Land Grant, concurs, "Constantly there's infighting over little things...and those all trickle down to the students which makes us uncomfortable."

Overall, however, the students were satisfied with the faculty and their relationships with them. They felt that they were able to approach most faculty members with questions, problems, and just to chat. Dean, a history student at Flagship, comments, “There are very good faculty here; they’re all supportive and very open, willing to talk to people, to meet with you.” However, students were also keenly aware of those faculty that were physically around and visible in the department versus those who were not. The amount and frequency of contact these students were able to have with their faculty was very important to them and was mentioned repeatedly. When discussing the concept of choosing an advisor, many remarked that choosing an advisor who was around was an important part of the bargain, and choosing someone who, in Michael’s words, is “...not always gone on vacation or not always involved in too many committee meetings that they just can’t spend time with their students.” The amount of time faculty were around and available also played out in the history departments in regard to faculty sabbaticals. Melanie, a history student at Flagship, remarks, “It’s happened to one in every two [students] where you find out your first year that your advisor is going on sabbatical and you didn’t know. It’s not a good surprise and it really does set you back in terms of progress.”

Another facet of the students’ relationships with their faculty was the conceptualization of what made “good” faculty members and advisors. Instead of discussing the faculty member’s research or reputation in the field, students equated a nice, supportive, and interested faculty member with someone that would best serve on a committee or as an advisor. Gloria, a history student at Land Grant, recommends, “I guess what I would advise is not necessarily to look for the expert, but to look for the person who’s been supportive.” Todd, another history student at Land Grant, equally remarks, “Pick somebody who you’re comfortable with, because you don’t want to pick somebody who’s a specialist just because they’ve got a fancy sort of pedigree or

they're famous or something like that; that doesn't do you any good. Pick somebody who's going to be supportive and dedicate a fair amount of time to you."

The advising relationship is particularly vital to these students. Karen, a chemistry student at Flagship, states, "Pick your advisor based on how well you think you're going to get along with him because that relationship in doctoral [education] is extremely important."

Michael, a chemistry student at Land Grant, discusses how important this relationship is to the doctoral experience: "If you don't get along with your advisor your life can be *hell*." The relationships that these students make with their advisors are clearly central to their experience, not only in terms of their research, but in regard to their future as well. Katie, a chemistry Land Grant student, discussed her job search and when asked if the department assisted her in finding a job, says, "Oh, our advisor does most of that, they have connections with people. And that's what's important because I don't think people even go through résumés anymore. I think they just call somebody up that they know and ask if they have someone. If you know what you want to do, tell your advisor and he'll help you do that." Stacy, a chemistry student at Flagship, similarly quips, "I think the relationship you have with your advisor, and the type of advisor - the way they work, their expectations of you, things like do they have a family, do they have outside interests - end up being more important to your overall education, your overall well-being as a graduate student, and then even after when they're recommending you to jobs. I think in the end that relationship is far and away the most important part."

Peer Support

Students regularly mentioned peer support in their interviews as an integral part of their experience. These comments were spread equally across all students in all departments and peer support was mentioned much more frequently than the concept of faculty support. Ultimately,

these students look to one another for guidance, support, friendship, and stability more than any other person or thing in the program. As previously indicated, it was only the part-time students who did not regard their relationships with their peers to be the most important and most helpful aspects of their programs.

Beginning a graduate program can be a daunting experience for many graduate students. The students in this study were able to make early connections with one another at recruitment weekends, during the orientation programs, and through graduate student organizations to which they belong. The students felt that their connections with other graduate students were what got them through the beginning of their program, and like Denise, a chemistry student at Land Grant, says, “I think talking to the other grad students is probably the most important thing.” Steve, a history student at Flagship, similarly remarks, “[The other graduate students] are at the same level you are, they’ve experienced some of the things that you’re experiencing now, or they’ve experienced it before so they can tell you what to expect and you can interact with them. There’s not that social distance that exists initially between graduate students and faculty members because of the difference in status. I immediately fell upon other graduate students as a sort of support group.”

The students look to one another as mentors, especially the newer graduate students to the more advanced, and as Michael, a chemistry Land Grant student, says, “Rely on the people who’ve been around the block, so to speak. I think the other graduate students really are positive when trying to basically pick their brains for information and they just help you get through things.” Melanie, a history student Flagship, agrees, “I would say that my fellow graduate students were probably the most helpful resource. I think that especially the first year, when it

was so disorienting, having a group of people that had been here already and sort of knew the ropes a little bit better was critical in helping make it easier to get into this whole process.”

Support from other graduate students was also commonly mentioned when discussing the choice of one’s advisor or research group. Scott, a chemistry Land Grant student, comments, “I think the best advice is to go talk to other graduate students in the group. If they have problems, if they really enjoy the professor, if they just can’t talk to the guy, or don’t want anything to do with him - I think the students are always a really good measure of what’s going on in the lab.” Denise, another chemistry student at Land Grant, similarly remarks, “Talk to the graduate students and find out about what they actually do, like what their day is and it will give a 100 times more clear of a picture that what you’d actually be expected to do in the group. The grad students will give you an honest answer.” Eric, a chemistry student at Flagship, who did not feel he had a good relationship with his advisor during his experience, comments, “I didn’t get to talk to any graduate students before I started and if I’d known they would have warned me how this person was.”

The connections the chemistry students had with their peers were often more highly regarded than those with their advisors. Maya, a chemistry student at Flagship, remarks, “Make sure you like the advisor, I guess, but more important I think is that you like the group you join. Of course the advisor is important, but you work less with them than the people in the group.” Pamela, another Flagship chemistry student, equally contends, “I decided to join the group because I realized it’s more important that I interact well with the other graduate students and that’s how I made my decision.”

Support: Conclusions and Recommendations

The concept of support is well represented in the literature on doctoral student attrition and retention (Abedi & Benkin, 1987; Baird, 1990; Bragg, 1976; Hodgson & Simoni, 1995; Katz & Hartnett, 1976; Lovitts, 2001; Weidman & Stein, 2003), and was equally well represented in the accounts given by the doctoral students in this study. Support for these students took many forms including peer, faculty, advisor, financial, and familial, but those predominately discussed were that of financial, faculty, and peer support.

Financial support is integral to the success and retention of doctoral students (Abedi & Benkin, 1987; Benkin, 1984; Bowen & Rudenstine, 1992; Hodgson & Simoni, 1995; Lovitts, 2001). In the words of Bowen and Rudenstine (1992), “In short...money matters” (p. 12). The doctoral students in this study are no different; money clearly matters to them as well. In the departments of history, issues of financial support are never far from their minds and for students currently working on their research it appears to be an almost constant concern. Financial support in all of the departments clearly distinguished those students as the most integrated in their programs, with many of the students commenting on the identity recognition given to students with funding versus those without. For the chemistry students without secured funding or for those who had to seek it independently, funding was an equally stressful issue in their lives. Overall, it was apparent that the students who did not have to worry about their financial support were generally the most satisfied in their programs.

Programs should work diligently to provide as much financial support as possible to their graduate students, but in a time of budget cuts and dwindling financial support of public education, this support is becoming more difficult to provide. However, programs can be forthright regarding their ability to fund students and should readily share this information with

prospective applicants to their programs. The students in each of the history programs were concerned with the rising numbers of students admitted to their programs each year without an equal increase of financial support for these students, and several of the chemistry students at Flagship were distressed by promised funding that ultimately did not surface upon entrance to their programs. The financial resources available, the length of time funding is available, and the processes for allocating these funds, are all important points to be shared with students even before entrance to their programs. For financially strapped departments, support for students' funding needs can also come in the form of information and resources. Directing students to possible extramural funding sources and opportunities is central to this support and can be directly incorporated into orientation programming early in their experiences.

Many scholars have commented on the importance of supportive relationships between students and faculty members, and most especially advisors, in the doctoral experience. Katz and Hartnett (1976) state, "The nature of the graduate students' relations with the faculty...is probably the single most salient feature of the graduate department climate" (p. 59). Interaction with faculty members, both inside and outside of the academic environment, often spells the difference between retention and attrition for many students (Lovitts, 2001). In this study, interaction with their faculty members, and most especially with their advisors, was central to the students' experience. Most interesting was the importance of the peer relationship to these students' satisfaction and retention. While the literature has discussed the importance of the peer relationship to student satisfaction and support (Baird, 1990, 1995; Lovitts, 2001; Weidman & Stein, 2003), it has not pointed to the high degree of importance that I found in my discussions with the students. It was evident that the students who had supportive peer relationships were generally more satisfied with their experiences than those without.

Programs must be cognizant of the influences that peers and faculty have upon on students' satisfaction and retention in their programs. These relationships should be carefully cultivated as much as possible by offering students and faculty multiple opportunities throughout the program to interact with one another both formally and informally. Again, the use of peer-mentoring programs will assist students in making connections with one another early in their experiences. Programs should also structure office spaces for students in the department, as a place where they can interact, work, and study, and Lovitts (2001) found that doing so were often more integrated in the department and had higher retention levels than students who did not. Brown bags, symposia, and social hours can also offer graduate students the opportunity to interact not only with one another but with faculty members as well.

In regard to socialization, relationships with peers and mentors are often the most salient factors in the socialization process. Van Maanen (1978) and Van Maanen and Schein (1979) discuss the importance of these types of relationships to a newcomer throughout their work on organizational socialization. They posit, "Colleagues, superiors, subordinates, clients, and other associates support and guide the individual in learning the new role. Indeed, they help to interpret the events one experiences...they provide the individual with a sense of accomplishment and competence (or failure and incompetence)" (p. 215). Ultimately, those students in this study who lacked supportive relationships with both peers and faculty were those who were the most dissatisfied with their experiences. It was these students who discussed seeking professional help to deal with their graduate experience, who were taking anti-depressants to cope with their subsequent unhappiness, and who either had thought about or were ultimately planning on leaving their programs. While financial support was ultimately important to these students overall peace of mind in their programs, it did not appear to have as much

influence on their overall satisfaction and retention as their peer and faculty support did. There were many students who lacked financial support that were still relatively satisfied with their overall experience, but students lacking both peer and faculty support did not appear satisfied in their programs and were having difficulties with persistence.

It is this concept that leads me to my overall thesis on issues of support: Those doctoral students with supportive peer relationships and faculty relationships were the most satisfied in their degree programs (see Figure 1). Those students missing one of these types of relationships were still relatively satisfied in their programs (see Figures 2 and 3), but those missing both types of relationships were ultimately dissatisfied and disillusioned with their experiences.

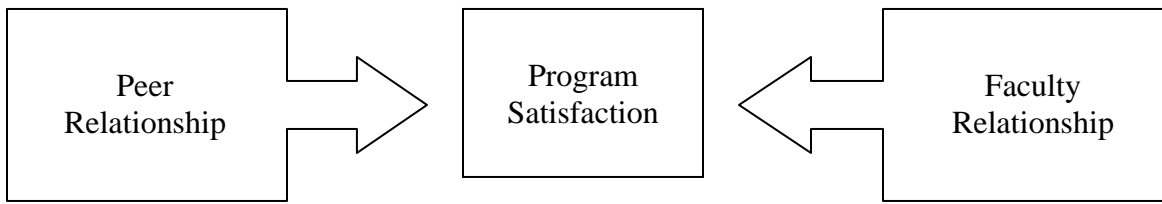


Figure 1. The influence of peer and faculty relationships on program satisfaction.

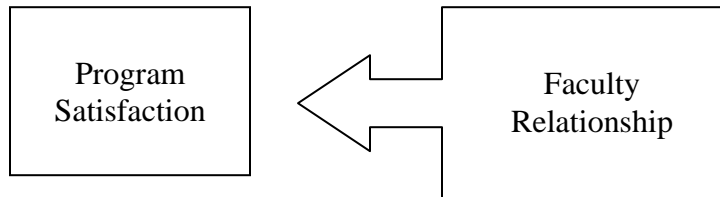


Figure 2. The influence of faculty relationship on program satisfaction.

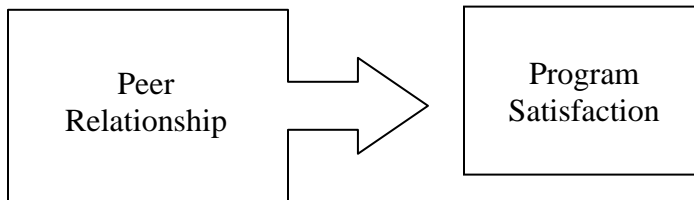


Figure 3. The influence of peer relationship on program satisfaction.

Conclusions

Five overall themes emerged from this study, including (1) Ambiguity; (2) Priorities and Balance; (3) Development; (4) Fitting the Mold; and (5) Support, that were relevant across both disciplines and institutions studied. While previous chapters detailed the contextually based findings such as experiences by phase, institution, discipline, and department, these findings pointed to a similarity of experience by all participants, regardless of context. Within the context of the current study on doctoral education, the overall findings constitute a series of socialization processes that these students experience throughout their programs that influence their behavior and attitudes. An understanding of these socialization processes by both the student and the department will assist in better structuring experiences and support as needed throughout the graduate program.

The final chapter details overall conclusions, implications, and recommendations that speak to the findings presented both in this chapter and in the study overall.

CHAPTER IX: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate the socialization processes that doctoral students experience in the disciplines of chemistry and history at two institutions, Land Grant University and Flagship University, in order to address the following research questions: What socialization processes do doctoral students experience in their programs? How are these processes experienced at different phases or times of their programs? How are these experiences shaped by discipline? And, finally, how do these experiences compare by institutional setting?

A total of forty doctoral students were interviewed in this qualitative study. These data were supplemented with an analysis of relevant documents, and informal observations in the departments in order to better understand the contexts and cultures in which these students' experiences are situated. Constant-comparative analysis (Bogdan & Biklen, 2003) of the data collected resulted in findings based on phase of the students' experiences, the individual institutions, disciplines, and departments, as well as overall findings that reflected the totality of the students' experiences. The purpose of this final chapter is to discuss the overall conclusions and implications from this study from the perspective of the research questions, as well as to present a summary of recommendations for policy, practice, and further research.

Socialization Processes of Doctoral Students

The first guiding research question of this study was, what socialization process do doctoral students experience in their programs? Van Maanen (1978) identifies socialization as “the manner in which the experiences of people learning the ropes of a new organizational position, status, or role are structured for them by others within the organization” (p. 19). To learn this position, status, or role, the individual is introduced to particular socialization

processes or “events that will make certain behavioral and attitudinal consequences more likely than others” (Van Maanen, 1978, p. 20).

From the study conducted, a series of findings resulted that describe the socialization processes the students at Land Grant University and Flagship University experienced. These processes include (1) Ambiguity; (2) Priorities and Balance; (3) Development; (4) Fitting the Mold; and (5) Support. For the students in this study, these processes included not only structures and relationships that facilitated their degree progress and success, but equally represented issues and obstacles for them to overcome. For example, support and balance are needed for the student to find success and satisfaction in their programs, but an overall culture of ambiguity will impede this success. Further, while personal, cognitive, and professional development are inherent parts of the doctoral experience, students who were not able to fit the mold of their graduate programs had difficulties in all areas of development.

Doctoral programs should work toward minimizing issues of ambiguity as much as possible in their programs through clarifying expectations and guidelines. While it appears that a certain amount of ambiguity is inherent in graduate education and in the educational enterprise, much of the ambiguity discussed by the students in this study was unnecessary and was ultimately an impediment to their progress and satisfaction in their programs.

Priorities and balance are also central to the experience in graduate education, as students must learn, much like their faculty, to balance the many responsibilities and duties of their positions. Graduate programs can prepare students for this reality through structured workshops and helpful resources in time management and again through a clarification of expectations. Students should also be equally responsible in this regard by working toward a sufficient balance in their own lives and many responsibilities in their lives.

Personal, professional, and cognitive development are also important parts of the doctoral student experience, as the student learns to look at the world, themselves, and their discipline in a different light. Equally, students are learning the skills and habits necessary to become future scholars in their disciplines. While programs cannot necessarily direct the development these students will undergo, being supportive members of the academic community and providing the necessary structure can assist them through what may be a difficult time. Opportunities for professional development, however, are within the purview of both the program and the student. Programs and mentors can provide structured opportunities to learn about the profession and its many aspects and students should be equally responsible in seeking out these opportunities.

Issues of fitting the mold, or not fitting into normative structures in graduate education, were also impediments to doctoral student success in this study. Students who were part-time, students with children, women, and students of color all discussed less than satisfactory experiences in their programs. Programs, faculty, and staff must understand that the typical student of 20 years ago is no longer the norm in graduate education today. Similarly, allowing for flexibility in program expectations and requirements are helpful for these students, especially when these expectations and requirements are based on assumptions and lifestyles of students from long ago.

Finally, issues of support are also vital to doctoral student success throughout the degree program. In this study, support was manifested in faculty, peer, and financial support. Students need and rely upon their relationships with their peers and desire closer relationships with their faculty and advisors. Structuring opportunities for this relationship development can be helpful to students in all phases of the program. Equally, financial support for these students is a needed part of the doctoral experience. While it is not possible for programs to provide financial support

for all students throughout all years of the degree program, efforts should be made to provide as much of this support as possible for full-time students who need it.

Overall, the socialization processes discussed in this study are relevant not only to the chemistry and history students in this study, but to all graduate students, regardless of disciplinary or institutional context. Providing the necessary structures and opportunities to facilitate doctoral student success are paramount to ensuring student success in their programs.

Socialization and Programmatic Phases

The second research question that guided this study asked how these socialization processes are experienced at different phases or times in the doctoral programs of the students interviewed. Prior research and interviews with the graduate students in the study led to the definition of three phases of the doctoral student experience. These phases are identified by the formal programmatic experiences in each of the degree areas as well as the informal socialization experiences of the students as well. Again, the first phase of this model consists of the time of admission to the program until coursework begins. The second phase of studies includes that time spent mainly in coursework, and the third phase marks the culmination of coursework through the dissertation research period, or the period generally referred to as candidacy.

While Chapters V, VI, and VII discuss these phases and related findings in more detail, it was clear from the interviews with the students in the study that they did experience distinctive events at particular times in their programs. Phase I students seemed most concerned with information about their prospective programs as well as their initial impressions they gain from primary contact with staff and faculty members. Upon acceptance into their program of choice, these students then discuss the importance of the orientation program and understanding the expectations that are required of them by this new environment. Phase II students, however, are

in the full fledged graduate student role, in the midst of their coursework and working toward proving themselves to others. These students are also concerned with building relationships with peers, faculty, and staff, as well as balancing the many duties and responsibilities that are required of them. As they near Phase III, they are also highly apprehensive regarding their candidacy examinations. Once these examinations are over, the students move to Phase III, where they begin their independent research for their dissertation and learn to manage and structure their time effectively in this endeavor. Students are also concerned with finishing in a relatively short amount of time so they can then pursue the career options that also preoccupy them during this phase.

In this regard, the socialization processes discussed in the previous chapter are all present in the experiences of the students interviewed, but some are more prevalent than others during specific phases in their experience. For example, balancing and prioritizing is always important, but seems most salient during Phase II of the experience, and while independence is the ultimate goal of obtaining a Ph.D., students seem most concerned with this process during Phase III. Taken together, the socialization processes present in each phase of the students' experience join together to form a developmental or sequential socialization which Van Maanen (1978) describes as "transitional processes marked by a series of discrete and identifiable stages through which an individual must pass in order to achieve a defined role and status within the organization" (p. 26).

Understanding that students possess certain needs at particular turning points over others is important in formulating orientation programs and support structures throughout the students' programs. As previously stated, orientation programs should represent a series of informational workshops throughout the graduate experience rather than a one-shot effort in the first week of

the program that overwhelms and confuses the students. Orientation programs should therefore offer students developmentally appropriate information at the important turning points and transitions during their programs. Furthermore, the importance of the support structures for these students is also integral to the students' success in each of the phases. Van Maanen (1978) states, "The individual's best source of information on the sequential process is another person who has gone through it" (p. 27). In this manner, peer-mentoring programs are invaluable to students throughout their experiences and the facilitation of interaction with peers and faculty during Phases I and II are also integral to the students' success and satisfaction. Equally, opportunities should be made available to students in Phase III to capitalize upon the supportive relationships they have previously made in their programs and orientation programming should be structured to provide students with the needed direction and guidance through the often isolated and ambiguous research phase.

Socialization and Disciplinary Differences

The third research question guiding this study asked how the socialization processes experienced by the doctoral students interviewed were shaped by discipline. Chemistry and history were the chosen disciplines for this study, representing both the natural sciences and the humanities respectively. While Chapters V, VI, and VII entail much more of this description and the related findings, it was apparent that the processes of socialization generally differ by discipline. Therefore, while all socialization processes were evident in both disciplines studied, the order in which these students might experience them or the relative emphasis given to one socialization process over another was generally different. For example, ambiguity appeared to be much more of an issue in the history departments studied, whereas the highly structured culture of chemistry allowed for much less confusion in regard to overall expectations and

guidelines. Similarly, whereas support was extremely important to all of the students in the study, advisor support appeared to be much less of an issue to the students in chemistry, who generally depended more on one another for support and guidance. Conversely, a professionally and emotionally supportive relationship with advisors was of the utmost importance to the doctoral students in the history departments.

Overall, the socialization process the students in the chemistry programs experience is one that is much more group oriented, allowing for greater interaction with and dependence upon the students' peers. Conversely, the history students' experience is much more independent, allowing for a stronger bond to be developed between the student and the advisor, but an experience that demands much more self-direction and self-structure by the student. Therefore, the relationship between the student and the advisor in the chemistry programs is one more characterized as a supervisor-employee relationship, whereas the relationship in the history programs was typically much more of the traditional advisor-student relationship.

Programmatically, the experience for the chemistry students was primarily oriented around the research group and the fewer courses required in the student's program typified this focus.

History programs, on the other hand, emphasize much more of a coursework-focused program, therefore explaining the larger amount of time spent in coursework. Finally, the structure of the graduate program in chemistry allows for a shorter time to degree, as it is generally much more focused, organized, and group oriented, allowing for anticipatory socialization experiences to assist the students through the degree program. History, however, generally has a much longer time to degree, which is explained by the more independently focused programs that must be directed by the individual student and in which much of the socialization is not gained until the student actually enters the program.

The difference in socialization experiences for these two disciplines is integral to understanding the distinctive needs that students have in their disciplinary programs. Nevertheless, much of the literature and research on doctoral education has focused on graduate education as a whole rather than from the perspective of the specific disciplinary contexts in which it is found. Program staff and faculty are often the best experts of their respective disciplinary cultures and should provide students with the required experiences and support to ensure proper socialization to the profession. However, this socialization cannot be limited to the one professional trajectory of academia, but to the multiple professional opportunities that exist for students upon successful completion of their degree programs.

Socialization and Institutional Differences

The fourth and final research question guiding this study spoke to how the socialization processes experienced by the doctoral students interviewed compared by institutional setting. Land Grant University and Flagship University were the two pseudonyms chosen to represent the institutions included in the study. Both universities were research-extensive institutions located in the same state in the United States, but shared very few characteristics in common beyond this. While these particular findings are discussed in more detail in Chapters V, VI, and VII, specific differences were evident throughout the experiences of the students in the study.

Perhaps due to the relatively larger size and increased emphasis on graduate education at Flagship University, their students often experienced much more clarity of expectations and guidelines than their Land Grant counterparts. Nevertheless, this lack of ambiguity did not necessarily transfer to higher satisfaction, as many of the Land Grant students expressed much more satisfaction with their programs and relationships with faculty than did the students at Flagship. This, again, may be reflective of the relatively larger size of Flagship acting in this

case as a detriment, not allowing for as much contact and camaraderie as the smaller programs at Land Grant. Further, the relative size difference of Flagship University appeared to be much more of a detriment to the students coming from liberal arts undergraduate institutions than it was for the students at Land Grant, as many of the Flagship students were taken aback by the large scale of the institution, the department, and their programs. It is therefore not surprising that the chemistry students at Flagship discussed their need for and dependence on supportive peer relationships more often than the students at Land Grant. While these peer relationships were important to all the chemistry students in the study, the Flagship students put greater emphasis and importance on these relationships than did their colleagues at Land Grant, owing again most likely to the larger size and scope of the department at Flagship that generally separated the students much more from their faculty.

Inasmuch then as disciplinary context influences the socialization of doctoral students, so does the institutional context. Institutional size and culture are key aspects of the socialization process within graduate school, generally affecting much of the experience of the students in their programs. Consequently, program staff and faculty should be aware of the institutional contexts in which they are located and how these affect the students. In the case of Land Grant University, much more cohesion and clarity must be given to their programmatic guidelines and expectations, whereas Flagship University must focus upon connecting students to faculty mentors and peer mentors to solidify these much needed relationships. Students must be equally cognizant of the types of environments into which they are entering and how institutional differences may affect their experiences. Being aware and knowledgeable consumers about their graduate school choices will be an important part of the students' ultimate satisfaction with their programs.

Recommendations for Further Research

This study examined the socialization processes of doctoral students in chemistry and history at two research-extensive universities in the United States. A set of definite socialization processes emerged from the study, surfacing distinctly within the particular phases, disciplines, and institutions studied. My research in this area builds upon the work in doctoral education by those such as Lovitts (2001) and Golde (1998, in press) while adding to the existing body of knowledge by more clearly defining socialization within particular contexts and disciplines. These findings point to a need for reformation in the practices and policies of doctoral education, allowing for more structure, guidance, and support of the students and their success.

However, much work yet remains in the area of doctoral student socialization, retention, and success. While this study focused upon the disciplines of chemistry and history, these are only two of the multitude of disciplines that exist in academia. More research must be conducted within these specific disciplinary contexts to better understand the socialization processes that exist within these particular cultures. Furthermore, this type of research must be conducted within other institutional contexts to better identify the differences that these distinctive cultures have upon their students and their socialization. For example, is there a difference in the socialization that happens at an elite, Ivy League institution versus a striving, public institution?

In addition, while this study included interviews with both male and female students, students of color, full-time and part-time students, first generation students, and students with families, these individuals certainly require more significant attention in the research on doctoral education. Accordingly, other research must be conducted with students from not only these populations, but from other marginalized populations such as international students, un-funded

students, and other non-traditional students. Students entering graduate school after professional careers are also a growing population in higher education and merit further study as well.

Furthermore, while this study discussed many findings related to the development of these doctoral students, much work remains in this area. Particular developmental models of doctoral student progress, cognition, psychological, and emotional functioning should be investigated in order to better understand the holistic nature of the graduate school experience. Additionally, quantitative studies should be conducted in these areas and others to better understand doctoral education and its constituencies.

Research must work toward better understanding the processes, functions, and outcomes of doctoral education and the experiences of the students within it. Therefore, while the stakeholders of doctoral education should not necessarily aim to make the process “easy” so that “everyone would have a Ph.D.,” the important rigor and required independence of the degree should be tempered with support, guidance, and structure that provides for doctoral student success, retention, and satisfaction.

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APPENDIX A

Department Chair Interview Protocol

I. Introduction

- a. The purpose of this study is to better understand how doctoral students experience their programs at different stages in their development. I am interested in finding out from you what your impressions are on doctoral education in your department. I will be interviewing a number of other students in the department as well as observing and collecting documentation on how this program is directed. Your answers will be extremely helpful to me in understanding how your discipline and your institution affect doctoral student progress, so giving specific examples and being as detailed as possible in your answers would be greatly appreciated.
- b. Are there any questions you would like to ask before we begin?
- c. Before beginning, we do need to discuss the Human Subjects documentation, which is required for any research involving people. Please be aware that there are no known risks or benefits to this study, and you have the choice to answer or not answer a question at any time if you do not feel comfortable. You also have the right to withdraw from the study at any time. Furthermore, your identity will be protected and only I will have access to all tapes and transcripts of our interviews. Are there any questions about any of this?
- d. I am going to begin taping now, is that all right with you?
- e. Any other questions before we begin?

- II. Tell me a little bit about yourself – your background, how you came to academe, how you became a department chair.
- III. What do you feel your role is in relation to graduate studies in the department?
- IV. Tell me about a “typical” doctoral student in your department.
 - a. How does he/she begin, what is the general course followed, etc.?
- V. How would you describe a “successful” doctoral student in this department?
 - a. Would that description change in other departments, and if so, how?
- VI. What about the opposite? What exactly do you see as the issue or problem for students who did not complete the program? What made them “unsuccessful”?
 - a. Do you feel that the result would have been the same if the student were in another department?
- VII. In what ways does your department assist graduate students in being successful?
- VIII. In your opinion, what else could be done to assist graduate students that isn’t already being done?
- IX. Do you have anything else to add about your impressions of graduate students in your department?

APPENDIX B

Doctoral Student Interview Protocol

X. Introduction

- a. The purpose of this study is to better understand how doctoral students experience their programs at different stages in their development. I am interested in finding out from you what types of needs you feel you have at this stage in your doctoral program. I will be interviewing a number of other students in the department as well as observing and collecting documentation on how this program is directed. Your answers will be extremely helpful to me in understanding how your discipline and your institution affect doctoral student progress, so giving specific examples and being as detailed as possible in your answers would be greatly appreciated.
- b. Are there any questions you would like to ask before we begin?
- c. Before beginning, we do need to discuss the Human Subjects documentation, which is required for any research involving people. Please be aware that there are no known risks or benefits to this study, and you have the choice to answer or not answer a question at any time if you do not feel comfortable. You also have the right to withdraw from the study at any time. Furthermore, your identity will be protected and only I will have access to all tapes and transcripts of our interviews. Are there any questions about any of this?
- d. I am going to begin taping now, is that all right with you?
- e. Any other questions before we begin?

II. Questions for Phase I Students (first year)

- a. Tell me a little bit about yourself.
- b. How did you come to be a graduate student here?
 - i. Follow up/clarifying questions: age, past education, family background, family status now, why decided to study this, degree pursuing, how long in program thus far, career aspirations, etc.
- c. Tell me about the admission process here. How did that go?
 - i. Clarifying questions: financial, housing, paperwork, were these concerns taken care of?
- d. Talk to me about starting the program. What was that like?
- e. When you were beginning, who or what was most helpful to you?
- f. Did you receive any sort of orientation when you began your program? What are your thoughts about this?
- g. Now that you've been through the process of entering the program, what suggestions would you give your department?
- h. Tell me about your interaction with the faculty thus far.
 - i. How about your interaction with other graduate students/peers?
- j. What are your thoughts about your coursework at this point?
- k. Thinking about the interactions between faculty, students, and staff you have witnessed so far in the department, what things stick out in your mind?
- l. What things do you need to worry about getting done right now? Do you feel like you are prepared to do them?

- m. What comes next for you? What are the next steps? How do you feel about those next steps?
- n. What is your biggest stressor right now?
- o. Have you heard about any students who have left the program? What is your understanding about this?
- p. If you could give advice to a new graduate student entering the program next semester, what advice would you give?
- q. Is there anything else you would like to add?
- r. Do you have any other questions or comments?
- s. Thank you so much for your time and participation in my study. If you ever have any questions, concerns, or comments, feel free to contact me.

III. Questions for Phase II Students (second year – candidacy)

- a. Tell me a little bit about yourself.
- b. How did you come to be a graduate student here?
 - i. Follow up/clarifying questions: age, past education, family background, family status now, why decided to study this, degree pursuing, how long in program thus far, career aspirations, etc.
- c. Tell me about the admission process here. How did that go?
 - i. Clarifying questions: financial, housing, paperwork, were these concerns taken care of?
- d. Talk to me about starting the program. What was that like?
- e. When you were beginning, who or what was most helpful to you?

- f. Did you receive any sort of orientation when you began your program? What are your thoughts about this?
- g. Now that you've been through the process of entering the program, what suggestions would you give your department?
- h. Tell me about your interaction with the faculty thus far.
- i. How about your interaction with other graduate students/peers?
- j. What are your thoughts about your coursework at this point?
- k. Thinking about the interactions between faculty, students, and staff you have witnessed so far in the department, what things stick out in your mind?
- l. Talk to me about your advisor and your relationship with him/her.
 - i. Clarifying questions: how met up with advisor, why, recommendations, assigned advisor?
- m. Tell me about the meetings you have with your advisor.
- n. How would you describe your relationship with your advisor overall?
- o. If you could give advice about advisors to a new graduate student, what would you say?
- p. Have you heard about any students who have left the program? What is your understanding about this?
- q. What is your biggest stressor right now?
- r. What things do you need to worry about getting done right now? Do you feel like you are prepared to do them?
- s. What comes next for you? What are the next steps? How do you feel about those next steps?

- t. If you could give advice to a new graduate student entering the program next semester, what advice would you give?
- u. Is there anything else you would like to add?
- v. Do you have any other questions or comments?
- w. Thank you so much for your time and participation in my study. If you ever have any questions, concerns, or comments, feel free to contact me.

IV. Questions for Phase III Students (candidacy - completion)

- a. Tell me a little bit about yourself.
- b. How did you come to be a graduate student here?
 - i. Follow up/clarifying questions: age, past education, family background, family status now, why decided to study this, degree pursuing, how long in program thus far, career aspirations, etc.
- c. Tell me about the admission process here. How did that go?
 - i. Clarifying questions: financial, housing, paperwork, were these concerns taken care of?
- d. Talk to me about starting the program. What was that like?
- e. When you were beginning, who or what was most helpful to you?
- f. Did you receive any sort of orientation when you began your program? What are your thoughts about this?
- g. Now that you've been through the process of entering the program, what suggestions would you give your department?
- h. Tell me about your interaction with the faculty thus far.
- i. How about your interaction with other graduate students/peers?

- j. What are your thoughts about your coursework at this point?
- k. Thinking about the interactions between faculty, students, and staff you have witnessed so far in the department, what things stick out in your mind?
- l. Talk to me about your advisor and your relationship with him/her.
 - i. Clarifying questions: how met up with advisor, why, recommendations, assigned advisor?
- m. Tell me about the meetings you have with your advisor.
- n. How would you describe your relationship with your advisor overall?
- o. If you could give advice about advisors to a new graduate student, what would you say?
- p. Tell me about your preliminary or comprehensive exam process (if applicable).
- q. Tell me about how you came to choose your dissertation topic.
- r. How far are you in your dissertation research?
- s. What is your biggest fear or worry regarding your dissertation/research?
- t. What else has changed for you?
- u. Who or what has been most helpful to you throughout your program?
- v. If you could give advice to a graduate student beginning the dissertation process in this department, what would you say?
- w. What things do you need to worry about getting done right now? Do you feel like you are prepared to do them?
- x. What comes next for you? What are the next steps? How do you feel about those next steps?

- y. Have you heard about any students who have left the program? What is your understanding about this?
- z. What is your biggest stressor right now?
- aa. Have you begun the job search process yet? If so, tell me your thoughts about it and the department's or institution's role in it.
- bb. Do you have any other comments or concerns about your program at this point?
- cc. If you could give advice to a new graduate student entering the program next semester, what advice would you give?
- dd. Is there anything else you would like to add?
- ee. Do you have any other questions or comments?
- ff. Thank you so much for your time and participation in my study. If you ever have any questions, concerns, or comments, feel free to contact me.

APPENDIX C

Letter of Consent

Date

Dear Study Participant:

My name is Susan K. Gardner and I am a graduate student at Washington State University pursuing my Ph.D. in Higher Education. I am conducting a study regarding the doctoral student experience for my dissertation, and your participation in this study would greatly assist me in a deeper understanding of this issue. The information gained through my study will be used to influence policy and practice as they relate to doctoral students.

Your participation in this study will be garnered through interviews regarding your doctoral experience in this institution of higher education. Your participation is completely voluntary.

The interviews will remain totally confidential – neither your name nor any other identifying information will be asked or recorded. You are free to not answer any questions you may find objectionable. This study has been reviewed and approved by the WSU Institutional Review Board. If you have any questions or concerns regarding this study you may call the WSU IRB at (509) 335-9661 or myself at (509) 332-1717.

The information on this consent form is provided so that you can decide whether you wish to participate in this study. It is important that you understand that your participation is completely voluntary. This means that even if you agree to participate you are free to withdraw from the study at any time or decline to participate in any portion of the study, without penalty.

The interviews will be tape recorded so that I can focus on the questions at hand and transcribe our interaction at a later time. Only I will review and have access to this tape, and the tape will then be placed in a locked file cabinet until May of 2005, when it will be destroyed.

This experiment poses no known risks to your health and your name will not be associated with the findings. Your participation will take approximately one hour. Results of this study will be available upon request at the conclusion of the project. If you have any questions not addressed by this consent form, please do not hesitate to ask. You will receive a copy of this form, which you should keep for your records.

Thank you for your time.

Sincerely,

Susan K. Gardner

Washington State University

(509) 332-1717

Consent Statement:

I have read the above comments and agree to participate in this research project. I give my permission to be audio taped, under the terms outlined above. I understand that if I have any questions or concerns regarding this project I can contact the investigator at the above number or the WSU Institutional Review Board at 509-335-9661.

Participant's Signature

Date