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# Examining the Influence of Graduate Student Experiences on Graduate Alumni Giving

Kevin Fleming Ph.D.

*University of Massachusetts Amherst*, [kjflemin@admin.umass.edu](mailto:kjflemin@admin.umass.edu)

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Examining the Influence of Graduate Student Experiences on  
Graduate Alumni Giving

A Dissertation Presented

by

KEVIN JAMES LYNCH FLEMING

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2017

College of Education  
Educational Policy, Research, and Administration  
Higher Education

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Approved as to style and content by:

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Joseph B. Berger, Chair

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Sharon F. Rallis, Member

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Robert S. Feldman, Member

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Joseph B. Berger, Senior Associate Dean  
College of Education

## DEDICATION

To my incredible and supportive wife, Christina:

I am truly overwhelmed by your love, support, and patience throughout this endeavor.

“Thank you” cannot nearly express my gratitude – but it will have to suffice.

To my amazing children, Connor, Mackenzie, and Ryan:

Thank you for your love, inspiration, and for keeping me laughing during the process.

Everything I do is for you.

To my phenomenal parents, Jim and Terry:

Thank you for always believing in me.

Everything I have done is because of you.

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I would also be remiss if I did not mention, as a group, my classmates over the course of the program. Your passion inspired me, your support kept me going, and your friendship helped keep it fun.

ABSTRACT

EXAMINING THE INFLUENCE OF GRADUATE STUDENT EXPERIENCES ON  
GRADUATE ALUMNI GIVING

MAY 2017

KEVIN FLEMING, B.S., JAMES MADISON UNIVERSITY

M.A., BOWLING GREEN STATE UNIVERSITY

Ph.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Joseph B. Berger

As private philanthropy has become established as a critical source of financing for higher education institutions, a growing body of research has begun to explore those factors that enhance the likelihood that alumni will donate to their alma mater. One of the potential influences upon alumni giving that researchers have begun to investigate is how positive or negative student experiences increase or decrease the likelihood that alumni will “give.” However, much of this research focuses on the undergraduate alumni experience, and little consideration has been given to studying graduate alumni as a population with distinct giving tendencies, influences, and student experiences.

The purpose of this study is to examine the relationship between graduate student experience and graduate alumni giving. I use Astin’s (1970) theory of Input-Environment-Output to inform my theoretical framework, where personal characteristics (Inputs) interact with student behaviors, student perceptions, alumni behaviors, and alumni perceptions (Environment) to influence graduate alumni giving behaviors (Output). I use factor analysis to identify behavioral and perceptual factors within both student and alumni experience, Chronbach’s alpha reliability to verify variable cohesion,

and path analysis to identify the most significantly influential variables on graduate alumni giving by calculating the direct, indirect, and total effects of personal characteristic, student behavior, student perception, alumni behavior, and alumni perception factors. The central hypothesis of the study was that positive student experiences will lead to increased graduate alumni donating behavior.

The results of the study somewhat support the hypothesis, in that student experiences had only moderate significant effects directly on graduate alumni giving. Personal characteristics also had moderate influence on giving, whereas alumni experiences had the most substantial influence on graduate alumni giving. However, both student experiences and person characteristics powerfully influenced alumni experience, which in turn has substantial influence on giving. Importantly, a reduced model is identified that provides an empirically tested framework for studying graduate alumni giving.



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# CHAPTER I

## INTRODUCTION

### **A. Background & Problem Statement**

As state and federal governments continue to decrease financial investment in higher education, private philanthropy has become an increasingly vital source of financing higher education institutions (Weerts, 2009). Given this trend, a growing body of research has begun to explore those factors that enhance the likelihood that alumni will “give” (make financial contributions) to their alma maters. One of the potential influences upon alumni giving that researchers have begun to investigate is how positive or negative student experience increases or decreases the likelihood that alumni will give, and the level at which they donate. However, much of this research either focuses on the undergraduate alumni student experience, or lumps undergraduate and graduate students together. Surprisingly, little consideration has been given to distinguishing giving tendencies and influences of graduate and undergraduate alumni. In this paper, I hope to address this gap by exploring how graduate student experience influences the giving behavior of graduate alumni.

### **B. Exploring Graduate Alumni Giving**

Studying graduate student alumni giving influences is important because graduate alumni comprise a significant portion of the overall population of alumni donors at many institutions. Currently, there are 21,679,000 people in the United States with Master’s and Doctoral degrees, comprising 9% of the U.S. population (U.S. Census Bureau, 2014). It is anticipated that another 998,500 Master’s and Doctoral degrees will be awarded in the 2014-2015 school year (National Center for Education Statistics, 2015). The size of this

population becomes particularly significant as institutions increasingly rely on donations from alumni to sustain and advance their programming (McDearmon & Shirley, 2009; Weerts, 2009). Total charitable contributions to United States colleges totaled \$33.8 billion in 2013 (Bidwell, 2014). Alumni (both graduate and undergraduate combined) are the second largest contributors to colleges and universities behind foundations, and donated nearly \$10,000,000,000 to colleges and universities in 2014 (Mulhere, 2015). Institutions will become more reliant upon alumni contributions in the foreseeable future (McDearmon & Shirley, 2009). Because graduate alumni comprise a significant portion of an indispensable source of higher education funding, studying those unique elements that influence their giving behavior can inform fundraising practice and help institutions actualize the giving potential of the graduate alumni population.

Yet, despite the significant number of graduate alumni, the need to differentiate graduate alumni from undergraduate alumni has largely been ignored by researchers. Studies have begun to examine differences in influencing factors upon the giving behavior of particular types of alumni, including differences in:

- Race (Bryant, Jeon-Slaughter, Kang, & Tax, 2003; Carson, 1989; Drezner, 2009; Escholz & Van Slyke, 2002; Johnson-Bailey, Valentine, Cervero, and Bowles, 2009)
- Gender (Andreoni, Brown, & Rischall, 2003; Bruggink & Siddiqui, 1995; Cox & Deck, 2006; Croson & Gneezy, 2009; Dvorak & Toubman, 2013; Eschholz & Van Slyke, 2002; Holmes, 2009; Holmes, Meditz, & Sommers, 2008; Newman, 1995; Okunade, 1996; Ostrander & Fisher, 1995; Rooney, Brown, & Mesch, 2007; Wunnava & Lauze, 2001)

- Marital status (Andreoni, Brown, & Rischall, 2003; Kaplan & Hayes, 1993; Rooney, Brown, & Mesch, 2007; Rooney, Mesch, Chin & Steinberg, 2005; Yoruk, 2010), and
- Age (Bruggink & Siddiqui, 1995; Gaier, 2005; Holmes et al., 2008; McDearmon & Shirley, 2009; Mesch et al., 2002; Terry & Macy, 2007; Weerts & Ronca 2007; Willemain, Goyal, Van Deven, & Thurkal, 1994).

There is increasing recognition that, while there is value to examining characteristics of all alumni that increase giving, differences in varying types of alumni cannot be ignored. Alumni cannot solely be viewed as a population with uniform characteristics, influences, and tendencies. Unfortunately, graduate student alumni have yet to be studied as a unique group of alumni with distinct influences on giving behavior.

### **C. Graduate Student Experience**

There is a growing body of research on different influences on giving behavior of the general population of alumni. A variety of personal characteristics, institutional characteristics, and alumni perceptions all coalesce to influence both undergraduate and graduate alumni giving behavior. However, a foundational assumption of my study is that student experience while on campus has a strong influence on the giving tendencies of all alumni, and that positive student experiences increase the likelihood that alumni will donate to their alma mater (Clotfelter, 2003; McDearmon & Shirley, 2009; Monks, 2003). Indeed, Monks (2003) reported that the most significant determinant of alumni giving levels is the individual's satisfaction with his or her undergraduate experience. Because student experience seems to exert such a strong influence on giving, I chose to



focus my study on the nature of this specific influence upon graduate alumni giving behavior.

Yet, after choosing this focus, I was surprised to see that a significant gap existed in the research literature identifying different types of college experiences that lead to high levels of graduate student satisfaction. Much attention has been paid to the ways in which institutions can structure the undergraduate student experience to increase the likelihood of positive outcomes. However, graduate students have differing goals and needs while in college than do undergraduates. Gardner and Barnes (2007) found that levels of graduate student involvement are “entirely different” than those of undergraduate students, and that graduate involvement quality, depth, influences, and outcomes impact graduate student socialization into the profession (p. 375-378). Gustitus, Golden, and Hazler (1986) noted that “graduate students work under a variety of personal and professional stressors...including somatic symptoms, depression, and difficulty in meeting academic obligations” (p. 461), and Coulter (2004) found that graduate students needed better orientations, professional development workshops, student space, and communication systems with academic departments and the institution (p. 15). Because graduate students have different academic, professional, social and emotional needs than undergraduates, factors that lead to a positive graduate student experience may be altogether different than those that lead to a positive undergraduate experience.

#### **D. Connecting Graduate Student Experience and Alumni Giving**

This study hopes to bridge several identified gaps in the literature by examining the relationship of graduate student experiences and graduate alumni giving. There is increasing recognition among scholars that different groups of students have varying

student experiences, and that various components of the student experience differ in the degrees to which they impact the student satisfaction of different groups of students. Similarly, researchers of alumni giving have begun to explore the differential influences on giving between different groups of alumni. However, researchers have only begun to study graduate student alumni separately from undergraduate student alumni, inviting exploration of those student experiences that most profoundly influence graduate alumni giving.

### **E. Purpose and Research Questions**

The purpose of this study is to identify those graduate student experiences that most significantly influence graduate alumni giving. The overarching inquiry of this study asks this question: *What elements of the graduate student experience most significantly influence graduate alumni giving?* Within this question, I hope to explore the following questions:

1. Does an overall positive graduate school experience increase the likelihood of giving as alumni?
2. Which graduate student experiences most significantly influence giving to the institution?
3. How do the student experiences compare between graduate alumni who give and those who do not?
4. How do personal characteristics such as age, gender, race/ethnicity, marital status, or financial status affect the relationship between student experience and alumni giving?

By surveying graduate students at a large research institution in the northeast with significant graduate student and graduate alumni populations, and subsequently comparing their giving behavior as alumni, I hope to take an initial step towards addressing this question.

## **F. Theoretical Framework**

I use Astin's (1970) theory of Input-Environment-Output as the conceptual foundation for the theoretical framework of this study. I conceptualize alumni giving as a culmination of the interplay between individual graduate alumni characteristics and their experiences at the institution as a graduate student and as alumni. Individual characteristics include such aspects as race, gender, age, and a host of other genetic and situational characteristics that graduate students bring with them to their studies. The experiences graduate students have while at their institutions, such as their program orientation, relationships with professors and advisors, interactions with classmates, etc., as well as their experiences with the institution as alumni, interact with these individual characteristics to influence their giving behavior as alumni. Thus, Inputs (student characteristics) interact with the Environment (graduate student and alumni experiences) to influence the Output (giving as alumni). An element of time is incorporated in this framework, where personal characteristics are present before student behavior and perceptions, which both precede alumni behaviors and perceptions, and all of which precede giving behavior. While no clear *causality* can be established between different temporal periods in the framework, I hope to establish how earlier components within the framework may exert *influence* upon the temporal components of the framework that occur later on. Thus, in this study, I hope to identify those student and alumni experiences

(environment) that most profoundly interact with alumni characteristics (inputs) to influence alumni giving (output).

## **CHAPTER II**

### **LITERATURE REVIEW**

In this section, I review the research literature on the topics that undergird this study: influences on alumni giving, student experience, and the Input-Environment-Output theoretical framework as it relates to alumni giving. Through critical examination of the literature amongst these topics, I hope to frame this study within the context of what we already know, and how this study can help advance our knowledge base. The literature review is guided by the connections that undergird the logic of my study:

1. A number of factors are known to influence alumni giving, and one significant influence on alumni giving is student experience
2. Graduate students are a distinct population with unique needs that shape their student experience, and
3. Because student experience influences giving behavior, it is important to understand what types of graduate student experiences are likely to affect amounts and frequency of donating as alumni.

By studying what we know about influences upon alumni giving and components of graduate student experience that are most salient to graduate student satisfaction, I hope to build upon current knowledge and illuminate specific aspects of the graduate student experience that make graduate alumni more or less likely to make financial contributions to their graduate alma mater.

#### **A. Astin's Input-Environment-Output Theory**

In order to study graduate student experience, it is necessary to have a framework through which to understand how it affects students. Unfortunately, specific frameworks

for exploring and understanding graduate student experience have yet to be developed. However, a number of models for understanding undergraduate student experience have been constructed, and I look to these undergraduate models to help guide my research into graduate student experience. One such framework that has been widely utilized to understand undergraduate student experience is Astin's (1970) Input-Environment-Output model (Stein, 2007; Strayhorn, 2008; Thurmond, Wambach, Connors, & Frey, 2002; Whitmire, 1998; Zuniga, Williams, & Berger, 2005). I chose this model because of its flexibility, adaptability, and broad applicability, which allows me to apply the principles within the model as the guiding framework for my exploration of graduate student experience. As Astin (1977) states about studying how college affects students, "the real issue is the 'comparative impact of different collegiate experiences.' More information is needed on the relative impact of various *types* of collegiate experiences" (p. 6). The I-E-O framework allows me to explore how different graduate student experiences affect giving as alumni.

Astin's (1970, 1991) conceptual model posits that outcomes are a function of the interaction between the personal characteristics of an individual and the environment they are in. It is debatable as to when this concept officially became a theory, and Astin's I-E-O theory is cited in different years by different researchers. Citations on Astin's theory vary between 1970, 1977, 1991, and 1993; however, I consider the theory to have first been formalized in 1970 and then utilized and further explicated in later works. Thus, for the purposes of this paper, I cite the year as 1970.

Originally, Astin developed and applied this conceptual model in 1970 to help organize and analyze the burgeoning amount of literature on college student

development, and help identify methodological shortcomings of previous work and strengthen methodological approaches of future studies (Astin, 1970). He hoped to hone in on how the college environment interacted with personal attributes of college students to produce student outcomes by organizing research studies to analyze each of these factors, believing that researchers often omitted one or more of these aspects in their study designs. He was also concerned with inferential errors by those researching college student development, in that he believed researchers often rejected null hypotheses when they should be accepted (Type I errors), accepted null hypotheses when they should be rejected, (Type II errors) or concluded that there was a significant college affect on the outcome but the affect they report is actually the opposite of what is happening (what he termed “Type III errors”) (Astin, 1970). In subsequent works, he utilized this theory to analyze data on college outcomes (1977, 1993) and to refine methodological approaches to college student research. His I-E-O theory has been used by many researchers as a conceptual framework to study the effects of a wide array of educational programs in the years since its inception, including this dissertation.

As its title suggests, the theory is comprised of three constructs: *Inputs*, *Environment*, and *Outputs*. Inputs are “those personal qualities the student brings initially to the education program (including the student’s initial level of developed talent at the time of entry),” such as demographic information, educational background, political orientation, financial status, career choice, major, degree aspiration, life goals, etc. (Astin, 1993, p. 18). It is important to include Inputs within a sound research design because they have a double influence on outputs – they both directly influence outputs and also influence outputs *through* the environment (Thurmond & Popkess-Vawter,

2003). Environment “refers to the student’s actual experiences during the educational program,” and includes anything that happens during the educational program that might influence the student and the measured outcomes (Astin, 1993, p. 18). Outputs “refer to the ‘talents’ we are trying to develop in our educational program,” and are the end results that occur at the end of the program (Astin, 1993, p. 18). In the case of my study, I am looking at how the personal characteristics of individuals (Inputs) affect giving behavior of graduate alumni (Outcome) *through* the graduate school environment (Environment) they encountered as a graduate student, while accounting for the direct effects that personal characteristics of graduate alumni (Inputs) have on their giving behavior (Outcome) apart from the environment.

The major strength of the I-E-O model is that it helps minimize error associated with causal inferences between the practice and outcomes of education by controlling for input characteristics, as most educational research occurs in natural settings (Thurmond & Popkess-Vawter 2003). The theory essentially attenuates researchers to refine their study designs to incorporate an understanding of the personal characteristics of individuals apart from the environmental application, in order to then understand how immersion within that environment affects the educational outcome on individuals. Astin, himself, notes that the “I-E-O model was designed to address the basic methodological problem with non-experimental studies in social sciences, namely random assignment of people (inputs) to programs (environments)” (Astin & Sax, 1998, p. 252). The model reduces biased and inaccurate estimates of the effects of environmental variables on student outcomes by controlling for differences in the characteristics of individuals, resulting in more accurate assessments of the effects of a learning environment



(Thurmond & Popkess-Vawter 2003). Applying this concept to my current study, I aim to refine my ability to measure the effect of graduate student experience on the giving behavior of graduate alumni by accounting for the personal characteristics of the individuals apart from their graduate school environment. By understanding the personal characteristics of graduate alumni (Inputs), I can refine the clarity and accuracy of the measured effect of graduate school (Environment) on certain aspects of their giving behavior (Outcomes).

While the theory makes sense, its major weakness lies in the complexity of implementation in research design. As Thurmond & Popkess-Vawter (2003) posit, “conceptually, the model is parsimonious, but not simple. Although relationships among the constructs make sense, complexity lies in accurately operationalizing theoretical concepts as testable variables.” They caution that some outcomes may be interpreted as inputs (such as high school G.P.A.), and a number of environmental factors that affect educational outcomes may be unaccounted for in a study. They also advocate that researchers who employ the model must be contextually clear in defining the Inputs, Environmental components, and Outcomes being accounted for and measured, and that generalization of findings is limited due to the lack of randomization of subjects.

Applying this to my study, I need to be clear regarding what personal characteristics I identify that I am examining, the types of graduate experiences that I am explicitly analyzing as environmental factors of graduate student experience, and the measures of giving that I am looking at. Many of the factors I account for and examine are guided by the factors identified in this literature review, and I explicate them in my methods and results sections. While the factors within each construct (I-E-O) will be clearly defined,

the generalizability of my findings will be necessarily limited due to inability for randomization.

An additional limitation of the I-E-O model is that it does not account for different types of experiences in the environment – namely, distinguishing between behaviors that people engage in and perceptions they have about those experiences. Berger and Milem (1997; 1999) advocate that both behaviors and perceptions are an important component of understanding environmental phenomenon. In order to refine the specificity of our understanding of the effect of the environmental on outcomes, it helps to categorize environmental factors into behavioral (what activities we participate in and the settings in which they take place) and perceptual (what we think and feel about those activities and settings) components, rather than to examine them as an indistinguishable whole. To account for this, I have incorporated behavioral and perceptual categories of environmental factors that influence giving into my theoretical framework. Specifically, the conceptual framework of this paper organizes the environment into behavioral and perceptual categories of graduate student experiences, as well as behavioral and perceptual categories of alumni experiences, to understand how they influence alumni giving.

### **B. Graduate Student Experience**

A foundational assumption of my study is that student experience while on campus has a strong influence on the giving tendencies of all alumni, and that positive student experiences increase the likelihood that alumni will donate to their alma mater (McDearmon & Shirley, 2009; Monks, 2003; Clotfelter, 2003). Because student experience seems to exert such a strong influence on giving, I chose to focus my study on

the nature of this specific influence upon graduate alumni giving behavior. The bodies of literature on giving influences and graduate student experience are both relatively sparse, and the literature connecting graduate student experience and giving is even more scarce. Studies have shown that graduate students have different social, academic, and professional needs in graduate school than undergraduates (Coulter, 2004; Gustitus et al., 1986; Gardner & Barnes 2007). Because graduate students have different academic, professional, social and emotional needs than undergraduates, graduate students may construct the meaning of their experience differently than undergraduates do, and may have generally different levels of overall satisfaction with their student experience than undergraduate students. Here, I explore those personal characteristics (Inputs) and environmental factors (Environment) that most significantly influence graduate student experience (Output).

### **1. Inputs**

The personal characteristics of graduate students (Inputs), such as gender, race ethnicity, nationality, or financial status play a significant role in the way they experience graduate school. Women graduate students reported significantly more stress and stress-related symptoms, yet also reported significantly less support from their academic departments than men, indicating a greater role strain for women and less support for managing multiple roles, academic demands, and family needs (Mallinckrodt & Leong, 1992). They tend to have less frequent interactions with faculty, and may experience an increasingly “male-oriented” climate the further they advance in their studies (Sandler & Hall, 1986). Incorporating the role of graduate student into other roles such as wife, homemaker, mother, and/or professional, combined with the “superwoman syndrome”

expectations that a woman must perform well in all her roles, may lead to role strain and increased symptoms of stress (Mallinckrodt & Leong, 1992). Additionally, some disciplines may alter the experience for women more powerfully than others. In programs that are traditionally dominated by men, women report significantly more faculty hostility and social isolation than men, and more difficulty in finding mentorship and social support (Mallinckrodt & Leong, 1992). Gender can play a role in graduate student relationships with peers and faculty, role incorporation, and stress levels, and ultimately affecting their entire experience.

Race, ethnicity, and nationality are also significant factors in graduate student experience. Ethnic minorities can experience “micro-aggressions,” or brief everyday slights, snubs, and implications – often committed unconsciously – that send denigrating messages to a member of a minority group due to their membership within that group (Clark, Mercer, Hill, & Dufrane, 2012). These experiences may typically be subtle but can be overt, and over time can lead to feelings of inadequacy, isolation, inferiority, emotional distress, and erode academic engagement (Clark et al., 2012). Ethnic minorities may also have difficulty finding a mentor, which is an important influence on graduate student experience. For instance, Black graduate students may experience difficulty finding Black faculty members, and experience difficulty connecting with other faculty members in their department as deeply as their White counterparts (Ellis, 2001; Noy & Ray, 2012).

Financial status can also significantly affect perceived graduate experience. Graduate students are often dependent on financial assistance to attend graduate school through means such as loans and financial aid. Debt incurred through these forms of

financial assistance can be substantial, and affect the student throughout their academic endeavors and well after they graduate, causing significant stress to the student.

Moreover, they are often financial burdens that are incurred in addition to financial debt incurred from their undergraduate studies. Many students are dependent upon securing assistantships, fellowships, or maintaining full time jobs to pay for their education. The demands of assistantships, fellowships, and full time jobs can delay time to completion, impede academic performance, create time constraints that impinge upon their ability to become more involved in their programs or professional organizations, and lead to elevated feelings of isolation within a student's academic program (Girves & Wemmerus, 1988). These assistantships may be poorly advertised, highly competitive, difficult to secure, and may also not be guaranteed to last through the entirety of the time a graduate student is enrolled. The stipend amount received may not be commensurate with the work and time expectations demanded by the employers, leading to feelings of angst, stress, and exploitation. Employment schedules may provide inconvenient and inflexible schedules that make taking required classes difficult to undertake. The ability to pay for graduate work can be a significant source of concern for graduate students, and affect how positively or negatively they feel about their experience when they become alumni.

Personal characteristics (Inputs) interact with one another to influence graduate student experience. For instance, race and gender may combine to affect how graduate students form relationships with their advisors or other faculty in their department, or how they perceive the classroom environment, sense of community in the department, and peer interactions - particularly for graduate students at predominantly White institutions (Ellis, 2001). The relatively low numbers of Women and non-White graduate

students and faculty members makes connecting with faculty members in general more difficult and less satisfying for women and non-White graduate students, and particularly systematically disadvantages women of color in finding advisor support (Noy & Ray, 2012). Though it seems intuitively that family status would affect the graduate student experience significantly, it has not yet emerged as a focal point in the literature.

In their study of doctoral student experience of Black and White students at predominantly White institutions, Ellis (2001) found that race affected doctoral student experience more significantly for Black female students than White men and women - but also affected Black women more than it did Black men. White males seemed to express more satisfaction with their academic advisors than White females, Black Males, or Black females, and conversely Black females reported the lowest levels of satisfaction and more confrontational relationships with their academic advisors and mentors. Both White and Black males reported feeling more comfortable exchanging ideas with faculty and students in class, fewer clashes and feelings of intimidation with professors, and enjoying the classroom environment more than White and Black women. Black women were also more proactive than Black men to raise issues of diversity and recognition of differing perspectives and ideas, which seemed to lead to increased perceptions of a less welcoming classroom climate for Black women. Women, and Black women in particular, perceived departmental community to be lacking more than men, and experienced more difficulty integrating into the departmental culture and less sense of connection with their doctoral communities. As this study highlights, gender and race can interact to influence the relationships graduate students establish at school, the amount of support they receive, and their perceptions of their overall graduate student experience.

Interestingly, race and gender may also shape expectations for graduate school experience and ultimately how satisfied students are once they graduate. The majority of literature focuses on differences in Black and White graduate students, and unfortunately has not included a focus on other racial backgrounds – with research most notably absent on the experiences of Hispanic students, one of the fastest growing student populations. Black males entered graduate school with a greater emphasis on completing their degree quickly and advancing professionally than White men or White or Black Women, with little emphasis on becoming socially involved with the people in their programs (Ellis, 2001). Thus, they were more satisfied with their experience upon graduating than other groups, even though they may have experienced similar levels of social integration throughout their program. Because they expected less support and emphasized quick degree completion and professional advancement, Black males viewed their experience more favorably. Expectations of graduate student experience can affect graduate student satisfaction, and expectations about graduate school may vary by race and gender.

## **2. Environment**

### **a. Socialization**

One significant environmental influence on graduate students is the degree to which they are socialized into both their academic program and their chosen profession. Socialization is “the process 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” (Weidman, Twale, and Stein, 2001), and involves how graduate students “acquire the values and attitudes, the interests, skills, and knowledge, in short the culture, current in the groups of which they are, or seek to

become a member (Merton et al 1957, p. 287). Through socialization, graduate students come to understand and acclimate themselves to the culture, values, behaviors, and expectations of their academic departments, peers, professors, and their chosen profession, and determine how they fit within these cultures and expectations – or not. In short, the process of socialization allows graduate students to discover how well they fit within the environments their field of study in which they are immersed. How well they perceive their fit can shape how enjoyable and fulfilling they find their graduate student experience.

Golde (1998) notes that the socialization of graduate students is “an unusual double socialization” where they are “simultaneously directly socialized into the role of graduate student and are given preparatory socialization into a profession” (p. 56). They must overcome four general tasks of initial socialization into graduate student life and their future profession:

1. Intellectual mastery – possessing the intellectual competence in coursework, lab work, and other intellectual settings
2. Learning the realities of life as a graduate student - deciding if it is worth it to struggle through the rigors of graduate student life
3. Learning the chosen profession – determining whether or not they are suited to the work, and
4. integrating into the department – deciding if the particular department and program they are enrolled in is a good fit for them personally.

Students navigate these four tasks to determine if they have made the right career choice, that graduate school is a worthwhile path to achieving this professional goal, that they are



capable of the work required of them, and that they belong in the department in which they enrolled.

Socialization may be even more nuanced than the double socialization Golde (2008) suggests. Gardner (2010) contends that Golde's stages are actually too "monolithic," meaning that the experience of one student cannot be representative of all students. She extends socialization to a "bi-level" experience in which academic, programmatic, professional, and personal socialization issues are influenced by the phase of the program graduate students are in as well as the climates, cultures and contexts of the departments and disciplines in which they were enrolled. How socialized graduate students feel can vary within different academic, professional, programmatic and social spheres, and change as students progress through various stages of their graduate student experience. Graduate student socialization, then, occurs on a number of levels and is influenced by a number of factors.

The degree to which graduate students feel socialized can begin as early as when they first enroll in their academic program. Graduate students can experience significant angst as they enter a new culture and assume additional roles and new norms (Adler & Adler, 2005; Coulter, 2004). In addition to logistical transitions that may include moving, leaving friends and significant others, obtaining new drivers' licenses and insurance, and buying new household items for a new residence, graduate students are often thrown into a cultural environment they know little about (Adler & Adler, 2005; Goplerud, 1980). Becoming a graduate student may involve assuming a number of new roles at the same time, such as becoming a student, teacher, researcher, residence staff, or part-time employee, and incorporate a number of different settings that may include the specific

program, the graduate school the program is housed in, a new institution, new employment, new professions, and/or new academic settings.

Often, norms and expectations of each role and setting are not made explicit, and can prove to be difficult to ascertain without guidance (Austin & McDaniels, 2006; Gardner, 2010). Some messages about what is valued may even conflict with one another. At many research institutions, teaching excellence is often extolled and applauded, but research productivity weighs much more heavily in rewards and incentives (Austin & McDaniels, 2006). Ambiguity regarding norms and expectations can persist throughout the graduate student experience as well, and shift depending upon the stage of their studies they are in. For instance, doctoral students who are applying or who are about to begin their studies feel ambiguity surrounding the exact expectations of them in graduate school, while those in the midst of classes and exams may be unclear about the examination process, and those in the candidacy phase may feel adrift in the dissertation process (Gardner, 2010). Beyond ambiguity, the role of graduate student may also be expected to predominate all others in a student's life, leading to anxiety and difficulty reconciling roles and responsibilities outside the graduate student identity such as a worker, parent, spouse, friend, family member, etc. (Egan, 1989). Graduate students often need to negotiate with peers, friends, and families to establish priorities, commitments and responsibilities, and may experience increased stress from having to justify their graduate school commitments to these various groups (Polson, 2003). Discerning loosely defined expectations and values embedded in multiple roles, and incorporating them into roles outside graduate school, can be difficult and taxing on graduate students.

Graduate students often have difficulty reconciling the competing demands of their many roles (Anderson & Swazey, 1998; Egan, 1989). Many graduate students report an ever-present feeling of being unable to satisfy the conflicting demands of various roles, that the amount of work they have impairs the quality of the work they do, workload demands interfere with their personal life, and find it difficult to evaluate their progress in their various roles (Anderson & Swazey, 1998). The many demands and roles of graduate school often create significant change in graduate students, including changes in identity, perspectives, values, and beliefs – so much so that they change feelings of self-worth, competence and ultimately one’s sense of self (Egan, 1989). Graduate students must negotiate demanding multiple roles that are loosely defined, compete with one another, and have demanding expectations, often proving difficult to ascertain and negotiate.

Many graduate students are not fond of the ways they changed through the course of graduate school (Egan, 1989; Anderson & Swazey, 1998). In one study, nearly a third of graduate students indicate that graduate school changed them in ways they did not like, and respondents were nearly split in whether they agreed or disagreed that graduate school had positively reinforced their prior values, self-image, and way of thinking about the world (Anderson & Swazey, 1998). Moreover, students are typically expected to adapt to a new culture, often with little recourse for the culture to adapt to the individual characteristics the student brings. Too often, socialization is assumed to be a one-way street. This sentiment is evident in the rigid views of socialization expressed by Tierney (1997):

Socialization pertains to the successful understanding and incorporation of those [cultural] activities by the new members of the organization... [socialization]

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." (Tierney, 1997)

Graduate programs view change in graduate students as "a gradual, benign, well-intentioned developmental socialization process," and too often attribute depression, anxiety, and other negative effects to "psychological shortcomings" of the student rather than a result of structural shortcomings of graduate programs (Egan, 1989, p. 200). As graduate students negotiate their various roles and integrate them into their being, graduate students may evolve their identity in ways that they may like, dislike, or perhaps have mixed feelings about. These changes in identity, and feelings that result, can affect how graduate students feel about their graduate student experience.

Because of the considerable amount of new and often ambiguous expectations placed upon graduate students, they need better orientations that clarify academic expectations, introduce them to classmates and professors, and help them begin to understand and navigate the norms of the various new roles and settings they find themselves within (Coulter, Goin, & Gerard, 2004). While it has traditionally been assumed that graduate students did not need services because of their focus, maturity, and goal orientation, they have such diverse needs that multiple service providers are required to successfully integrate them into the school, department, and profession (Polson, 2003). Many graduate students experience significant angst, fear that they will not be able to perform adequately in graduate school, and will be discovered as an "imposter." Low self-esteem and self-doubt are common emotions among new graduate students, and some graduate orientations reinforce these emotions in their initial encounters with students with sayings such as "look around you and in five years only one out of every

three of you will be here” (Adler & Adler, 2005). Orientations must be structured to incorporate the unique characteristics students bring with them, the uniqueness of the graduate programs, departments and disciplines themselves, and persist well after the first week of classes after a graduate student enrolls (Gardner, 2010; Polson, 2003). Without better orientations to help anchor their understanding of their new roles and environments to help bolster their self-confidence, graduate students may feel adrift and abandoned to decipher their roles and discover their confidence *despite*, rather than *because of*, the messages they receive from their programs. Because of this, significant numbers of graduate students start off their programs lagging behind in the socialization process, and may never fully catch up to where they hope (or are expected) to be.

In addition to becoming socialized to their academic, programmatic and social surroundings, graduate students also seek opportunities to become socialized within their chosen profession. They often pursue their degree to help advance their career interests, and may come with a more professional orientation and expectation than undergraduates do. In fact, Anderson and Swazey (1998) found that the number one reason respondents indicated they came to graduate school was due to a desire for knowledge in their chosen field of study. Focus on professionalization is one significant distinguishing factor between graduate training and earlier education (Egan, 1989). The way that academic departments either facilitate or impede the transition from graduate student into their profession can greatly affect their perception of their graduate student experience.

One substantial avenue for graduate student professional socialization occurs through involvement in professional associations. Graduate students often become involved in these professional associations through the encouragement of faculty or other

students, and many programs encourage participation through implicit or explicit messages – some even formalize professional association participation and conference attendance as part of their requirements (Gardner & Barnes, 2007). Involvement in professional associations seems to shift over the duration of the academic program. Early in their program, graduate students typically become highly involved with local professional organizations and get a taste of national associations. As they progress towards degree completion, their participation in professional associations evolves into high levels of involvement in national associations and less involvement in local associations (Gardner & Barnes, 2007). This shift reflects an increasing competence in their professional proficiency, development of particular areas of interest and expertise, and the expansion of their professional networks as they progress in their graduate programs. As involvement in professional associations evolves, graduate students hone their professional acuity and advance their career pursuits after graduation through visibility and networking.

Yet, despite the increased desire of graduate students to make professional connections and associations, many graduate programs fail to create significant opportunities to generate these professional connections. Learning may be focused on academic matters, and programs may lack opportunities to apply these skills in practical, or “real-world,” settings within their professional field. Graduate students prize practical experience that will add to their skills and enhance their professional resumes, and the disconnect between the professional experiences graduate students desire and the programmatic offerings they experience can leave graduate students frustrated and unfulfilled with their professional growth during school.

## **b. Relationships With and Amongst Faculty**

Another significant environmental factor (Environment) in the experience of graduate students is their relationships with faculty. Students may form relationships with faculty in a variety of ways, such as teachers, job supervisors, mentors, advisors and friends. Faculty members can help integrate students into the culture of the academic program and the profession. Often the professional associations faculty members involve themselves in, and the level of their involvement, strongly influences the professional associations graduate students join, and the nature of their involvement (Gardner & Barnes, 2007). The amount and nature of interactions with faculty can also play a “crucial role” in reducing stress levels and prolonged life disruptions, with more frequent and emotionally or intellectually satisfying interactions leading to significantly lower levels of stress and life disruption (Goplerud, 1980).

Students typically enter their graduate experience anticipating a warm and supportive relationship with faculty characterized by individualized help and guidance, only to be disappointed in the atmosphere they encounter as a graduate student (Egan, 1989). Student expectations of a strong relationship with faculty, combined with some of the benefits that accompany these relationships, can play an important role with graduate student satisfaction. While some caution that the importance of these relationships may be overstated (Bieber & Worley, 2006), it is generally agreed upon that developing a strong relationship with at least one faculty member may be one of the most important factors in whether graduate students decide to stay or leave their graduate programs (Baird, 1995; Barnes & Austin, 2009; Ellis, 2001; Hartnett and Katz, 1977; Lovitts, 2001; Nettles & Millett, 2006; Noy & Ray, 2012; Vilkinas, 2008).

Graduate student satisfaction with their relationships amongst faculty seems to be affected by the kinds and levels of power they perceive faculty to have. Aguinis & Nesler (1996) analyzed the effect that graduate student perceptions of different types of faculty power had on student perceptions of factors of graduate student satisfaction and success, including quality of relationship, faculty trustworthiness and credibility, and intention to invite the faculty supervisor to chair or sit on thesis or dissertation committees or conduct research with them. Power was defined as “the ability or potential...to alter a target’s behavior, intentions, attitudes, beliefs, emotions or values,” and identified five types of perceived power: *referent* (desire to be associated with the faculty supervisor), *coercive* (perceived ability to punish the student), *expert* (possessing special knowledge they can confer to the student), *legitimate* (perceived right of the faculty member to influence the student and their obligation to comply) and *reward* (ability to provide the student with desired tangible or intangible benefits) (p. 71-72). The researchers found that graduate student perceptions of each type of faculty supervisor power greatly affected how trustworthy and credible graduate students perceived their supervisors to be, how much they wanted to work with faculty on research, and ultimately their perceptions of the quality of their relationship. Graduate students perceived faculty with higher coercive power as less credible and trustworthy, and were less inclined to invite their faculty supervisor on to their thesis or dissertation committee or conduct future research with them. Conversely, higher levels of perceived expert, referent, reward, and legitimate power contributed to perceptions of better quality relationships, higher credibility and trustworthiness, and increased desire to work with faculty on research projects.



Expectations faculty place upon graduate students can also influence how students perceive their experience. Faculty hold high expectations of graduate students, which can be gratifying and inspiring, or frustrating and demoralizing. Of particular note is that a significant number of graduate students may feel exploited by faculty members (Adler & Adler 2005; Anderson & Swazey, 1998). Often, graduate students are asked to take on large research or teaching assignments, and these assignments may come with short notice. Anderson and Swazey (1998) note that student feelings of exploitation may result from differences in understandings of appropriate workloads, in which case the problem may be addressed through direct conversation or negotiation between the graduate student and faculty. However, actual high levels of exploitation experiences would warrant substantial restructuring of tasks, responsibilities and expectations. It is important that graduate students find faculty members who are invested in developing their emotional maturity, cultivating their intellectual potential, and genuinely care about them as people. Rather than merely impart subject matter from their fields, faculty must “make certain that students independently exercise their minds to build their thinking prowess” (Bess, 1978, p. 289). Faculty should see graduate students as a resource worth investing time and energy into, but through the course of graduate students’ experiences they may end up feeling abused as cheap labor utilized to complete the menial drudgery of faculty workloads.

The political environment and relationships faculty have amongst each other can also affect how graduate students perceive their own relationships with faculty. In their study of sociology graduate students, Adler and Adler (2005) found that students “soon found that they were shut off from some areas because professors did not get along,” that

“the people they had come to work with were either unavailable or disinterested in them,” and that “the backroom politicking, divisiveness, and backstabbing was so insidious...that people could not even be in the same room together” (p. 16). However, connecting to a mentor may actually help provide insight into faculty politics, help aspiring faculty members see that there is “more to faculty life than *just* the politics,” and help graduate students feel capable of maneuvering through the political landscape as future faculty members (Bieber & Worley, 2006, p. 1026). Graduate students who perceive healthy relationships with and amongst faculty within their program generally have more enjoyable graduate school experiences.

### **c. Advisor Relationship**

One particular faculty relationship that powerfully influences graduate student experience is that between a graduate student and his or her advisor. This relationship is particularly prevalent for doctoral students. In fact, for doctoral students, the advisor is widely thought to be one of the most important people that doctoral students will interact with during their programs (Baird, 1995; Barnes & Austin, 2009; Hartnett and Katz, 1977; Lovitts, 2001; Nettles & Millett, 2006; Noy & Ray, 2012; Vilkinas, 2008). Healthy relationships with a faculty advisor enhance the likelihood of an enjoyable and fulfilling graduate student experience, whereas poor relationships with an advisor can significantly degrade the graduate student experience. Advisors can serve as the primary socializing agent for doctoral students in to the department (Barnes & Austin, 2009). Advisor experience and expertise in course selection, understanding of previous student experience successes and trouble spots during the program, and knowledge of the breadth of programmatic and course offerings can help graduate student advisees build a plan of

action within their program that best suits their needs and goals. They can help alleviate confusion over new roles and expectations, navigate administrative red tape and institutional bureaucracy, and match their advisees with particular courses that will align well with student learning styles, goals, and schedules. Advisors may also serve as the conduit to involvement on prized research projects, publications, graduate assistantships, and even professional and employment connections upon graduation.

If a program requires a thesis or dissertation, the advisor can truly make or break the graduate experience of their advisee. As one graduate student noted, “you can be in the greatest school in the world and have a lousy time just because of the adviser (sic), or [be in]...the worst school in the world and have a good adviser (sic) and have a good time going through the program” (Ellis, 2001, p. 37). Some of the qualities that adept advisors possess include a friendly disposition, supportive and caring nature, collegiality, honesty, and being accessible (Barnes & Austin, 2009). Advisors are often the filter through which graduate students progress in the thesis/dissertation process, and their level of advice, attention, engagement, flexibility and approval can greatly impact both the amount of time it takes a student to complete the process and the level of enjoyment the student has while undertaking the endeavor.

Advisors can also facilitate the selection of additional committee members who add value in such ways as content expertise, bureaucratic navigation, perspectives, or even disposition to the composition of the committee. When seeking to create thesis or dissertation committees, graduate students often have a limited knowledge of, and exposure to, faculty members outside of their academic unit, and advisors may provide links to faculty who can make important contributions to the research project.

Additionally, the advisor can serve a graduate student through several important roles and functions, including collaborator, advocate, mentor, behavior-corrector, process manager, and source of solace in the face of failure, while simultaneously helping to develop advisees as independent researchers and instilling disciplinary habits (Barnes & Austin, 2009). Advisors must be able to integrate various roles at any given time that are completely opposite, varying from people-focused to task-focused, and from internally focused to externally focused (Vilkinas, 2008). The nature of the relationship between advisor and advisee can affect degree completion, with positive relationships being significantly more likely to lead to completion of dissertations (Barnes & Austin, 2009). These roles and skills require a high level of nuanced skills and abilities in order to optimally serve graduate student advisees, and the aptitude and methods that advisors use to approach their role can be a key facet of how enjoyable or unpleasant the student finds the thesis or dissertation process to be.

Differences in the understanding of thesis or dissertation advisor roles can affect graduate student satisfaction. The traditional view envisions the thesis or dissertation process as a primarily solitary one that is undertaken by the student, in which problems, stagnation, confusion, and loss of motivation are generally seen as the province of the student to work through. In doing so, they prove their worth as an academic worthy of the degree. However, lines of thought have emerged in which advisors take on a more expansive and active role in the dissertation process of their advisees, and working through the challenges of the process becomes an increasingly shared activity. Ahern and Manathunga (2004) argue that dissertation advisors should be “clutch starters” for advisees who are stalled in any particular part of the process, and help determine the

cause of the stall and provide the support and encouragement that will help the student get unstuck. Advisors must be empathetic and responsive to personal issues yet require students to produce, find balance between providing autonomy and providing direction, and foster creativity while providing a critical perspective – all of which require a difficult ability to move between seemingly paradoxical roles (Vilkinas, 2008).

Successfully advising students requires skillful and nuanced proficiency, and employs a range of abilities to address graduate student needs. However, graduate students must also be realistic in their expectations of their advisor, and realize that they will encounter struggles and difficulties that they must work through, and that self-directed exploration is inherent in graduate school studies.

It should be noted that the importance of finding a mentor in graduate school, while important, may be overstated in some instances. For instance, Bieber & Worley (2006) found that, despite witnessing faculty behaviors contrary to idealized perceptions of faculty life, graduate students often held tenaciously to their conceptualizations of life as a faculty member, rather than attributing these behaviors to the result of the realities of faculty life. But, even in this study, the seedling idea of potentially becoming a future faculty member was first implanted by the encouragement of a faculty member. Thus, while the role of advisors in graduate experience may be overstated in some instances, it still stands as one of the most prominent influences in shaping the graduate experience of their advisees.

#### **d. Committee Relationship**

The relationship between a student and his or her thesis or dissertation committee members, as well as the relationship between the committee members themselves, is

another environmental factor (Environment) that affects graduate student experience – particularly for doctoral students. Good relationships between student and committee and/or amongst committee members creates a better experience for the graduate student and, conversely, tensions between student and committee and/or amongst committee members lead to more negative perceptions of the thesis or dissertation process. The level of cohesion amongst committee members can either facilitate or inhibit the progression of the graduate student through the process, and plays a large role in the amount of time it takes to complete the degree. A graduate student may find that some faculty cannot work with each other, or are no longer interested in the type of work that the student would like to pursue, or that faculty committees try and force the student’s research interest into specific areas that fit the interests of the faculty member(s) rather than the student’s (Adler & Adler, 2005). The inability to connect with faculty members can leave graduate students floundering and adrift (Adler & Adler, 2005). Committee guidance through the process of writing a thesis or dissertation can prove to be essential, and clear and consistent feedback throughout the process reduces the level of anxiety, frustration and surprises for graduate students.

#### **e. Relationships with Peers**

Another important influence on graduate student experience is interactions with fellow graduate students. Anderson and Swazey (1998) found that about half of the graduate students they surveyed indicated that they learned more from each other than they did from faculty, and Gardner (2010) found that the primary source of support for the vast majority of the doctoral participants in her study was from other students in their program. Peers can serve as a source of comfort, information, and support for graduate

students during a demanding time. Peers can often serve as informal advisors, helping to suggest professional associations, courses, or ways to navigate programmatic and administrative requirements. Interacting with peers in the early stages of graduate school can be particularly important, as an inverse relationship exists between frequency of social interactions with peers and the incidence of stressful life events and reported psychological disturbances for first year graduate students (Goplerud, 1980). Positive interactions with peers seems to enhance the ability of a student to cope with the significant amounts of stress that accompany the transition into graduate school.

Conversely, peers can also be a source of competition during a graduate program. Anderson and Swazey (1998) found that an astonishing 92 percent of graduate student respondents indicated that people in their department put their own interests first. About half said that they had to compete for faculty time, attention, and resources that were ultimately only given to a select few students, and that faculty would bend the rules for some students but not all. Peer relationships may also be more influential on the experience of different types of graduate students. For instance, full-time and single students and those with assistantships may be more likely to stress the importance of their interactions with peers, whereas those students who are part-time, working professionals, married, or have small children do not spend as much time with graduate student peers (Ellis, 2001). While peer support can often times reduce stress, peer competition can also provide a significant source of stress during graduate school, and vary in significance depending upon the type of graduate student

Cohort models, or students grouped together in the same academic program that will take many of the same classes together and are intended to progress through the

program in the same general time frame, can either serve to create strong bonds amongst graduate students, or create feelings of distance and isolation. Commonalities in interests, life circumstance, and graduate school experiences can help students bond together, and provide avenues of support as difficulties and challenges emerge. Some graduate students struggle to find points in common with their fellow cohort members, and competitive culture in the program can cultivate cheating, backstabbing, gossiping, and pernicious behavior among cohort members (Adler & Adler, 2005). Divisions among cohorts may develop as they progress through the program as well, emerging from differing ideological perspectives, the degree of importance they place on their schooling, or different specializations (Adler & Adler, 2005). That a cohort is intended to develop bonds amongst students can make feelings of isolation even more pronounced for those who struggle to bond with fellow students. The relationships that students have with their peers can either enhance or detract from their graduate student experience, and the formal structures designed to create positive peer interactions can either facilitate or impede peer relationships.

### **3. Summary of Graduate Student Experience Literature**

Graduate student experience is influenced by a variety of personal characteristics (Inputs) and graduate program settings (Environment). Graduate students encounter a number of new and demanding roles in the graduate environment that they must integrate into the many roles and responsibilities inherent in their personal life, and seek to establish relationships with faculty and peers that can facilitate or inhibit successful and satisfying integration into graduate school. Many of the roles they assume are loosely defined, yet hold high expectations for exemplary graduate student performance.



Establishing healthy relationships with faculty and peers can be important source of guidance, learning, and stress relief, but can also turn frustrating and even demoralizing if a graduate student does not forge meaningful connections that meet their hopes and expectations. Despite the numerous and demanding new roles, as well as the importance of forming good relationships with faculty and peers, formalized institutional and programmatic support may not always be structured in a way that facilitate smooth role transitions and strong relationships with faculty and classmates. Personal characteristics (Inputs) such as race, age, gender, and financial stability interact with environmental factors to help shape experiences that graduate students have and the way that students perceive their experience. Ultimately, the experiences a graduate student has, and the way he or she defines their experience, coalesces out of the traits a person brings with them – in essence, who they are – and the graduate environment they are immersed in.

### **C. Influences Upon Alumni Giving**

Unfortunately, higher education fundraising has been under-studied in academically rigorous and theoretically sound realms of research. Drezner and Heuls (2014) noted the distressingly low number of peer-reviewed articles (139) that resulted from a search in the Education Resource Information Center (ERIC) with key words of alumni/alumnae, fund raising/fundraising, philanthropy, trustee, or institutional advancement in the abstract of the article. The 5-year average of publications of fundraising articles in peer-reviewed journals increased dramatically in 2003-2012 to 15 per year, up from an average of 2 in the years 1993 to 2002. However, this corresponded with the inception of the only two peer-reviewed journals dedicated to fundraising and advancement research, which have since closed, and it is expected that research into

fundraising will slow dramatically with their closure (Drezner & Heuls, 2014). Additionally, only 10 percent of the dissertations conducting fundraising research between 1991 and 2006 were published in a journal, and 76 percent of those published were in the *International Journal of Educational Advancement*, which no longer exists.

While the body of research on higher education fundraising is young, some common influences on giving behavior have begun to emerge. A variety of personal characteristics, institutional characteristics, and student experiences all coalesce to influence alumni giving behavior. I examine elements of each that have emerged in the literature, and suggest how they relate to my study.

### **1. Inputs: Personal Characteristics and Giving**

The theoretical framework for this study recognizes that individuals have characteristics about them that are not shaped by the educational institution, yet affect the ways in which they donate to their institution. In the Input-Environment-Output model, these are “Inputs.” Research literature on alumni giving illuminates a number of personal characteristics that affect alumni giving, including:

- Giving capacity (Conley, 2000; Mesch et al., 2002; Schervish & Havens, 2001; Weerts & Ronca, 2009; Wiepking & Breeze, 2012),
- Race (Bryant et al., 2003; Carson, 1989; Drezner, 2009; Escholz & Van Slyke, 2002; Johnson-Bailey et al., 2009)
- Gender (Andreoni et al., 2003; Bruggink & Siddiqui, 1995; Cox & Deck, 2006; Croson & Gneezy, 2009; Dvorak & Toubman, 2013; Eschholz & Van Slyke, 2002; Holmes, 2009; Holmes et al., 2008; Newman, 1995;

Okunade, 1996; Ostrander & Fisher, 1995; Rooney et al. 2007; Wunnava & Lauze, 2001),

- Marital status (Andreoni et al., 2003; Kaplan & Hayes, 1993; Rooney et al., 2007; Rooney et al., 2005; Yoruk, 2010), and
- Age (Bruggink & Siddiqui, 1995; Gaier, 2005; Holmes et al., 2008; McDearmon & Shirley, 2009; Mesch et al., 2002; Terry & Macy, 2007; Weerts & Ronca 2007; Willemain, Goyal, Van Deven, & Thurkal, 1994).

In this section, I explore the research on personal characteristics (Inputs) that affect alumni giving behavior.

#### **a. Giving Capacity**

The amount of wealth an alumnus/a possesses, or “capacity,” has been shown to significantly influence alumni giving behaviors. Weerts and Ronca (2009) identified characteristics that distinguish alumni donors from non-donors and examined the relationship between donor characteristics and levels of giving. They found that capacity was significantly related to whether or not alumni donated, as well as amount of the donation. Alumni with a higher financial capacity were more likely to donate to their alma mater and to donate larger amounts of money than alumni with lower financial capacity. Household income level of \$90,000 was determined to be an important benchmark, with household incomes earning \$90,000 or more being more likely to give, and to give at higher levels. Mesch et al. (2002) found that people gave an additional \$295 for each additional \$20,000 of income. While capacity is an important indicator, it must be noted that high income alone does “not necessarily translate into gifts,” and that capacity interacts with strength of affinity to the institution (Weerts & Ronca, 2009).

Alumni perceptions of their personal capacity is also a significant factor, as the size of donations has been shown to decrease if a donor has a careful approach to money and worries about their financial situation, regardless of their actual personal resources (Wiepking & Breeze, 2012). Nonetheless, financial capacity was shown to affect whether or not alumni donated to their alma mater, and the monetary size of the gift.

Capacity may also be responsible for racial differences in philanthropy that arise. Whites may be more likely to give and at higher levels simply because they have higher capacity than other races. Conley (2000) argued that the difference in average net worth is wider than the racial gap in any other socioeconomic measure, and that Whites enjoyed a net worth that was about 8 times that of Blacks in 1994 (about \$72,000 compared to \$9,800 for Blacks). He also noted that donations are typically made from liquid assets such as bank accounts, certificates of deposits, stocks, mutual funds, or bonds – rather than built into household budgets – and these categories of wealth contain the largest racial asset gap within net worth. This seems to be supported by Shervish and Havens (2001), who found that higher wealth pushes up giving as a proportion of income, but lowers the proportion of giving to overall wealth. As Conley (2000) stated simply, “it certainly takes money to give it away” (p. 530). The implicit argument is that Blacks may desire to be every bit as generous as White counterparts, but are disadvantaged in net worth relative to Whites to have the ability to do so. As systematic economic disadvantage in the system replicates itself for minorities with each successive generation, the gap in net worth is reinforced and widened as time progresses, becoming even more prohibitive to Black philanthropy over time.

## **b. Race**

Researchers have begun to examine the giving behavior of alumni of different races, with particular emphasis on differences between Blacks and Whites. Results have been mixed. Some Studies (Bryant et al., 2003; Carson, 1989) found that Blacks were significantly less likely to donate than Whites, that Whites are significantly more likely to donate than Blacks and non-Whites, and that non-White women gave significantly smaller donations than White women (Escholz & Van Slyke, 2002). Yet, other studies yielded contradictory results. Mesch, Rooney, Steinberg, and Denton (2006) found that racial differences disappeared when controlling for variables such as net worth and social capital, and several studies similarly found that social and human capital variables, as well as survey methodology, accounted for the race gap in giving between Blacks and Whites (Conley, 2000; Mesch et al., 2002; Musick, Wilson, & Bynum, 2000; Rooney, Mesch & Steinberg, 2005). What these contradictory findings may point to is that, while differences in giving behavior may exist amongst alumni of different races, there are likely other factors that either account for or exacerbate these differences. Clearly, more research needs to be conducted. As Steinberg & Wilhelm (2005) note, existing literature is not extensive, yields mixed results, and obscures whether racial and ethnic differences in giving are real. But, whether due to different variables that interact with race or due to behavioral differences in giving directly related to race, there seems to be growing evidence suggesting that race interacts with other factors to influence the giving tendencies of alumni.

Groups within alumni of a specific race may also differ in their giving tendencies and motivations. For instance, Black alumni from Historically Black Colleges and

Universities (HBCUs) may have unique experiences that shape their giving behavior. Studying Black HBCU alumni, Drezner (2009) found a unique importance placed upon “racial uplift” within Black communities, which was particularly salient for Black individuals from the millennial generation. Black alumni often indicated that their reason for participating as alumni was to help out other Black students, and the Black community as a whole. He also found a “specific school spirit” from Black alumni who attended a Historically Black College or University (HBCU), in that students and alumni often felt an affinity for both their own institution and HBCU’s in general. Additionally, Black graduate students have different student experiences that may influence their giving behavior. Johnson-Bailey et al. (2009) sought to map the campus climate and experiences of Black graduate students and alumni at a southern state research institution, noting that Black graduate students are “entirely different on many levels – age, length of degree requirements, curriculum, and life experiences” (p. 180). The researchers found that White professor discrimination, enforced social isolation, underestimation of academic ability, White student discrimination, and forced representation for the Black race all characterized the majority of respondents’ experiences as graduate students. While the researchers did not specifically examine how these differential experiences impacted their giving as alumni, they do highlight that they have different graduate student experiences than the rest of the alumni population, which may also mean that they have different giving influences as alumni. These experiences suggest that Black alumni from HBCUs may form unique attachments to higher education institutions that shape how they financially contribute to them as alumni.

### **c. Gender**

Researchers have also begun to examine studies on gender differences in alumni giving. Again, divergent findings in the literature emerged. Studies have found that women tend to give more (Bruggink & Siddiqui, 1995; Holmes, 2009; Holmes et al., 2008), or more frequently but in lower amounts than men (Dvorak & Toubman, 2013); some have found that men tend to give more (Okunade, 1996); others have found that women give to more charities but in smaller amounts (Andreoni et al., 2003; Rooney et al., 2007), and still others have found that men are more likely to occasionally give to their alma mater than women, but that gender doesn't matter in donors who give consistently (Wunnava & Lauze, 2001). The conflicting findings about women's philanthropy can be confusing, and certainly invite further studies into gender differences in giving.

One suggested reason for differing results has been that women may be more responsive to the context of giving and finances than men (Cox & Deck, 2006; Croson & Gneezy, 2009). Two particular elements that seem to influence women more than men are the total economic and social costs of generosity. Women seem to be more generous than men when social distance is low (their identities are more closely associated with their behavior), the total monetary cost of generosity is low (the donation amount is small), and there is an absence of reciprocal motivation (donating decisions are not made within the context of donating decisions of others), but differences in donating behavior may disappear as the situational context of giving changes (Cox & Deck, 2006). As a result, women will appear more or less generous depending upon the context of the study,

given that women are more responsive to changes in the social and economic costs of donating.

While differences in actual donating behavior may be murky, it does seem that women's *motivations* for giving significantly differs from men's giving motivations – even when actual donating behavior is similar. Though Eschholz and Van Slyke (2002) found no differences in giving behavior between men and women, they found that women believed it was much more important to get information back about their donation, were more motivated more by helping the community, and felt more strongly about their reasons to give than men, and women who perceived that the government was responsible to take care of community problems gave less. Emphasizing the cause that women are giving to, as well as the affect it will have in connecting them to the community, is significantly more important for women than men (Ostrander & Fisher, 1995). Additionally, women's decision to donate are influenced more than men by whether the institution is in a crisis situation, and are more motivated to donate to show human caring, as a way to express their moral beliefs, a means to help others, and as an expression of gratitude for their own good fortune than men (Newman, 1995). While differences in actual giving behavior has yet to be firmly established, the factors that motivate donations seems to differ prominently between men and women.

#### **d. Marital Status**

Marital status is another personal characteristic (Input) that affects giving. Indeed, it has been suggested that marital status confounds gender, and that marital status is more important in predicting giving behavior than gender (Kaplan & Hayes, 1993; Rooney et al., 2005). While Brooks (2004) stated that marital status is “frequently insignificant” (p.



424), a growing body of literature suggests that single individuals have different giving behaviors than married couples, and single men and women have different giving behaviors from each other (Andreoni et al., 2003; Rooney et al., 2007; Yoruk, 2010). An important aspect of giving behaviors of married couples is how giving decisions get made in the household, and which partner makes the charitable donating decisions. Increased education and income level tend to increase bargaining power within a household, as the individual with a higher education level and income tends to hold more sway in giving decisions (Andreoni et al., 2003). Giving tends to be spread more widely across charities and in smaller amounts when women are the primary decision-makers in the household, whereas households with men as the primary decision maker have a greater tendency to concentrate their giving in fewer numbers of charities and in larger donation amounts (Andreoni et al., 2003; Yoruk 2010). Some studies have found that when household decisions were made jointly, husbands tended to have more influence over wives in deciding charitable giving (Andreoni et al., 2003), whereas others (Yoruk, 2010) found significant differences in giving between households where the husband is the decision maker and households that decide jointly, and that women had significantly more bargaining influence in joint-decision making households than men. Focusing specifically on giving to education, male decision-makers have been found to have little to no significant affect on the decision to give to education nor the amount donated, women decision-makers are more likely to increase the likelihood of giving to education and the amount donated, and couples that decide about giving separately are significantly more likely to give to education than couples who decide jointly (Rooney et al., 2007). Marital

status, and the dynamic between spouses, can play a role in predicting the giving behavior of alumni.

#### **e. Age**

Differences in giving amongst age groups have also emerged in the research literature. Typically, people tend to become more generous financially as they get older (Bruggink & Siddiqui, 1995; Holmes et al., 2008; McDearmon and Shirley, 2009; Weerts & Ronca 2007). Mesch et al. (2002) found that people gave an additional \$12 with each additional year of age, and McDearmon and Shirley (2009) found that age did affect alumni giving, with higher donation amounts correlating with increased age of alumni. Related to age, class and year significantly influences giving. Accounting for cost of living indexes and constant dollars, Willemain et al., (1994) found that gift size and participation increased with reunion number (5th, 10th, 20th<sup>h</sup>, etc.), with the 25<sup>th</sup> and 50<sup>th</sup> reunions resulting in especially significant donation amounts and participation. As alumni age, they become more generous in the amount and frequency that they donate to their alma maters.

Donating behaviors of young alumni are becoming an important focus within the body of research on alumni giving. While young alumni are typically more actively involved in non-monetary ways than older generations of alumni, they are the least likely to donate to their alma maters, and to give the least amount of money (Gaier, 2005). Student debt, and the amount owed, negatively affects young alumni giving as debt increases, whether due to their financial ability to donate, decreased desire and sense of obligation to donate, or both (Terry & Macy, 2007). However, McDearmon and Shirley (2009) found no difference in young alumni giving between those who had received

financial awards while a student and those who had not, hinting at a possible mentality shift towards debt and financial obligations among young alumni.

Willemain et al. (1994) also found a disconcerting trend of declining enthusiasm amongst younger classes than older classes as measured by participation and gift size, raising concern about future gifts as younger classes replace older classes as the major gift-givers. Interestingly, charities that young alumni give to in addition to their alma mater was to other universities, leading to conjecture that young alumni may be more likely to hold several higher education degrees and that institutions may be competing with one another for their donations (McDearmon & Shirley, 2009). The mentality of gift-giving seems to shift by age and class, and young alumni may have a mentality and set of influences that affect their giving behavior that are different than older alumni.

## **2. Environment: External Factors that Influence Giving.**

In addition to the personal characteristics of alumni, experiences with the institution, alumni perceptions of the institution, and attributes of the educational institution also affect the ways in which alumni donate. In the Input-Environment-Output model, these elements constitute the “Environment.” Experiences with the institution that affect giving include:

- Student experience (Clotfelter, 2003; Gaier, 2005; Harrison et al., 1995; McDearmon & Shirley; 2009; Monks, 2003; Weerts, 2009).
- Financial assistance provided as a student (Clotfelter, 2003; Marr, Mullin, & Siegfriedt, 2005; Meer & Rosen, 2012; Monks, 2003; Terry & Macy, 2007)
- Being asked to donate (Baade & Sundberg, 1996; Bekkers & Wiepking, 2010; Bryant et al., 2003; Harrison et al., 1995; Okunade, 1996; Weerts & Ronca, 2009)

Alumni perceptions that influence giving include:

- Engagement (Clotfelter, 2003; Farrow & Yuan, 2011; Holmes, 2009; Weerts, 2009; Weerts & Ronca, 2007)
- Perceived organizational need (Bekkers & Wiepking, 2010; Diamond & Kashyap, 1997; Ostrander & Fisher, 1995; Pearson, 1999; Weerts, 2007; Weerts & Ronca, 2009)
- Perception that gift will make a difference (Diamond & Kashyap, 1997; Ostrander & Fisher, 1995; Weerts, 2007)
- Trust (Sargeant, Ford, & West, 2006; Sargeant & Lee, 2004)

Institutional characteristics that affect alumni giving include:

- Institution type (Baade & Sundberg, 1996; Stinson & Howard, 2008; Terry & Macy, 2007)
- Athletics program and performance (Baade & Sundberg, 1996; Grimes & Chressanthis, 1994; Holmes, 2009; Meer & Rosen, 2009; Meer, Rosen, & Harvey, 2009; Monks, 2009; Stinson & Howard, 2008);

In this section, I explore the research on the environmental elements (Environment) that affect alumni giving behavior.

### **a. Student Experience**

McDearmon and Shirley (2009) asserted that “one factor that stands out [that is positively correlated to alumni giving] is the relationship between an alumnus’ satisfaction with their undergraduate experience and their willingness to give back to their institution,” (p. 85). In fact, Monks (2003) reported that the most significant determinant of alumni giving levels is the individual’s satisfaction with his or her

undergraduate experience, noting that those who were “very satisfied” gave almost three times as much and those who were “generally satisfied,” and gave almost twice as much as alumni who were “ambivalent,” “generally dissatisfied,” or “very dissatisfied” with their undergraduate experience (p. 124). Clotfelter (2003) found similar results, and noted that student experience is among several factors that provide “an excellent opportunity not only to supplement our knowledge about factors that affect charitable giving, but also to provide insight into what has become a significant source of revenue,” (p. 110). These findings are also echoed by Harrison et al. (1995), who found that the level of exposure to the institutional environment as a student has a strong influence on alumni giving.

Increased engagement and satisfaction as a student is associated with higher levels of alumni giving, with higher levels of involvement in student activities (Gaier, 2005; Monks, 2003), academic learning (Gaier, 2005), interaction with faculty and peers (Monks, 2003), having someone take a mentoring interest in them (Clotfelter, 2003), full-time student status (Harrison et al., 1995), being an athlete (Clotfelter, 2003) and general satisfaction with student life (Clotfelter, 2003) increasing giving as alumni. Clotfelter (2003) found several factors decreased student experience and negatively impacted alumni giving, including being married, dissatisfaction with institutional emphasis on teaching and research, dissatisfaction with experiences outside of teaching and research, and being non-white. Importantly, he points out that once students graduate, there is nothing that institutions can do to change their student experience at that point, which is one of the single most important factors in predicting their giving. Typically, the only way to change the satisfaction level of alumni is to arouse dissatisfaction through changing institutional policies. Thus, he argues, it is of utmost importance to provide a

rewarding and satisfying collegiate experience for students if we hope they will become donors as alumni.

There has been a small amount of research that has touched upon graduate student giving as well. Interestingly, Weerts (2009) found that alumni who had earned two degrees at University of Wisconsin or earned degrees at other institutions besides UW were more likely to be non-donors, whereas those who did not gave in the range of \$500-\$1,000 during their lifetime. The graduate degree attained and field of study may also influence the amount alumni donate. Monks (2003) found that graduates with an MBA or law degree had higher average donations than those without an advanced degree but those with a Ph.D. did not give significantly more than undergraduate alumni. Okunade (1996) found that graduate alumni had a different giving profile from undergraduate alumni. Graduate alumni with one graduate degree had decreasing giving profiles for several years after completing the first graduate degree and then stopped declining; those who earned a second degree at the same institution continued to decrease for about seven more years beyond the bottoming out period for single degree graduate alumni. Additionally, actual wealth accumulation dominated potential earnings effects as an influence on giving, and doctoral alumni had the highest giving profile among graduate alumni.

However, while sporadic studies of graduate student experience exist, they fail to present a coherent understanding of graduate student alumni giving, nor the specific experiences of the graduate student experience that exert the most influence on graduate alumni giving. Because student experience seems to exert such a strong influence on giving and the body of research on graduate alumni giving is so sparse, I chose to focus

my study on the influence of graduate student experience upon graduate alumni giving behavior.

### **b. Financial Assistance and Student Debt**

Whether alumni received financial assistance, as well as the type of financial assistance they received, may affect alumni giving. While several studies (Holmes 2009; McDearmon & Shirley, 2009) found that varying types of loans and financial awards had no significant affect on alumni giving, a number of others (Clotfelter, 2003; Marr et al., 2005; Meer & Rosen, 2012; Monks, 2003; Terry & Macy, 2007) have found that receiving financial assistance and the type of assistance received does affect alumni giving. Among studies that have found that the type of financial assistance provided does affect alumni giving, there seems to be consistent findings that loans decrease the likelihood of giving and the amount given (Marr et al., 2005; Meer & Rosen 2012; Monks, 2003). Clotfelter (2003) found that receiving need-based financial aid reduced future giving, and Marr et al. (2005) found that the type of need-based aid was more important than the amount received, with loans decreasing the likelihood of future giving whereas grants increased the likelihood and amount of alumni giving.

Perhaps the most thorough study of student financial assistance and its effect on alumni giving to date is Meer and Rosen (2012), who studied the giving of a population of 13,000 alumni from a private university from 1993-2005. They found that simply taking out a student loan decreases the probability of donating as an alumnus/a, and of those who took out student loans who did give, those who took out large student loans made the smallest donations – what the researchers attributed to an “annoyance affect” in that alumni resented the fact that they had to repay loans. Strangely, they also found that

receiving a scholarship reduces the size of the gifts recipients gave as alumni and reduced their likelihood of being in the top 10 percent of givers in their class in a given year, although larger scholarship amounts did lead to larger donations as alumni among recipients who donated. They also found that the effects of financial aid and student debt persisted over time, and that aid in the form of campus jobs did not have a strong effect on donating as alumni. While it does seem that the majority of studies do find that financial assistance influences alumni giving, it is noteworthy that the most recent studies on the subject have found that financial assistance does not influence giving, which may be an aberration or possibly signal a shift in giving behavior among alumni.

### **c. Being Asked**

Another important environmental factor in making donations is being asked to do so (Bekkers & Wiepking, 2010; Weerts & Ronca, 2009). Bryant et al. (2003) found that 85% of donations in the 1996 Independent Sector survey on giving came after receiving a solicitation. Universities have been able to increase alumni giving through spending on development and alumni programs, which provide increased numbers of solicitations to alumni (Baade & Sundberg, 1996; Harrison et al., 1995; Okunade, 1996; Weerts & Ronca, 2009). While universities increase their chances of receiving a donation by providing opportunities to donate through solicitations, institutions must be strategic in how they make appeals for donations to alumni. Institutions should be mindful to not overburden potential donors with solicitations or risk producing donor fatigue and a lower average donation received (Bekkers & Wiepking, 2010). By creating a thoughtful schedule of solicitations to alumni, universities can increase the number and amount of alumni donations.



#### **d. Engagement**

The nature and strength of the relationship between alumni and their institution is often referred to in the literature, and in popular culture, as “alumni engagement.” Measures of alumni engagement typically utilize the frequency and amount of financial donations that they make to their alma maters, legislative advocacy, and volunteering, among others (Weerts & Ronca, 2007). Alumni who have a strong emotional connection with the university are more likely to engage in, and have positive attitudes about, donating to their alma mater, and cultivating strong emotional ties to the institution is important for developing consistency between positive views of donating and actual donation behavior (Farrow & Yuan, 2011). As Weerts (2009) states succinctly, “giving size increases with increased satisfaction with one’s relationship with the institution” (p. 98). People who are highly engaged in the institution through volunteering and philanthropy expect to be involved in supporting the institution, and do not typically need to be convinced by the institution that it is their responsibility (Weerts and Ronca, 2007). It is also noteworthy that engagement can be both an Input and an Output. Graduate students become alumni with a certain engagement level with the institution that can be considered an outcome of their experience. Their level of engagement with the institution continues to influence giving behavior, and the result of the interactions with the institution in turn affect their level of engagement. Thus, engagement is both an Input and an Output, though I focus here on the role of engagement as an Input.

Some of the factors that increase alumni engagement are positive student experiences, volunteering for the university as alumni, and having relatives who also attended the same alma mater (Clotfelter, 2003; Holmes, 2009). Volunteering as an

alumnus/a seems to have a particularly strong relationship with giving. Technology portals can also play an important role in the engagement level of alumni. Weerts (2009) found that those who felt it was at least somewhat important to keep in touch through institution websites or online newsletters were more likely to give at higher levels. Engagement through social Networking sites such as Facebook or LinkedIn has also been shown to affect giving behaviors, with increased alumni participation in online networks increasing positive views of donating and actual donation behaviors (Farrow & Yuan, 2011). Interestingly, frequency of communication from the university to alumni through social network sites did not seem to have an effect on the attitudes alumni held about volunteering and donating, but increased communications did increase actual alumni volunteer and giving behavior. As alumni engage with the institution through traditional ways and through technological portals, they are more likely to donate to their alma mater.

#### **e. Perceived Need**

Alumni perceptions of how much their donation is needed, and the potential impact their donations will have on their alma mater, significantly affect their giving decisions. In fact, awareness that there is institutional need for donations is a critical prerequisite for philanthropic support, as alumni will not donate if they do not know that the institution needs their donations (Bekkers & Wiepking, 2010; Weerts & Ronca, 2009). Weerts and Ronca (2009) found that the most important characteristics distinguishing between those alums who are likely to give versus those who do not were their perceptions of how much the institution needed donations, and that their personal donation will make a difference. A significant factor in the decision *not* to donate to a

university is the perception that the institution does not need the gift as much as other organizations (Pearson, 1999). The level of need that a donor perceives may also shape the amount that he or she donates, as larger donors tend to perceive a higher institutional need for donations than other donors (Diamond & Kashyap, 1997; Weerts, 2007).

#### **f. Efficacy**

Accompanying the perception that the institution needs donations, donors must also believe in the efficacy of their gift - that their contribution will actually make a difference (Diamond & Kashyap, 1997; Weerts 2007). Donors must feel that their contribution will actually aid the organization towards remedying their articulated need. This belief – that their contribution will make a difference towards helping the perceived need of the institution – is particularly important to women donors (Ostrander & Fisher, 1995). Alumni must perceive an institutional need for donations in order to make a contribution, that their contribution will make a difference to the cause, and the amount of perceived institutional need helps influence the size of their gift.

#### **g. Trust**

Trusting the institution is an important environmental component that influences alumni giving. Trust refers to the extent of donor belief that a charity will behave as expected and fulfill its obligations (Sargeant & Lee, 2004). According to Sargeant et al. (2006), institutions create trust when they are perceived to have had an impact on the cause and maintain appropriate communications with the donor. The speed of responses to particular issues or concerns did not seem to be a determining factor as to whether or not alumni trusted the institution, but rather the quality of the interactions when they occurred. The perceived professionalism of an organization and the quality in which

institutions serve their donors are both important determinants of donor loyalty and generosity, with high service quality leading to greater loyalty and higher donation amounts (Sargeant, West, & Ford, 2004). In addition to personal perception, public perception of quality and trustworthiness plays a role in generating higher levels of support from alumni (Sargeant et al., 2004). As institutions convince alumni that they will be good stewards of their donations, they increase the likelihood of receiving more frequent, consistent, and larger donations.

#### **h. Institutional Type**

There is some evidence to suggest that the type of college someone attends will influence their giving behavior as an alumnus/a, though this field of research has also yielded contradictory findings. Private institutions have a higher probability of garnering donations from alumni than public institutions, especially those with low acceptance rates and large institutional endowments (Terry & Macy, 2007). While quality of student experience influences the giving behavior of alumni in general, positive student experiences seem to increase giving from private school and liberal arts school alumni significantly more than for public school alumni; though wealth as a student leads to higher donations for alumni in general, it leads to more significant increases in giving from public institution alumni than those from private and liberal arts institutions (Baade & Sundberg, 1996). The success of athletics programs seems to increase alumni donations in most types of institutions, but the way in which fundraising increases differs between types of institutions. In Division I-A schools with high-profile athletic programs, fundraising success seems to increase significantly towards athletic programs as the most prominent sport at the school does well, but negatively affect fundraising levels in

academic departments, and fundraising decreases when the team performance declines. However, Division I-AA and Division I-AAA schools with high-profile athletic programs seem to benefit in both athletic and academic fundraising efforts when the team performs well, with academic fundraising levels benefitting even more than athletic fundraising, and do not experience fundraising declines when team performance declines (Stinson & Howard, 2008).

Contrary to studies that have found that institutional type matters to alumni giving, Harrison et al. (1995), though, found that institutional type (defined in his study as research or non-research institutions, public or private, and by type of sports program) did not matter in fundraising success. Rather, they found that the level of exposure to the college environment was important. As levels of participation in student activities such as fraternities and sororities increased at institutions, alumni donations also significantly increased. Conversely, as levels of part-time students increased at institutions, alumni donations significantly decreased. While these findings may appear contradictory, it may actually be the case that the type of institution(s) one attends, the activities they involve themselves in, and the amount of time they are immersed in that environment all help shape how individuals will give as alumni.

#### **i. Athletic Team Performance**

As with other potential influences on giving, the literature has yielded differing results as to whether athletics programs and performance influence giving. While Turner, Meserve, and Bowen (2001) found that athletic performance at Division I schools had no relationship to giving rates and only modest effects on Division III schools, others (Baade & Sundberg, 1996; Grimes & Chressanthis, 1994; Holmes, 2009; Meer et al., 2009;

Stinson & Howard, 2008) have found that athletic program performance and/or appearance in major post-season events does affect fundraising. As Stinson and Howard (2007) relay, findings from the past 20 years have been inconsistent and often “provide starkly different views on the ability of athletic programs to influence donor behavior” (p. 17). Athletics can be a key decision point for alumni donations to the university, and the visibility of the athletics team can serve as an important means of staying connected to the institution (Monks, 2009). Holmes (2009) found that increases in the winning record of the athletic program – particularly of the most highly visible sports at an institution - significantly increases alumni contributions as they experience a “warm glow from athletic success.” Relatedly, Baade & Sundberg (1996) found that appearances in major postseason events such as bowl games or the NCAA tournament increased fundraising, but that overall season winning percentage did not increase fundraising performance. Winning on television may be particularly helpful for increasing donations (Grimes & Chressanthis, 1994). As the research on athletics and giving is small, there has been little to no research on whether athletic performance affects undergraduate alumni more than graduate alumni, but one intuitively may wonder if athletic performance may not typically have as much influence on the giving behavior of graduate alumni.

It is also debatable whether or not this winning “glow” may apply only to athletic fundraising success, spill over into academic fundraising success, or actually curtail academic fundraising. Grimes & Chressanthis (1994) found that athletic success increased both athletic and academic fundraising, whereas Stinson and Howard (2004) found that increased giving along with athletic success at one university actually reduced the amount of money donated to the institution’s academic programs over a ten-year

period. In a follow up study, Stinson and Howard (2008) found that the level of athletics may account for differential effects of athletic performance on giving to academics, with Division I athletic success reducing academic giving to those institutions, and athletic success at Division I-AA and I-AAA schools actually increasing the size of academic gifts more than the size of gifts to athletics at these types of institutions. Conversely, they found that poor athletic performance or NCAA violations can negatively influence fundraising.

There may also be gender differences in how team performance affects the giving behavior of former athletes. Meer and Rosen (2009) found that former college student athletes who were women had different donor behavior than former college student athletes who were male. While male alumni athletes increased their donations to both the athletic program and for general institutional purposes by about 7 percent when the team he played on won a conference championship, team performance had no significant effect on the donations of women alumni athletes. Additionally, males whose teams were successful while they were playing made larger donations as alumni, while former team success did not significantly affect the size of donations from women alumni athletes. While this study was specific to former athletes, it invites further study as to whether or not there is a gender difference in how athletic performance affects the philanthropy of the larger alumni population. Athletic team performance may have differential effects on alumni giving depending on the nature of the program and its visibility, and may also affect the philanthropic behavior of men differently than women.

### **3. Summary of the Literature on Giving Influences.**

Research has shown that giving behavior is influenced by both the personal characteristics of donors and their environment. Personal characteristics such as giving capacity, race, gender, marital status, and age have all been shown to influence giving behavior of alumni. Similarly, environmental aspects such as experiences with the institution, alumni perceptions of the institution, and attributes of the institution also affect the ways in which alumni donate, including student experience, financial assistance received as a student, being asked to donate, engagement, perceived need, perception that a gift will make a difference, trust in the institution, institutional type, and athletics performance. Both personal characteristics and the environment exert influence on alumni giving behavior, and invite further study into how they interact with one another to shape alumni giving.

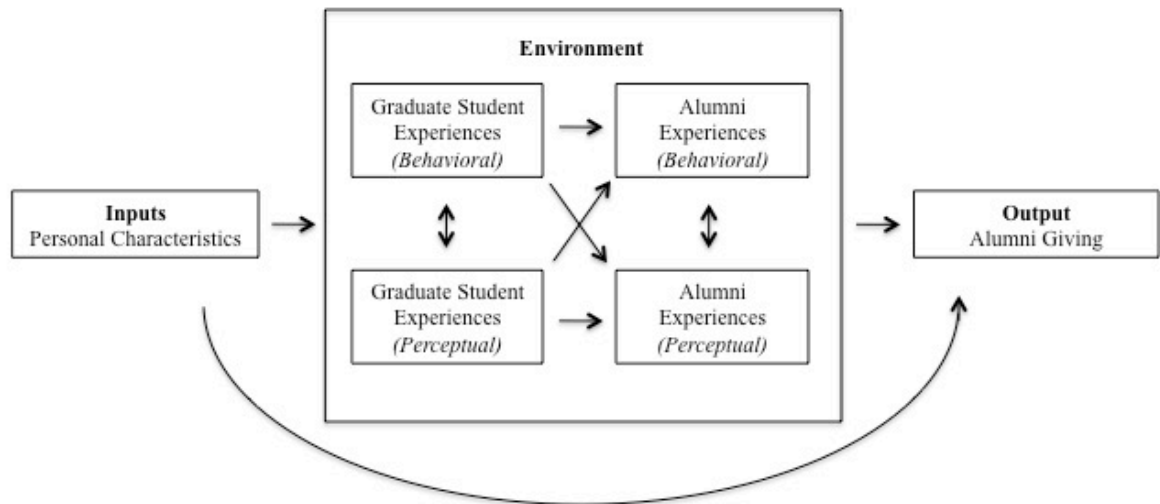
#### **D. Connecting the Literature**

The guiding theoretical framework of this paper is Astin's Input-Environment-Output theory, which posits that educational outcomes (Outcomes) are a product of the interaction between the personal characteristics of an individual (Inputs) and the behavioral and perceptual components of both the educational programming they are immersed in and their experiences as alumni (Environment). I have chosen to focus my study on the giving behavior of graduate alumni (Outcome). Looking at the body of research, a variety of Inputs and Environmental factors have been shown to affect alumni giving behavior, including capacity, race, gender, marital status, age, institution type, athletics program performance, engagement, perceived institutional need and efficacy, financial assistance received as a student, being asked to donate, survey methodology,



and student experience. Of these factors, student experience stands out as one factor that is particularly influential upon the giving behavior of alumni. Yet, specific research on how the student experiences of graduate school students affects their giving behavior as alumni has yet to emerge in a robust way in the literature. Another body of research looks at graduate student experience, and a number of personal and environmental factors are known to affect graduate student experience, including socialization, relationships with faculty members, graduate advisor, and peers, thesis or dissertation committee, race, age, gender, and financial stability. It is at the intersection of research on alumni giving and graduate student experience that I situate my study: I examine graduate student experiences to further understand their influence on graduate alumni giving. My framework of how personal characteristics interact with graduate and alumni experiences to influence giving is represented below in figure 1.

**Figure 1. Conceptual Model**



## CHAPTER III

### METHODS

#### A. Rationale

I have selected path analysis as the most appropriate method for analyzing the data for my study. Path analysis is a multiple regression-based structural equation modeling that is used to confirm a priori hypotheses to verify whether or not they fit the data generated in a study. In other words, path analysis allows me to verify whether or not my hypothesized model may be a good fit with the data from the Alumni Association survey. I have hypothesized that particular personal characteristics (Input variables) will interact with particular graduate school and alumni experiences (Environmental variables) to influence giving (Output variable). By calculating the path coefficient ( $\beta$ ) – or measure of the extent of effect of one variable on another - of each personal characteristic (Input) variable on giving (Output), both directly and interacting through environmental variables (Environment), I can test whether or not data from the survey fit my hypothesis that personal characteristics will interact with graduate student experience and alumni experience to influence giving behavior.

Prior to proceeding further, it is necessary to define several terms within path analysis. I use Garson's (2008) definitions as a guide. A *path* model is a diagram relating independent, intermediary, and dependent variables, where arrows indicate causation between exogenous or intermediary variables and the dependent variables. *Exogenous variables* are those variables in a path model with no explicit causes, and therefore have no causal paths in the model. In my study, the exogenous variables would include Inputs - the personal characteristics of participants, such as race, gender, capacity, etc.

*Endogenous variables* are those variables that have incoming causal paths. Endogenous include both *intervening causal variables* (variables that interact with exogenous variables to influence the dependent variable) and *dependent variables* (those variables that have only incoming causal paths). In my study, intervening causal endogenous variables would include graduate student and alumni Environmental behaviors and perceptions, such as peer and faculty relationships, student group participation, career preparation, etc. The dependent variables would be Outcome variables, or measures of giving behavior such as whether or not someone has donated, frequency, and amount of donations. I believe that personal characteristics (exogenous variables) have a direct effect on giving (endogenous variables), and also interact with environmental variables in graduate school and as alumni (intervening causal endogenous variables) to influence giving behavior (endogenous variable).

Path analysis allows the researcher to calculate the *direct effects* of exogenous variables on dependent endogenous variables, the *indirect effects* of exogenous variables on dependent endogenous variables (i.e. effects of exogenous variables on dependent variables when mediated through intervening endogenous variables), and the *total effects* of exogenous variables and intervening endogenous variables on dependent endogenous variables (i.e. the cumulative direct and indirect effects of exogenous and intervening endogenous variables on endogenous dependent variables). Path analysis will allow me to calculate:

- The direct effects of personal characteristics (Inputs) on giving (Output)

- The indirect effects of personal characteristics (Inputs) interacting with intervening graduate and alumni experience characteristics (Environment) on giving (Output)
- The direct effects of graduate & alumni experiences (Environment) on giving (Output)
- The total effects of personal characteristic (Input) direct and indirect effects on giving (Output), and
- The total effects of graduate & alumni experiences (Environment) on giving (Output) .

### **B. Conceptual Framework**

The conceptual framework for this study is that Inputs (graduate student and alumni characteristics) interact with the Environment (graduate student and alumni experiences) to influence the Output (alumni giving). This conceptual model is represented above in Figure 1.

### **C. Research Questions**

To return to our research questions, the overarching inquiry of this study asks this question: *What elements of the graduate student experience most significantly influence graduate alumni giving?* Within this question, I hope to explore the following questions:

1. Does an overall positive graduate school experience increase the likelihood of giving as alumni?
2. Which graduate student experiences most significantly influence giving to the institution?

3. How do the student experiences compare between graduate alumni who give and those who do not?
4. How do personal characteristics such as age, gender, race/ethnicity, marital status, or financial status affect the relationship between student experience and alumni giving?

#### **D. Research Design**

The data were collected as part of a survey of alumni attitudes and behavior funded by the division of Development and Alumni Relations at a mid-sized state university in the northeast United States. The survey was conducted by Performance Enhancement Group, Ltd., which implemented the “Alumni Attitude Study,” a survey that has been delivered for 9 years at 200 institutions. The survey has been administered in its same base form over those years, with several questions added in this instance at the request of this particular institution. The survey included questions regarding personal characteristics, student experiences and perceptions, alumni experiences and perceptions, and giving behavior.

Several steps were taken to ensure participant confidentiality. An introductory letter was distributed along with the survey by the development and alumni relations office that outlined the potential uses of the survey results, as well as steps that would be taken to ensure participant anonymity. I obtained permission from the division of Development and Alumni Relations to use the survey data for my study, which was granted. Email addresses were not provided with the data, nor was I provided a participant key to prevent the ability to individually identify participants. Finally, the results are reported in this study in aggregate so as to protect individual identities.

The target population for my study is living graduate alumni at the institution, which was approximately 60,000 living graduate alumni at the time of the survey; about 34,500 of whom had email addresses on file with the institution and about 24,500 who had postal mail contact information but no email addresses on file with the institution. The sampling frame consists of those graduate alumni who were living and had mail and/or email contact information on file with the Alumni Association at the time of the survey distribution. I must note that this particular institution considers anyone who has taken two or more semesters of classes to be an alumnus/a, independent of whether or not they graduated, so the unit of analysis for this study is a former graduate student with two or more semesters of graduate work at the institution who may, or may not, have graduated.

The data were collected three times, and the survey was distributed through email to 89,190 individuals. A small initial beta list of 4,514 alumni initially received the survey at 8:00 in the morning on November 6, 2013, which 1281 recipients opened (28.37% open rate). Later that afternoon, the bulk of the recipients received the survey via email, with 84,676 more individuals receiving the survey, of which 21,472 opened the email (25.35% open rate). Eight days later, individuals who had already taken the survey were removed from the distribution list, and the survey was emailed on November 14, 2013 in the afternoon to 85,759 alumni, of which 15,349 recipients opened (17.89% open rate). Seven days later, additional survey respondents were removed from the distribution list, and the final reminder email was sent on November 21, 2013 in the early evening to 83,617 individuals, which was opened by 13,693 recipients (16.37% open rate). Though the email open rate was high, ultimately only 5,658 participants responded

to and provided usable data for the survey (6.34%). However, a substantial number of respondents had graduate degrees from the institution. Overall, 4,680 graduate alumni responded (82.71% of respondents), of which 4,142 solely held a graduate degree from the institution (88.50% of graduate alumni respondents) and 538 had both graduate and undergraduate degrees from the institution (11.50% of graduate alumni respondents).

### **E. Site Selection**

This institution was chosen for several reasons. First, the institution had a sizeable graduate alumni population, allowing for a wider population to draw from with a broader variety of alumni than a smaller school might provide. Some of the graduate student alumni differences that this institution provided insight into included graduate student alumni age, gender, ethnicity, capacity, geographic location, employment status, and profession. Similarly, the institution had a wide array of graduate programs and had a long history of granting graduate degrees, which provided the ability to incorporate a more diverse representation of a variety of graduate student experiences. Some of the opportunities provided by situating my study at this institution included differences in academic disciplines, program size, program structure, level of graduate work, full time vs. part time student status, family status, and employment status while a graduate student, among others. Finally, the ability to gain unfettered access to all of the data from a survey that had recently been sent to all living alumni with email addresses was a rare opportunity, and allowed me to bypass administrative and bureaucratic hurdles that could prevent obtaining similarly rich alumni data at a different institution with a large graduate student alumni population.

## **F. Participants**

The survey was divided into five areas – loyalty, student experience, overall experience with the university, alumni experience, and demographics (Performance Enhancement Group, 2013). According to the Alumni Attitude Study notes, the confidence interval was based on number and variation of responses, assumed random distribution and ability to respond, and did not utilize response percentage as part of the confidence interval calculation (Performance Enhancement Group, 2013). Additionally, while low survey response rate and high non-response rate raised concerns about differences between respondents and non-respondents, ranking consistency in question groups and distribution across donor status, age, and gender help reduce these concerns of bias.

A breakdown of key demographic information is provided below. Of note, Caucasians were overrepresented in respondents compared to the general alumni population, and minority populations – particularly African American and Hispanic populations – were underrepresented. Additionally, a higher percentage of respondents had given at some point in their lifetime than is found in the general population of the institution, with 26% of respondents indicating that they have donated to the institution at some point. With regard to professional industry, the percentage of those in business-oriented fields may have been overrepresented when taken together (business professions were broken out with more specificity than other types of professions; for instance, “education” was a category rather than more specific subsets of educational professions). Other notable demographic information included:



- *Graduate degrees:* Of those who participated, 21% of respondents had one or more graduate degrees from the institution – 10% had a Master’s degree, 6% had 2 or more undergraduate and graduate degrees, 3% had their doctorate only, and 2% had 2 or more graduate degrees from the institution – which is reflective of the graduate student alumni population at the institution of about 25%.
- *Gender:* 50% of respondents were male, 49% were female, and 6 individuals were transgender (which was too small for statistical analysis).
- *Ethnicity:* 86% of respondents were Caucasian, 2% were African American, 2% were Hispanic, 4% were Asian or Pacific Islander, 1% were Cape Verdean, and 4% preferred not to answer.
- *Sexual orientation:* 88% were heterosexual, 2% were gay, 1% were lesbian, 2% were bisexual, and 7% preferred not to answer.
- *Donor status:* 433 respondents were current donors, 3,058 were lapsed members, and 2,155 had never donated
- *Capacity:* 4% of respondents were rated as having the capacity to give between \$1-\$9,999, 77% were categorized as having the capacity for \$10,000-\$24,999 donations, 5% were categorized as capable of \$25,000-\$49,000 gifts, and 5% were categorized as capable of donations of \$50,000 or more.
- *Geographic residence:* 34% of respondents lived in the eastern part of the state where the institution is located, 17% in the western and central part of the state, 8% in the other New England states, 6% in New York, 5% in California, 5% in the Washington DC region, 3% in Florida, 18% in all other U.S. states, 5% outside the U.S.

### **G. Data, Measures, and Coding**

Survey questions and their corresponding data will be coded and categorized according to the constructs they represent. Namely, they will be divided into the following constructs within the I-E-O conceptual framework:

- Inputs, which included demographic questions
- Environment, which included:
  - Graduate student behaviors
  - Graduate student perceptions
  - Alumni behaviors
  - Alumni perceptions
- Outputs, which included measures of giving

The questions and corresponding data are represented in Tables 1 through 6, below in the “Results” section. Once categorized, data were analyzed as detailed out in the “Analysis” section.

### **H. Analysis**

Factor analysis and path analysis will be used to analyze the data from the survey. First, factor analysis will be used to identify variables from the data that grouped together within the various constructs of the conceptual framework to identify variable groupings – namely, the data that grouped together within the Input construct, the data groupings within the Environment construct (graduate student behaviors, graduate student perceptions, alumni behaviors, and alumni perceptions), and Outputs construct (giving). Given the lack of a priori knowledge regarding the underlying structural relationship within each group of variables, varimax orthogonal rotation will be used for the factor

analysis. Once the best fit for each factor analysis has been established, Chronbach's alpha reliability measure will be used to verify the cohesion of each multi-variable construct.

After identifying the variable groupings from the factor analysis, path analyses will be conducted to determine the direct and indirect effects of the independent variables on giving. Path analysis equations will be conducted on the following sets of variables, which follow the sequential paths within the conceptual model of the paper (equations were calculated for arrows that move from left to right in the conceptual model, to reflect the sequence in which they occur):

- Input effect equations
  - Effect of Inputs on graduate student behaviors
  - Effect of Inputs on graduate student perceptions
  - Effect of Inputs on alumni behaviors
  - Effect of Inputs on alumni perceptions
  - Effect of Inputs on alumni giving
- Graduate student behavior effect equations:
  - Effect of graduate student behavior on alumni behavior
  - Effect of graduate student behavior on alumni perceptions
  - Effect of graduate student behavior on giving
- Graduate student perceptions effect equations
  - Effect of graduate student perceptions on alumni behavior
  - Effect of graduate student perceptions on alumni perceptions
  - Effect of graduate student perceptions on giving

- Alumni behavior effect equations
  - Effect of alumni behavior on giving
- Alumni perception effect equations
  - Effect of alumni perceptions on giving

## **I. Limitations**

### **1. Path Analysis**

One noteworthy stipulation accompanies the use of path analysis. Rather than confirming causation, path analysis confirms that a path model is only one of many possible ways a set of variables can be structured. Carducci (1979, p. 15) notes that “finding that a particular path model results in small discrepancies from the original matrix does not permit the conclusion that the proposed model is the correct one for describing the causal structure of the variables in question. Therefore, path analysis is more of a method for rejecting models than for lending support to one of many competing causal models.” Thus, while the data from the alumni survey may fit well with my hypothesized path model, it cannot definitively confirm that my path model is the one and only model of causation between these variables – it may be the case that other path models fit the data equally well or better.

### **2. Bias**

Inherent bias in the study must also be highlighted and understood, and the Performance Enhancement Group’s (2013) provides some notes for understanding potential biases within the survey, as well as how they were minimized as much as possible. The confidence interval of the study was based on the number of responses received as well as the variation of responses, assumed random distribution and ability to respond, and

response percentage was not considered in the confidence interval calculation. While a low response rate and high non-response rate cause concern for differences between respondents and non-respondents, ranking consistency for question groups and distribution across membership status, age, gender, etc. help reduce concerns regarding non-response bias. That the survey was distributed strictly by email, and not complemented by postal mail and/or phone delivery, raises concerns of selection bias. The institution has about 65% of alumni records with emails on file, and it is unclear how many of those are currently utilized by those whose records they are associated with. The wide availability and use of email and internet help reduce the non-response bias with respect to delivery method (email, postal mail, or phone), but the relatively high percentage of alumni without email addresses on file (approximately 35%) does raise concerns over potential behavioral and demographic differences between graduate alumni who have email addresses on file with the institution and those who do not. In addition to the notes from Performance Enhancement Group (2013) it would also appear that the number of people who have given at some point in their history is overrepresented in the sample, implying that survey results may be more insightful for understanding the giving influences of those who donate, rather than those who do not. Additionally, White respondents were overrepresented in the sample, and may preclude the effect size of race in the results.

Social desirability is one additional important source of bias in this study. It is important to note that the two measures of giving in this study – donating frequency and donating history/future intentions are all self-reported, and are not actually verified in the institution's database. Self-reported behavior can misrepresent actual behaviors, and can

be influenced by personality type and survey item characteristics, among others, with perceived desirability of behavior having the greatest influence on self-reported conduct (Randall & Fernandes, 1991). There is a likelihood that there is an element of perceived desirability to donate to the institution, and potentially misrepresenting their likelihood of having given, intending to do so in the future, and the frequency of their donations. Thus, giving behavior may be over-reported in the survey results.

### **J. Conclusion**

I believe that graduate student experience affects giving as alumni, and I aim to understand what elements of the graduate student experience most significantly influence graduate alumni giving. Path analyses provides an excellent means of initially exploring the potential influence of graduate student experience on graduate alumni giving, in that it provides a way of testing whether or not an a priori hypothesis fits with the data. Factor analysis allows me to identify groupings of variables within the I-E-O conceptual framework, and path analysis enables me to calculate the measured effect of the Input variable groupings (personal characteristics) and Environmental (graduate student and alumni behaviors and perceptions) variable groupings on the Output (giving). By using the results of a survey sent to all alumni with email addresses at a mid-sized state university with a wide variety of graduate programs and a sizeable graduate alumni population, there was a greater potential to have a broader diversity of graduate alumni experience represented in the results. While a diverse perspective is represented by those participants who responded, some biases in the sample do exist, such as social desirability bias, concerns about demographic and behavioral differences between graduate alumni with emails on file with the institution and those without emails on file,

and overrepresentation of groups such as White respondents when compared to other racial groups, overrepresentation of business professions when compared to other professions, and overrepresentation of donors in the sample. Yet, other factors such as ranking consistency over the life of the Alumni Attitude Survey from other institutions and wide use of email and the internet help reduce concerns of such biases, and the study can prove useful as an initial exploration of how graduate student experience affects alumni giving despite those concerns of bias that do persist.

## CHAPTER IV

### RESULTS

This section explores the results of the statistical analyses previously detailed in the methods section. First, I provide an overview of the variables that were used in the analysis, and then highlight particular information about the variables using descriptive statistics to better understand them. Next, I discuss the results of the factor analysis used to group like variables together to reduce the number of factors used in path analysis, and group these factors accordingly within the conceptual framework. Finally, I discuss the results of the path analysis, and examine the direct, indirect, and total effects of the factors in the study.

#### A. Variables

Six sets of variables were used in this study. These include (1) personal characteristics, (2) student behaviors, (3) student perceptions, (4) alumni behaviors, (5) alumni perceptions, and (6) donating behavior. These variable groups were assigned within the conceptual framework, with Inputs incorporating personal characteristic variable groupings, Environment incorporating, student behavior, student perception, alumni behavior, and alumni perception variables, and Outputs including donating variables. Table 1 defines the variables used, along with the answers and scales used to measure them.



**Table 1. Listing and Definition of Variables**

***Input Variables – Personal Characteristics***

1. Exposure to Institution  
Indicates how many degrees that the individual obtained from UMass (No degree obtained = 1, Undergraduate = 2, graduate degree = 3, both undergrad and grad = 4)
2. Race  
Alumni racial/ethnic identity (nonwhite = 1, white = 2)
3. Disability  
Disability status (disabled = 1, not disabled = 2)
4. Gender:  
Gender (male = 1, female = 2)
5. Distance  
Distance from institution (within 16 miles = 1, 17-50 miles = 2, 51-160miles = 3, 161-250 miles = 4, over 250 miles within US = 5, over 250 miles outside US = 6)
6. Sexual Orientation  
Sexual orientation (non-heterosexual = 1, heterosexual = 2)
7. Veteran Status  
Veteran status (veteran = 1, non-veteran = 2)
8. Wealth  
Measure of potential giving capacity as determined by institution's evaluation (\$1-\$999 = 1, \$1,000-\$4,999 = 2, \$5,000-\$9,999 = 3, \$10,000-\$24,999 = 4, \$25,000-\$49,999 = 5, \$50,000-\$99,999 = 6, \$100,000-\$249,999 = 7, \$500,000-\$999,999 = 8,  $\geq$  '\$1,000,000) = 9
9. Graduation Year  
Year of graduation (every year from 1940 – 2012)

***Environment Variables - Student Behavior***

10. Academic Importance  
Composite of five items measuring the importance of a variety of academic and intellectual development experiences (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
11. Admissions & Orientation  
Composite of three items measuring the importance of admissions, orientation, and faculty and administrator relationships (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
12. Co-Curricular Importance  
Composite of five items measuring the importance of participating in a variety of leadership, relationship, programmatic, and institutional tradition experiences (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)

**Table 1. Listing and Definition of Variables (Continued)**

13. Professional Community Engagement  
Composite of five items regarding participating as a student in a variety of professional and community engagement organizations (No = 0, Yes = 1)
14. Career Importance  
Composite of five items measuring the importance of participating in a variety of career-related student experiences (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
15. Fraternity Participation  
Participation in a fraternity or sorority (No = 0, Yes = 1)
16. Intramural Participation  
Participation in intramural sports (No = 0, Yes = 1, (blank) = No Response)
17. Music/Theater Organization Participation  
Participation in a music or theater student organization (No = 0, Yes = 1)
18. Ethnic/Cultural Organization Participation  
Participation in an Ethnic/Cultural Organization (No = 0, Yes = 1)

***Environment Variables - Student Perceptions***

19. Academic Integration  
Composite of four items measuring how well the institution provided academic & intellectual development experiences (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
20. Career Preparation Opportunities  
Composite of five items measuring institutional effectiveness in providing career development opportunities (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
21. Co-Curricular Opportunities  
Composite of nine items measuring how institutional effectiveness at providing a variety of leadership, relationship, programmatic, and institutional tradition opportunities for students (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
22. Embracing Diversity  
Composite of six items measuring institutional effectiveness at creating a welcoming climate (Strongly disagree = 1, Generally disagree = 2, Generally agree = 3, Strongly agree = 4, No opinion = 0)
23. Preparation for Graduate School  
Institutional effectiveness in preparing student for further graduate education (Poor preparation = 1, Fair preparation = 2, Good preparation = 3, Excellent preparation = 4, No opinion/Not Applicable = 0)

***Environment Variables - Alumni Behaviors***

24. Alumni Participation Barriers  
Composite of four items that prevent participation in alumni activities (No = 0, Yes = 1)
25. Communication Participation  
Composite of two items measuring frequency of reading the alumni email newsletter and the alumni magazine (Never = 1, One time = 2, A few times = 3, Frequently = 4, No opinion = 0)

**Table 1. Listing and Definition of Variables (Continued)**

***Environment Variables – Behaviors (continued)***

26. Alumni Event Participation  
Composite of six items measuring frequency of participation in alumni activities such as various types of events, volunteering, and visiting campus (Never = 1, One time = 2, A few times = 3, Frequently = 4, No opinion = 0)
27. Utilize Web Resources  
Composite of three items measuring frequency of online and email participation behavior (Never = 1, One time = 2, A few times = 3, Frequently = 4, No opinion = 0)
28. Donating Barriers – Institutional  
Composite of four institutional barriers to donating (Strongly disagree = 1, Generally disagree = 2, Generally agree = 3, Strongly agree = 4, No opinion = 5)
29. Donating Barriers – Financial  
Composite of three financial and career barriers to donating (Strongly disagree = 1, Generally disagree = 2, Generally agree = 3, Strongly agree = 4, No opinion = 5)

***Environment Variables - Alumni Perceptions***

30. Alumni Embracing Diversity  
Composite of six items measuring institutional effectiveness at creating a welcoming climate (Strongly disagree = 1, Generally disagree = 2, Generally agree = 3, Strongly agree = 4, No opinion = 5)
31. Alumni Advocacy Importance  
Composite of five items measuring the importance of alumni generally identifying job opportunities, mentoring, recruiting students, and providing financial donations (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
32. Alumni Event & Volunteer Importance  
Composite of six items measuring the importance of other alumni participating in alumni events and volunteer opportunities (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
33. Volunteer Support  
Composite of six items measuring how well the institution supports alumni in participating in a variety of alumni volunteer opportunities (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
34. Supports Event Participation  
Composite of five items measuring how well the institution supports alumni in participating in a variety of in person and online alumni events and activities (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
35. Institutional Loyalty  
Composite of three items measuring the extent of loyalty to various aspects of the institution (Not Loyal = 1, Somewhat Loyal = 2, Loyal = 3, No Opinion = 4)

**Table 1. Listing and Definition of Variables (Continued)**

***Environment Variables – Alumni Perceptions (continued)***

36. Institutional Reputation – Visibility  
Composite of seven items measuring the extent to which various rankings, media, athletic team performances, and other types of accomplishments influence the opinion of the institution (No impact on my opinion = 1, Some impact on my opinion = 2, Significantly impacts my opinion = 3, Critically impacts my opinion = 4, No opinion = 0)
37. Institutional Reputation – Academic & Community  
Composite of five items measuring the extent to which various community outreach and academic accomplishments influence the opinion of the institution (No impact on my opinion = 1, Some impact on my opinion = 2, Significantly impacts my opinion = 3, Critically impacts my opinion = 4, No opinion = 0)
38. Academic Loyalty  
Composite of four items measuring loyalty to departments, faculty, and student groups (Not Loyal = 1, Somewhat Loyal = 2, Loyal = 3, No Opinion = 4)
39. Communication Content Effectiveness  
Composite of nine items measuring the perceived effectiveness of various types of communication content (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
40. Communication Content Importance  
Composite of nine items measuring the perceived importance of various types of communication content (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
41. Communication Format Effectiveness – Traditional  
Composite of six items measuring the perceived effectiveness of various types of traditional communication formats, including email, magazine, website, mailings, and newsletters (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
42. Communication Format Effectiveness – Interactive  
Composite of three items measuring the perceived effectiveness of various types of emerging media, including various social media and the alumni online community (Poor = 1, Fair = 2, Good = 3, Excellent = 4)
43. Communication Importance – Web & Social Media  
Composite of five items measuring the importance of web-based and social media communication formats (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
44. Communication Importance – Mailings & Emails  
Composite of four items measuring the importance of various mail and email communication formats (Not important = 1, Somewhat important = 2, Very important = 3, Critically important = 4)
45. Overall Alumni Experience  
Overall quality of experience as an alumnus/a (Poor = 1, Fair = 2, Good = 3, Excellent = 4)

**Table 1. Listing and Definition of Variables (Continued)**

***Environment Variables – Alumni Perceptions (continued)***

46. Overall Institutional Opinion

Current overall opinion of institution (Poor = 1, Fair = 2, Good = 3, Excellent = 4)

***Output Variables - Donating Behavior***

47. Donating Frequency

Frequency of making a financial gift to the institution (Never = 1, One time =2, A few times = 3, Frequently = 4, No opinion = 0)

48. Donating History & Future Intentions

The history of donating behavior and future intentions of donating behavior (Have NOT financially supported & do NOT PLAN to in future = 1, HAVE financially supported but DO NOT PLAN to continue = 2, Have NOT financially supported but PLAN TO in future = 3, CURRENTLY financially support and plan to CONTINUE = 4, Currently financially support and plan to INCREASE in future = 5, No Opinion = 0)

**B. Descriptive Statistics**

Table 2 shows means and standard deviations of each variable used in the study.

Examining personal characteristic variables, 14% were non-white and 86% of graduate student respondents were white; 50% were men and 50% were women; 5% were non-heterosexual and 95% were heterosexual; 10% were non-veterans and 90% were veterans; and 3% were disabled whereas 97% were not disabled. Of the graduation range between 1940 and 2012, the average graduation year was 1990; the average giving capacity as determined by the institution was just under \$10,000, and the average distance respondents lived was about 210 miles away from the institution.

The student block of the conceptual framework includes both student behavior variables and student perception variables. Examining student behavior variables, the average respondent rated academic importance as critically important; the average respondent rated admissions & orientation between very important and critically important; the average response for co-curricular importance was very important; slightly

fewer respondents had engaged in professional and community engagement student organizations than those who had not; the importance of career-related student experiences was rated closest to critically important; 84% of respondents did not participate in fraternities whereas 16% did participate in a fraternity; 43% of respondents participated in intramural sports and 57% did not; only 20% of respondents participated in a music or theater organization, and only 11% participated in a cultural or ethnically aligned organization. Reviewing student perception variables, the average respondent said that the institution came close to doing a good job of providing academic and intellectual development experiences as a student; the average rating of the institution's effectiveness at providing career development opportunities as a student was at the higher end of "fair," the institution was between "good" and "excellent" at providing leadership, relationship, programmatic, and institutional direction opportunities, they "strongly agreed" that the institution created a welcoming climate, and the average response was that the institution provided close to excellent preparation for graduate school.

The alumni block of variables within the conceptual framework includes both alumni behavior variables and alumni perception variables. Slightly more graduate alumni indicated that they experienced barriers to participating in alumni activities (53%) than those who did not (47%); respondents "frequently" read the alumni newsletter and alumni magazine; respondents most often attended "one" alumni event, participated in institutional online resources and email "around a few times;" and generally "disagreed" that both institutional and personal factors prevented them from making financial donations to the institution. Examining alumni perceptions, the average alumnus/a felt that the institution "effectively" creates a welcoming climate; respondents felt on average

that it was “very important” for other alumni to identify job opportunities, mentor, recruit students, donate to the institution, volunteer, and attend events; the average respondent also felt that the institution did a “good job” supporting alumni in volunteering and participating in events; on average, respondents felt “loyal” to the institution and to their academic departments, faculty and student groups; the average opinion of the institution was “significantly influenced” by both visibility and academic/community accomplishments; and the average alumnus/a had a “good” alumni experience and an “excellent” opinion of the institution overall.

Finally, the last block of the conceptual framework includes variables that measure giving behavior. On average, respondents had given money a “few times,” and typically planned to donate in the future, but may or may not have donated in the past. For means and standard deviations of each variable in the study, please refer to Table 2 below.

**Table 2. Descriptive Statistics**

<b>Variable</b>	<b>Mean</b>	<b>Std. Deviation</b>
Disability	1.97	0.16
Race	1.86	0.35
Gender	1.50	0.50
Sexual Orientation	1.95	0.22
Veteran Status	1.90	0.30
Distance	3.57	1.30
Exposure to Institution	3.12	0.32
Wealth	3.94	0.54
Graduation Year	1990.36	16.81
Academic Importance	21.07	3.37
Admissions & Orientation	10.76	2.85
Co-Curricular Importance	16.06	4.59
Professional Community Engagement	1.46	1.25
Music/Theater Org Participation	0.20	0.40
Fraternity Participation	0.16	0.37
Intramural Participation	0.43	0.50
Ethnic/Cultural Org Participation	0.11	0.31
Career Importance	18.97	4.66
Academic Integration	14.85	3.28
Career Preparation Opp.	14.21	4.87
Co-Curricular Opportunities	32.19	7.03
Embracing Diversity	24.49	4.68
Preparation for Grad School	3.73	1.02
Alumni Participation Barriers	1.53	1.12
Communication Participation	8.02	2.32
Alumni Event Participation	13.38	5.50
Utilize Web Resources	7.70	3.03
Donating Barriers - Institutional	9.92	3.88
Donating Barriers - Financial	8.68	3.18
Academic Loyalty	13.55	3.83
Communication Content Effectiveness	29.36	7.82
Communication Content Importance	28.89	8.03
Communication Format Effectiveness - Traditional	20.19	5.07
Communication Format Effectiveness - Interactive	8.13	2.99
Communication Method - Web & Social Media	13.52	5.25
Communication Method - Mailings & Emails	12.67	3.90
Alumni Embracing Diversity	23.91	4.96
Alumni Advocacy Importance	17.44	4.60
Alumni Event & Volunteer Importance	17.19	5.79



**Table 2. Descriptive Statistics (Continued)**

Volunteer Support	16.99	5.69
Supports Event Participation	15.64	4.61
Institutional Loyalty	8.82	2.81
Institutional Reputation - Visibility	23.88	5.61
Institutional Reputation - Academic & Community	17.61	4.45
Overall Alumni Experience	3.33	1.11
Overall Institutional Opinion	4.32	0.84
Donating Frequency	3.05	1.62
Donating History & Future Intentions	3.66	1.40

### **C. Factor Analysis**

Exploratory factor analyses were performed as a way to statistically group survey items together to reduce the large number of survey item questions into a smaller number of variables to later be used as factors in path analysis. Variables were grouped around the concepts within the conceptual framework: Input variables (including personal characteristic variables), environmental variables (including student behavior, student perception, alumni behavior, and alumni perception variables), and output variables (those variables measuring financial giving behavior). Nine personal characteristic variables (Inputs) were identified in the survey. Environmental variables were broken into four blocks according to the conceptual framework. The first block of environmental factors, student behaviors, were refined into nine variables; the second block, student perceptions, included five variables; the third block of environmental variables, alumni behaviors, included six variables; and the fourth block of environmental variables, alumni perceptions, included seventeen variables. The giving variables (Output) included two variables. Overall, forty-eight variables were included in this study.

**Table 3. Results of Factor Analyses**

<b>Embracing Diversity (Student)</b> .....	<b>Factor Loading</b>
Welcoming to all genders.....	855
Welcoming to all ethnicities.....	849
Welcoming to all sexual orientations.....	846
Committed to diversity.....	826
Welcoming to disabilities.....	781
Welcoming to veterans.....	689
<b>Alpha Reliability</b> .....	<b>902</b>
<b>Co-Curricular Opportunities</b> .....	<b>Factor Loading</b>
Opportunity to participate in student organizations.....	745
Attending cultural events including films, lectures, & other arts.....	697
Attending athletic events.....	678
Student Leadership Opportunities.....	610
Exposure to diverse perspectives, cultures, & activities.....	572
Orientation for new students.....	551
Traditions or values learned on campus.....	491
Relationships with other students.....	487
Student Employment Opportunities.....	482
<b>Alpha Reliability</b> .....	<b>849</b>
<b>Academic Importance</b> .....	<b>Factor Loading</b>
Academics & classes.....	749
Intellectual & Personal Development.....	731
Relationships with faculty & advisors.....	672
Exposure to diverse perspectives, cultures, & activities.....	549
Relationships with other students.....	384
<b>Alpha Reliability</b> .....	<b>742</b>
<b>Academic Integration</b> .....	<b>Factor Loading</b>
Relationships with faculty & advisors.....	724
Academics/classes.....	712
My undergraduate college/school within the institution.....	550
A student organization or activity I was associated with.....	452
<b>Alpha Reliability</b> .....	<b>714</b>
<b>Academic Loyalty</b> .....	<b>Factor Loading</b>
My major or academic department within my college/school.....	827
Faculty member or instructor.....	817
My undergraduate college/school within the institution.....	689
A student organization or activity I was associated with.....	521
<b>Alpha Reliability</b> .....	<b>731</b>

**Table 3. Results of Factor Analyses (Continued)**

<b>Admission/Orientation Importance .....</b>	<b>Factor Loading</b>
Admissions .....	821
Relationship with administration & staff .....	563
Orientation for new students .....	535
<b>Alpha Reliability .....</b>	<b>618</b>
<b>Alumni Participation Barriers.....</b>	<b>Factor Loading</b>
Value .....	650
Time/other commitments .....	648
Concern about solicitation.....	560
Type of event.....	525
<b>Alpha Reliability.....</b>	<b>503</b>
<b>Communication Participation .....</b>	<b>Factor Loading</b>
Read the alumni e-newsletter .....	853
Read the alumni magazine .....	846
<b>Alpha Reliability.....</b>	<b>752</b>
<b>Communication Content Effectiveness .....</b>	<b>Factor Loading</b>
Faculty profiles, news & achievements.....	831
Student profiles, news & achievements .....	824
Alumni profiles, news & achievements .....	808
Research projects & achievements.....	788
Alumni Association news & strategic initiatives .....	717
University & alumni events.....	708
School/college/department news & strategic initiatives .....	692
Athletic news & events.....	638
Professional development events & resources .....	634
<b>Alpha Reliability.....</b>	<b>927</b>
<b>Communication Content Importance .....</b>	<b>Factor Loading</b>
Faculty profiles, news & achievements.....	812
Research projects and achievements .....	769
Student profiles, news, & achievements .....	763
Alumni profiles, news, & achievements .....	737
School/college/department news & strategic initiatives .....	648
Alumni Association news & strategic initiatives .....	613
Professional development events & resources .....	608
University & alumni events.....	599
Athletic news & events.....	403
<b>Alpha Reliability.....</b>	<b>893</b>

**Table 3. Results of Factor Analyses (Continued)**

<b>Communication Format Effectiveness – Traditional .....</b>	<b>Factor Loading</b>
Email communications .....	734
Electronic newsletter .....	730
Alumni magazine .....	696
University website .....	619
Direct mailings .....	571
Alumni website.....	568
<b>Alpha Reliability.....</b>	<b>832</b>
<b>Communication Format Effectiveness – Interactive .....</b>	<b>Factor Loading</b>
Viral videos/YouTube .....	856
Online alumni community.....	820
Social media .....	729
<b>Alpha Reliability.....</b>	<b>837</b>
<b>Communications Importance – Web &amp; Social Media.....</b>	<b>Factor Loading</b>
Social media .....	792
Viral videos/YouTube .....	771
Online alumni community.....	771
Alumni website.....	538
University website.....	487
<b>Alpha Reliability.....</b>	<b>824</b>
<b>Communication Importance – Mailings &amp; Emails.....</b>	<b>Factor Loading</b>
Alumni magazine .....	745
Direct mailings .....	668
Electronic newsletter .....	666
Email communications.....	614
<b>Alpha Reliability.....</b>	<b>756</b>
<b>Alumni Embracing Diversity .....</b>	<b>Factor Loading</b>
Welcoming to all ethnicities.....	915
Welcoming to all genders.....	913
Welcoming to all sexual orientations.....	912
Committed to diversity and inclusion .....	894
Welcoming to all persons with disabilities.....	840
Welcoming to all veterans .....	757
<b>Alpha Reliability.....</b>	<b>937</b>
<b>Alumni Advocacy Importance.....</b>	<b>Factor Loading</b>
Identifying job opportunities.....	761
Welcoming to all mentoring.....	732
Welcoming to all recruiting students.....	701
Serving as ambassadors to promote institution to others .....	681

**Table 3. Results of Factor Analyses (Continued)**

Providing financial support for institution (e.g. donations) .....	562
<b>Alpha Reliability</b> .....	<b>788</b>
<b>Alumni Event &amp; Volunteering Importance</b> .....	<b>Factor Loading</b>
Attending athletic events .....	829
Attending general alumni and institution events .....	806
Participating in online activities .....	752
Volunteering for institution .....	620
Networking with other alumni .....	522
Provide leadership on boards, committees, etc. ....	520
<b>Alpha Reliability</b> .....	<b>858</b>
<b>Alumni Event Participation</b> .....	<b>Factor Loading</b>
Attend homecoming activities .....	771
Attend social alumni events .....	742
Attend athletic events .....	710
Attend class or affinity reunions .....	698
Volunteer to support institution .....	618
Visit campus .....	523
<b>Alpha Reliability</b> .....	<b>792</b>
<b>Utilize Web Resources</b> .....	<b>Factor Loading</b>
Use social media .....	797
Utilize professional development resources .....	710
Visit institution or Alumni Association website .....	444
<b>Alpha Reliability</b> .....	<b>505</b>
<b>Volunteer Support</b> .....	<b>Factor Loading</b>
Mentoring .....	816
Identifying job opportunities .....	813
Recruiting students .....	759
Serving as ambassadors to promote institution to others .....	705
Volunteering for institution .....	610
Providing leadership by serving on boards, committees, etc. ....	607
<b>Alpha Reliability</b> .....	<b>886</b>
<b>Supports Event Participation</b> .....	<b>Factor Loading</b>
Attending athletic events .....	855
Attending general alumni and institution events .....	834
Providing financial support for institution (e.g. donations) .....	625
Participating in online activities .....	625
Networking with other alumni .....	579
<b>Alpha Reliability</b> .....	<b>842</b>

**Table 3. Results of Factor Analyses (Continued)**

<b>Career Importance.....</b>	<b>Factor Loading</b>
Job placement opportunities .....	819
Internship or coop opportunities .....	800
Skills/training for career development.....	651
Opportunity to interact/network with alumni .....	602
Student employment opportunities .....	557
<b>Alpha Reliability .....</b>	<b>807</b>
<b>Career Preparation Opportunities.....</b>	<b>Factor Loading</b>
Job placement opportunities .....	797
Internship or coop opportunities .....	746
Opportunity to interact/network with alumni .....	709
Skills/training for career development.....	585
Relationship with administration and staff .....	463
<b>Alpha Reliability .....</b>	<b>815</b>
<b>Co-Curricular Importance.....</b>	<b>Factor Loading</b>
Opportunity to participate in student organizations.....	726
Attending cultural events including films, lectures & other arts .....	716
Student leadership opportunities.....	629
Traditions or values learned on campus.....	611
Attending athletic events.....	547
<b>Alpha Reliability .....</b>	<b>741</b>
<b>Donating Barriers – Institutional .....</b>	<b>Factor Loading</b>
Don't feel the institution needs my support.....	832
Institution hasn't made a good case for needing my support.....	823
I don't have an interest in supporting the institution financially .....	818
I am unsure how my gift will be used .....	676
<b>Alpha Reliability .....</b>	<b>806</b>
<b>Donating Barriers – Financial .....</b>	<b>Factor Loading</b>
My personal situation doesn't allow me to financially support institution.....	789
I am paying of college debt.....	734
I am unemployed or in a career change .....	685
<b>Alpha Reliability .....</b>	<b>598</b>
<b>Institutional Loyalty .....</b>	<b>Factor Loading</b>
Institution in general .....	792
State institutions collegiate system in general .....	699
Institution's athletics.....	641
<b>Alpha Reliability .....</b>	<b>584</b>

**Table 3. Results of Factor Analyses (Continued)**

<b>Institutional Reputation – Visibility .....</b>	<b>Factor Loading</b>
Media visibility .....	708
Campus aesthetics (e.g. buildings, grounds, etc.) .....	678
Success of athletic teams .....	656
History/Tradition.....	656
School rankings (e.g. U.S. News & World Report).....	616
Accomplishments of Alumni .....	593
Value/respect for degree .....	472
<b>Alpha Reliability .....</b>	<b>797</b>
<b>Institutional Reputation – Academic &amp; Community.....</b>	<b>Factor Loading</b>
Diversity & inclusion.....	771
Providing scholarships .....	739
Outreach to community.....	717
Accomplishments of students .....	679
Accomplishments of faculty .....	637
<b>Alpha Reliability .....</b>	<b>807</b>
<b>Professional Community Engagement.....</b>	<b>Factor Loading</b>
Academic Clubs .....	661
Professional or Career Organizations .....	612
Honor Society .....	570
Community Service Organizations .....	452
Residence Hall Organizations.....	364
<b>Alpha Reliability .....</b>	<b>480</b>

**D. T-Test**

One research question asks how the student experiences differ between donors and non-donors. A t-test was used to determine differences between the student behaviors and perceptions of donors and non-donors. Table 4 shows the differences in the student experiences of donors and non-donors by displaying the means, t-test results, and significance of the donating frequency and donating history/future intentions of both donors and non-donors.

**Table 4. T-Test Results of Donor and Non-Donor Student Experiences**

Student Behavior & Perception Variables	Donating Frequency			Donating History		
	Mean - Have NOT Donated	Mean - HAVE Donated	T-Test	Mean - Have NOT Donated	Mean - HAVE Donated	T-Test
Academic Importance	20.47	21.15	.88	20.47	21.15	11.63**
Admissions & Orientation	10.45	10.81	5.59	10.45	10.81	1.24
Co-Curricular Importance	31.38	32.54	23.80**	14.40	16.30	12.39**
Professional Community Engagement	1.37	1.50	.15	1.24	1.49	2.82
Music/Theater Org Participation	0.17	0.22	50.79**	.18	.20	7.82
Fraternity Participation	0.11	0.18	170.80**	.13	.16	22.26**
Intramural Participation	0.35	0.46	221.44**	.33	.44	186.85**
Ethnic/Cultural Org Participation	0.11	0.1	4.48	.10	.11	.41
Career Importance	19.36	18.8	2.97	18.78	19.01	3.7
Academic Integration	13.74	15.01	18.45**	13.74	15.01	17.64**
Career Preparation Opp.	13.76	14.41	20.25**	12.73	14.43	2.81
Co-Curricular Opportunities	29.27	32.6	33.93**	29.27	32.60	15.89**
Embracing Diversity	24.58	24.45	1.88	23.83	24.58	1.38
Preparation for Grad School	3.58	3.80	26.87**	3.37	3.79	22.82

**E. Blocked Hierarchical Regression (Path) Analysis**

Path analysis, using blocked hierarchical regression, was conducted in order to calculate the direct, indirect and total effects of factors in each component of the conceptual framework. In order to construct the path analysis, a series of multiple regression equations were run in which each sequential block of variables, as defined by the conceptual framework, were regressed together on the variables in the next block. Table 5 shows the direct effect results, Table 6 shows the indirect effect results, and Table 7 shows the total effect results of the path analysis.

**1. Direct Effects**

To calculate direct effects, personal characteristic variables were utilized as independent factors in the analysis on the variables within student behaviors, student perceptions, alumni behaviors, alumni perceptions, and giving. Factors in both student behaviors and student perceptions were utilized as both dependent variables within the factor analysis for personal characteristics, and independent variables for variables within



alumni behavior, alumni perceptions, and giving. Both alumni behaviors and alumni perceptions were calculated as dependent variables within the factor analysis for personal characteristic, student behavior and student perception variables, and calculated as independent variables influencing alumni giving. Please refer to the “Methods” section of the methods chapter for deeper exploration of the use of each group of variables as independent and dependent variables.

### **a. Student Behavior Variables**

Table 5 shows the direct effects of the path analysis, along with  $R^2$  values measuring the degree of variance explained for each dependent variable. All of the personal dependent variables within the student behavior block of the conceptual framework were significantly explained by personal characteristic variables, though only moderately so: academic importance ( $R^2 = .09^{**}$ ), admissions and orientation ( $R^2 = .03^{**}$ ), co-curricular importance ( $R^2 = .07^{**}$ ), professional community engagement ( $R^2 = .07^{**}$ ), career importance ( $R^2 = .10^{**}$ ), fraternity participation ( $R^2 = .09^{**}$ ), intramural participation ( $R^2 = .09^{**}$ ), music/theater organization participation ( $R^2 = .04^{**}$ ), and ethnic/cultural organization ( $R^2 = .13^{**}$ ).

Being female ( $\beta = .136^{**}$ ), living farther away from home ( $\beta = .066^{**}$ ), and graduating more recently ( $\beta = .198^{**}$ ) all had statistically significant positive effects having important academic and intellectual experiences, while being non-heterosexual ( $\beta = -.044^*$ ) and holding more degrees at the institution ( $\beta = -.087^{**}$ ) had significant negative effects on having important academic and intellectual student experiences. Females ( $\beta = .108^{**}$ ) and more recent grads ( $\beta = .085^{**}$ ) were more likely to have more important admissions and orientation experiences, whereas non-white individuals ( $\beta = -$

.063\*\*) and those with more degrees at the institution ( $\beta = -.082$ ) were less likely to have important admissions and orientation experiences. Females tended to have significantly more co-curricular experiences than males ( $\beta = .048^*$ ), and those farther away from the institution had more important co-curricular activities than those living closer ( $\beta = .049^*$ ). Non-White individuals tended to have more important co-curricular activities than Whites ( $\beta = -.066^{**}$ ), and those with fewer degrees at the institution had more important co-curricular activities than those with multiple degrees ( $\beta = -.250^{**}$ ). Several personal characteristics significantly affected professional community engagement, with being female ( $\beta = .062^{**}$ ), living farther away ( $\beta = .104^{**}$ ) and graduating more recently ( $\beta = .079^{**}$ ) each having significant positive effects on the importance of participating in professional and community engagement organizations, and having more degrees at the institution ( $\beta = -.236^{**}$ ) having a significant negative effect on professional community engagement. Similarly, three of these personal characteristic variables affected career importance in the same ways they affected professional community engagement, with being female ( $\beta = .054^{**}$ ) and graduating more recently ( $\beta = .271^{**}$ ) both having significant positive effects on the importance of career-related student experiences, whereas having more degrees at the institution ( $\beta = -.084^{**}$ ) had negative effects on career-related student experiences.

Personal characteristics had a surprising number of significant direct effects on music/theater organization participation, with six of the nine personal characteristics holding significance. Those with more institutional degrees ( $\beta = -.078^{**}$ ), less wealthy individuals ( $\beta = -.044^*$ ) non-heterosexuals ( $\beta = -.051^{**}$ ), and those graduating less recently ( $\beta = -.067^{**}$ ) were less likely to be involved in music or theater organizations;

females ( $\beta = .147^{**}$ ) and those living farther away ( $\beta = .047^*$ ) were more likely to participate in music or theater. Males were significantly less likely than females to have participated in intramurals ( $\beta = -.230^{**}$ ), those who lived farther away were more likely to have participated in intramurals than those who lived closer ( $\beta = .043^*$ ), and those with more degrees from the institution were less likely to have played intramural sports ( $\beta = -.183^{**}$ ). Four personal characteristics had significant effects on ethnic/cultural organization participation. Non-Whites were much less likely to have participated in ethnic or cultural organizations as a student than Whites ( $\beta = -.353^{**}$ ), and non-heterosexuals were much less likely to participate in ethnic or cultural organizations than heterosexuals ( $\beta = -.083^{**}$ ). Women were more likely to have participated in ethnic or cultural organizations than men ( $\beta = .048^*$ ), and those who lived farther away were more likely to have participated than closer residents ( $\beta = .043^*$ ).

#### **b. Student Perception Variables**

Many of the student perception variables within the conceptual framework were significantly explained by personal characteristic variables, with the exception of preparation for graduate school, which was not significant ( $R^2 = .01$ ). Personal characteristics held significant explanatory power over the other four student perception variables: academic integration ( $R^2 = .02^{**}$ ), career preparation opportunities ( $R^2 = .01^{**}$ ), co-curricular opportunities ( $R^2 = .05^{**}$ ), and embracing diversity ( $R^2 = .03^{**}$ ). Five personal characteristics had significant positive direct effects on academic integration. Whites reported being significantly more integrated academically than non-Whites ( $\beta = .067^{**}$ ), Females were more academically integrated than men ( $\beta = .046^*$ ), those residing further away more academically integrated than those living closer ( $\beta =$

.062\*\*), those with both graduate and undergraduate degrees from the institution more academically integrated than those with just their graduate degree ( $\beta = .064^{**}$ ), and recent graduates more academically integrated than those of earlier graduation years ( $\beta = .092^{**}$ ). Non-veterans were less likely than veterans to report high levels of academic integration ( $\beta = -.054^*$ ).

Career preparation opportunities were affected by four personal characteristics. Non-heterosexuals reported higher levels of institutional effectiveness in providing career preparation opportunities than heterosexuals ( $\beta = .043^*$ ), and veterans were less likely to perceive institutional effectiveness in providing career opportunities than non-veterans ( $\beta = -.047^*$ ). Living farther away ( $\beta = .068^{**}$ ) and graduating more recently ( $\beta = .080^{**}$ ) tended to increase levels of institutional effectiveness in providing career preparation opportunities. When evaluating how well the institution provided leadership, relationship, and programmatic opportunities, Whites ( $\beta = .053^{**}$ ) and women gave higher ratings to institutional effectiveness in providing co-curricular opportunities. Living farther away ( $\beta = .066^{**}$ ), having more degrees from the institution ( $\beta = -.112^{**}$ ), and graduating more recently ( $\beta = .150^{**}$ ) all increased the likelihood of higher ratings of institutional effectiveness at providing co-curricular opportunities. Ratings of embracing diversity were significantly affected by three personal characteristics. Whites were more likely to perceive higher institutional effectiveness at creating a welcoming climate than non-Whites ( $\beta = .067^{**}$ ), those with fewer degrees from the institution perceived a less welcoming climate than those with graduate and undergraduate degrees ( $\beta = -.075^{**}$ ), and more recent graduates perceived a more welcoming climate than those graduating

from earlier years ( $\beta = .158^{**}$ ). There were no personal characteristics that significantly affected preparation for graduate school.

### **c. Alumni Behavior Variables**

All six alumni behavior variables in the conceptual framework held significant, but moderate, predictive power: alumni participation barriers ( $R^2 = .08^{**}$ ), communication participation ( $R^2 = .17^{**}$ ), alumni event participation ( $R^2 = .24^{**}$ ), utilize web resources ( $R^2 = .13^{**}$ ), donating barriers – institutional ( $R^2 = .09^{**}$ ), and donating barriers – financial ( $R^2 = .13^{**}$ ). Only one personal characteristic was found to have significant direct effects on alumni participation barriers, with those living closer being less likely to participate in institutional activities ( $\beta = -.130^{**}$ ). Three student behavior variables significantly affected alumni participation barriers. Those who had more important academic experiences as students were more likely to experience participation barriers as alumni ( $\beta = .103^{**}$ ), alumni who were more involved as students were less likely to experience participation barriers in institutional activities ( $\beta = -.106^{**}$ ), and higher involvement in professional and community service activities led to increased barriers to participation. ( $\beta = .060^*$ ). Similarly, three student perception variables significantly affected alumni participation barriers. Those who felt the institution effectively provided career preparation opportunities experienced fewer alumni participation barriers ( $\beta = -.122^{**}$ ), and feeling that the institution effectively prepared them for graduate school also were less likely to have experienced barriers to participation ( $\beta = -.044^*$ ). Strangely, institutional effectiveness at creating a welcoming student environment made it more likely to experience participation barriers as alumni ( $\beta = .066^{**}$ ).

Nine total variables had significant influence on communication participation. Three personal characteristics were significant. White individuals ( $\beta = .044^*$ ), veterans ( $\beta = .059^{**}$ ), and older graduates ( $\beta = -.369^{**}$ ) were all more likely to read the newsletter and alumni magazine than non-Whites, veterans, and those who graduated in more recent years. Similarly, three student behavior variables significantly influenced communication participation. Respondents who were more involved in co-curricular experiences ( $\beta = .060^*$ ), had higher participation in intramurals ( $\beta = .048^*$ ), and had higher participation in career-related student experiences ( $\beta = .056^*$ ) were more likely to read the alumni newsletter and alumni magazine than those who had lower levels of participation in co-curricular experiences, intramurals, and career-related student experiences. Three student perception variables also held significant influence on communication participation. Those who felt better integrated academically ( $\beta = .115^{**}$ ), had more co-curricular opportunities provided to them, and perceived more welcoming environments ( $\beta = .070^{**}$ ) were more likely to read the alumni newsletter and alumni magazine.

Alumni event participation significantly influenced by 12 total variables, four of which were personal characteristic variables, seven of which were student behavior variables, and one of which was a student perception variable. Males ( $\beta = -.121^{**}$ ), those living closer ( $\beta = -.275^{**}$ ), those graduating less recently ( $-.084^{**}$ ), and non-heterosexuals ( $\beta = .044^*$ ) attended alumni events less frequently than women, nearby residents, more recent graduates, and heterosexuals. Strangely, having more important academic ( $\beta = -.104^{**}$ ) and admissions/orientation ( $\beta = -.058^{**}$ ) student experiences significantly reduced the frequency of participating in alumni events. However, those who had positive co-curricular ( $\beta = .242^{**}$ ), professional community engagement ( $\beta =$

.063\*\*), fraternity ( $\beta = .133^{**}$ ), intramural ( $\beta = .085^{**}$ ), and career-oriented ( $\beta = .055^*$ ) student experiences attended alumni events significantly more often. Those who felt they had higher levels of career preparation as a student attended alumni events more frequently ( $\beta = .113^{**}$ ).

The frequency of alumni participation in online resources and email was significantly influenced by eight factors. Men were less likely than women to utilize web resources ( $\beta = -.045^*$ ), distant residents were less likely than nearby residents ( $\beta = -.076^{**}$ ), and recent graduates were more likely than older graduates ( $\beta = .141^{**}$ ) to utilize web resources. Having important co-curricular ( $\beta = .104^{**}$ ), professional community engagement ( $\beta = .046^*$ ), and career-related ( $\beta = .111^{**}$ ) student experiences positively affected the frequency of utilizing web resources, as did participating in intramural sports ( $\beta = .053^{**}$ ). Those who felt they were well prepared for their careers as students also utilized web resources more frequently ( $\beta = .121^{**}$ ).

The factors that had significant direct effects on institutional and financial barriers had surprisingly little overlap. Personal characteristics that directly influenced financial donating barriers include disability ( $\beta = -.063^{**}$ ), race ( $\beta = -.055^{**}$ ), gender ( $\beta = .142^{**}$ ), exposure to the institution ( $\beta = -.055^{**}$ ), and graduation year ( $\beta = .290^{**}$ ), whereas institutional barriers to donating were only significantly influenced by graduation year ( $\beta = .120^{**}$ ). Disabled individuals, non-white individuals, men, those with fewer degrees, and older graduates were significantly less likely to have experienced financial barriers to donating; older graduates were also significantly less likely to have experienced institutional barriers to donating. Few student behavior factors significantly influenced institutional and financial barriers to donating. Those with more academically important

experiences were significantly less likely to experience both institutional ( $\beta = -.090^{**}$ ) and financial ( $\beta = -.068^*$ ) barriers to donating, and participants in intramural sports were less likely to experience financial donating barriers ( $\beta = -.045^*$ ). Three student perception factors significantly affected institutional barriers to donating, whereas no student perception factors emerged as holding significant affect over financial barriers to donating. Respondents who felt that they had more important co-curricular opportunities ( $\beta = -.111^{**}$ ), a more welcoming student climate ( $\beta = -.065^{**}$ ), and were better prepared for graduate school ( $\beta = -.104^{**}$ ) were all significantly less likely to perceive institutional barriers to donating.

#### **d. Alumni Perception Variables**

Seventeen factors comprise the alumni perception component of the framework, all of which were found to be significant, ranging from moderate to strong predictive power: academic loyalty ( $R^2 = .20^{**}$ ), communication content effectiveness ( $R^2 = .27^{**}$ ), communication content importance ( $R^2 = .28^{**}$ ), communication format effectiveness – traditional ( $R^2 = .25^{**}$ ), communication format effectiveness – interactive ( $R^2 = .19^{**}$ ), communication method – web & social media ( $R^2 = .27^{**}$ ), communication method – mailing and emails ( $R^2 = .19^{**}$ ), alumni embracing diversity ( $R^2 = .36^{**}$ ), alumni advocacy importance ( $R^2 = .25^{**}$ ), alumni event and volunteer importance ( $R^2 = .31^{**}$ ), volunteer support ( $R^2 = .36^{**}$ ), supports event participation ( $R^2 = .31^{**}$ ), institutional loyalty ( $R^2 = .25^{**}$ ), institutional reputation – visibility ( $R^2 = .23^{**}$ ), institutional reputation – academic and community ( $R^2 = .22^{**}$ ), overall alumni experience ( $R^2 = .16^{**}$ ), and overall institutional opinion ( $R^2 = .21^{**}$ ). All were significant at the  $p \leq .001$  level.



Academic loyalty was influenced by ten factors. Two personal characteristics were significant, with women being less loyal to academic departments, faculty, and academic student groups ( $\beta = -.054^{**}$ ), and more recent graduates being more loyal to their academic departments, faculty, and academic student groups ( $\beta = .185^{**}$ ). Academic importance ( $\beta = .056^*$ ), co-curricular importance ( $\beta = .065^{**}$ ), professional community engagement ( $\beta = .119^{**}$ ), and music/theater participation ( $\beta = .064^{**}$ ) were all student behavior factors that significantly affected academic loyalty. Those with more important academic, co-curricular, professional community engagement, and music/theater student experiences were more likely to be loyal to their academic departments than those who had less important or fewer of these experiences. Four student behaviors proved statistically significant, with feeling more academically integrated ( $\beta = .192^{**}$ ) and better preparation for both career ( $\beta = .128^{**}$ ) and graduate school ( $\beta = .110^{**}$ ) having positive effects on academic loyalty, and increased co-curricular experiences ( $\beta = -.083^{**}$ ) having negative effects on academic loyalty.

Personal characteristics, student behavior, and student perception factors had somewhat similar effects on how respondents perceived the importance of both alumni communication content and how effectively the institution provided those types of content. Graduation year affected perception of content importance and effectiveness, and stood out as the one variable that affected each in different directions. More recent grads seemed to believe that communication content was more important ( $\beta = .055^{**}$ ), but felt the institution was less effective at providing that content ( $\beta = -.070^{**}$ ) than older graduates. Gender ( $\beta = .044^*$ ) and distance ( $\beta = -.045^{**}$ ) both had significant effects on communication content effectiveness, with women finding the institution more effective

at providing content than men and those living farther away finding the institution less effective at providing content than those residing closer to the institution. Non-Veterans perceived more importance in communications content than veterans did ( $\beta = .066^{**}$ ).

The importance of web and social media communications were similarly linked with the importance of mailing and email communications. Within personal characteristics, men were less likely to think that both web and social media communications ( $\beta = -.042^*$ ), as well as mailings and emails ( $\beta = -.046^*$ ), were as important as women did. White individuals were less likely to indicate that web and social media content were important as non-white individuals were ( $-.046^*$ ); more recent graduates were more likely to indicate that web and social media content was important ( $\beta = .229^{**}$ ). Non-veterans were more likely to believe that mailings and emails were more important than veterans did ( $\beta = .057^{**}$ ).

Factors with significant influence on perceptions of effectiveness of both traditional and interactive communication formats were also somewhat similar to one another. Women perceived higher effectiveness for both traditional ( $\beta = .041^*$ ) and interactive ( $\beta = .057^{**}$ ) communication formats than men did. Non-veterans ( $\beta = -.048^*$ ) and recent graduates ( $\beta = .074^{**}$ ) believed that the institution provided more effective interactive communication formats than veterans and older graduates did. Those living farther away perceived less effective traditional communication formats than those living closer to the institution ( $\beta = -.056^{**}$ ). Student behavior factors were even more similar in how they influenced perceptions of effectiveness of traditional and interactive formats of communication. More important admissions and orientation experiences had positive effects on the perceived effectiveness of both traditional ( $\beta = .075^{**}$ ) and interactive ( $\beta =$

.072\*\*) communication formats, while higher professional community engagement negatively affected perceived effectiveness of both traditional ( $\beta = -.055^{**}$ ) and interactive ( $\beta = -.082^{**}$ ) communication formats. Higher levels of academically important experiences negatively affected perceptions of institutional effectiveness in utilizing interactive communication formats ( $\beta = -.085^{**}$ ), and higher levels of important co-curricular experiences positively affected perceptions of institutional effectiveness in utilizing interactive communication formats ( $\beta = .085^{**}$ ).

Student perception factors were most similar in how they affected perceptions of institutional effectiveness of both traditional and interactive communication formats. Higher career preparation led to higher levels of perceived traditional ( $\beta = .146^{**}$ ) and interactive ( $\beta = .271^{**}$ ) format effectiveness; higher satisfaction with co-curricular opportunities had positive effects on traditional ( $\beta = .224^{**}$ ) and interactive ( $\beta = .137^{**}$ ) communication format effectiveness; welcoming alumni climates had positive effects on traditional ( $\beta = .092^{**}$ ) and interactive ( $\beta = .054^{**}$ ) communication format effectiveness, and better preparation for graduate school led to higher perceptions of traditional ( $\beta = .074^{**}$ ) and interactive ( $\beta = .055^{**}$ ) formats of communication. Academic integration also had significant positive effects on communication format effectiveness ( $\beta = .077^{**}$ ).

Student behavior factors also held some similarities in their effect on perceived importance of web/social media, and mailing/email communications methods. More important admissions and orientation experiences made it more likely that both web/social media communication methods ( $\beta = .102^{**}$ ) and mailing/email communications methods ( $\beta = .078^{**}$ ) were important; having more important co-

curricular experiences led to higher perceived importance of both web/social media ( $\beta = .275^{**}$ ) and mailings and emails ( $\beta = .242^{**}$ ); and having more important career experiences led to higher perceived importance of web/social media ( $\beta = .142^{**}$ ) and mailings and emails ( $\beta = .100^{**}$ ). Having more academically important experiences was the only student behavioral factor that only affected perceived importance of one communication method variable, with those who had better academic experiences perceiving web and social media as significantly less important ( $\beta = -.067^{**}$ ).

There was no overlap between the effects of student perception variables on the two communication method importance variables. Respondents who felt that the institution provided better career preparation opportunities felt that web and social media were more important than those who did not feel the institution adequately provided these opportunities ( $\beta = .085^{**}$ ), and those who perceived a more welcoming student environment also felt that web and social media were significantly more important than those who did not ( $\beta = .040^*$ ). Respondents who felt more academically integrated rated mailings and emails as more important than those who did not ( $\beta = .084^{**}$ ), as did those who felt better prepared for graduate school than those who did not ( $\beta = .078^{**}$ ).

How welcoming respondents perceived the institution to be as alumni was influenced by only four factors. Non-veterans perceived the campus climate as more welcoming than veterans ( $\beta = .039^*$ ), and recent graduates perceived a more welcoming climate than older graduates ( $\beta = .057^{**}$ ). Two student perception variables were found to be significant influences of alumni embracing diversity, with higher levels of co-curricular experiences leading to increased perceptions of a welcoming climate ( $\beta = .081^{**}$ ), and increased perceptions of a welcoming climate as a student leading to

increased perceptions of a welcoming climate as an alumnus/a ( $\beta = .505^{**}$ ). No student behavior variables were found to be significant influences upon perceptions of a welcoming climate amongst alumni.

Eight factors significantly influenced how important respondents felt that identifying job opportunities, mentoring, recruiting students, and providing donations were for alumni to undertake. Only one personal characteristic held significance, with distance negatively affecting alumni advocacy importance ( $\beta = -.044^*$ ). Four student behaviors were significant. Those who had more important academic ( $\beta = .109^{**}$ ) co-curricular ( $\beta = .236^{**}$ ) and career ( $\beta = .200^{**}$ ) experiences were more likely to believe alumni advocacy was important, whereas participation in music/theater organizations tended to reduce perceptions of alumni advocacy importance ( $\beta = -.047^{**}$ ). Three student perception variables were also found to be of significant positive influence on alumni advocacy importance. Perceptions that the institution effectively provided career preparation opportunities led to higher levels of alumni advocacy importance ( $\beta = .084^{**}$ ), as did perceptions of a more welcoming alumni climate ( $\beta = .046^*$ ) and better preparation for graduate school ( $\beta = .058^{**}$ ).

Nine factors shaped how important respondents felt it was for alumni to volunteer and attend institutional alumni events. Being heterosexual ( $\beta = .054^{**}$ ) and graduating more recently ( $\beta = .181^{**}$ ) both had positive effects on the importance of volunteering and alumni event participation. Five of the eight student behavior variables were found to be significant, including academic importance ( $\beta = -.054^*$ ), admissions and orientation ( $\beta = .059^{**}$ ), co-curricular importance ( $\beta = .394^{**}$ ), professional community engagement ( $\beta = -.046^*$ ), and music/theater organization participation ( $\beta = -.055^{**}$ ). Having better

admissions and orientations, more important co-curricular experiences ( $\beta = .394^{**}$ ), and more important career experiences ( $\beta = .126^{**}$ ) all positively affected perceptions of alumni event and volunteer importance, while having more important academic experiences ( $\beta = -.054$ ) had negative effects on alumni event and volunteer importance. Those with better professional community engagement experiences were less likely to consider attending alumni event and volunteering to be important ( $\beta = -.046^*$ ).

While event and volunteer importance measured how important alumni believed they were, two other variables – volunteer support and supports event participation – measured how well alumni believed the institution supported volunteer and alumni event participation. Perceived institutional effectiveness at supporting volunteer opportunities was significantly influenced by six factors, with no personal characteristic variables found to be of significance. Three student behavior variables were significant, with better admissions and orientation experiences ( $\beta = .055^{**}$ ) and more important co-curricular experiences ( $\beta = .054^*$ ) positively affecting perceived volunteer support, and having more important academic experiences negatively affecting perceived volunteer support ( $\beta = -.063^{**}$ ). Three student perception factors were significant as well, each with positive effects on volunteer support. Better career preparation opportunities ( $\beta = .449^{**}$ ), co-curricular opportunities ( $\beta = .139^{**}$ ), and more welcoming student climates ( $\beta = .071^{**}$ ) all significantly increased perceptions of institutional support for volunteering.

How well alumni perceived institutional support for alumni event participation was influenced by five factors. Distance from the institution was the only personal characteristic factor of significance, with living farther away negatively affecting event

participation support ( $\beta = -.053$ ). Co-curricular importance was the only student behavior variable that significantly affected event participation support, with more important co-curricular experiences increasing perceived event participation support ( $\beta = .050^*$ ). Those who perceived more institutional effectiveness at providing career preparation ( $\beta = .262^{**}$ ) and co-curricular opportunities ( $\beta = .261^{**}$ ), as well as a more welcoming climate ( $\beta = .070^{**}$ ), were more likely to believe the institution supported alumni event participation.

Twelve factors had significant influence on Institutional loyalty. Four personal characteristics had significant negative effects on institutional loyalty, and two had significant positive effects on institutional loyalty. Women ( $\beta = -.094^{**}$ ), nearby alumni ( $\beta = -.093^{**}$ ), less wealthy alumni ( $\beta = -.039^*$ ) and those with fewer degrees from the institution ( $\beta = -.069^{**}$ ) were less loyal to the institution. Heterosexuals ( $\beta = .060^{**}$ ) and recent graduates ( $\beta = .050^*$ ) were more loyal to the institution. Two student behavior factors were significant, with more important co-curricular experiences ( $\beta = .167^{**}$ ) and intramural participation ( $\beta = .117^{**}$ ) leading to higher institutional loyalty. Four student perception variables had significant positive effects on institutional loyalty. Better academic integration ( $\beta = .069^*$ ), more perceived co-curricular opportunities ( $\beta = .124^{**}$ ), a more welcoming climate ( $\beta = .154^{**}$ ) and better preparation for graduate school ( $\beta = .065^{**}$ ) all led to higher levels of institutional loyalty.

Two variables measuring institutional reputation were included in the study – visibility, and academic/community factors. The significant influencing factors for each were quite similar, although in one instance the same factor held significant influence on both visibility and academic/community factors, but affected each in opposite directions.

Visibility and academic/community reputation were both influenced by personal characteristics of sexual orientation and distance. Heterosexuals were more likely to have their opinion of the institution's reputation influenced by visibility ( $\beta = .043^*$ ), but were less likely to be influenced by academic and community elements ( $\beta = -.037^*$ ). Living farther away negatively affected how influential both visibility ( $\beta = -.061^{**}$ ) and academic and community elements ( $\beta = -.080^{**}$ ) were in perceptions of institutional reputation. Visibility was less likely to influence women in their perceptions of institutional reputation than men ( $\beta = -.104^{**}$ ), and non-veterans were more likely to be influenced by visibility in their perceptions of institutional reputation ( $\beta = .050^*$ ). Non-Whites ( $\beta = -.062^{**}$ ), non-heterosexuals ( $\beta = -.037^*$ ), and less recent graduates ( $\beta = -.047^*$ ) were all less likely to have their perceptions of institutional reputation influenced by academic and community elements.

Some similarities between significant student behavior factors that influenced both visibility and academic/community elements were also found. Admissions and orientation had positive effects on both visibility ( $\beta = .093^{**}$ ) and academic and community elements ( $\beta = .064^{**}$ ) on their influence on institutional reputation. More important co-curricular experiences also had positive effects on both visibility ( $\beta = .249^{**}$ ) and academic and community elements ( $\beta = .186^{**}$ ). Intramural participation ( $\beta = .055^{**}$ ) and more important career experiences ( $\beta = .075^{**}$ ) were both more likely to make visibility more important in evaluating institutional reputation. More important academic experiences made academic and community elements more important in evaluating institutional reputation ( $\beta = .188^{**}$ ), whereas fraternity participation made



academic and community elements less important in evaluating institutional reputation ( $\beta = -.053^{**}$ ).

Student perception variables with significant influence on the importance of visibility and academic/community elements on perceived institutional reputation included two of the same factors: embracing diversity and preparation for graduate school. More welcoming student climates led to greater importance of both visibility ( $\beta = .102^{**}$ ) and academic/community elements ( $\beta = .072^{**}$ ) in evaluating institutional reputation. More effective career preparation opportunities also made visibility more important in determining institutional reputation ( $\beta = .062^*$ ).

The factors with significant influence on both overall alumni experience and overall institutional opinion were very closely aligned. Those living farther away were more likely to report lower quality experiences as alumni ( $\beta = -.086^{**}$ ) and lower overall opinions of the institution ( $\beta = -.059^{**}$ ). White individuals were more likely to report higher overall opinions of the institution than non-whites ( $\beta = .055^{**}$ ). Student behavior variables held little influence on both overall alumni experience and overall institutional opinion, with co-curricular experience found to be the only factor of significance on overall alumni experience: higher levels of important co-curricular experiences leading to more positive overall alumni experiences ( $\beta = .081^{**}$ ). Four student perception variables positively affected both overall alumni experience and overall institutional opinion. Better academic integration increased both overall alumni experience ( $\beta = .094^{**}$ ) and overall institutional opinion ( $\beta = .110^{**}$ ); better career preparation increased alumni experience ( $\beta = .197^{**}$ ) and institutional opinion ( $\beta = .095^{**}$ ); more welcoming student climates increased alumni experience ( $\beta = .055^{**}$ ) and institutional opinion ( $\beta = .109^{**}$ );

and better preparation also increased alumni experience ( $\beta = .119^{**}$ ) and institutional opinion ( $\beta = .153^{**}$ ).

#### **e. Output Variables**

Fourteen factors had significant direct effects on donating frequency, with more significant direct effects concentrated in the alumni blocks within the conceptual framework. Two personal characteristic factors were significant, with wealthier individuals donating significantly more frequently ( $\beta = .073^{**}$ ) and recent graduates donating significantly less frequently ( $\beta = -.280^{**}$ ). Fraternity participation was the only student behavior variable with significant influence on donating frequency, with participants in fraternities or sororities making significantly less frequent donations ( $\beta = -.048^{**}$ ). Five alumni behavior variables significantly influenced donating frequency. Those who experienced more alumni participation barriers ( $\beta = -.057^{**}$ ), more institutional donating barriers ( $\beta = -.158^{**}$ ), and more financial donating barriers ( $\beta = -.159^{**}$ ) donated less frequently. Those who had higher communication participation ( $\beta = .127^{**}$ ) and alumni event participation ( $\beta = .183^{**}$ ) were likely to donate more frequently. Six alumni perception variables significantly influenced donating frequency. Placing high importance on web and social media ( $\beta = -.087^{**}$ ) and alumni event importance ( $\beta = -.125^{**}$ ), as well as perceiving high levels of institutional support for volunteering ( $\beta = -.053^{*}$ ), all reduced the frequency of donations. Conversely, placing high importance on mailings and emails ( $\beta = .063^{**}$ ) and alumni advocacy ( $\beta = .115^{**}$ ), as well as having a positive overall alumni experience ( $\beta = .049^{**}$ ), significantly increased the frequency of donations.

Seventeen factors had significant direct effects on donating history and future intentions, including many of the same factors that had significant influence on donating frequency. The same two personal characteristic factors were significant, with wealthier individuals more likely to have donated and to intend on doing so again ( $\beta = .062^{**}$ ), and more recent graduates significantly less likely to have donated nor intend to do so in the future ( $\beta = -.058^*$ ). Admissions and orientation was the only student behavior significantly influencing donating history and future intentions, with better admissions and orientation experiences leading to a lower likelihood of having donated nor intending to do so in the future ( $\beta = -.067^{**}$ ). The same five alumni behaviors significantly influenced donating history and future intentions that influenced donating frequency, and in the same direction. Those who experienced more alumni participation barriers ( $\beta = -.070^{**}$ ), institutional donating barriers ( $\beta = -.272^{**}$ ), and financial donating barriers ( $\beta = -.125^{**}$ ) were less likely to have donated and to donate in the future. Those who had higher communication participation ( $\beta = .051^*$ ) and alumni event participation ( $\beta = .87^{**}$ ) were more likely to have donated, and to do so again in the future.

All of the six alumni perception variables that significantly influenced donating frequency also significantly influenced donating history and future intentions, and in the same direction. Placing high importance on web and social media ( $\beta = -.065^{**}$ ) and alumni event importance ( $\beta = -.078^{**}$ ), as well as perceiving high levels of institutional support for volunteering ( $\beta = -.066^*$ ), all reduced the likelihood of having donated in the past nor intending to in the future. Conversely, placing high importance on mailings and emails ( $\beta = .120^{**}$ ) and alumni advocacy ( $\beta = .123^{**}$ ), as well as having a positive overall alumni experience ( $\beta = .056^{**}$ ), significantly increased the likelihood to have

donated in the past and do so again in the future. Additionally, those with higher academic loyalty ( $\beta = .052^{**}$ ), institutional loyalty ( $\beta = .068^{**}$ ), and overall institutional opinion ( $\beta = .067^{**}$ ) were significantly more likely to have donated in the past and do so again in the future.

Table 5. Standard Parameter Estimates of Direct Effects for Path Analysis

Variables	Academic/Admissions & Entrance	Admissions & Entrance	Co-Curricular Importance	Professional Community Engagement	Career Importance	Minor/Themer Org Participation	Fraternity Participation	Interracial Participation	Ethnic/Cultural Org Participation	Academic Involvement	Career Preparation Opp.	Co-Curricular Opportunities	Empowering Diversity for Grad School
Disability	0.14	-0.17	0.24	0.20	0.08	0.19	0.11	0.32	-0.13	0.19	0.26	0.38	0.22
Race	-0.10	-0.63**	-0.66**	0.00	-0.38	-0.11	-0.26	0.40	-3.33**	0.67**	0.21	0.53**	0.67**
Gender	1.34**	1.08**	0.48*	0.62**	0.74**	1.47**	0.13	-2.30**	0.48*	0.46*	0.04	0.77**	-0.16
Sexual Orientation	-0.44*	-0.18	-0.01	-0.17	-0.10	-0.01**	0.00	0.34	-0.83**	0.05	0.43*	0.09	0.33
Western Status	0.31	-0.35	0.05	-0.08	0.31	0.15	-1.07**	0.36	-0.11	-0.54*	-0.47*	-0.01	0.03
Distance Exposure to Institution	0.68**	0.93	0.49**	1.04**	-0.12	0.47*	0.24	0.45*	0.45*	0.62**	0.31	0.68**	0.11
Wealth	-0.23	-0.09	-0.08	0.02	0.16	-0.78**	-1.29**	-0.36	-0.36	0.64**	-0.13	-0.12**	-0.73**
Graduation Year	1.98**	0.85**	0.90	0.79**	2.71**	-0.87**	-2.08**	0.07	-0.11	0.92**	0.80**	1.50**	1.38**
Academic Importance													
Admissions & Entrance													
Co-Curricular Importance													
Professional Community Engagement													
Minor/Themer Org Participation													
Fraternity Participation													
Interracial Participation													
Ethnic/Cultural Org Participation													
Academic Involvement													
Career Preparation Opp.													
Co-Curricular Opportunities													
Empowering Diversity													
Preparation for Grad School													
Alumni Participation Barriers													
Communication Participation													
Alumni Event Participation													
Utilize Web Resources													
Doubling Barriers - Institutional													
Doubling Barriers - Financial													
Academic Loyalty													
Communication Content Effectiveness													
Communication Content Importance													
Communication Format Effectiveness - Traditional													
Communication Format Effectiveness - Interactive													
Communication Method - Web & Social Media													
Communication Method - Mailings & Events													
Alumni Empowering Diversity													
Alumni Advocacy Importance													
Alumni Events & Volunteer Importance													
Volunteer Support													
Supports Event Participation													
Institutional Loyalty													
Institutional Reputation - Visibility													
Institutional Reputation - Academic & Community													
Overall Alumni Experience													
Overall Institutional Opinion													
Donating Frequency													
Donating History & Future Intentions													
R <sup>2</sup>	.69**	.63**	.67**	.67**	.10**	.64**	.69**	.69**	.13**	.62**	.61**	.61**	.63**
													.01

Table 5. Standard Estimates of Direct Effects for Path Analysis (Continued)

Alumni Perceptions Barriers	Communication Participation	Alumni Event Participation	Urbans Web Resources	Dancing Barriers - Instrumental	Dancing Barriers - Financial	Academic Loyalty	Communication		Communication		Communication		Communication		Alumni Empowering Diversity	Alumni Advocacy Importance	Alumni Event & Volunteer Importance
							Communication a Content	Communication b Importance	Communication a Format	Communication b Efficacy	Communication a Method - Type & Social Media	Communication b Method - Settings & Excell	Alumni Empowering Diversity	Alumni Advocacy Importance			
-0.21	0.04	0.00	-0.07	-0.23	-0.63**	-0.04	0.03	-0.06	-0.01	0.17	-0.07	-0.01	-0.03	-0.03	-0.05	-0.10	
-0.04	-0.13	-0.12**	-0.45*	0.07	-0.54**	-0.13	0.10	-0.09	0.03	-0.10	-0.46*	-0.18	0.33	-0.10	-0.13	-0.09	
-0.14	0.02	0.44**	0.14	0.07	-0.06	0.18	0.07	0.09	0.10	0.17	-0.44*	-0.11	0.21	0.19	0.19	0.54**	
0.10	0.59**	0.13	0.09	-0.39	-0.27	0.02	-0.03	0.66**	-0.05	-0.48*	0.26	0.57**	0.39*	0.29	0.11	-0.11	
-1.50**	-0.23	-3.75**	-0.76**	0.33	0.00	0.02	-0.45**	-0.28	-0.56**	-0.19	0.12	-0.14	0.12	-0.14	-0.33	-0.37	
0.43	0.11	-0.31	-0.22	-0.16	-0.55**	0.12	-0.00	0.00	-0.21	-0.12	-0.04	0.12	-0.01	-0.07	0.17	0.10	
0.02	-0.25	0.09	-0.04	0.14	-0.37	-0.02	-0.33	-0.19	-0.20	-0.03	-0.02	-0.01	-0.11	-0.07	0.31	0.01	
0.69**	-3.69**	-0.64**	1.41**	1.20**	2.90**	1.53**	-0.70**	0.53**	-0.35	0.74**	3.29**	-0.37	0.77**	0.37**	0.64	1.81**	
1.05**	0.25	-1.04**	-0.41	-0.99**	-0.88*	0.28*	0.01	0.29	-0.21	-0.83**	-0.87**	-0.07	0.36	0.36	1.09**	-0.54*	
0.17	-0.11	-0.28**	0.15	0.53	0.13	0.23	0.85**	0.78**	0.72**	1.02**	1.02**	0.78**	0.21	0.13	0.13	0.59**	
-1.06**	0.60*	2.42**	1.04**	-0.10	0.28	0.65**	-0.04	2.77**	0.24	0.85**	2.75**	2.42**	0.00	2.26**	3.94**	3.94**	
0.60**	0.09	0.63**	0.46*	-0.12	-0.23	1.19**	-0.04	-0.09	-0.52**	-0.22	-0.14	-0.14	-0.03	0.01	-0.46*	-0.46*	
0.39	0.02	0.20	0.31	-0.12	0.23	0.64**	-0.04	-0.18	0.03	-0.01	0.00	0.01	0.15	0.18	-0.47**	-0.75**	
0.02	-0.01	1.33**	0.07	0.06	0.11	0.13	-0.32	-0.12	-0.08	-0.12	-0.12	-0.06	-0.15	0.12	0.32	0.32	
0.30	0.48*	0.83**	0.53**	-0.16	-0.45*	-0.16	-0.02	0.19	0.17	-0.16	0.03	0.07	0.10	0.19	0.12	0.15	
0.04	-0.34	-0.24	0.05	0.22	0.10	-0.03	-0.03	0.33	0.09	0.26	0.26	-0.07	0.01	0.09	0.18	0.09	
0.38	0.56*	0.55*	1.11**	0.44	0.44	0.15	-0.07	1.58**	0.37	0.30	1.43**	1.00**	0.38	3.00**	3.00**	1.46**	
-0.03	1.13**	-0.45	0.00	-0.64	-0.56	1.29**	0.31	0.66*	0.77**	-0.24	0.44	0.54**	0.47	0.12	0.3	0.3	
-1.22**	-0.28	1.13**	1.21**	-0.03	0.17	1.26**	0.31	1.46**	1.46**	2.71**	0.51**	0.31	-0.22	0.64**	1.26**	1.26**	
-0.26	0.67*	0.43	0.54	-0.11**	-0.13	-0.82**	0.25	2.78**	0.25	2.34**	-0.48	0.31	1.34**	1.34**	-0.25	-0.21	
0.64**	0.70**	-0.95	0.14	-0.85**	-0.89	0.94	0.61**	0.44*	0.92**	0.54**	0.40*	0.34	0.34	3.03**	0.46*	0.38	
-0.44*	0.24	0.33	0.01	-1.04**	0.02	1.10**	0.36	0.59**	0.74**	0.53**	0.15	0.78**	0.01	0.78**	0.78**	0.22	



perception variable blocks. Table 6 summarizes the significant indirect effects within the conceptual framework. Please refer to the “Methods” section of the methods chapter for deeper exploration of the use of each group of variables as independent and dependent variables.

#### **a. Personal Characteristics on Alumni Behaviors**

Personal characteristics typically had moderately significant indirect effects on alumni behavior variables. Five personal characteristics influenced alumni participation barriers, with White individuals ( $\Delta = -.13^*$ ), heterosexuals ( $\Delta = -.06^*$ ), and those holding more degrees ( $\Delta = -.11^*$ ) being less likely to experience barriers to participation as alumni, whereas females ( $\Delta = .12^*$ ) and those living farther away ( $\Delta = .05^*$ ) were more likely to experience barriers to alumni participation. Three personal characteristics had significant indirect effects on communication participation, with White individuals reading the alumni email newsletter and magazine significantly less than non-White individuals ( $\Delta = -.15^*$ ), and females ( $\Delta = .10^*$ ) and those living farther away from the institution ( $\Delta = .11^*$ ) reading the newsletter significantly more than males and those living closer to the institution. Non-disabled individuals were significantly less likely to participate in alumni events than individuals with disabilities ( $\Delta = -.12^*$ ), and those living farther away from the institution ( $\Delta = .12^*$ ) and those with more degrees from the institution ( $\Delta = .17^*$ ) were more likely to participate in alumni events. Only one personal characteristic had a significant indirect effect on utilizing web resources, with those farther away utilizing web resources less frequently ( $\Delta = -.09^*$ ). Four personal characteristics had significant indirect effects on institutional barriers to donating, with Whites ( $\Delta = -.12^*$ ), females ( $-.11^*$ ), those with more degrees ( $-.12^*$ ), and wealthier



individuals ( $\Delta = -.09^*$ ) being less likely to experience institutional barriers to donating. Similar personal characteristics held significant indirect effects on financial donating barriers, with Whites ( $\Delta = -.10^*$ ), females ( $\Delta = -.11^*$ ), and wealthy individuals ( $\Delta = -.07^*$ ) being less likely to experience financial barriers to donating.

### **b. Personal Characteristics on Alumni Perceptions**

Personal characteristics typically had moderately significant indirect effects on alumni perceptions. White individuals were significantly less loyal to faculty and departments ( $\Delta = -.09^*$ ), while those living farther away ( $\Delta = .12^*$ ) and those graduating more recently ( $\Delta = .10^*$ ) were significantly more loyal to faculty and departments. Those with more degrees perceived significantly more effective ( $\Delta = .15^*$ ) and important ( $\Delta = .22^{**}$ ) communication content; recent graduates also perceived significantly more effective ( $\Delta = .17^*$ ) and important ( $\Delta = .20^{**}$ ) communication content. Whites ( $\Delta = -.11^*$ ) and females ( $\Delta = -.09^*$ ) perceived significantly less effective interactive communication formats than non-Whites and males, and recent graduates ( $\Delta = -.08^*$ ) perceived web and social media communication to be significantly less important.

Gender, number of degrees, and wealth all had significant indirect effects on the perceived importance of alumni advocacy, with females significantly less likely to believe alumni advocacy was important ( $\Delta = -.11^*$ ), and those having more degrees ( $\Delta = .15^*$ ) and wealthier individuals ( $\Delta = .12^*$ ) believing that alumni advocacy was significantly more important. While those with more degrees were more loyal to the institution ( $\Delta = .21^{**}$ ), White individuals ( $\Delta = -.14^*$ ), females ( $\Delta = -.07^*$ ), and wealthy individuals ( $\Delta = -.07^*$ ) had significantly less institutional loyalty. Personal characteristics had similar indirect effects on the influence of both visibility as well as academic and

community accomplishments on perceived institutional reputation. Whites ( $\Delta = -.06^*$ ;  $\Delta = -.08^*$ ), heterosexuals ( $\Delta = -.07^*$ ;  $\Delta = -.11^*$ ), those living farther away ( $\Delta = -.08^*$ ,  $\Delta = -.11^*$ ), and recent graduates ( $\Delta = -.06^*$ ;  $\Delta = -.09^*$ ) perceived visibility and academic/community accomplishments as significantly less influential on institutional reputation, whereas women ( $\Delta = .08^*$ ;  $\Delta = .09^*$ ) perceived them as significantly more influential on institutional reputation. Distance from the institution was the only personal characteristic with significant indirect effects on overall alumni experience, with those living farther away rating their alumni experience significantly lower than those living closer ( $\Delta = -.09^*$ ).

### **c. Indirect Effects on Donating Behavior**

Two personal characteristics had significant indirect effects on giving behavior, each with moderate influence. Wealthier individuals donated significantly more frequently than less wealthy individuals ( $\Delta = .14^*$ ), and recent graduates donated significantly less frequently than less recent graduates ( $\Delta = -.09^*$ ). Similarly, wealthier individuals were more likely to have donated and intend on doing so again in the future ( $\Delta = .18^*$ ), whereas recent graduates were less likely to have donated and intend on doing so again in the future ( $\Delta = -.07^*$ ).

Only two student behavior variables had significant indirect effects on giving behavior. Participation in a fraternity significantly reduced the frequency of giving ( $\Delta = -.08^*$ ), and having more important admissions and orientation experiences significantly reduced the likelihood of having donated nor intending to donate in the future ( $\Delta = -.07^*$ ). The same three student perception variables had similar effects on both donating frequency and donating history/future intentions. Perceptions of highly effective

academic and intellectual development experiences increased both donating frequency ( $\Delta = .23^{**}$ ) and having donated in the past/intending to do so in the future ( $\Delta = .18^*$ ).

Perceptions of effectively providing career preparation opportunities also increased the likelihood of more frequent donations ( $\Delta = .07^*$ ) and having donated/intending to do so again ( $\Delta = .06^*$ ). Providing effective co-curricular opportunities led to more frequent donations ( $\Delta = .17^*$ ), and increased the likelihood of having donated/intending to do so again in the future ( $\Delta = .11^*$ ).

Table 6. Standard Parameter Estimates of Indirect Effects for Path Analysis

Variables	Alumni Participation on n	Alumni Participation n	Utilize Resources 1	Donating Barriers - Institutions	Donating Barriers - Financial	Academic Loyalty	Communi- cation Content Effectiveness	Communi- cation Formal Effectiveness	Communi- cation Formal Effectiveness ss - ss - Traditional	Communi- cation Formal Effectiveness ss - ss - Interactive	Communi- cation Method - Web & Social	Communi- cation Method - Mailings & Emails	Alumni Participation Diversity	Alumni Participation Importance	Alumni Event & Volunteer Importance	
Disability		.12*														
Race	-.13*	-.15*		-.12*	-.10*	-.09*				-.11*				-.11*	-.09*	
Gender	-.12*	.10*		-.11*	-.11*					-.09*				-.11*		
Sexual Orientation	-.06*															
Veteran Status		.11*				.12*								.06*		
Distance	.08*	.12*		-.09*										.15*	.11*	
Exposure to Institution	-.11*	.17*		-.12*	-.07*	.10*								.12*		
Wealth				-.09*							-.08*				-.12*	
Graduation Year																
Academic Importance																
Admissions & Orientation																
Co-Curricular Importance																
Professional Community Engagement																
Music/Theater Org Participation																
Fraternity Participation																
Intramural Participation																
Ethnic/Cultural Org Participation																
Career Importance																
Academic Integration																
Career Preparation Opp																
Co-Curricular Opportunities																
Enhancing Diversity																
Preparation for Grad School																
Alumni Participation Barriers																
Communication Participation																
Alumni Event Participation																
Utilize Web Resources																
Donating Barriers - Institutional																
Donating Barriers - Financial																
Academic Loyalty																
Communication Content Effectiveness																
Communication Content Importance																
Communication Formal Effectiveness - Traditional																
Communication Formal Effectiveness - Interactive																
Communication Formal Effectiveness - Traditional																
Communication Method - Web & Social Media																
Communication Method - Mailings & Emails																
Alumni Enhancing Diversity																
Alumni Advocacy Importance																
Alumni Event & Volunteer Importance																
Volunteer Support																
Supports Event Participation																
Institutional Loyalty																
Institutional Reputation - Visibility																
Institutional Reputation - Academic & Community																
Overall Alumni Experience																
Overall Institutional Opinion																
Donating Frequency																
Donating History & Future Intentions																
R <sup>2</sup>	.08***	.17***	.24***	.13***	.09**	.13***	.20**	.27**	.28***	.25**	.19***	.27**	.19**	.36**	.25**	.31***

\* p ≤ .01, \*\* p ≤ .001 (2-tailed).



from the institution ( $\beta = -.07^{**}$ ). But when interacting with student behaviors and perceptions, recent graduates are more likely to perceive effective communication content from the institution ( $\epsilon = .10^{**}$ ). Gender has a positive direct effect on perceived interactive communication effectiveness, with women perceiving higher levels of institutional effectiveness ( $\beta = .06^{**}$ ). But when factoring in the indirect effects of gender on interactive communication effectiveness through student experience and perception, women are less likely to perceive effective interactive communication formats than men ( $\epsilon = -.03^{**}$ ). Race has no direct effect on alumni event and volunteer importance ( $\beta = .00$ ), but its indirect effect through student behaviors and perceptions has a significantly negative total effect on the importance Whites place on alumni event and volunteer importance ( $\epsilon = -.09^*$ ). The direct effect of the number of degrees on institutional loyalty is initially negative ( $\beta = -.07^{**}$ ), but alumni with more degrees have more institutional loyalty when accounting for student behaviors and perceptions ( $\epsilon = .14^{**}$ ). Sexual orientation has a direct positive effect on institutional visibility ( $\beta = .04^*$ ), but a slightly negative total effect, with heterosexuals slightly less inclined to see visibility as an influential component of perceived institutional reputation ( $\epsilon = -.03^*$ )

Table 7. Standard Parameter Estimates of Total Effects for Path Analysis

Variables	Academic s & Importance	Admission s & Orientation	Co-Curricular Importance	Profess. Co-Engage mt	Career Importance	Music/Theater Org Participation	Fraternity Participation	Intramural Participation	Ethnic/Cultural Org Participation	Academic Integration	Career Preparation Opps	Co-Curricular Opportunities	Preparation for Grad School
Disability													
Race													
Gender	.14**	-.06*	-.07*	.06*	.05*	.14**			-.35**	.07**		.05*	.07*
Sexual Orientation	-.04*	-.11*	.05*			-.05*			.05*			.08*	
Veteran Status													
Distance	.07*		.05*	.10*		.05*			.04*	.05*		.07*	
Exposure to Institution	-.09*	-.08*	-.25**	-.29**	-.08*	-.08*	-.13**		.06*	.07*		-.11*	-.08*
Wealth													
Graduation Year	.20**	.09*		.08*		-.07*			.09*	.08*		.15**	.16**
Academic Importance													
Admissions & Orientation													
Co-Curricular Importance													
Professional Community Engagement													
Music/Theater Org Participation													
Fraternity Participation													
Intramural Participation													
Ethnic/Cultural Org Participation													
Career Importance													
Academic Integration													
Career Preparation Opps													
Co-Curricular Opportunities													
Preparation for Grad School													
Alumni Participation: Barriers													
Communication Participation													
Alumni Event Participation													
Utilize Web Resources													
Donating Barriers - Institutional													
Donating Barriers - Financial													
Academic Loyalty													
Communication Content Effectiveness													
Communication Content Importance													
Communication Format Effectiveness - Traditional													
Communication Format Effectiveness - Interactive													
Communication Method - Web & Social Media													
Communication Method - Mailings & Emails													
Alumni Enhancing Diversity													
Alumni Advocacy Importance													
Alumni Event & Volunteer Importance													
Volunteer Support													
Supports Event Participation													
Institutional Loyalty													
Institutional Reputation - Visibility													
Institutional Reputation - Academic & Community													
Overall Alumni Experience													
Overall Institutional Opinion													
Donating Frequency													
Donating History & Future Intentions													
R <sup>2</sup>	.09**	.03**	.07**	.07**	.10**	.04**	.09**	.09**	.13**	.02**	.01**	.05**	.03**

\* p ≤ .01, \*\* p ≤ .001 (2-tailed).







## CHAPTER V

### DISCUSSION

#### A. Introduction

Given that the purpose of this study is to examine the relationship between graduate student experience and graduate alumni giving, I use Astin's (1970) theory of Input-Environment-Output as the theoretical framework undergirding the study, where personal characteristics (Inputs) interact with student behaviors, student perceptions, alumni behaviors, and alumni perceptions (Environment) to influence giving behavior (Output). To explore these questions, I used varimax orthogonal rotation factor analysis to group like variables together within appropriate constructs, Chronbach's alpha reliability measure to verify the cohesion of these variable groupings, and blocked hierarchical path analysis to determine the extent of the effects of input variables and environmental variables both directly and indirectly on measures of giving. Additionally, a t-test was used to identify differences in student experiences between graduate alumni donors and non-donors. In this chapter, I present the summary of key findings using my research questions as a guide. I then discuss the major implications for policy and practice, and conclude with some observations about the most important overarching conclusions that can be drawn from this study.

#### B. Summary of Findings

The overarching research question of this study asks: *what elements of the graduate student experience most significantly influence graduate alumni giving?* Within this question, I asked the following research questions: 1) Does an overall positive graduate school experience increase the likelihood of giving as alumni? 2) Which

graduate student experiences most significantly influence giving to the institution? 3) How do the student experiences compare between graduate alumni who give and those who do not? 4) How do personal characteristics such as age, gender, race/ethnicity, marital status, or financial status affect the relationship between student experience and alumni giving? Here, I look at what the results tell us about each question, and what this exploratory study invites for future research.

### **1. Research Question 1**

*Does an overall positive graduate school experience increase the likelihood of giving as alumni?* It is important to note that the structure of the survey questions prevents me from completely isolating alumni perceptions of their graduate school experience specifically. While all respondents utilized in my study were graduate students at the institution, many of the graduate alumni respondents had attended as both undergraduate and graduate students at the institution. Therefore, student experiences in this context must be looked at as a whole that incorporate both graduate and undergraduate experiences at the institution. It is also important to note that giving in this study is only measured by whether or not someone has ever donated, their intentions to do so in the future, and the frequency of donations. Donation amounts were not part of the survey data.

That said, overall student experience (including both student behaviors and perceptions) does not seem to generally have many statistically significant direct effects on graduate alumni giving behaviors, whereas alumni experiences (alumni behaviors and perceptions) seem to exert much more influence on giving. Only five of the fourteen student behavior and perception variables significantly affected giving behavior, with two

of them having negative effects on giving (explored in further depth under research question 2, below). However, positive student experiences do have significantly positive effects on overall opinion of the institution and overall alumni experience, which both have significantly positive effects on graduate alumni giving. Student behaviors and perceptions produce their most significant influence in graduate alumni behaviors and perceptions, many of which ultimately have significant varying effects on giving. Thus, while positive graduate student experiences have only a small significant effect directly on alumni giving, they seem to gain much more influential power through significant positive effects on alumni experiences and overall alumni and institutional opinions.

Both positive overall alumni experience and overall institutional opinion significantly increased the likelihood that graduate alumni would have made a donation and intend to do so again in the future, and positive overall alumni experience also increased the frequency of donations. There were ten significant total effects of student experiences on overall alumni experience and overall institutional opinion, all of which were positive. Co-curricular participation and opportunities play an important role in shaping alumni experience and institutional opinion. Those who had more important leadership, relationship, programmatic, and institutional tradition student experiences were more likely to have a positive overall alumni experience. Those who felt that the institution effectively created these co-curricular opportunities were more likely to have an overall positive alumni experience and a higher overall opinion of the institution. Similarly, graduate alumni who felt that the institution effectively created academic and intellectual development opportunities, career development opportunities, a welcoming campus climate, and had better prepared them for further graduate education while they

were students all had significantly more positive alumni experiences and a better opinion of the institution. Through their positive effects on overall alumni experience and overall institutional opinion, student experiences realize significant influence on graduate student experience.

The existence of positive effects of student experiences generally having a positive influence on alumni giving supports previous research, although it varies in the degree of influence it exerts. Monks (2003) reported that alumni satisfaction with their student experience was the most significant determinant of their giving level, and McDearmon and Shirley (2009) noted that student experience “stands out” as one factor that increases the willingness of alumni to give back financially. While student behaviors and perceptions were not the most influential factors that directly influenced graduate alumni giving in this study, those student experiences that were significant tended to have positive effects on giving. Student behaviors and perceptions do seem, however, exert powerful influence on a range of alumni behaviors and perceptions, which in turn significantly affect graduate alumni giving. Importantly, student behaviors and perceptions seem to have significantly positive effects on overall alumni experience and overall institutional opinion, which have significant positive effects on giving history, frequency, and future intentions. In other words, overall positive student experiences seem to have muted effects directly on giving, but they find substantial significance on overall alumni experience and overall institutional opinion, which significantly affect giving. It is worth noting that any differences with the findings from previous research may be due to the fact that this study focused on graduate alumni, while previous studies

focused almost exclusively on undergraduate alumni. The results of this initial exploration welcome further testing and verification of these results.

## **2. Research Question 2**

*Which student experiences most significantly influence giving to the institution?*

Due to the difficulty mentioned above to completely isolate graduate school experiences from undergraduate experiences for those who had also earned their undergraduate degrees, “student experiences” in this study must necessarily incorporate both undergraduate and graduate experiences together. Because of this, I have tweaked the second research question to recraft the phrase “graduate student experiences” into “student experiences,” and ask “*which student experiences most significantly influence graduate alumni giving to the institution?*” While I cannot identify specifically whether or not these student experiences occurred while a graduate student, the results remain useful towards initially identifying student experiences that may shape the giving behavior of graduate alumni, which has been an under-studied population in previous research.

Five of the fourteen student behavior and perception factors significantly affected giving behavior. Three of the five factors were student perception variables that had significant positive effects on graduate alumni giving behavior. Those who felt that the institution effectively provided academic and intellectual development opportunities, career development opportunities, and co-curricular opportunities were more likely to have given, to intend to donate in the future, and to donate more frequently. These findings support previous research that indicates the importance of professional & intellectual development opportunities to graduate student experience (Coulter, 2004;

Gardner & Barnes 2007; Goplerud, 1980; Gustitus et al., 1986) and the importance of developing a strong social network (Baird, 1995; Barnes & Austin, 2009; Clotfelter, 2003; Ellis, 2001; Goplerud, 1980; Hartnett and Katz, 1977; Lovitts, 2001; McDearmon & Shirley, 2009; Monks, 2003; Nettles & Millett, 2006; Noy & Ray, 2012; Vilkinas, 2008), and suggests that providing intellectual development, career-oriented, and socially fulfilling opportunities is good for both creating a positive student experience as well as a graduate student and increasing subsequent giving as graduate alumni.

In perhaps one of the most surprising and counter-intuitive findings, admissions and orientation experiences had significant negative effects on donating history and future intentions. Individuals who rated admissions and orientation as being more important were significantly less likely to have donated, to intend to donate in the future, or to donate as frequently as those who had fewer important admissions and orientation experiences. This was surprising for several reasons. Having more positive admissions and orientation experiences had significant effects on eleven alumni behavior and alumni perception variables, all of which were positive except for one (admissions and orientation had significant negative effects on alumni event participation). Additionally, research suggests that effective orientation processes facilitate difficult transitions and enhance feelings of well-being as they apply to and matriculate into their graduate programs (Adler & Adler, 2005; Coulter, Goin, & Gerard, 2004; Gardner, 2010; Polson, 2003). Given this powerful positive influence on alumni experience and its history in the research literature as a powerful predictor of an overall positive student experience, it seems counterintuitive that having more positive admissions and orientation experiences would lead to a lower likelihood of having donated nor intending to do so in the future,

and to give less frequently. It may be the fact that admissions and orientation occur so early in the undergraduate experience that the effect changes over time for alumni. It may also be that retrospective sense-making is less accurate with experiences that are so far in the past, or it may be that students who rated those initial socialization experiences highly did so in comparison to less positive subsequent experiences, which in turn had a negative effect on giving. This is a finding that should be verified and examined in future research.

Similarly, having been in a fraternity or sorority also seems to significantly decrease the frequency of graduate alumni giving. Two potential explanations come to mind. The first may be that participants in fraternities and sororities actually have less positive student and alumni experiences. Looking at the data however, fraternity or sorority participation had significant effects on only two alumni behavior and perception variables – one positive (alumni event participation), and one negative (academic and community reputation). Given the low influence of fraternity and sorority participation on giving, it seems unlikely that its negative effects on giving are due to more negative student and alumni experiences. One other potential explanation might be that these graduate alumni are donating directly to the fraternity and sorority organizations themselves, which often exist outside the institutional giving channels and are not considered to be institutional donations. Regardless, fraternity and sorority participation joins admissions and orientation importance as the two student experience variables with significant potential negative influence on graduate alumni giving, while academic integration, career development opportunities, and co-curricular opportunities are the



three student experience variables with seemingly significantly positive influence on graduate alumni giving.

### **3. Research Question 3**

*How do the student experiences compare between graduate alumni who give and those who do not?* The results of this study support previous research that positive student experiences and higher levels of student involvement lead to increased giving behavior as alumni (Monks, 2003; McDearmon and Shirley, 2009). Eight student behavior and perception variables were significantly different between frequent graduate alumni donors and non-donors, and six student behavior and perception variables were significantly different between those who had donated before and intended to do so in the future and those who had not donated and did not intend to do so in the future. More frequent graduate alumni donors tended to have significantly more important co-curricular experiences, to have participated in significantly more music and theater groups, and played more intramural sports, but were less likely to be in a fraternity or sorority. Alumni who donated more frequently also had more opportunities for academic and intellectual development, career preparation, co-curricular involvement, and felt better prepared for further graduate education. Similarly, those who donated and intended to again had significantly more important academic and co-curricular experiences, played more sports, and had more opportunities for intellectual development and career preparation, but were less likely to be in a fraternity. As expected, graduate alumni donors were generally more involved, had more important student experiences, and perceived more opportunities for involvement than non-donors. Of note, while the variables listed above were all significantly different statistically between graduate

alumni donors and non-donors, the means were not dramatically different in practical terms. This is consistent with the previous findings of this study that student experience has only moderate effects on giving directly. However, such slight differences between donors and non-donors may also suggest that even slightly increased amounts of involvement and opportunities provided to students may make a difference in whether or not graduate students donate as alumni, and the frequency of their donations.

#### **4. Research Question 4**

*How do personal characteristics such as age, gender, race/ethnicity, marital status, or financial status affect the relationship between student experience and alumni giving?* This question yielded another of the most surprising results of the study, as most personal characteristics did not significantly affect graduate alumni giving behavior. Given that previous research indicates how influential personal characteristics such as gender (Andreoni et al., 2003; Bruggink & Siddiqui, 1995; Cox & Deck, 2006; Croson & Gneezy, 2009; Dvorak & Toubman, 2013; Eschholz & Van Slyke, 2002; Holmes, 2009; Holmes et al., 2008; Mallinckrodt & Leong, 1992; Newman, 1995; Okunade, 1996; Ostrander & Fisher, 1995; Rooney et al. 2007; Sandler & Hall, 1986; Wunnava & Lauze, 2001), race (Bryant et al., 2003; Carson, 1989; Clark et al., 2012; Drezner, 2009; Ellis, 2001; Escholz & Van Slyke, 2002; Johnson-Bailey et al., 2009; Noy & Ray, 2012), giving capacity (Conley, 2000; Mesch et al., 2002; Schervish & Havens, 2001; Weerts & Ronca, 2009; Wiepking & Breeze, 2012), and age (Bruggink & Siddiqui, 1995; Gaier, 2005; Holmes et al., 2008; McDearmon & Shirley, 2009; Mesch et al., 2002; Terry & Macy, 2007; Weerts & Ronca 2007; Willemain, Goyal, Van Deven, & Thurkal, 1994) can be on both graduate student experience and on alumni giving, the fact that so few

personal characteristics significantly affected graduate alumni giving behavior was unexpected. It may be that these personal characteristics are less important once so many behavioral and perceptual variables are included, and it may be that such personal differences are more important for undergraduate alumni than for graduate alumni given the passing of time and opportunities for additional sources of influence. This counterintuitive finding in my exploratory study invite replication and investigation in future research.

Graduation year and wealth were the only two personal characteristics that significantly influenced graduate alumni giving behavior, with graduation year negatively affecting giving and wealth positively affecting giving. Findings of this study on graduation year also support previous research that being younger has negative effects on giving behavior. The more recently alumni had graduated, the less likely they were to have donated nor intend to in the future, and they donated less frequently. Graduation year was highly influential in mostly positive ways on student behaviors and perceptions as well as alumni behaviors and perceptions, yet had significant negative effects on giving behavior. This may be related to giving capacity, in that recent graduates often have more debt and make less money than later in life (McDearmon & Shirley, 2009). However, it may also support previous research suggesting that enthusiasm for philanthropic support is declining among younger graduates, and invites further exploration of the underlying reasons why recent graduates are less likely to give than older counterparts.

Wealth is one variable that seems to consistently arise across the research literature as one of the most significantly influential variables that affects giving, and the

results of this study are consistent with these previous studies. In this particular study, wealth may also have influenced racial effects on giving, with the fact that race did not significantly affect giving potentially supporting Conley's (2000) argument that capacity may be an important distinction in looking at racial giving behavior. This study only measured whether or not alumni had given a donation, the frequency of their donations, and whether or not they planned to donate again in the future, but did not measure the *amount* of the donation. Higher wealth pushes up giving as a proportion of income, but Blacks traditionally have significantly less net worth and financial capacity than Whites (Shervish & Havens, 2001). As a result of limited capacity, it often may appear that Blacks have lower giving behavior. In this case, removing gift size may or may not have negated a significant effect of race on giving behavior.

In addition to race, gender is another personal characteristic that noticeably has no significant effect on giving behavior. There are divergent studies in the research literature about the roles that gender plays in giving behavior (Andreoni et al., 2003; Bruggink & Siddiqui, 1995; Dvorak & Toubman, 2013; Holmes, 2009; Holmes et al., 2008; Okunade, 1996; Rooney et al., 2007; Wunnava & Lauze, 2001). That gender did not significantly affect giving behavior in this study may potentially be due to the situational context of giving for women, where the giving behavior of women may vary by the social distance and monetary amount of the philanthropic situation (Cox & Deck). The context surrounding giving to this particular institution may have shaped how graduate alumni women donate, and consequently obscured giving differences between men and women that might arise elsewhere in different institutional settings. Similar to race, the fact that donation amount is not accounted for in this study may also have reduced effects of

gender on graduate alumni giving behavior, as previous studies have found gender differences in donation amounts (Andreoni et al., 2003; Dvorak & Toubman, 2013; Okunade, 1996; Rooney et al., 2007). While only two personal characteristics significantly affected giving behaviors, there may be underlying factors that negated the significance of additional personal characteristics such as gender and race. It should also be noted that personal characteristics exert substantial influence on student behaviors and perceptions as well as alumni behaviors and perceptions, which in turn exert substantial influence on graduate alumni giving behaviors.

### **C. Implications for Research**

The major implication for future research is that the findings from this exploratory analysis can potentially be used to generate an empirically-based model that could be used in future research and as a means for improving strategies used in development to facilitate giving among graduate alumni. The model tested in this study is too large and has too many variables, making it unwieldy for use as a conceptual tool or as a guide for policy and practice. Thus, the findings from this study can potentially be used to produce a reduced model of variables to utilize when studying graduate alumni giving behaviors, given additional replication and verification in future studies. This study identifies the personal characteristics (Inputs), student behaviors, student perceptions, alumni behaviors, and alumni perceptions (Environment) that have significant effects on graduate alumni giving (Output). By examining an originally unwieldy forty-six variables and measuring for their potential effect on graduate alumni giving frequency and history/future intentions, this study has now refined the list of variables by more than half into a much more manageable nineteen variables that have significant positive or

negative effects on graduate alumni giving. Stated simply, future researchers looking further at influences on graduate alumni giving behavior now have an empirical basis from which to start their studies. Figure 17 shows the reduced model of variables with significant effects on alumni giving behavior, and the direction of each of their effects (positive or negative).

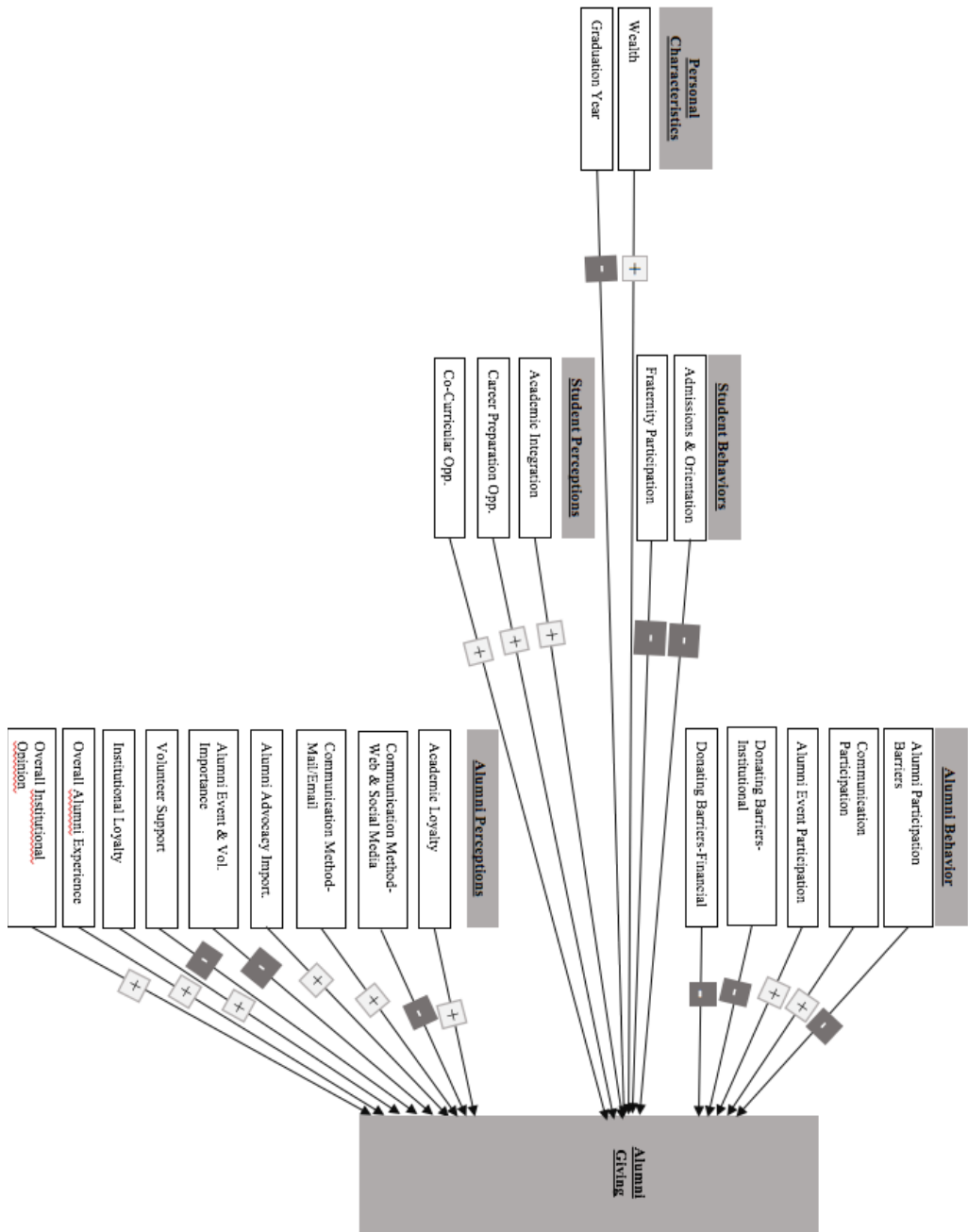


Figure 2. Reduced Model of Student and Alumni Experience Factors with Significant Effects on Graduate Alumni Giving

Another implication of this study is that it provides a useful means of expanding our understanding of both student and alumni experience by parsing them out into behaviors and perceptions, each comprised of distinct factors within them. Most studies on giving simply use “student experience” and “alumni experience” each as one universal representation of their time as a student and as an alumnus/a, either positive or negative. This study brings to light that student and alumni experiences can be much more deeply understood, consisting of behaviors and perceptions that are each comprised of variables that uniquely shape giving behavior either positively or negatively. The study also adds a temporal element to our understanding as well, where personal characteristics influence student experiences; both personal characteristics and student experiences then interact to influence alumni experiences; and finally personal characteristics, student experiences, and alumni experiences all intertwine to shape the donating behavior of graduate alumni. The conceptual model provides richness and depth to our understanding of both student and alumni experience, and how they interact with personal characteristics and each other to influence giving behavior.

The results of this study could also prove equally useful to future studies of graduate student and alumni engagement, even apart from studying alumni giving. While personal characteristics and student experiences both had moderately significant effects on giving, personal characteristics were very influential on both student and alumni experiences, and student experiences were highly influential on alumni experiences. Given the relative dearth of research studying graduate students and graduate alumni, the results of this study can provide insight into significant factors that affect graduate student experience and graduate alumni experience. As the field of research begins to

realize that graduate students and graduate alumni must be studied as unique populations with their own distinct needs, experiences, and influences, the results of this study can again provide a useful starting point for research into the personal characteristics, behaviors, and perceptions of graduate students and graduate alumni.

Given that this study is exploratory in nature, future research should attempt to replicate the findings of this study at a variety of institutional settings. The initial findings of this study, and particularly the surprising and seemingly counterintuitive findings previously mentioned, require replication and refinement to employ the proposed new model confidently. This initial inquiry into how graduate student experience influences graduate alumni giving should not be considered gospel, but rather an initial exploration into an understudied body of research that invites replication and continued calibration of our understanding of both graduate student experience and graduate alumni giving.

Finally, the results and process of undertaking this study also illuminates ways in which the study can be improved and refined, as well as future directions that might be explored. One way for future researchers to refine the study is to make specific distinctions between graduate student experiences and undergraduate experiences. Recalling the discussion surrounding several of my research questions above, I was unable to completely isolate the student behaviors and perceptions that were distinctly graduate experiences and which were undergraduate student experiences for alumni who had both their graduate and undergraduate degrees from the institution due to the structure of the questions in the survey. Because of this, I had to dilute what I had hoped to pinpoint as graduate student experiences that influence giving behavior, and broaden



my conclusions to student experiences that included both graduate and undergraduate behaviors and perceptions. Similarly, there was no single question on the survey that asked respondents to simply rate their overall graduate student experience. Though I parsed out a number of student experiences that were each rated positively or negatively and could ascertain a general sense of whether or not respondents had a positive or negative overall graduate student experience, a survey question explicitly asking graduate alumni to rate their overall graduate student experience would add robustness to our understanding of how they viewed the entirety of their student experience.

Similarly, adding a measure of gift amount would provide deeper understanding of the ways in which personal characteristics, student experiences, and alumni experiences affect giving behavior of graduate student alumni. Additionally, future research could examine particular reasons why certain personal characteristics like gender, race, and age did not significantly affect giving behavior, and investigate underlying phenomena in capacity, disposition, and others that may explain the variability in findings between this and other studies. Other future studies could explore the underlying phenomena of seemingly counterintuitive results, such as why having more important admissions and orientation experiences, joining a fraternity or sorority, valuing the importance of web and email formats, and believing in the importance of alumni volunteering and participating in events all have negative effects on alumni giving. Further, a significant shortcoming of this study is that it measures *perceived* giving behavior, rather than actual giving behavior. Undertaking a study structure that measures *actual* giving behavior could provide deeper and more accurate measurement, such as a cohort-based study where the actual giving behavior of the same group of

graduate alumni are measured over time and matched with their responses to the exit survey they must fill out prior to graduation.

The results of this study have useful implications for future research. I have provided a useful and empirically-based starting point for future researchers examining graduate alumni giving behaviors by identifying a reduced model of significant personal characteristics, student behaviors, student perceptions, alumni behaviors, and alumni perceptions that influence graduate alumni giving. I have also added depth to our understanding of student alumni experience by refining them into behavioral and perceptual factors, adding an element of time, and understanding how they interact with one another to influence giving. Further, this study provides a platform for extending the research literature on graduate student experience and graduate alumni experience by identifying the personal characteristics that significantly influence graduate student experience, as well as personal characteristics and student experiences that significantly influence graduate alumni experience. Finally, I have suggested ways in which the study can be improved upon in the future to help add to our understanding of how graduate student and alumni experiences influence alumni giving.

#### **D. Implications for Policy and Practice**

A major takeaway from this study is that how we interact with alumni matters quite a bit, and exerts significant influence on graduate alumni giving behavior. While the graduate student experience holds moderate influence over graduate alumni giving, graduate alumni interaction with the institution has the most substantial influence on whether or not graduate alumni give, and if so, how often. Contrary to pervading perceptions among practitioners, it may not be the case that we have lost the potential to

cultivate graduate student alumni if they didn't have an overwhelmingly positive experience as a graduate student. The results of this study indicate that intentional efforts to create a positive alumni experience can, indeed, increase the likelihood that graduate alumni will make a donation, intend to do so in the future, and do so more frequently.

In particular, there seem to be several alumni experiences that have significantly positive effects on giving behavior. Alumni who read emails and mailings – and, particularly, the alumni magazine and email newsletters – are significantly more likely to give, and focusing energy on creating engaging content that invites participation in these mediums will have positive effects on giving. Similarly, organizing engaging events that help alumni congregate and finding ways to entice alumni to return to campus elevates the likelihood that alumni will give. Graduate alumni who are loyal to their academic departments, faculty, and departmental student groups, as well as to the institution as a whole, are more likely to give, and finding ways to tap into this affinity and nostalgia will help with giving efforts – and can potentially be used as the basis for the aforementioned creation of engaging emails, mailings, magazine articles, email newsletters, and alumni event content. Facilitating the connections between alumni around job opportunities, robust mentoring networks, and involving alumni in recruiting future students also makes graduate alumni more likely to give. Overall positive alumni experience and overall opinion of the institution has significant positive effects, and crafting communications and individual conversations that reflect on the general feelings alumni have about their alma mater and their institutional experiences beyond narrowly specific experiences can be helpful towards encouraging giving. This may be a particularly useful strategy for development officers in conversation with disgruntled alumni when discussing a

particular component of their student or alumni experience. Reframing and re-focusing the conversation towards the entirety of their alumni experience can help move disgruntled alumni beyond a particular issue they have had and re-igniting the inclination to donate.

Understanding the alumni experiences that negatively affect graduate alumni giving is also useful. It makes sense that having more institutional and financial barrier experiences would lead to decreased giving. But taking a deeper dive into addressing specific aspects that institutions can understand and change surrounding wealth is helpful. Carefully articulating your case for supporting the institution through strategic individual asks and targeted group appeals can increase donations. Individual development officers can employ the information gleaned from personal conversations with a potential graduate alumni donor to align donation asks with the experiences, professions, and academic initiatives that best carry the individual's student and alumni experience into the future of the institution.

Additionally, rethinking how entire development operations are structured may be beneficial. Assigning fundraisers to raise money for specific departments within the college is a pervasive departmental structure among development operations. While this increases the development officers' knowledge base surrounding the initiatives within their particular departments, this structure requires development officers to try and steer donors toward particular initiatives within the department they represent, rather than aligning asks with initiatives that are most compelling for the potential donor. Thus, donation appeals are not donor-centric, but rather institution-centric. Should this structure persist, it could perhaps be enhanced by utilizing an initial fundraiser or alumni relations

professional to serve as a connector by collecting initial information about a potential graduate alumni donor's interests and affinities, and then connecting them with the development officer with the most appropriate expertise in the individual's areas of greatest interest. Creating structures for shared credit among development officers can also reduce competition that may ultimately lead to fundraisers attempting to steer potential donors into initiatives within their departmental purview and away from initiatives in other departments that may resonate more strongly with the potential donor. For annual fund officers, using targeted information such as industry, academic department, age, gender, student group involvement, alumni activity participation, and others can help group email, mailing, and phone appeals feel more personal to potential graduate alumni donors, and increase the likelihood that they will donate in response.

The results of the influence on student experiences can also inform fundraising practice. Creating opportunities for graduate students to involve themselves in the life of the institution beyond the classroom is an important aspect in shaping whether or not they will donate as alumni. The most effective co-curricular opportunities an institution can provide to its graduate students to positively influence giving as alumni are those rooted in academic and intellectual development experiences, and those that provide opportunities for furthering their professional skill sets and networks. One very interesting aspect of the findings in this study is that graduate student alumni may not necessarily need to actually *participate* in these opportunities to be significantly more inclined to donate as alumni, but rather only to *perceive that the institution provided* these opportunities for them while they were students. While participating in co-curricular and career-oriented activities did not prove to significantly affect giving

behaviors, the perceptions that they were *available* while they were a student made graduate student alumni significantly more likely to donate. Thus, institutions should provide as many co-curricular opportunities as they can for graduate students – especially opportunities revolving around intellectual, academic, and career development – and not be discouraged by low participation. The payoff will come later in the form of donations as the graduate students become alumni!

Understanding the ways personal characteristics significantly affect graduate alumni giving can also inform practice. It is intrinsic to fundraisers to focus their efforts on wealthier individuals, and this study suggests that this attention will yield dividends in the donating behavior of graduate alumni as well. However, the study results on wealth, along with graduation year, may also suggest that institutions which invest time and energy into connecting students with jobs and assistantships that reduce debt, increasing the size and availability of graduate student scholarships, and other debt-reduction measures may accelerate the likelihood and frequency of graduate alumni donations. As graduate alumni have more wealth, they are likely to give more. While institutions may be unable to change the salaries of their graduates as they become alumni, institutions can increase the capacity of recent graduates by focusing efforts to create assistantships, part time job opportunities, scholarships, and grants that reduce student debt upon graduation and make more room in their budgets to donate earlier, more frequently, and over a longer period of their lifetimes.

## **CHAPTER VI**

### **CONCLUSION**

Student experience has a moderately significant effect on graduate alumni giving behavior. Alumni experience exerts the most influence on whether or not alumni give, their intentions to donate in the future, and how frequently they make donations to the institution. However, student experiences and personal characteristics do powerfully influence alumni experiences, which in turn have substantial influence on alumni giving behavior. This exploratory study contributes to the body of literature on graduate alumni giving by identifying a reduced model that provides a conceptual framework for future researchers to utilize as a starting point to expand our collective knowledge base. By adding behavioral and perceptual components of both graduate student experience and graduate alumni giving, identifying significant factors within each, and examining how they interact to influence one another and alumni giving, this study broadens our understanding of both graduate experience and alumni experience. By elucidating the personal characteristics, student behaviors, student perceptions, alumni behaviors, and alumni behaviors with the most significant effects on graduate alumni giving, this study advances both future research and the ways in which we go about our fundraising practice.

# APPENDIX A CORRELATIONS

Table 8. Correlations Table

	Disability	Race	Gender	Sexual Orientation	Veteran Status	Distance	Exposure to Institution	Wealth	Graduation Year	Academic Performance	Admissions & Orientation	Co-Curricular Importance	Professional Engagement	Community Participation	Meat/Theater Participation	Fraternity Participation	Intramural Participation
Disability	1																
Race	0.14	1															
Gender	0.72**	0.09	1														
Sexual Orientation	0.19	0.07	-0.37	1													
Veteran Status	0.17**	-0.38*	0.03**	0.68*	1												
Distance	0.07	-0.33	-0.70**	0.21	-0.79**	1											
Exposure to Institution	0.22	-0.10**	-0.06	-0.50**	0.13	0.55**	1										
Wealth	0.33	0.13	-0.37	0.11	-0.10	0.14	0.34	1									
Graduation Year	0.05**	-0.175**	0.30**	-0.106**	0.10	-0.13**	0.05**	-0.093**	1								
Academic Importance	0.37	-0.27	0.42**	-0.060**	0.141**	0.29	-0.056**	-0.38	0.28**	1							
Admissions & Orientation	0.11	-0.65**	0.97**	-0.009	0.32	0.29	-0.62**	-0.15	0.92**	0.84**	1						
Co-Curricular Importance	0.029	-0.55**	0.48**	0.18	0.37	0.35	-0.225**	-0.03	0.31	0.47**	0.30**	1					
Professional Community Engagement	0.03	0.03	0.63**	-0.04	0.32	0.31	-0.234**	-0.06	0.46	0.225**	0.18*	0.59**	1				
Meat/Theater Org Participation	0.17	0.05	0.13**	-0.056*	0.39*	0.31	-0.086**	-0.044	-0.034*	0.113**	0.059*	0.144**	0.95**	1			
Fraternity Participation	0.023	0.04	0.59**	0.35	-0.173**	0.41*	0.143**	0.33	0.235**	0.38*	0.27	0.169**	0.93**	0.69**	1		
Intramural Participation	0.21	0.069**	-0.08*	0.057**	-0.34	0.44*	-0.198**	0.32	-0.68**	0.069**	0.07	0.204**	0.214**	0.09	0.137**	1	
Ethnic/Cultural Org Participation	0.11	-0.03*	0.25**	-0.060**	0.10	0.42*	0.004	-0.008	0.44*	0.116**	0.112*	0.139*	0.145**	0.09	0.16	0.17	1
Career Importance	0.47**	-0.76**	0.104**	-0.27	1.57**	-0.09**	-0.04**	0.02	0.86**	0.50**	0.521*	0.495**	0.40*	0.29	0.80**	0.09**	0.01
Academic Integration	0.17	0.72**	0.42*	-0.04	-0.07	0.50**	0.64**	0.35	0.70**	0.385**	0.43**	0.36**	0.38**	0.22	0.53**	-0.01	0.01
Career Preparation Opp.	0.25	0.20	0.08	0.36	-0.12	0.24	0.088**	0.14	0.71**	0.30*	0.20*	0.204**	0.06**	-0.07	-0.22	0.22	0.17
Co-Curricular Opportunities	0.43**	0.59**	0.91**	0.11	0.069**	0.34	-0.101**	-0.047*	1.29**	0.422**	0.31**	0.469**	0.221**	0.07**	-0.06	0.086**	0.06
Empowering Diversity	0.43*	0.66**	0.11	0.36	0.42*	-0.19	-0.079**	-0.01	1.25**	0.16**	0.168**	0.150**	0.091**	0.03	0.03	0.56**	0.03
Preparation for Grad School	0.14	0.37*	0.23	0.16	-0.08	0.35*	-0.17	0.20	-0.16	0.16**	0.059*	0.112**	0.147**	0.12	0.04	0.35	0.02
Alumni Participation Barriers	0.04	-0.32	0.41*	-0.050**	0.63**	-0.150**	0.10	-0.09	0.39**	0.065**	0.32	-0.40*	0.47**	0.42*	0.04*	0.04*	0.12
Alumni Event Participation	0.20	0.123**	-0.07**	0.088**	-0.09**	0.59**	-0.076**	0.06	0.39**	0.065**	0.129*	0.139**	0.091**	0.03	0.03	0.93**	0.02
Utilize Web Resources	0.21	-0.32	-0.09	0.18	0.65**	-0.084**	-0.052**	-0.19	1.89**	0.155**	0.45**	0.227**	0.121**	0.05	0.06	1.04**	0.06
Donating Barriers - Institutional	0.29	-0.110**	0.04	-0.14	-0.16	0.01	0.34	0.05	0.77**	0.153**	0.068**	-0.101**	-0.069**	-0.03	-0.14	-0.63**	0.04
Donating Barriers - Financial	0.17	-0.100*	0.192**	-0.050**	1.10**	-0.052**	-0.014	-0.67**	0.33*	0.069**	0.041*	0.16	0.20	0.75**	-0.024	0.21	0.16
Academic Loyalty	0.21	-0.26	0.27	-0.14	0.60**	0.16	-0.23	0.26	2.19**	0.259**	0.192**	0.209**	0.048**	0.27	0.11	0.16	0.16
Communication Content Effectiveness	0.16	0.39*	0.061**	0.21	0.25	-0.29	-0.042*	-0.03	1.82**	0.308**	0.192**	0.192**	0.048**	0.27	0.11	0.16	0.16
Communication Content Effectiveness - Traditional	0.31	-0.66**	0.35	0.07	1.06**	0.12	-0.060**	0.25	1.49**	0.34**	0.34**	0.43**	0.142**	0.25	0.13	0.91**	0.06
Communication Content Effectiveness - Interactive	0.19	0.04*	0.55**	0.28	0.09	-0.32	-0.039*	-0.30	0.24	0.26**	0.29**	0.219**	0.06**	0.38*	0.08*	0.39*	0.06
Communication Format Effectiveness - Traditional	0.30	-0.32	0.062**	0.24	0.05	-0.22	0.13	-0.19	1.07**	0.085**	0.180**	0.176**	-0.07	0.15	-0.13	-0.11	0.11
Communication Format Effectiveness - Interactive	0.18	-0.20**	0.18	0.06	1.05**	0.01	-0.19	0.19	0.84**	0.251**	0.320**	0.389**	0.08**	0.16	0.20	0.56**	0.06
Communication Method - Web & Social Media	0.18	-0.25	0.18	0.07	0.60**	0.17	-0.057**	-0.06	0.07	0.34**	0.25**	0.374**	0.107**	0.031*	0.37	0.72**	0.03
Communication Method - Mailings & Emails	0.42*	0.76**	0.35	0.11	0.87**	0.44*	-0.072**	-0.26	1.57**	0.23**	0.182**	0.168**	0.093**	0.42*	0.03	0.61**	0.03
Alumni Embracing Diversity	0.18	-0.04*	0.30	0.18	0.76**	-0.29	-0.042*	0.24	1.10**	0.360**	0.311**	0.413**	0.141**	0.07	0.23	0.59**	0.03
Alumni Advocacy Importance	0.25	-0.83**	0.27	0.40*	0.67**	-0.29	-0.041*	-0.12	2.72**	0.332**	0.482**	0.104**	-0.17	0.43*	0.04*	0.44*	0.04*
Alumni Event & Volunteer Importance	0.12	0.19	0.07	0.40*	-0.17	0.02	-0.18	0.14	0.25	1.06**	0.302**	0.210**	0.060**	0.05	0.26	1.04**	0.04*
Volunteer Support	0.21	0.44**	0.59**	0.05	0.47**	0.43*	-0.053**	-0.16	1.08**	0.197**	0.303**	0.232**	0.086**	0.34	0.04*	0.44**	0.04*
Supports Event Participation	0.26	0.72**	-0.06**	0.083**	0.25	-0.066**	-0.179**	-0.044	0.06*	0.20*	0.212**	0.317**	0.124**	-0.12	0.54**	0.207**	0.04*
Institutional Reputation - Academic & Community	0.23	-0.72**	0.063**	0.32	-0.36	0.53**	-0.090**	0.05	0.21	2.44**	0.286**	0.381**	0.331**	-0.03	0.60**	1.47**	0.04*
Institutional Reputation - Visibility	0.14	-0.54**	0.121**	-0.051**	0.92**	-0.53**	-0.14	0.31	0.99**	0.360**	0.325**	0.331**	0.059**	0.49**	0.042*	0	0.04*
Overall Alumni Experience	0.31	0.51**	0.09	0.34	0.05	0.53**	-0.13	0.18	0.13	0.99**	1.02**	1.57**	0.059**	0.26	0.03	0.44**	0.04*
Overall Institutional Opinion	0.24**	0.09**	0.42*	0.35	0.46*	-0.34	-0.051**	0.03	0.72*	1.66**	1.28**	1.67**	0.08**	0	0.48**	1.00**	0.04*
Donating Frequency	0.06	1.20**	-0.121**	0.65**	-0.18**	-0.03	-0.082**	0.111**	-0.454**	-0.04	-0.032	0.80**	0.44**	0.48**	1.00**	1.07**	0.04*
Donating History & Future Intentions	0.18	0.84**	0.065**	0.20	-0.40*	0.32	-0.055**	0.070**	1.54**	0.13**	0.24	1.31**	0.08**	0.13	0.45**	0.93**	0.04*

\* p ≤ .01, \*\* p ≤ .001 (2-tailed)



Table 8. Correlations Table (Continued)

Ethnic/Cultural Participation	Career Importance	Academic Integration	Career Preparation Opp.	Co-Curricular Opportunities	Enhancing Diversity	Preparation for Grad School	Alumni Participation Barriers	Communitarian Alumni Event Participation	Utilize Web Resources	Donating Barriers - Institutional	Donating Barriers - Financial	Academic Loyalty	Communitarian on Content Effectiveness	Communitarian on Format Effectiveness	Communitarian on Traditional - Interactive
092**	1														
007	124**	1													
007	142**	592**	1												
062**	267**	214**	615**	1											
-014	172**	264**	186**	337**	1										
018	013	337**	228**	288**	093**	1									
030	091**	046*	-130**	-054**	059**	061**	1								
-027	005	159**	076**	089**	103**	-066**	1								
050**	239**	153**	136**	134**	087**	-037	229**	1							
031	-040*	-220**	146**	-237**	-155**	-179**	088**	-240**	-137**	1					
056**	131**	-031	0	008	007	-032	083**	-241**	-090**	-069**	262**	1			
055**	194**	330**	264**	295**	163**	212**	021	126**	222**	-156**	088**	1			
094**	381**	240**	209**	326**	169**	142**	-070**	212**	347**	321**	174**	031	284**	376**	1
004	120**	380**	422**	462**	199**	164**	-085**	229**	158**	215**	-238**	-028	195**	214**	387**
014	098**	243**	376**	322**	136**	195**	-126**	318**	178**	264**	-261**	068**	129**	471**	466**
085**	365**	163**	196**	241**	140**	063**	-056**	08**	215**	460**	079**	114**	218**	586**	330**
040*	262**	238**	197**	389**	138**	158**	-110**	377**	348**	387**	227**	-076**	216**	307**	468**
001	198**	256**	171**	328**	584**	097**	079**	095**	071**	167**	-202**	009	206**	227**	221**
061**	399**	197**	196**	277**	164**	132**	-099**	168**	230**	244**	-196**	0	230**	217**	451**
068**	390**	154**	239**	262**	146**	082**	-125**	085**	319**	329**	105**	100**	212**	480**	249**
023	103**	407**	576**	467**	306**	186**	-134**	125**	177**	310**	169**	023	201**	453**	339**
-005	166**	408**	467**	496**	225**	184**	-085**	140**	177**	215**	-210**	022	204**	286**	474**
-014	197**	245**	213**	298**	211**	141**	-043*	219**	323**	283**	-300**	-012	385**	279**	374**
032	266**	230**	154**	288**	141**	141**	-035	192**	275**	220**	-020	254**	242**	463**	280**
023	103**	238**	177**	382**	166**	146**	-001	093**	107**	172**	178**	084**	266**	235**	454**
-015	116**	364**	319**	364**	248**	280**	-101**	170**	183**	176**	-279**	-004	227**	261**	228**
038**	082**	067**	036	071**	006	118**	-148**	397**	319**	079**	317**	-371**	009	136**	087**
012	021	130**	119**	185**	098**	165**	-142**	280**	346**	155**	-540**	-259**	167**	187**	324**
															211**
															064**

Table 8. Correlations Table (Continued)

	Communicant on Method - Web & Social Media Issues	Communicant on Method - Mailings & Events	Communicant on Method - Alumni Diversity	Alumni Advocacy Importance	Alumni Event & Volunteer Importance	Volunteer Support	Supporters Event Participation	Institutional Loyalty	Institutional Reputation - Visibility	Institutional Reputation - Academic & Community	Overall Alumni Experience	Overall Institutional Opinion	Donating Frequency	Donating History & Future Intentions
1														
592**	1													
172**	174**	1												
347**	385**	187**	1											
488**	392**	184**	660**	1										
212**	225**	191**	283**	305**	1									
239**	259**	223**	299**	323**	212**	1								
286**	332**	398**	291**	321**	264**	284**	1							
344**	380**	284**	372**	384**	219**	228**	468**	1						
278**	295**	250**	336**	306**	180**	229**	297**	590**	1					
152**	216**	170**	189**	192**	81**	166**	301**	187**	150**	1				
160**	245**	243**	252**	203**	203**	181**	181**	259**	211**	396**	1			
067**	186**	009	123**	021	064**	088**	145**	117**	047**	166**	157**	1		
086**	288**	130**	231**	119**	130**	177**	290**	220**	173**	231**	270**	583**	1	

## APPENDIX B

### BETA MAP OF DIRECT EFFECTS

**Figure 3. Direct Effects Map of Personal Characteristics on Student Behavior**

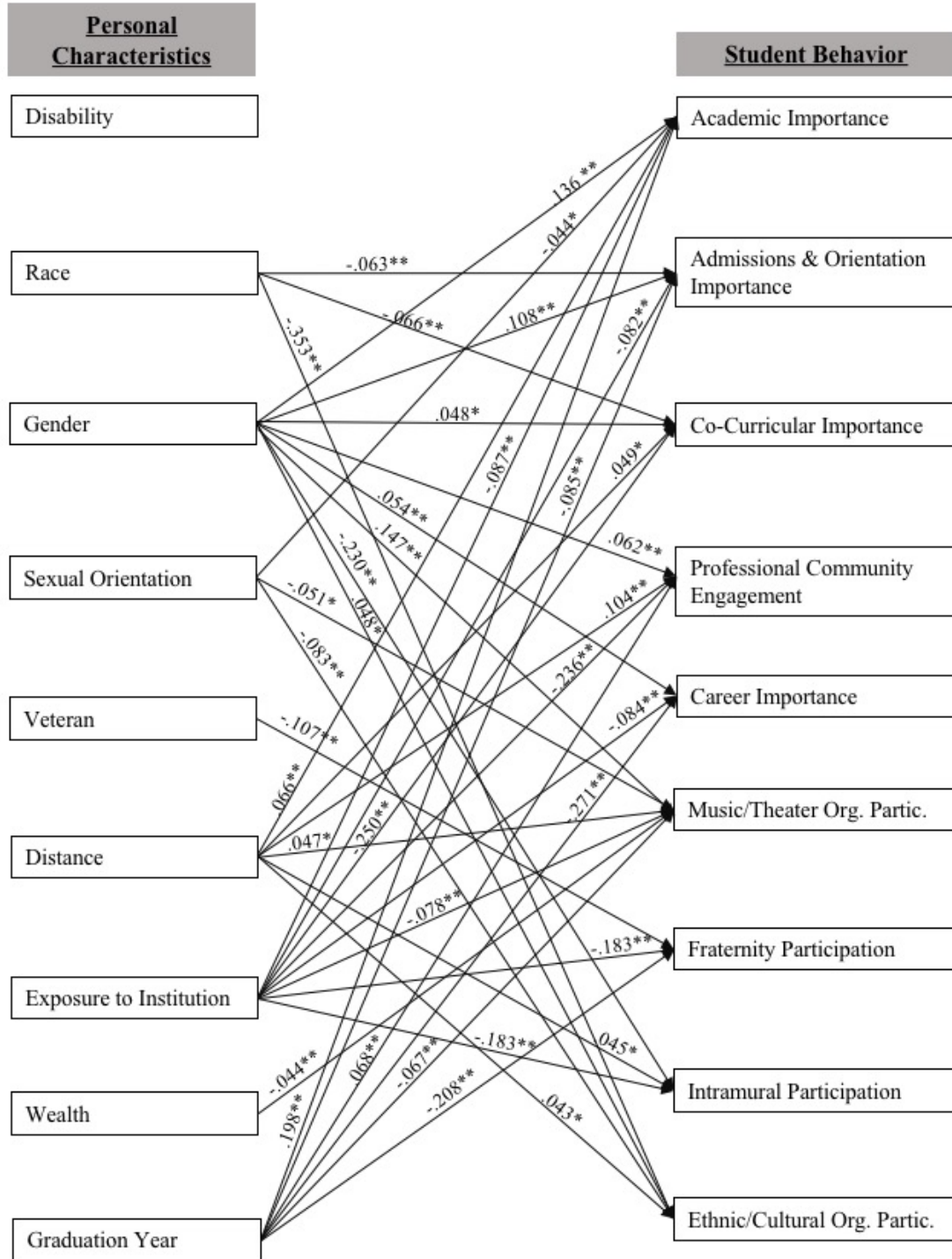


Figure 4. Direct Effects Map of Personal Characteristics on Student Perceptions

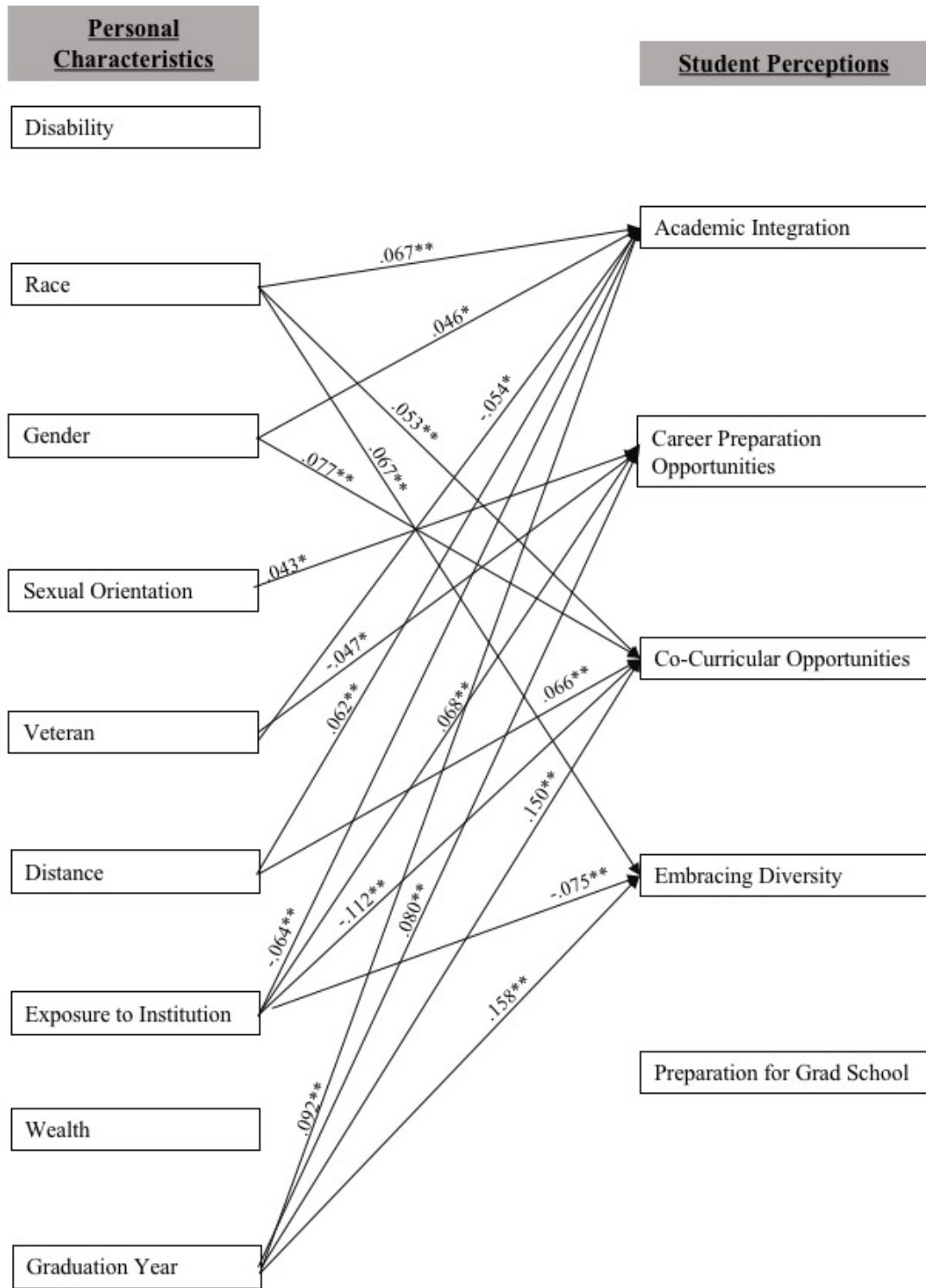


Figure 5. Direct Effects Map of Personal Characteristics on Alumni Behavior

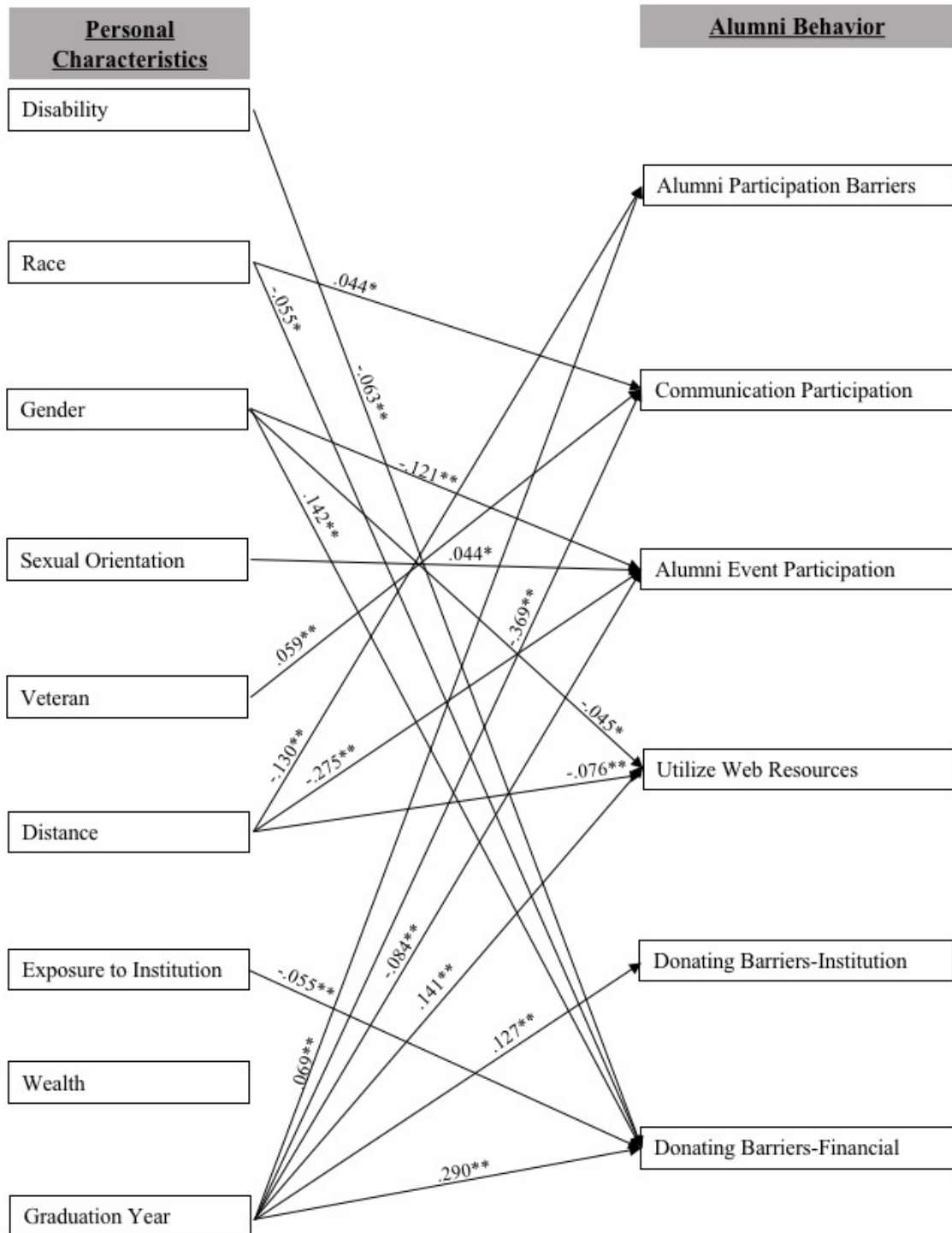
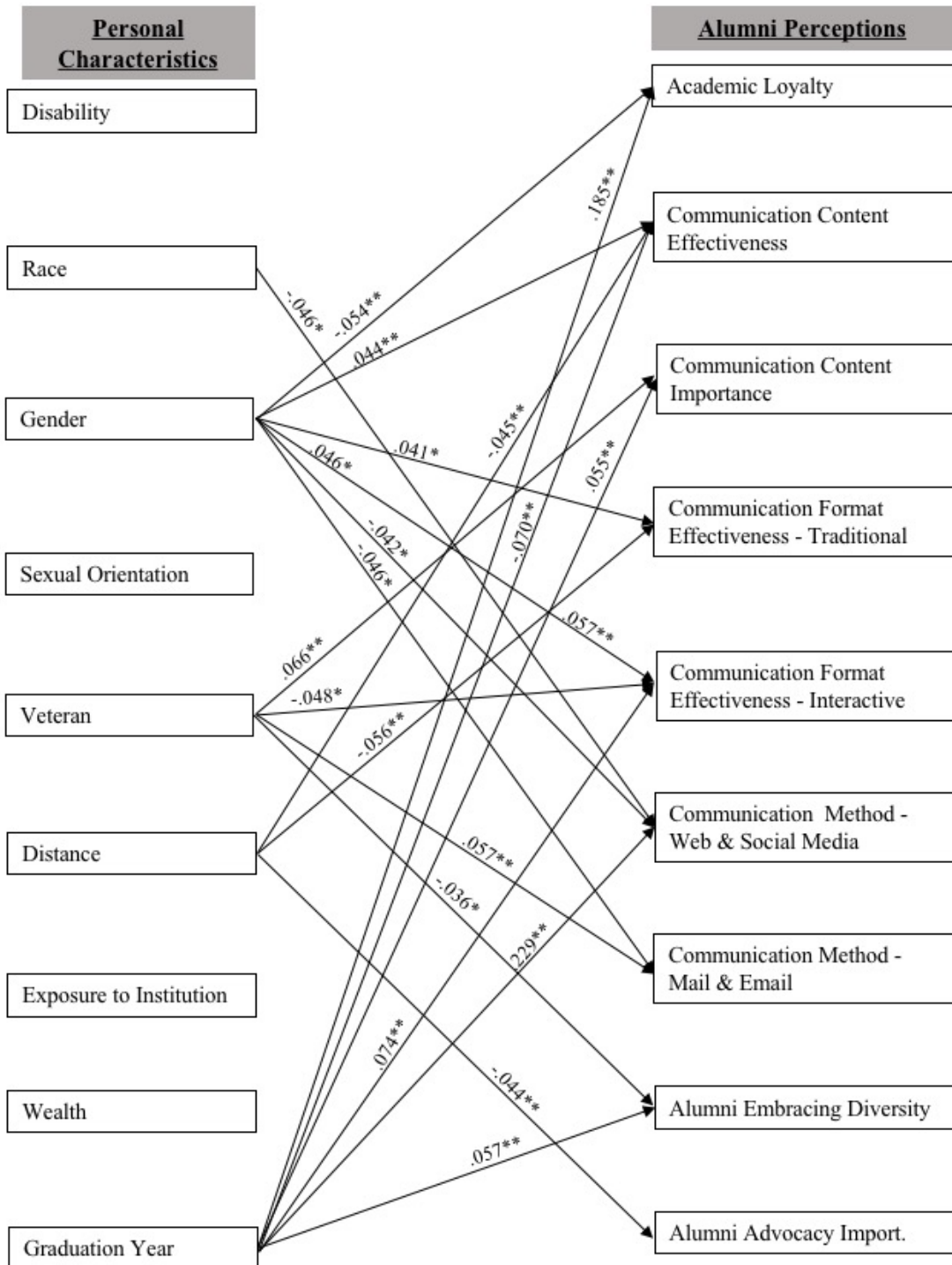


Figure 6. Direct Effects Map of Personal Characteristics on Alumni Perceptions



**Figure 6. Direct Effects Map of Personal Characteristics on Alumni Perceptions (Continued)**

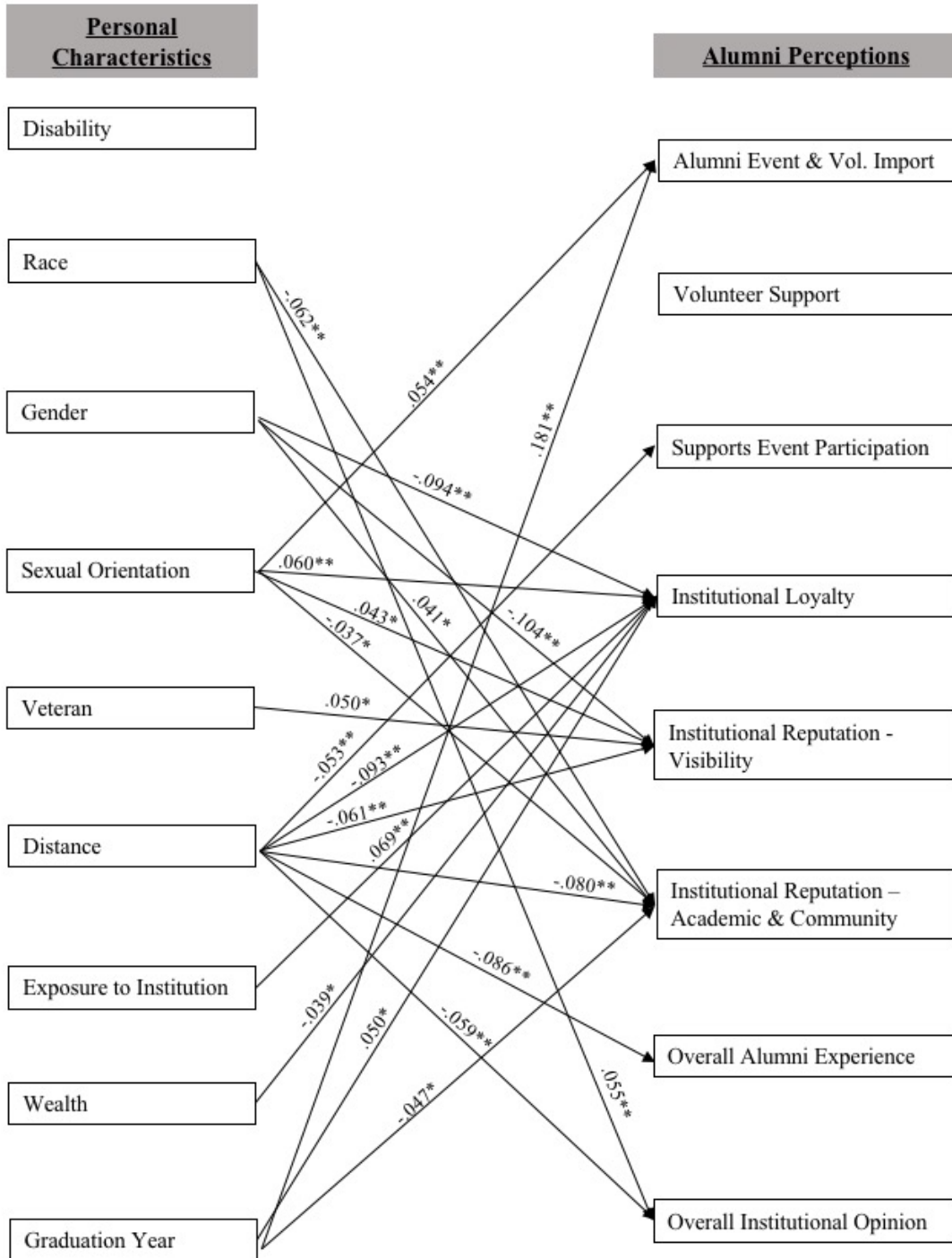




Figure 7. Direct Effects Map of Personal Characteristics on Giving

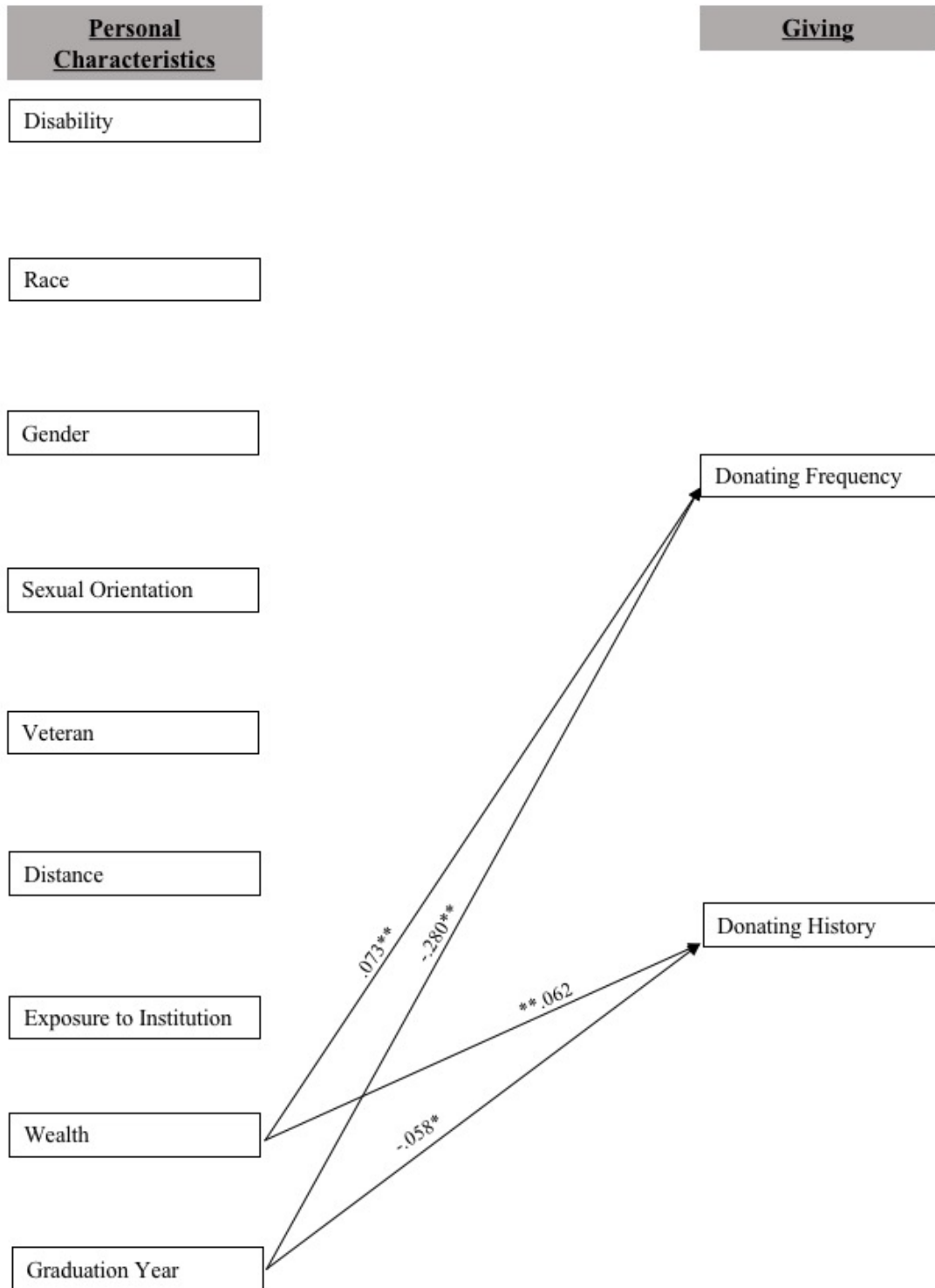




Figure 8. Direct Effects Map of Student Behavior on Alumni Behavior

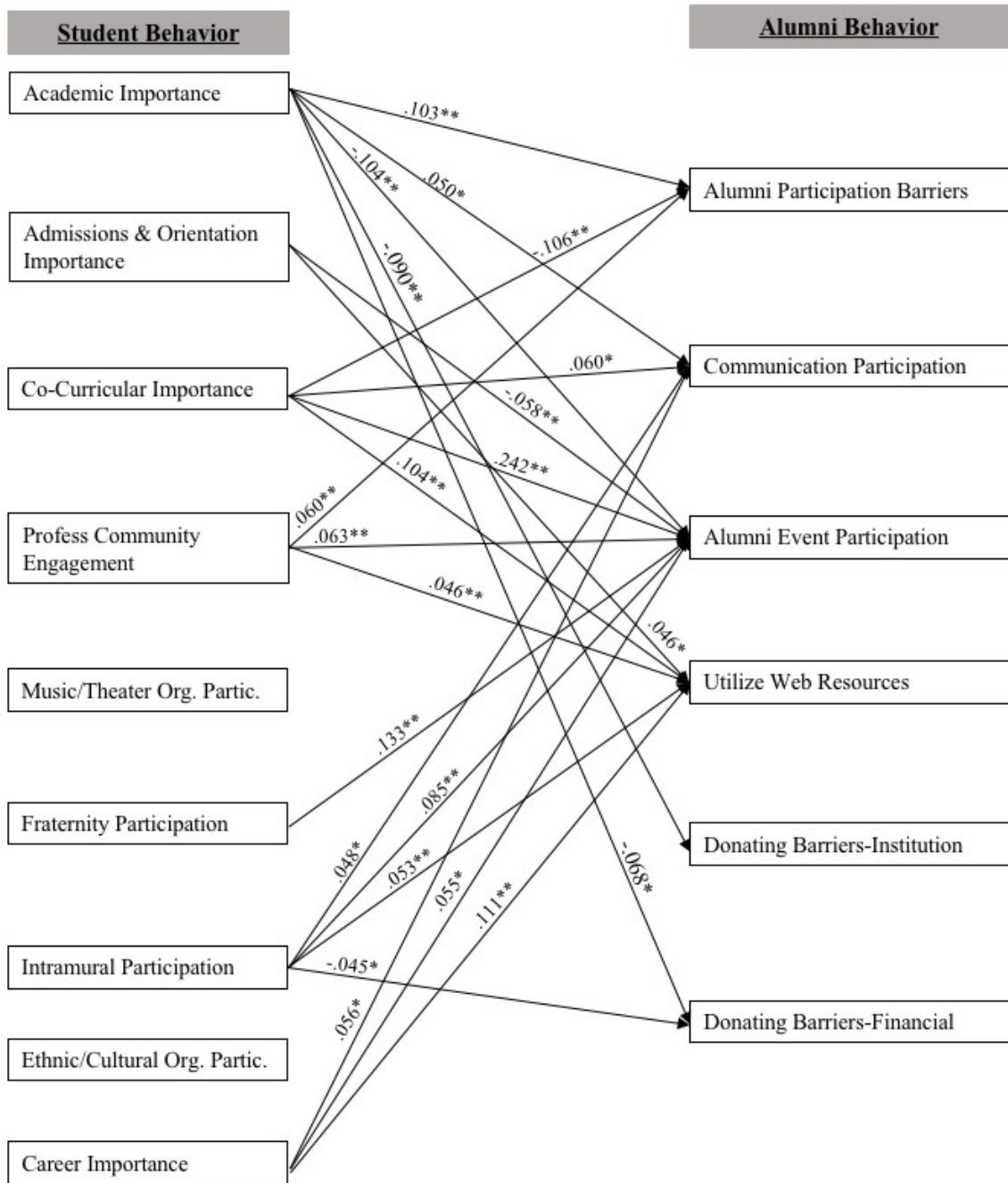
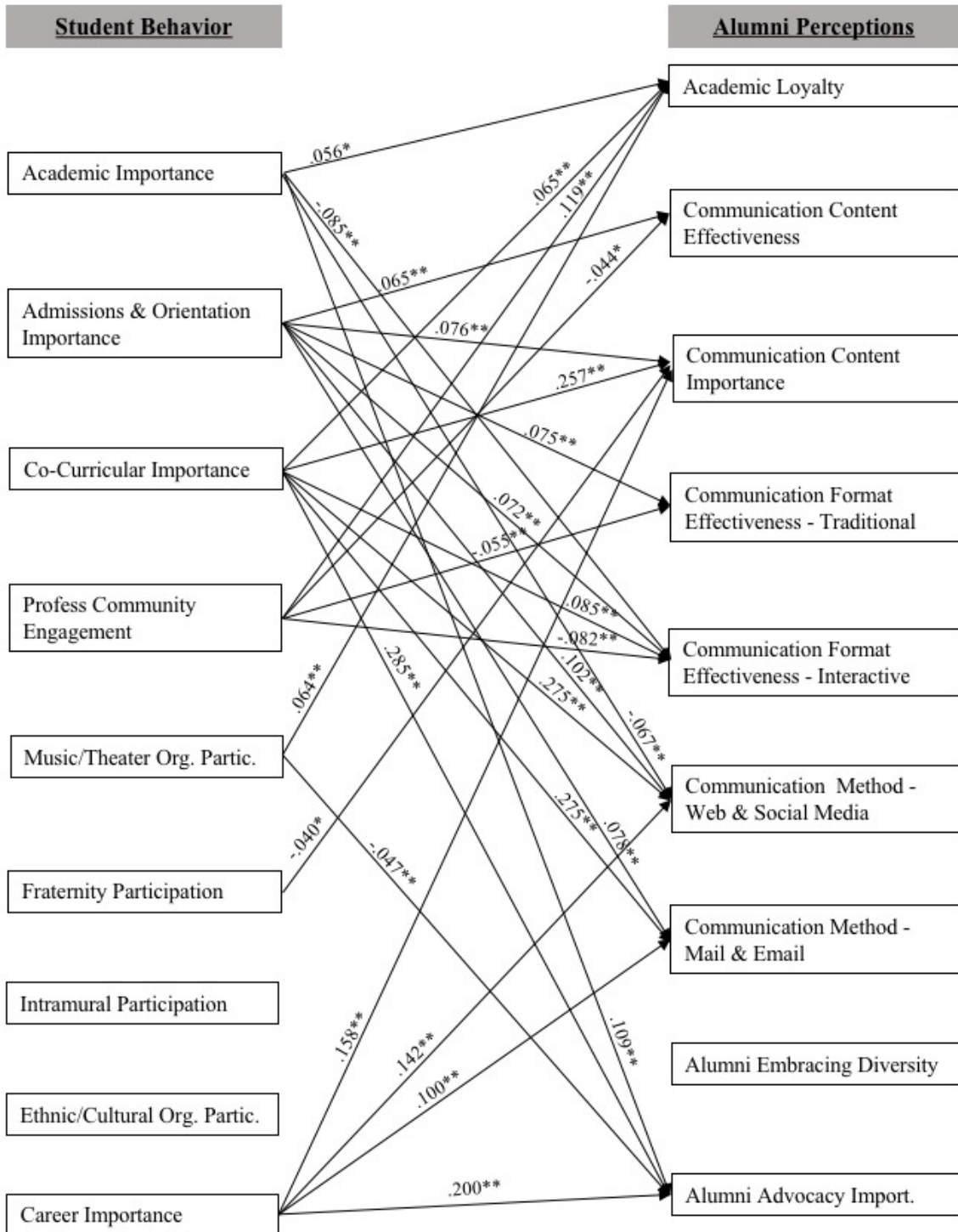


Figure 9. Direct Effects Map of Student Behavior on Alumni Perceptions



**Figure 9. Direct Effects Map of Student Behavior on Alumni Perceptions (Continued)**

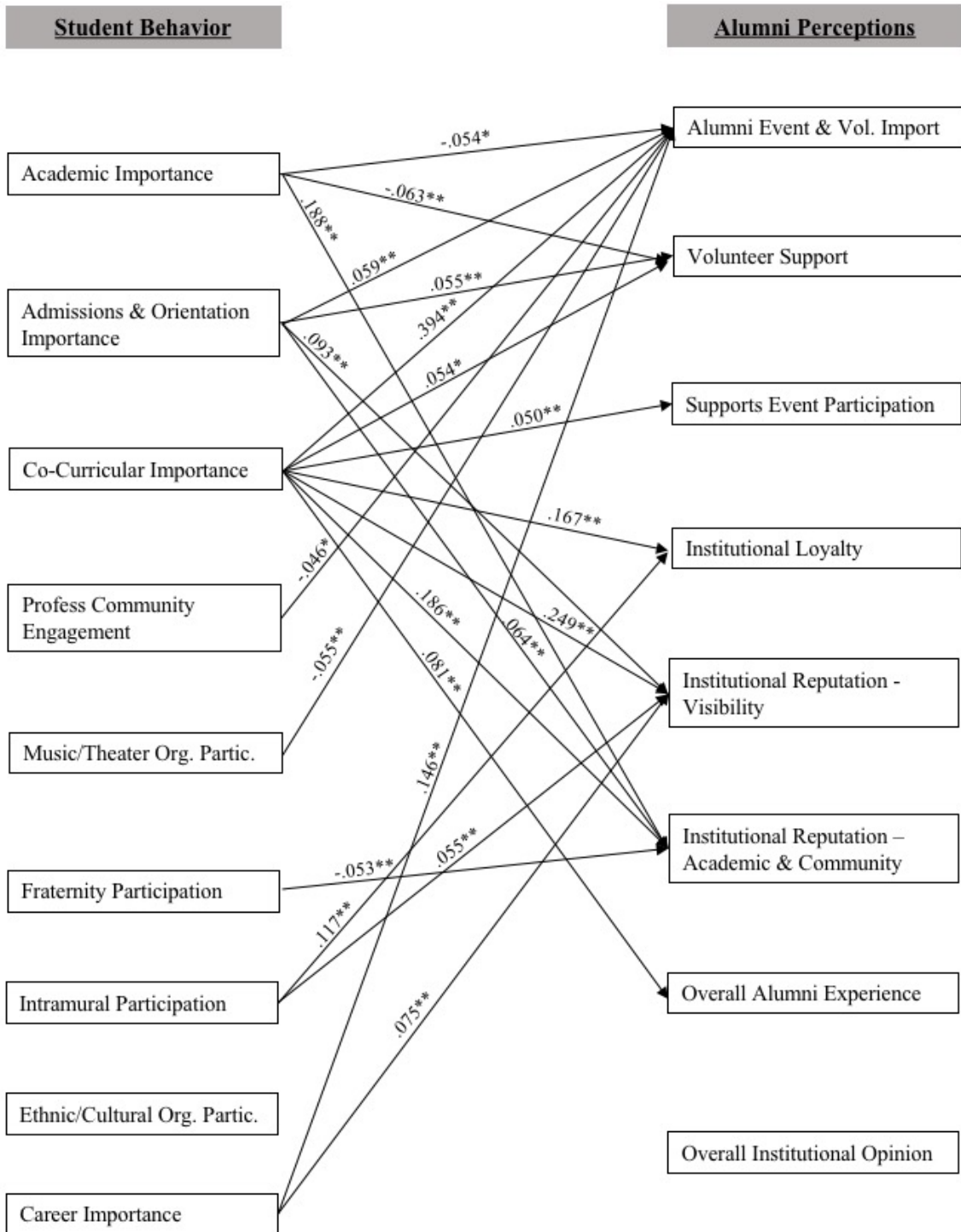


Figure 10. Direct Effects Map of Student Behavior on Giving

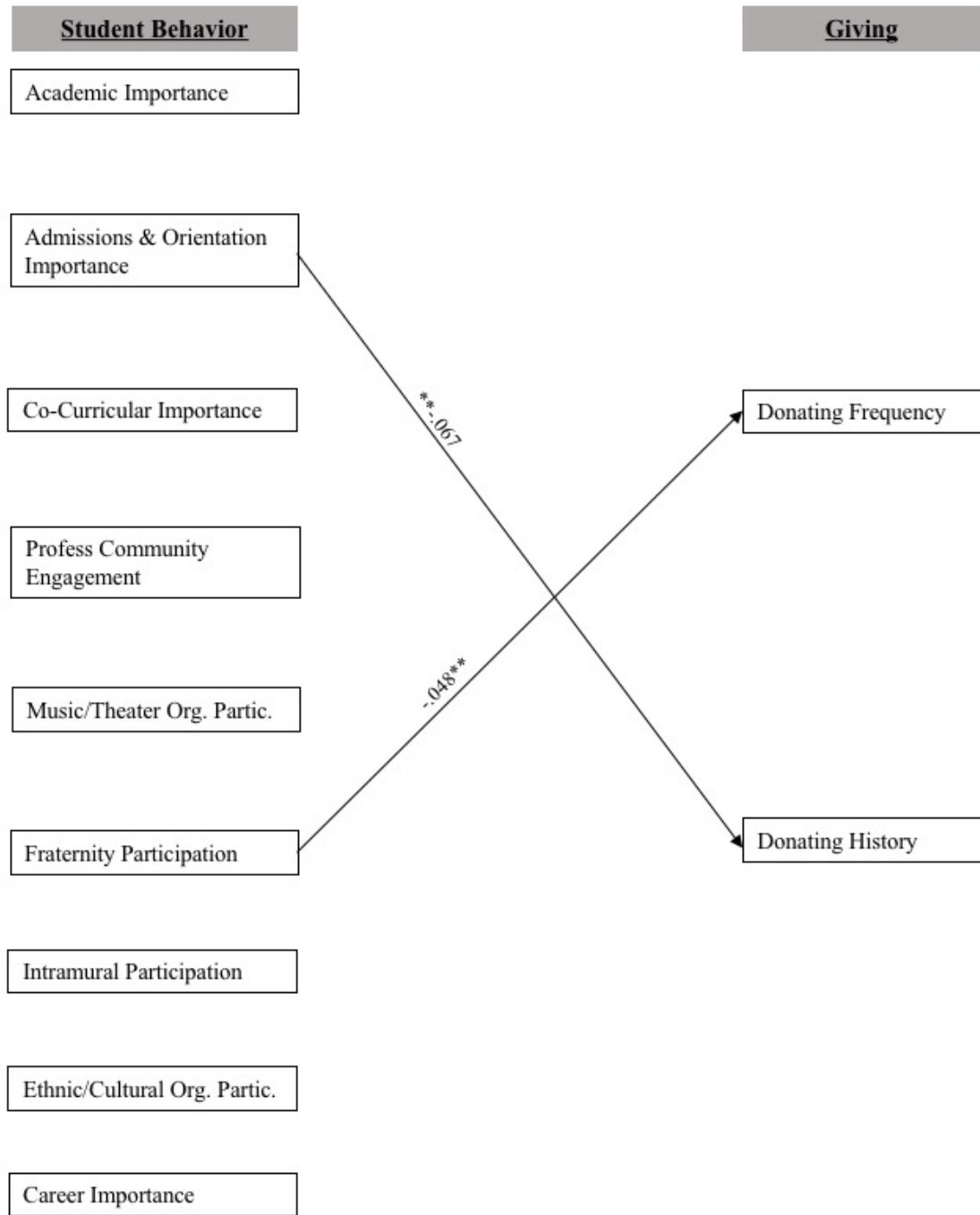
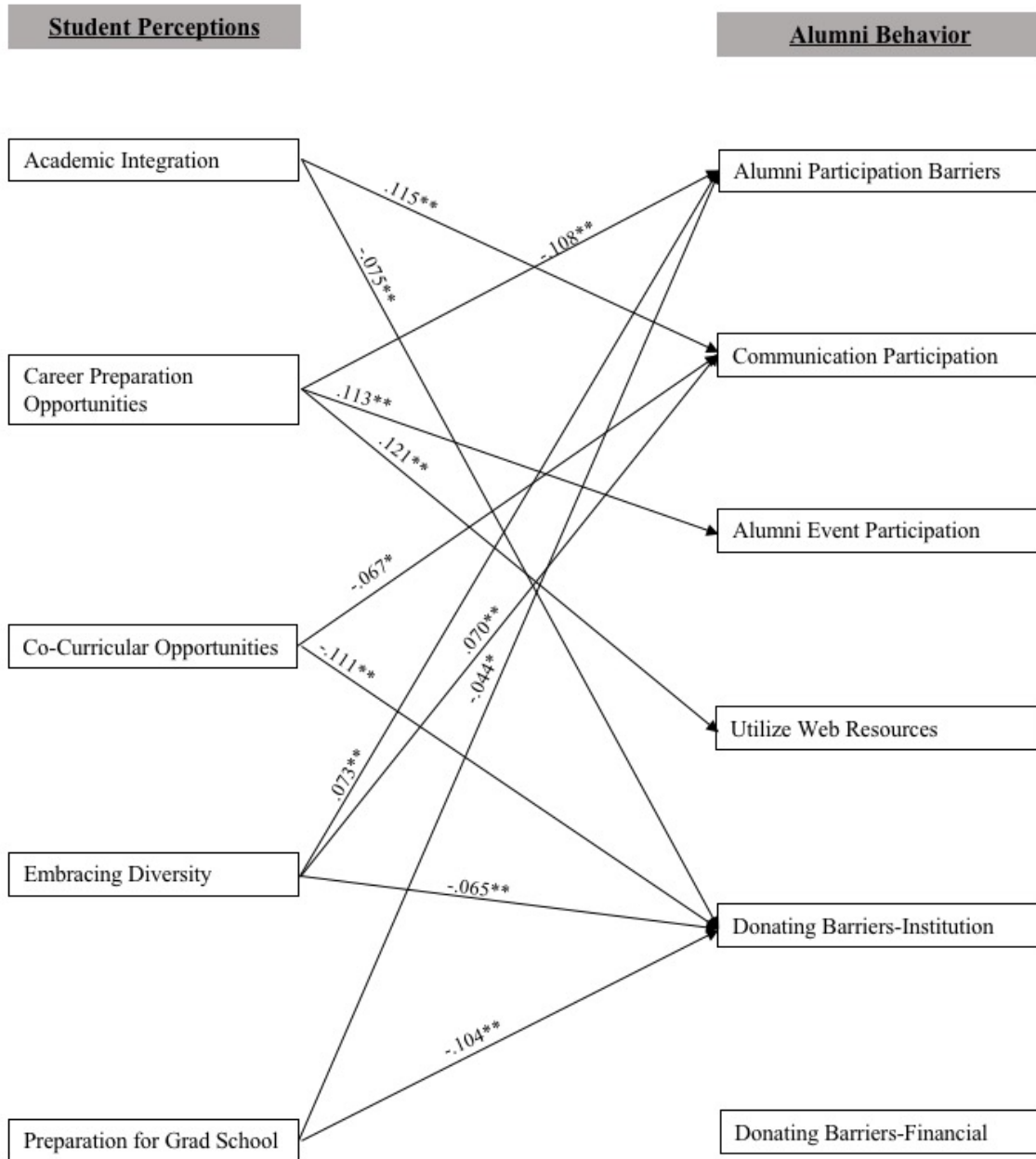
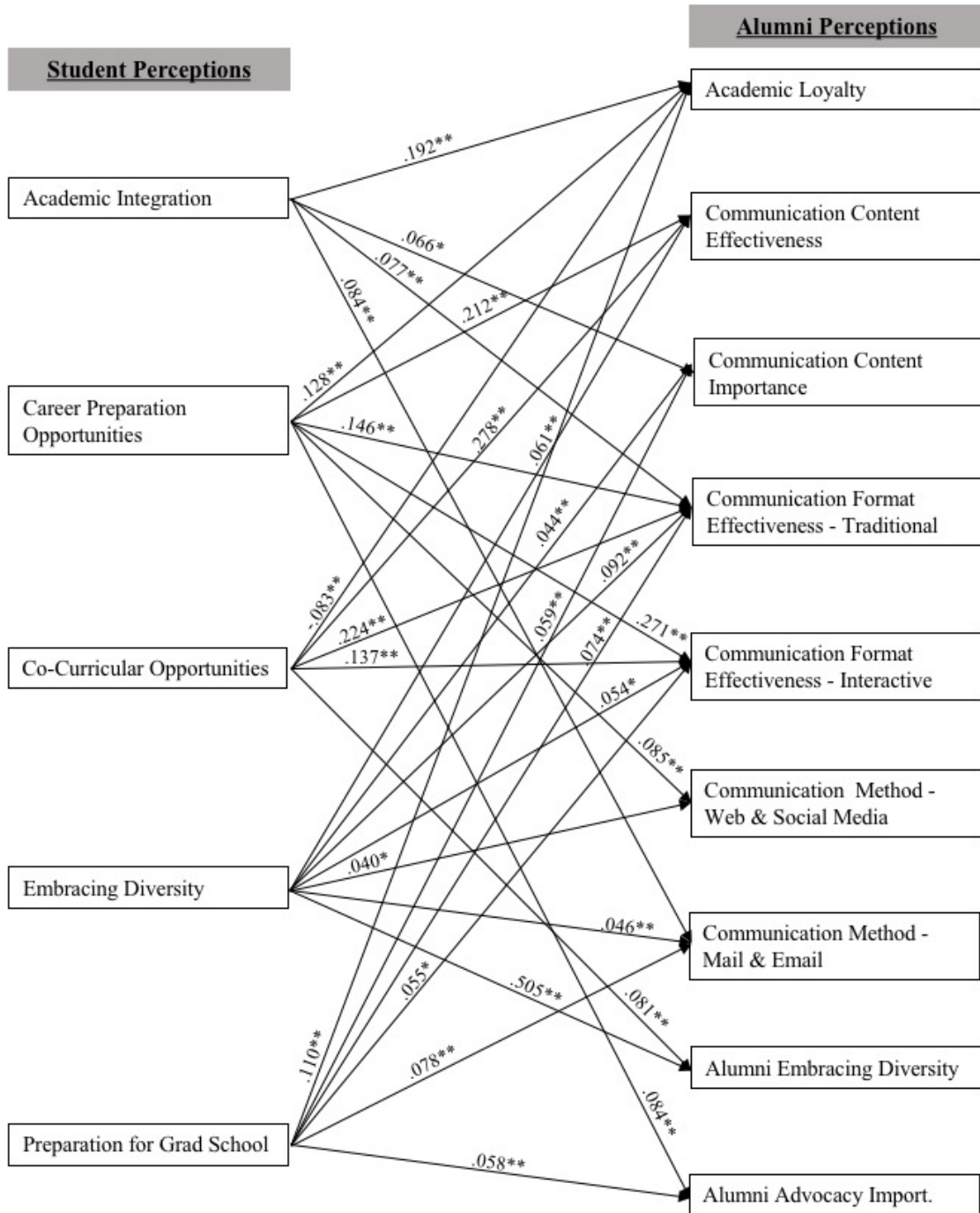


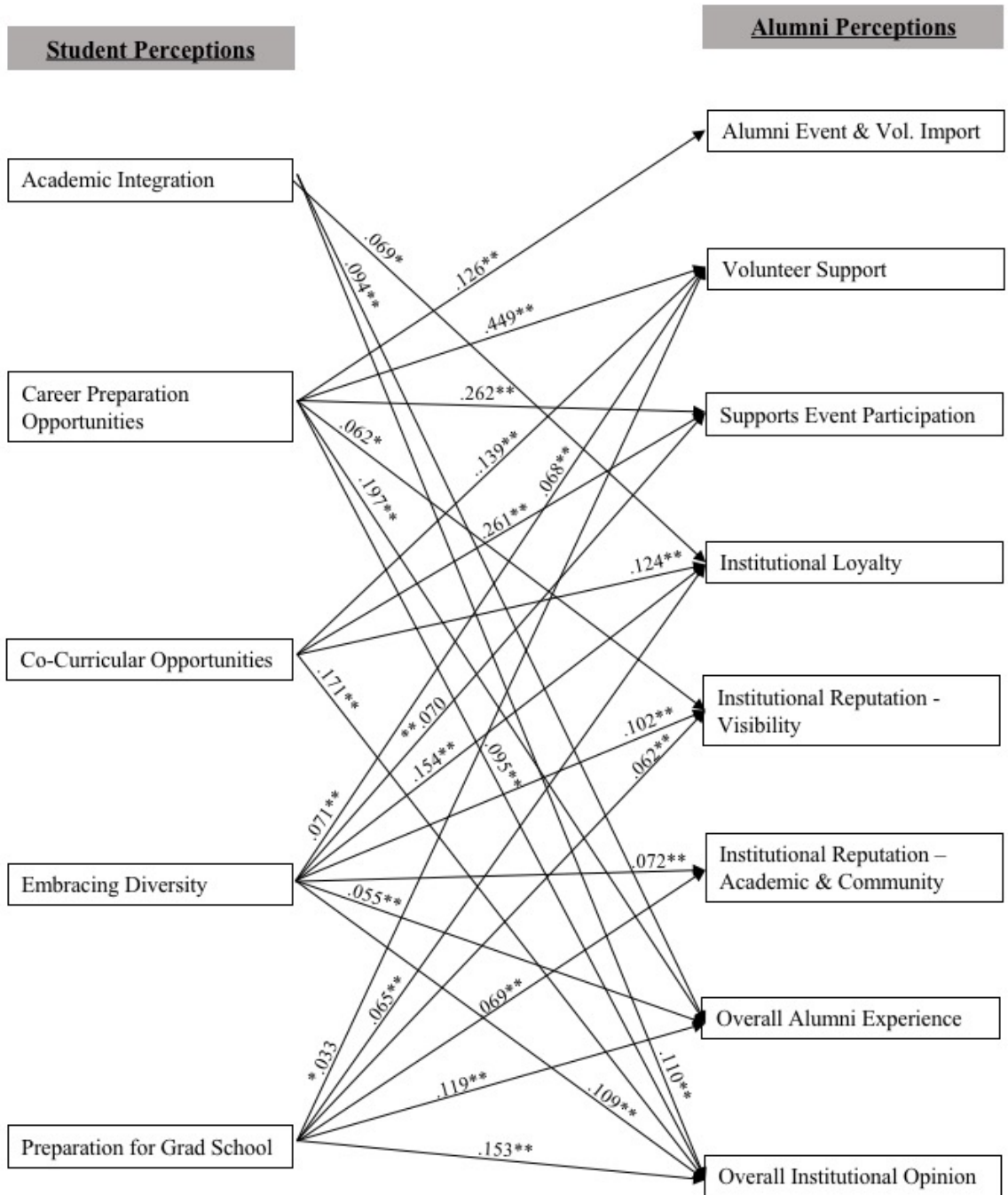
Figure 11. Direct Effects Map of Student Perceptions on Alumni Behaviors



**Figure 12. Direct Effects Map of Student Perceptions on Alumni Perceptions**



**Figure 12. Direct Effects Map of Student Perceptions on Alumni Perceptions (Continued)**





**Figure 13. Direct Effects Map of Student Perceptions on Giving**

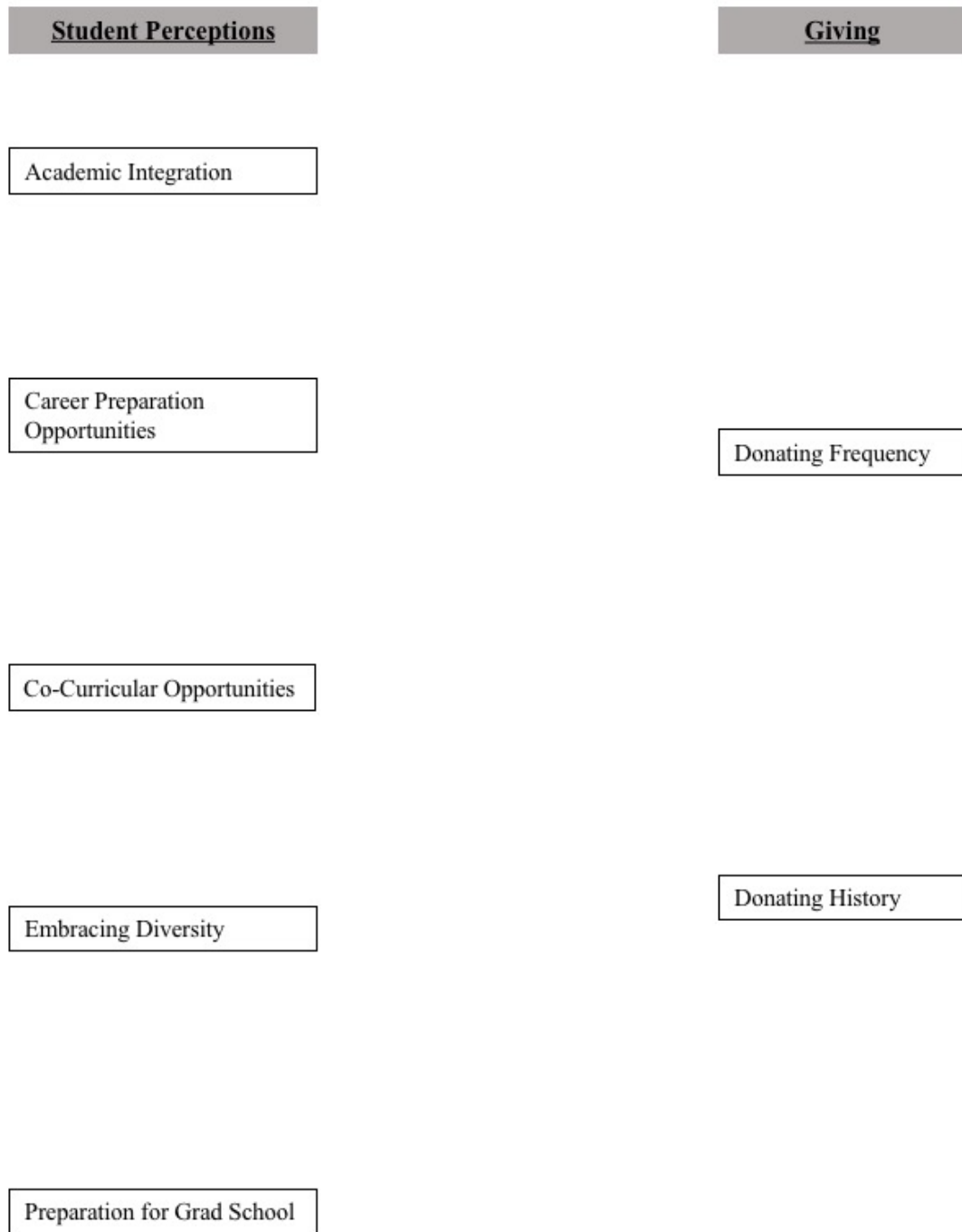




Figure 14. Direct Effects Map of Alumni Behavior on Giving

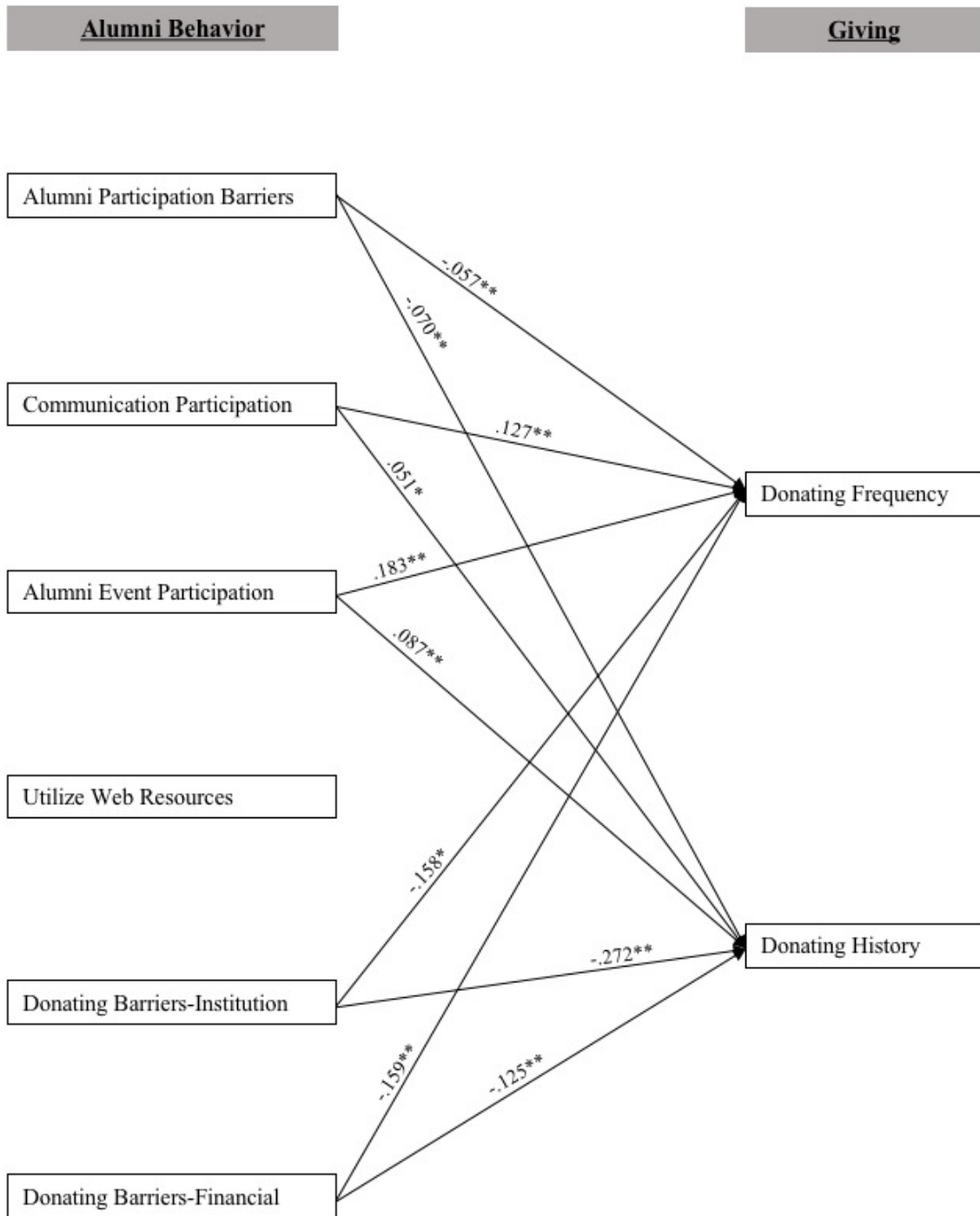
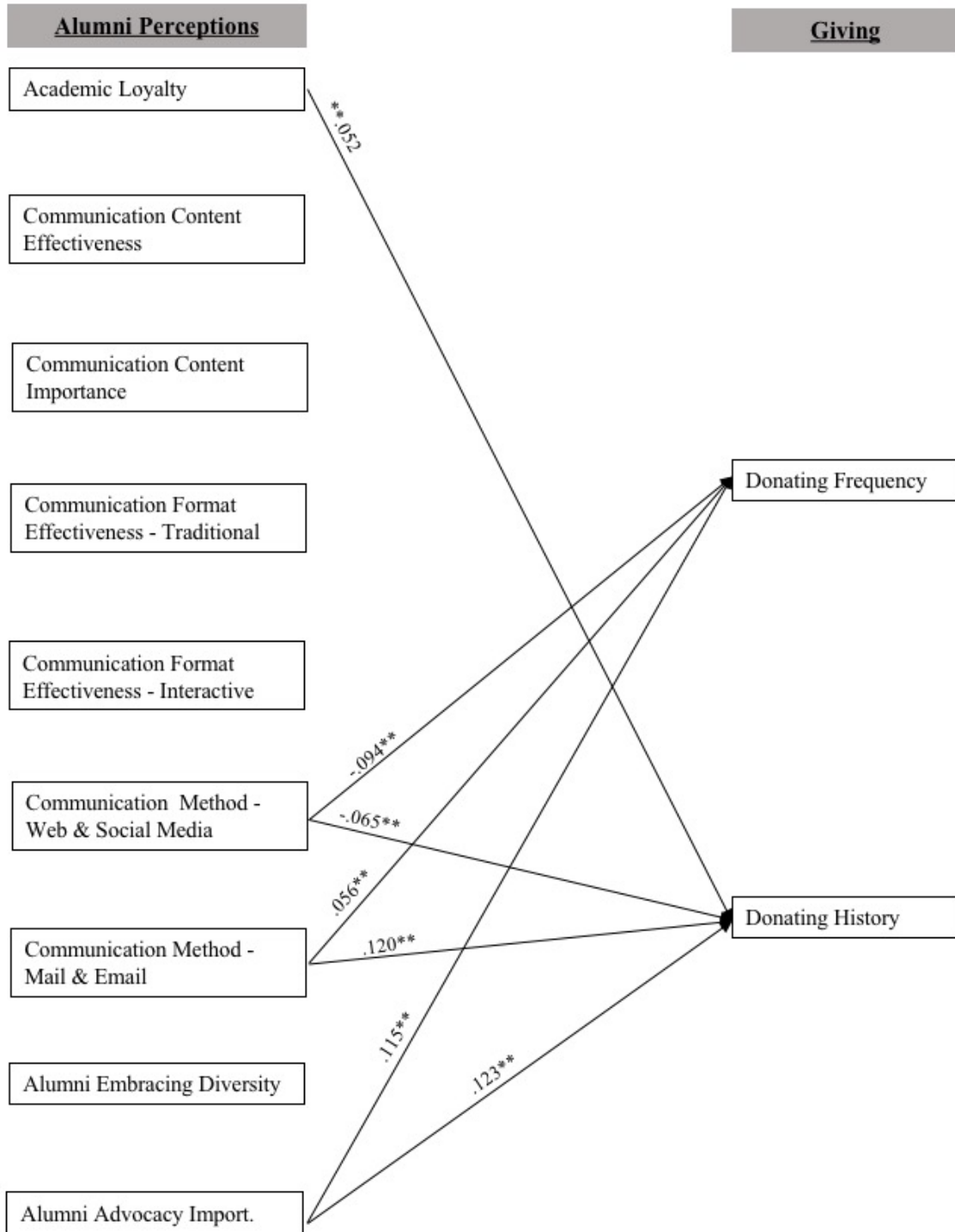
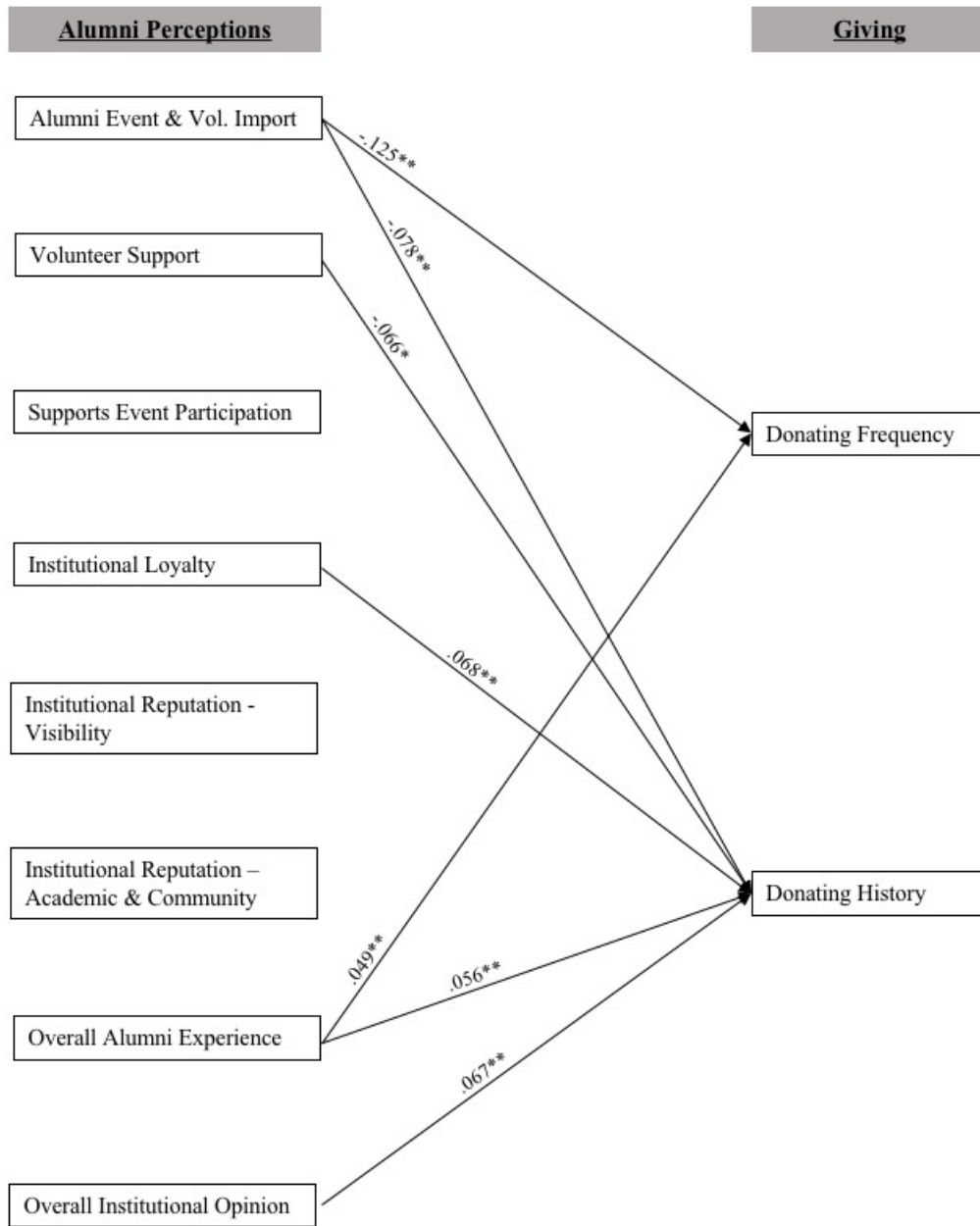


Figure 15. Direct Effects Map of Alumni Perceptions on Giving



**Figure 15. Direct Effects Map of Alumni Perceptions on Giving (Continued)**



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