

7-23-2013

# The Effect of Brand Identification on Alumni Supportive Behaviors

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THE EFFECT OF BRAND IDENTIFICATION ON ALUMNI SUPPORTIVE BEHAVIORS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

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May 2013

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The purpose of this study was to explore the relationship of brand identification and supportive behaviors for alumni of a medium-sized state-run public institution of higher education in the mid-Atlantic region of the US. The research examined the perceptions of donor and non-donor alumni of a state-run public institution of higher education to see if there were statistically significant differences between populations. The donor population was further examined to see if brand identification affected dollar amount or number of donations. Additionally, both the donor and non-donor populations were examined to see if identification affects promotion of the institution, competitive attitude towards other schools, and seeking contact with the university. Social identity theory (Tajfel & Turner, 1981), self-categorization theory (Turner, 1987 cited in Turner, Oakes, Haslam, & McGarty, 1994) and self-congruity theory (Sirgy, 1982) provided the theoretical framework of this study. The researcher used quantitative methods in this study and collected data with a survey instrument. The survey was sent to a census of all those alumni with active email addresses on file.

The survey yielded 2,856 responses of which 2,763 were usable. The survey responses were then linked to secondary data on file with the Offices of Development and Alumni Relations at the school in question. The findings suggested that brand identification affected choice to donate, donor level, number of donations, promotional behaviors, and competitive attitude towards out-groups. The findings also suggested that interpretation of brand, prestige, and participation were positively associated with identification while satisfaction was positively

associated with brand image. However, the results also indicated that identification was not statistically significant as related to seeking contact and participation was not statistically significant as related to brand image.

The study showed support for the inclusion of brand identification in traditional alumni donor models. The study also supported interpretation of brand as an important construct in explaining alumni supportive behaviors. The researcher then suggested implications for policy and practice and concluded by presenting opportunities for future research surrounding the construct of brand identification.

## ACKNOWLEDGMENTS

This dissertation would not have been possible without the kind support and encouragement of several individuals. I would like to thank my chair, Dr. David Yerger. Dave, I appreciated every one of our interactions and could not have been successful without your entirely accommodating approach. Your perspective added more value to my experience than I can express. I am truly grateful. I would like to thank the reading members of my committee Dr. Alex Heckert and Dr. William Donner. Alex, thank you for your relentless optimism, humor, and support. I came to rely on it likely more than you realized. Bill, your early guidance in the methodology and statistics realm was essential. Thank you for your insight and direction. I would like to express my sincere thanks and appreciation to Nikki Bell, the unofficial member of my committee. Thank you for being my partner-in-crime, a sounding board for all things, a voice of encouragement, and my competitor. But most importantly thanks for being my friend.

Thanks to Dr. John A. Anderson for affording me the graduate assistant opportunity. It was an honor to serve the Administration and Leadership Studies program and the Research and Training Center. Thanks to Sherri Zimmerman, Deb Kravitz, and Kim Winters for welcoming me into your office environment and offering support throughout this process. Thanks to the remarkable members of Cohort 11. You will always find a colleague and friend in me. And, a special thanks to Bill Speidel, Mary Morgan, Nathan Bish, Andrea Alsippi, and Emily Smeltz. You made the logistical portion of this operation painless. I am so grateful for your assistance, expertise, and patience.

Last but certainly not least, I would like to express my love and appreciation to my husband Brian. Thank you for being a source of support and understanding. You were my biggest ally throughout the process and I realize just how lucky I am.

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## CHAPTER 1

### INTRODUCTION

#### **Background**

##### **Financial Challenges in Higher Education**

In the past three to four years, the field of higher education suffered sharp decreases in funding across state and local levels of government (National Center for Education Statistics [NCES], 2011). For example, state appropriations for the Pennsylvania State System of Higher Education dropped 18 percent from fiscal year 2010 to 2011 (Commonwealth of Pennsylvania [CwoPA], 2011). That amount represented a deficiency of over 90 million dollars across the 14 system schools. This drop caused colleges and universities to eliminate or limit program offerings, grant fewer scholarships, reduce faculty, and exhaust existing resources without hope of replacement. The tightening of the state and federal budgets has increased the pressure on colleges and universities to find other sources of financial support. Consequently, colleges and universities are increasingly reliant upon private donors (Weerts & Ronca, 2009; Tsao & Coll, 2005; Cunningham & Cochi-Ficano, 2002).

The Council for Aid to Education (CAE) Voluntary Support of Education Survey reported tepid growth of private donor giving in 2010. The Voluntary Support of Education Survey reported an increase of .5 percent from 2009 (CAE, 2011). The slight increase in 2010 showed improvement over the near 12 percent decrease posted in 2009. Still, the slow increase in private giving indicates that more time is required to recover from the fundraising shortfalls caused by the Great Recession (Council for Advancement and Support of Education, 2011). The total amount of charitable contributions reached \$28 billion in 2010 which was the same level reported in 2006. However, when adjusting for inflation, the 2010 survey results represented a .6

percent decline since 2009 and an 8 percent decline when compared to the 2006 results (CAE, 2011).

More startling than the slow growth rate of private giving is the continued decrease in alumni support. In 2010, alumni contributions to higher education represented \$7.1 billion or 25.4 percent of the total voluntary support (CAE, 2011). This amount represents a .4 percent decrease from the \$7.13 billion in 2009 and an 18 percent decrease from the \$8.7 billion in 2008 (U.S. Bureau of the Census, 2011). This decreasing trend of alumni donations represents an area of deep concern for institutions. With increasing university operating costs and diminishing government funds, alumni donations become of critical importance for the financial well-being of colleges and universities. As alumni donate less money to their alma mater, ways to increase engagement is now the focus of many colleges and universities.

### **Marketing and Branding**

In response to the decreasing donation patterns of alumni, colleges and universities thrust themselves into commercial business practices like relationship marketing and branding in an effort to engage the potential donors (Ancil, 2008; Bunzel, 2007; Hemsley-Brown & Goonawardana, 2007; Melewar & Akel, 2005). Relationship marketing is the active attempt for organizations and brands to “develop long-term relationships with consumers on an individual basis” (Arnett, German, & Hunt, 2003). On the other hand, branding refers to the augmenting of a “cluster of functional and emotional values” (de Chernatony, 2001, p. 13) surrounding an identifiable product, service, or organization such that the consumer perceives the entity to be one of value. Relationship marketing focuses on donor retention by enhancing customer relations (Dall’Olmo Riley & de Chernatony, 2000) and is advantageous for the organization as it costs as much as five times less to retain current donors than to recruit new individuals

(Harley, 1984 cited in Sargeant, 2001; Petersen, 1997 cited in Sargeant, 2001). By placing energy and resources into the creation of reciprocal relations between the alumni and institution, universities attempt to contest reductions in government funding and increase the potential for private donations.

Relationship marketing shares similar benefits and outcomes with the practice of branding (Dall’Olmo Riley & de Chernatony, 2000). In essence, branding and relationship marketing can be perceived as complementary processes. De Chernatony (2001) defined brands as “clusters of functional and emotional values” (p. 13). Brands ultimately reside in the minds of consumers and exist as perceptions based on communications and personal experiences (de Chernatony, 2001; Plummer, 2000). A university is a “branded institution” (McAlexander, Koenig & Schouten, 2004, p. 62) that offers products and services stamped with the brand to a diverse stakeholder group. The products in higher education are intangible and the customers, or students, are also the products as they engage in the transfer and development of knowledge (Curtis, Abratt, & Minor, 2009; Anctil, 2008; Melewar & Akel, 2005).

Like relationship marketing that experienced a paradigm shift from massive public outreach to retention and development of existing customers, the concept of the brand has shifted from visual representations fostering product differentiation to symbolic entities supporting a relationship between the individual and organization (Dall’Olmo Riley & de Chernatony, 2000). Though the brand operates as a legal instrument (Balmer & Gray, 2003; de Chernatony & Dall’Olmo Riley, 1997) and an identifying device (Laidler-Kylander, Quelch, & Simonin, 2007; Balmer & Gray, 2003; de Chernatony & Dall’Olmo Riley, 1997), it is more recently highlighted as a symbolic mechanism of expressing key values (Sargeant, Hudson, & West, 2008; de Chernatony, 2001) and a means by which to construct individual identities (Balmer & Gray,



2003). For example, in 2004 Dove brand beauty products released the “Campaign for Real Beauty”. The successful campaign featured ordinary women of all shapes, races, and ages. The campaign did not use models or actresses to advertise their products. While Dove had been in existence since the 1950s, this campaign effectively changed the brand from a women’s personal product line to a company that valued a broader understanding of beauty. This study will focus on the university brand as a mechanism for constructing identity and self-definition as it relates to alumni supportive behaviors.

### **Benefits of Branding in Higher Education**

There are many benefits for an institution of higher education to engage in branding practices. Branding establishes legitimacy and stability (Chapleo, 2011), promotes a sense of prestige (Chapleo, 2011; Waeraas & Solbakk, 2008), and acts as a risk reducer or mark of quality (Chapleo, 2011; Judson, Aurand, Gorchels, & Gordon, 2009; Sargeant & Ford, 2007). For example, universities like Harvard, Massachusetts Institute of Technology, or Oxford actively promote their brand identity and reputation such that customers readily understand what their brand names represent (Curtis et al., 2009). Branding conveys values and beliefs to potential donors suggesting potent reasons why the organization is worthy of support (Sargeant et al., 2008) and helps fundraising efforts by providing a mental hook for donors (Sargeant & Ford, 2007). For example, Case Western Reserve University promotes the tagline “think beyond the possible” to empower stakeholders to sense the limitless nature of the institution (Case Western Reserve University, n.d.).

As competition increases among universities for the best students, staff, and resources, branding permits an institution to differentiate itself from competitors (Judson et al., 2009; Waeraas & Solbakk, 2008; Paramewaran & Glowacka, 1995 cited in Hemsley-Brown &

Goonawardana, 2007; Melewar & Akel, 2005; Balmer & Gray, 2003; Aaker, 1997). The university can differentiate itself on facets such as academic programs, facilities, athletics, social opportunities and amenities such as fitness centers (Curtis et al., 2009). Again, a pertinent example comes from Case Western Reserve University who enlists all stakeholder groups as brand stewards to express the impressive history of elite research conducted at the university (Case Western Reserve University, n.d.).

One of the most important benefits of branding in higher education is that it offers current students and alumni a sense of belonging through “life-long membership” (Curtis et al., 2009, p. 406). The feeling of belonging instills in the alumni a sense of identification with the university brand. Developed in social psychology, brand identification explains a person’s sense of belonging to a group or organization (Kim, Han, & Park, 2001; Bhattacharya, Rao & Glynn, 1995; Mael & Ashforth, 1992). Brand identification is the sense of connection to a brand that stems from the elicited emotional response and congruence between self-identity and brand characteristics (Kim et al., 2001). Identification with the university further permits the student the ability to define the self through the organization (Balmer & Liao, 2007). While all benefits of branding greatly improve the ability of a college to sustain the competitive edge (Chapleo, 2011; Curtis et al., 2009), the focus of this study is on brand identification and how it relates to supportive behaviors like donating money, promoting the school, attending events, and harboring an competitive attitude towards out-groups.

Though increasingly embraced in higher education, branding practices are still met with resistance by some institutions (Chapleo, 2008). Barriers to branding in higher education are financial, logistical, and philosophical in nature. Financial barriers include the debate between short term expenditures versus long term investments. Branding requires financial resources and

time commitments while the benefits might not be reaped immediately. Logistical issues arise in the difficulty in committing internal stakeholders to the processes involved with branding (Sargeant et al., 2008). Branding practices increase demands on managers who may suffer a lack of planning or staff resistance to advertising (Ancil, 2008). Like the general nonprofit sector, higher education administrators may challenge the suitability of branding practices as the stakeholder groups are diverse and the required actions too complex (Chapleo, 2011). From a philosophical standpoint, branding in higher education presents the potential for moral contradictions of values (Hemsley-Brown & Goonawardana, 2007) or the perceived betrayal of ethics. This philosophical standpoint stems from notion that commercial branding practices can endanger institutional integrity (Chapleo, 2011; Waerass & Solbakk, 2008). That is, branding looks to present a limited number of values and tightly defined organizational identity in an institution founded on numerous values and priorities set across multiple departments with diverse functions (Waeraas & Solbakk, 2008). While Chapleo (2008) suggested that colleges and universities can capitalize on heritage as a focus of branding efforts, a general concern exists surrounding the marketization of higher education (Hemsley-Brown & Goonawardana, 2007).

### **Problem Statement**

As previously mentioned, the trend of alumni financial support for colleges and universities is decreasing steadily. From 2008 to 2010, alumni contributions to higher education decreased by 18 percent or \$1.6 billion (CAE, 2011). The decrease in support from alumni is particularly alarming to colleges and universities as they must also manage sharp decreases in government funding. In an effort to engage alumni and increase the potential for philanthropy, institutions are applying business practices like relationship marketing and branding. By doing so, colleges and universities are reaping the benefits of differentiation, legitimacy, establishing

and expressing prestige, and brand identification. Empirical research on brand identification is limited in the field of higher education. There are also misperceptions that brand identification is driven by athletics, however, the empirical support for the claim is mixed (Porter, Hartman, & Johnson, 2011; Kim, Chang, & Jae Ko, 2010; Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976). As colleges and universities actively pursue ways to engage alumni in an exchange relationship, it is pertinent to gain better understanding of the effect of brand identification on supportive behaviors and if it is a potential mechanism for enhancing alumni support.

### **Studies Addressing the Problem**

Studies on the supportive behaviors of alumni emerge from multiple academic disciplines. This study confines its analysis to the higher education alumni donor literature and the brand identification literature from all sectors. This is because the two threads of literature share striking similarities in terms of the explored variables.

Studies of alumni donor behaviors tend to approach the topic by analyzing variables in three different categories. These categorizations include college characteristics, student characteristics, and institutional efforts to solicit funds. Most studies investigate a mix of variables falling into the three categories in hopes of finding a statistically significant predictive model of alumni support behaviors. The studies approaching alumni donor behaviors as being driven by college characteristics focus on the institution and widely held public opinion of the school (McDearmon, 2010; Sung & Yang, 2008; Cunningham & Cochi-Ficano, 2002). Those studies focusing on the characteristics of the student as predictors of supportive behaviors ascribe alumni supportive behaviors to the alumni's financial situation, the alumni's personal attributes, and variables related to the individual's experience as a student (McDearmon, 2010; Weerts &

Ronca, 2009; Weerts & Ronca, 2007; Tsao & Coll, 2005; Bingham, Quigley, & Murray, 2002; Cunningham & Cochi-Ficano, 2002; Clotfelter, 2001; Belfield & Beney, 2000; Baade & Sundberg, 1996; Okunade, Wunnuva & Walsh, 1994). The third category of studies explores the effect of institutional efforts to solicit funds on alumni supportive behaviors. These studies include variables such as communication efforts, frequency, and medium of contact with alumni (McDearmon, 2010; Weerts & Ronca, 2009; Sung & Yang, 2008; Bingham et al., 2002; Belfield & Beney, 2000; Okunade et al., 1994). Though the alumni donor literature shows support and consistency for the factors influencing choice to support an institution, the literature fails to explore the perception of the brand as understood by distinctiveness, attractiveness, and self-expressive value. It also fails to include the alumni's identification, or propensity to define the self in terms of association with the organization, as a potential predictive variable.

Similar to the alumni donor literature, the brand identification literature separates the explored variables into organizational and personal antecedents as a way to understand the effect of brand identification on positive outcomes like donations, loyalty, group cohesion, and other supportive behaviors. Like the alumni donor literature, the individual antecedent variables include personal attributes and individual experiences with the brand (Porter et al., 2011; Boroş, Curşeu, & Miclea, 2011; Kuenzel & Halliday, 2010; Kuenzel & Halliday, 2008; Ahearne, Bhattacharya, & Gruen, 2005; Bhattacharya & Sen, 2003; Bhattacharya et al., 1995; Dutton, Dukerich, & Harquail, 1994; Mael & Ashforth, 1992). Also similar, the commonly explored organizational antecedents surround the reputation and prestige of the brand (Porter et al., 2011; Boroş et al., 2011; Kuenzel & Halliday, 2010; Kuenzel & Halliday, 2008; Balmer & Liao, 2007; Ahearne et al., 2005; Bhattacharya & Sen, 2003; Bhattacharya et al., 1995; Dutton et al., 1994; Mael & Ashforth, 1992; Ashforth & Mael, 1989). Unlike the alumni donor literature, the brand

identification literature delves into the individual's perception of the brand by examining the distinctiveness, attractiveness, and self-expressive value (Balmer & Liao, 2007; Ahearne et al., 2005; Bhattacharya & Sen, 2003; Kim et al., 2001; Dutton et al., 1994; Mael & Ashforth, 1992; Ashforth & Mael, 1989). The interpretation of the brand influences an individual's sense of belonging to the group, or identification, which then influences positive outcomes and supportive behaviors. These missing pieces in the alumni donor literature present a gap that can be filled by the use of variables from the brand identification literature.

The literature examining brand identification and the effects on supportive behaviors in the context of higher education is scant. Few studies (Porter et al., 2011; Newbold, Mehta, & Forbus, 2010; Kim et al., 2010; Drezner, 2009; Sung & Yang, 2008; Balmer & Liao, 2007; Arnett et al., 2003; Humphreys & Brown, 2002; Mael & Ashforth, 1992; Cialdini et al., 1976) have specifically examined identification at institutions of higher learning. Of the studies that did examine identification in the field of higher education, two used qualitative methods to deepen the understanding of the construct and how it forms (Balmer & Liao, 2007; Humphreys & Brown, 2002) and one used qualitative research methods to evaluate a specific program at historically black colleges and universities (Drezner, 2009). Of the qualitative examples, the study conducted by Balmer and Liao (2007) is most informative to the current research project. The remaining seven studies used quantitative methods to better understand the relationship between antecedents and consequences of identification (Porter et al., 2011; Newbold et al., 2010; Kim et al., 2010; Sung & Yang, 2008; Arnett et al., 2003; Mael & Ashforth, 1992; Cialdini et al., 1976). These articles are thoroughly evaluated in the literature review as they include two landmark studies (Mael & Ashforth, 1992; Cialdini et al., 1976) and most relevantly pertain to the current study. In addition, those studies exploring identification in higher education used a

modified version of the measurement scale created by Mael and Ashforth (1992) originally designed for use at an all-male religious institution. Therefore, the degree to which identification serves as a mechanism of drawing support from alumni is yet to be fully understood.

The majority of identification studies come from the for profit and general nonprofit sectors (Bagozzi, Bergami, Marzocchi, & Morandin, 2011; Boroş et al., 2011; Kuenzel & Halliday, 2010; Lam, Ahearne, Hu, & Schillewaert, 2010; Kuenzel & Halliday, 2008; Donovan, Janda, & Suh, 2006; Ahearne et al., 2005; Tidwell, 2005; Kreiner & Ashforth, 2004; Van Dick, Wagner, Stellmacher, & Christ, 2004; Dukerich, Golden, & Shortell, 2002; Foreman & Whetten, 2002; Kim et al., 2001; Van Knippenberg & Van Schie, 2000; Ellemers, Kortekaas, & Ouwerkerk, 1999; Bhattacharya et al., 1995). Many of these studies use the terms organizational identification, corporate identification, or identification without a preemptive descriptor. For the purpose of this research, the construct is understood to be the same and thus those articles most relatable were included.

In summary, the alumni donor literature agrees on factors surrounding the institution, individual, and solicitation efforts that lead to donations and other supportive behaviors. The factors explored in the alumni literature as potential influencers of donation behavior are similar to those antecedents of brand identification. However, the brand identification literature includes variables that are missing from the donor literature such as interpretation of brand as measured by distinctiveness, attractiveness, and self-expressive value. Though the literature on brand identification is limited in the field of higher education, these factors could be the key to better understanding philanthropic behaviors of university alumni. This study will expand on the limited but increasingly relevant literature on brand identification in the field of higher

education. This study further explores the brand interpretation and identification variables overlooked in the alumni donor literature as they relate to alumni supportive behaviors.

### **Purpose and Objectives of the Study**

The purpose of this study is to explore the relationship of brand identification and supportive behaviors for alumni of a medium sized state run public institution of higher education in the mid-Atlantic region of the US. The primary objective of this research is to determine if having strong brand identification increases donation dollar amount, donation frequency, or other supportive behaviors like event attendance and promotion. This study will survey the perceptions of donor and non-donor alumni of a state run public institution of higher education to determine if there are statistically significant differences between populations. The donor population will be further examined to ascertain if brand identification affects amount or frequency of donations. Both populations will be examined to determine if brand identification affects other supportive measures like event attendance and promotional behaviors. Additionally, this research attempts to show that including brand identification and interpretation of brand as variables potentially increases the explanatory power for donor behaviors over those variables typically explored in the alumni giving literature thereby expanding the understanding of alumni supportive behaviors.

### **Research Question and Hypotheses**

The research questions for this study are as follows: “What are the effects of brand identification on alumni supportive behaviors? Is brand identification a potential mechanism for enhancing alumni supportive behaviors? More specifically, do alumni that experience strong identification donate more total dollars or more frequently than those that do not experience identification?”



The hypotheses for this study are as follows:

1. The stronger an alumna's brand identification, the more likely she will donate money to the organization.
2. The stronger an alumna's brand identification, the larger the sums of money she will donate to the organization.
3. The stronger an alumna's brand identification, the greater the number of donations she will make to the organization.
4. The stronger an alumna's brand identification, the more likely she will promote the university.
5. The stronger an alumna's brand identification, the more likely she will return to campus for events.
6. The stronger an alumna's brand identification, the more likely she will have a competitive attitude towards out-groups.
7. Interpretation of brand will be positively associated with identification.
8. Perceived prestige will be positively associated with identification.
9. Participation experience will be positively associated with identification.
10. Participation experience will be positively associated with brand image.
11. Satisfaction will be positively associated with brand image.

### **Significance of the Study**

The paucity of literature on the effects of brand identification in the higher education discipline is lamentable as it has the potential to provide insight on methods of increasing engagement and supportive behaviors from alumni. A study exploring the effects of brand identification on alumni supportive behaviors like donations, promotion, seeking contact with the

organization, and competitive attitude towards out-groups is important for several reasons. First, the research can extend knowledge giving an expanded understanding of the antecedents of identification and further refine the understanding of alumni donor behaviors by introducing a previously untested variable to the model. As funding sources become more limited, brand identification may be a mechanism that enhances alumni supportive behaviors.

Second, better understanding brand identification can lead to cost savings and more effective dissemination of resources. Administrators will benefit as having a better understanding of identification would permit an organization to allocate scarce resources more efficiently. Particularly with institutions that lack financial resources for fundraising efforts, this research can provide insight on where to spend time and money to support identification and reap the subsequent benefits. Knowledge of the correlates of identification can serve as a map guiding administrators in their funding decisions. This knowledge could give the organization the ability to isolate the forces that predispose individuals to act in certain ways (Plummer, 2000).

Third, the research could propose an integrative approach to philanthropic campaigns. The results could impact fundraising practice by suggesting partnerships with various college departments, like student affairs and academic affairs, in an effort to increase identification. The policy implications of the research include support for the shift from one-size-fits-all models of fundraising to more specialized models that tap into where students appear to be formulating their sense of identification with the college. In addition, this study could highlight organizational structure limitations introducing potential areas for improvement within the current development culture.

## **Assumptions**

For the purposes of this study, several assumptions were made. The first assumption is that the alumni donor records obtained from the Office of Development at the school in question are sufficiently accurate and updated. The second assumption is that the recipients of the survey will respond honestly to the questions. Third, the researcher assumed that all recipients would recall their college experience sufficiently enough to answer the survey questions. Finally, the researcher assumed that graduates would have longer tenure with the organization and thus limited the sample to only graduates of the institution and excluded those individuals that attended the institution without achieving a conferred degree.

## **Definition of Terms**

This section defines key terms used throughout the study:

1. Brand - de Chernatony (2001) explained “brands are clusters of functional and emotional values” (p. 13). Brands are manifested in consumer’s minds and exist by the process of organizations communicating the cluster of values. Consumers choose brands to satisfy needs and to express style of life.
2. Brand Community - It is a specialized community based on structured social relationships among admirers of a brand (Bagozzi et al., 2011). Bergkvist and Bech-Larsen (2010) explained brand community as the sense of “kinship or affiliation a customer feels with other people associated with the brand” (p. 507).
3. Brand Experience - Brand experience includes the experiential aspects of consumption created in response to brand-related stimuli during the encounter (Chang & Chieng, 2006). Brakus, Schmidt, and Zarantonello (2009) explained that brand experience is the subjective internal and behavioral responses elicited by “brand-related stimuli that are

part of a brand's design and identity, packaging, communications, and environments" (p. 53).

4. Brand Identification - Brand identification is the sense of belonging or connection to a brand that stems from the elicited emotional response and congruence between self-identity and brand characteristics (Ahearne et al., 2005; Kim et al., 2001). Dutton et al. (1994) defined brand identification as the degree to which a member defines herself in terms of the organization and that membership in the organization then shapes the self-concept. Kuenzel and Halliday (2008) defined brand identification as the "perception of oneness with a group of persons" (p. 294). For the purpose of this study, the term brand identification will be used to also represent the terms organizational identification and corporate identification.
5. Brand Image - Brand image is the "concept of a product held by the customer, based on reason and emotion, that is subjective and perceptual (going beyond the technical, functional or physical aspects of the brand), with perception being more important than reality" (Dobni & Zinkham, 1990 cited in Helgesson & Supphellen, 2004). Chang and Chieng (2006) explained brand image as the sum of brand associations or tangible and intangible associations of the brand.
6. Brand Personality - Aaker (1997) defined brand personality as the "set of human characteristics associated with a brand" (p. 347).
7. Construed External Image – Ahearne et al. (2005) explained construed external image as the perception of the brand held by relevant outsiders. Also called prestige, it is the individual's beliefs about the perception of the brand held by others.

8. Organizational Identity - Albert and Whetten (1985 cited in Hatch, 2006) defined organizational identity as “that which is central, distinctive and enduring about an organization” (p. 335).
9. Out-Groups – Out-groups refer to people categorized by the individual as not sharing the same social category. For the purpose of this study, out-groups refer to members associated with other colleges and universities that might be seen as relevant comparison institutions.
10. Relationship Marketing - Relationship marketing is the active attempt for organizations and brands to “develop long-term relationships with consumers on an individual basis” (Arnett et al., 2003).
11. Self-Congruity – Is the comparison of an individual’s self-concept to the image held of the brand (Sirgy, 1982). Self-congruity can reflect the actual, ideal, social, and ideal-social self. Consumers tend to prefer brands and organizations that are consistent with their self-concept (Arora & Stoner, 2009).
12. Supportive Behaviors - For the purpose of this study, the term supportive behaviors will be used to denote the acts of donating money, promoting, attending university events, and harboring a competitive attitude against out-groups.

## CHAPTER 2

### REVIEW OF LITERATURE

#### **Overview**

The purpose of this research was to explore the relationship of brand identification and alumni supportive behaviors. This chapter is structured into seven sections. First, this chapter offers a review of what is currently known and accepted in higher education alumni donor research. Second, the chapter explains the theoretical placement of brand identification using social identity theory, self-categorization theory, and self-congruity theory. Third, the chapter reviews the current and previous literature about the antecedents of identification including interpretation of brand image and brand experience. Fourth, the chapter highlights the findings from the literature surrounding positive outcomes of brand identification. Next, the chapter explains the methodology used in previous studies. Then, the chapter presents and explains the conceptual framework for the study. Finally, this chapter summarizes the findings from the literature.

#### **Alumni Donor Literature**

A rich literature exists in the field of alumni donor behaviors. On an aggregate level, the research in the past 20 years documented the complex nature of the alumni donation phenomenon (Cunningham & Cochi-Ficano, 2002; Belfield & Beney, 2000; Baade & Sundberg, 1996). These studies attempted to better understand alumni donor behaviors by examining college characteristics, personal characteristics, and institutional efforts to solicit funds. In addition to the three categories of variables commonly explored, the trend of alumni donations is purported to follow those of the economy and thus be affected by times of recession (Tsao & Coll, 2005; Okunade et al., 1994). The following paragraphs review the consensus information

on those institutional characteristics, personal characteristics, and solicitation efforts as they are understood to effect on alumni donor behaviors.

### **College or University Characteristics**

Studies investigating institutional characteristics suggested that the type of college affects overall donations. Levine (2008), in her survey of 58 college development directors, found that smaller private colleges had higher donation participation rates than their larger public counterparts. These results supported previous findings by Clotfelter (2001). Clotfelter (2001), using data on two cohorts at fourteen private colleges and universities from the College and Beyond survey, indicated that liberal arts colleges had higher donor participation than larger universities. This so-called “liberal arts effect” was also evident in the work completed by Cunningham and Cochi-Ficano (2002) who found “functionally defined ‘four-year’ institutions receive between \$38 and \$49 more in average donations per alumni than do other institutions” (p. 552). Cunningham and Cochi-Ficano (2002), using a thirteen-year panel design of a large and diverse sample of higher education institutions, also found that system schools average lower donations than independent institutions. This is significant to the current study as the focal institution is a public university that is part of a larger state system.

In addition to the type of institution influencing donor behaviors, several studies argued for the role of prestige or reputation on choice to donate. Baade and Sundberg (1996) found that quality of institution, defined as instructional expenditure per student, correlated with alumni donations. By exploring secondary data from the Integrated Postsecondary Education Data System (IPEDS), Peterson’s Guide to Four-Year Colleges and CAE, Baade and Sundberg (1996) discovered that high quality selective universities and colleges received significantly more gift money from alumni. Using this discovery and the same secondary data sources, Cunningham

and Cochi-Ficano (2002) later explained that higher reputation schools maintain selective admissions policies by admitting those applicants with superior achievements and are presumably more effective in adding value to the educational experience. In their study, reputation was found to decisively influence charitable giving flows (Cunningham & Cochi-Ficano, 2002).

Besides the exclusivity of admissions to institutions and financial breakdown per student, perceived prestige and rankings by third-party entities affect alumni donor behaviors. Liu (2006 cited in McDearmon, 2010) and Holmes (2009) found a high ranking in the US News and World Report to be positively and significantly associated with giving. Similarly, Sung and Yang (2008) in their creation of a relationship model of alumni giving found students' perceptions of university reputation to significantly affect supportive intentions. As such, it was explained that positive relationships and communication assist in the maintenance of perceived reputation which thereby motivates donations and intentions to donate (Sung & Yang, 2008). Holmes (2009), while exploring nearly 23,000 alumni giving records for Middlebury College in Vermont, found a difference in perception of organizational prestige based on recency of graduation. Holmes (2009) discovered recent graduates of a small private liberal arts college to be more affected by prestige than older graduates. While the current research study does not utilize rankings from popular media publications, it does collect data on construed external image, or perceived prestige.

### **Student Characteristics**

Of the many student-related characteristic variables explored in the alumni donor literature, several are empirically supported and accepted as influential over the choice to donate. Specifically, income, age, involvement in extracurricular activities, overall satisfaction, and



academic department are accepted as influencing donor behaviors. In a study of two public universities in the United Kingdom, Belfield and Beney<sup>1</sup> (2000) found income to significantly affect donations. However, these effects were limited to those individuals that do give and thus income did not affect the initial decision whether or not to donate. Likewise, Clotfelter<sup>2</sup> (2001) examined the differences in donation behaviors of two age cohorts and found the individuals that contributed most to the institution had the highest incomes. In 2003, Monks<sup>3</sup> investigated individual characteristics that correlated with donations for alumni of 28 highly selective private institutions. Employing a survey to collect the data, Monks (2003) asserted that an “increase in an individual’s income of \$10,000 raises the expected contribution by approximately 2%” (p. 124) while the same dollar increase of household income represented a 9% increase in contribution all else being equal. Later, Tsao and Coll (2005) explored the variables associated with alumni giving for journalism and communications majors. Like the previously mentioned studies, Tsao and Coll (2005) found income to significantly predict intent to financially support the department or program. Lastly, Weerts and Ronca<sup>4</sup> (2009) used classification tree methodology and determined income to be an important divider explaining levels of giving and initial likelihood of becoming a donor.

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<sup>1</sup> Belfield and Beney (2000) also examined marital status and gender. The authors found that married alumni gave less than their single counterparts. The authors also suggested that females have a higher probability of donating but overall give less than males. The gender variable was also explored by Okunade et al. (1994), Monks (2003), and Levine (2008) who found no statistically significant difference between donation behaviors of males and females.

<sup>2</sup> Clotfelter (2001) indicated that donations are concentrated with over 50% of giving being completed by 1% of alumni. Clotfelter (2001) also analyzed race in relationship to donation behaviors. Clotfelter (2001) found that non-white, multi-racial, and alumni born outside of the United States gave less money on average. Monks (2003) also examined race and found similar results.

<sup>3</sup> Monks (2003) suggested that those alumni who received financial aid in the form of loans gave less money to their alma mater. Those alumni that received financial aid in the form of grants, however, were found to donate more money to their alma mater. This finding was further supported by Marr, Mullin, and Siegfried (2005) who also found a significant difference in aid type in relationship to giving behaviors. This finding contrasts that of Cunningham and Cochi-Ficano (2002) that found no difference in aid type. Also, unlike the results found by Belfield and Beney (2000), Monks (2003) found that married alumni donated up to 18% more money than their single counterparts.

<sup>4</sup> Weerts and Ronca (2009; 2007) also examined employment and found it to be a significant predictor of donations.

Like income, age, or place in the lifecycle, is generally accepted as a predictor of charitable giving. Okunade et al. (1994), in their widely referenced study that explored a 63 year period, found the growth rate of charitable gifts to remain positive until age 52. This finding agreed with the positive growth rate suggested by Belfield and Beney (2000) but contrasted with the cut-off point of 61 found at Wooster University and 66 at Jeeves University. Though not a direct relationship, Bingham<sup>5</sup> et al. (2002) found the interaction between acknowledgement programs and age to affect the change in size of donation. Bingham et al. (2002) also highlighted that older alumni gave more money on average than the younger alumni suggesting support for previous research (Clotfelter, 2001; Belfield & Beney, 2000; Okunade et al., 1994). Similarly, Weerts and Ronca (2007) found age to predict supportive behaviors such that one year increase in age increased the inclination to volunteer by 1.09 times. Weerts and Ronca (2009) also found that for every one year increase in age the odds of donating money to one's alma mater increases by 2%.

Several scholars found involvement with extracurricular activities to predict donor behaviors. Okunade et al. (1994), based on a pooled micro-data sample of over 4,000 randomly selected alumni, found that students involved in Greek life donated less than their non-Greek counterparts. In contrast, Marr and colleagues (2005), in their eight-year study of Vanderbilt University alumni, found members Greek organizations to respond more positively than those in academic groups. Consistent with Marr et al. (2005), Belfield and Beney (2000) and Monks (2003) also found that alumni involved with Greek life donated more than non-Greeks. A similar discrepancy was presented around participation in athletics. Gaski and Etzel (1984) and

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<sup>5</sup> Bingham et al. (2002) explored giving history and found it to be a predictor of donor behaviors. The authors suggested that this supported previous research by Okunade et al. (1994) and Belfield and Beney (2000). However, upon closer scrutiny Okunade et al. (1994) and Belfield and Beney (2000) neglected to test giving history in their models.

Harrison, Mitchell, and Peterson (1995 cited in Bingham et al., 2002) found the evidence about athletic participation and alumni donations to be inconclusive. Monks (2003) and Marr et al. (2005), however, found participation in athletics to correlate with donor behaviors. No such discrepancy exists surrounding the involvement in clubs like student government, art, religious groups, and the alumni association as correlating with donor behaviors (Tsao & Coll, 2005; Monks, 2003; Clotfelter, 2001; Okunade et al., 1994). The findings from these studies showed positive relationships between participation in such groups and alumni donations.

One of the most well researched and understood variables involving donation behaviors is overall satisfaction with the college experience. Four studies in particular highlighted the effect of overall satisfaction on choice to donate. Clotfelter (2001) found a large majority of survey respondents to be very satisfied with their experience. These individuals more actively contributed to their alma mater than those individuals reporting dissatisfaction. Consistent with Clotfelter (2001), Monks (2003) found satisfaction to be a significant determinant of alumni giving. In this study, alumni reporting that they were very satisfied gave over 2.6 times as much as those reporting lower satisfaction scores. Monks (2003) also suggested that dissatisfaction with teaching, athletics, activities, the demographic breakdown of the student body, and lack of emphasis on faculty research negatively correlated with donations. Tsao and Coll (2005) employed a seven item scale to evaluate alumni satisfaction with the quality of the program. All but one item in the scale was found to significantly affect alumni intent to donate (Tsao & Coll, 2005). Unlike the other three studies, McDearmon (2010) focused solely on those reasons young alumni chose not to donate and found dissatisfaction with career services as a strong theme emerging from the qualitative data.

The final student characteristic attributed to propensity for donations is major or academic department. Though it is widely accepted that major or department affects propensity to donate, there is far less agreement on which departments tend to donate more than others suggesting the possibility that it is an institution-specific variable. Okunade et al. (1994) found department to be a predictor of alumni donations with business school graduates and honors college graduates giving less. Belfield and Beney (2000) indicated that law graduates at Jeeves University were most likely to give while education and medicine graduates were least likely to give. At Wooster University, on the other hand, the only differential observation was that science graduates gave more generously (Belfield & Beney, 2000). Monks (2003) found that graduates holding a degree in fine arts or nursing gave less than history and humanities majors. And finally, Marr et al. (2005) found that economics, math, and engineering majors have large statistically significant positive effects on likelihood of donor behaviors. Marr et al. (2005) found science majors, on the other hand, to have a statistically significant negative effect on the likelihood of donating.

### **Institutional Efforts to Solicit Funds**

Institutional efforts to solicit funds refer to those behaviors exhibited by the university to elicit donations from alumni and other stakeholder groups. Such behaviors include frequency of contact, medium of contact, and incentives and are conducted in an effort to engage the donor in an exchange relationship. Relationship marketing activities, advertising, and branding efforts exhibited by the institution are perceived by the alumni as behaviors of an active contributing member of a dyadic partnership (Aaker & Fournier, 1995). Alumni, instead of perceiving the university brand as an inanimate or passive object, perceives the brand as a lively and engaged partner and responds accordingly (Aaker & Fournier, 1995).

Several studies found development communication efforts to be of critical importance in soliciting funds from alumni (Weerts & Ronca, 2009; Sung & Yang, 2008; Levine, 2008; Tsao & Coll, 2005; Monks, 2003; Belfield & Beney, 2000; Baade & Sundberg, 1996). Bingham et al. (2002) while exploring the effect of frequency of contact with institutional agents on donor choice found that, though counterintuitive, more interaction did not result in more donations. This finding was later contradicted by Monks (2003) who found that frequency of contact with an advisor, faculty, or staff member did yield higher donations. Later, Levine (2008) found that overall number of communication pieces did not correlate with higher levels of donation participation yielding further support for the claims made by Bingham et al. (2002). However, Levine (2008) also found that the frequency of specific communication pieces, the alumni magazine and electronic newsletter, was positively associated with giving.

In addition to frequency and medium of contact, departmentally focused campaigns and communication with the institution are also perceived to influence donor behaviors. Belfield and Beney (2000) in several models found that departmental campaigns were more effective in eliciting donations than overarching university-wide fundraising efforts. In support of this notion, Levine (2008) found mixed results for annual fund and general campaign appeal letters. In terms of communication with the program, past and present interactions affect the choice to donate. Clotfelter (2001) and Monks (2003) found that the presence of a mentor while in college to be positively associated with supportive behaviors towards the institution. In 2005, Tsao and Coll indicated that communication with the program of study was a significant predictor in explaining alumni intent to donate. Similarly, Sung and Yang (2008), using structural equation modeling, found there to be a strong relationship between communication behaviors by the school and student-university relational outcomes. The student-university relational outcomes

were also highly correlated with supportive behavioral intentions (Sung & Yang, 2008). Then in 2009, Weerts and Ronca found that a key characteristic distinguishing between alumni donors and non-donors included the extent that the alumni kept in touch with the university. Weerts and Ronca (2009) found that alumni donors were more likely to keep informed through online alumni newsletters.

### **Summary of Alumni Donor Literature**

A plentiful research exists surrounding the examination of alumni donor patterns and behaviors. In the field, it is accepted that type of institution and prestige influence choice to donate. It is also supported and understood that personal characteristics like income, age, involvement with activities, overall satisfaction, and department correlate with donor behaviors. In addition, efforts made by the institution to solicit funds affect donations by engaging the alumnus in an exchange relationship. The following sections review the literature on brand identification as they relate to positive outcomes like alumni donations and support of an institution. The following sections highlight current practices and those identification variables missing from the alumni donor literature that contain the potential for better understanding of alumni philanthropic behaviors.

### **Brand Identification Literature Overview**

The literature assessing brand identification comes from the for-profit, general nonprofit, and higher education arenas. This literature review prioritizes those studies occurring within higher education exhibiting the most influential pieces like the landmark article from Mael and Ashforth (1992) and the work of Cialdini and colleagues (1976) that uncovered the tendencies of people to “bask in the reflected glory” of successful organizations. The review then reveals the linkages to higher education and folds in the remaining studies from the for-profit and general

nonprofit sectors that are most relevant to the current project. The following paragraphs present the theoretical background of brand identification by highlighting the early works of Tajfel and Turner (1981), Turner and colleagues (1987 cited in Turner et al., 1994), and Sirgy (1982). The section then leads into a thorough review of the brand identification literature highlighting the theoretically driven variables, gaps in understanding, and how this study contributes to the greater body of knowledge.

### **Theoretical Underpinnings of Brand Identification**

The theoretical underpinnings associated with brand identification and its antecedents have roots in the fields of sociology, social psychology, and marketing. Conceptualizations of identification emerged in the literature as early as the 1950s. Foote (1951 cited in Edwards, 2005) suggested that individuals identified with groups and that these categorizations influenced behavior that supports the organization. Later, Brown (1969 cited in Edwards, 2005) using Kelman's (1958 cited in Edwards, 2005) definition empirically investigated identification in organizations. Both researchers asserted that identification surrounds the relationship between the organization and the employee and the individual defines herself by that relationship (for a thorough review of the history of identification, see Edwards, 2005). The present study focused on the more contemporary understandings of identification from the dominant theoretical perspectives of social identity theory (Tajfel & Turner, 1981), self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987 cited in Turner et al., 1994), and self-congruity theory (Sirgy, 1982). Taken together, these theories explain the phenomenon of identification and how individuals define and express themselves by their association with organizations.

## **Social, Personal, and Organizational Identities**

To examine identification, one must first understand the notions of social, personal, and organizational identities. In the early 1970s, Henri Tajfel introduced the concept of social identity. Social identity encompasses the “aspects of an individual’s self-image that derive from the social categories to which he perceives himself as belonging” (Tajfel & Turner, 1981, p. 16). For example, a woman might define herself based on group affiliations, “I am a woman. I am an Ursinus College graduate.” Social identity differs from personal identity as personal identity encompasses the individual’s idiosyncratic traits and interests leading to a conceptualized sense of self (Ashforth, Harrison, & Corley, 2008). Personal identities are unique to the individual while social identities are shared between group members (Turner et al., 1994). Stated in another way, personal identities focus solely on the individual while social identities focus on the individual’s relationship to other group members or collectivities (Ashforth et al., 2008). This research concentrated exclusively on social identities except for the collection of data for the control variable surrounding an individual’s need for identification.

In addition to personal and social identities, organizations are also understood to have an identity. Albert and Whetten (1985) defined organizational identity as that which is central, enduring, and distinct about an organization. Organizational identity asks the questions, “who are we?” “What business are we in?” or “What do we want to be” (Hatch & Schultz, 2004, p. 3). It is promoted in communications, advertisements, marketing, and branding activities as well as personal exchanges with agents. Likewise Hatch and Schultz (2004) indicated that organizational identity is “tempered by the many encounters organizational members have with the organization’s stakeholders” (p. 336). As identity perceptions are shared among members of



an organization, the propensity exists for stronger social identity and identification (Ashforth et al., 2008; Kreiner & Ashforth, 2004).

### **Emergence of Social Identity Theory and Self-Categorization Theory**

Tajfel (1978 cited in Ellemers et al., 1999) presented the concept of social identity such that three different components surfaced. The cognitive component refers to the defining of the self in terms of an organization (Ellemers et al., 1999; Dutton et al., 1994). The evaluative component refers to the value assigned to the group membership. Lastly, the affective component highlights the emotional connection experienced by the individual (Ellemers et al., 1999). Synthesizing the three pieces, Tajfel and Turner (1981) conceptualized a group or social category as the following:

“a collection of individuals who perceive themselves to be members of the same social category [cognitive], share some emotional involvement in this common definition of themselves [affective], and achieve some degree of social consensus about the evaluation [evaluative] of their group and of their membership in it” (p. 15).

Recently, work by van Dick and colleagues (2004) introduced a fourth element of behavior. Behavior referred to the participation in group related activities or actions in support of the group.

In an effort to further Tajfel’s work on social identity, Tajfel and Turner (1981) established social identity theory as an explanation of self-categorizations and the effect on intergroup behavior and out-group discrimination. Social identity theory posits that people classify themselves into various social categories (Ashforth & Mael, 1989; Tajfel & Turner, 1981). Self-categorizations are cognitive tools that provide social order and a mechanism for

defining others and the self in the social environment. Category examples such as gender or organizational affiliation are defined by prototypes of characteristics perceived by the individual to be shared by members. As it is perceptual, individuals might use different category themes or place individuals in different category schemas (Ashforth & Mael, 1989).

Not long after Tajfel and Turner (1981) presented social identity theory, Turner and colleagues (1987 cited in Turner et al., 1994) offered an expanded theoretical model. Self-categorization theory evolved from social identity theory and suggested that the social categorization process is the cognitive basis of group-behavior (Hogg & Terry, 2000). Self-categorization theory indicates that outcomes like group loyalty, cooperation, and the replacement of personal self-interest with collective self-interest are the result of social identity (Turner et al., 1994). By categorizing the self and others into in and out-groups, the individual accentuates perceived differences and similarities. Depersonalization, or a change in the self-conceptualization, occurs when comparative groups are no longer perceived as unique individuals and are instead understood to embody the relevant prototype (Hogg & Terry, 2000). This phenomenon creates normative behavior by aligning actions and attitudes with those of the perceived in-group prototype. For example, New York Yankees fans expect Boston Red Sox fans to act in a certain manner surrounding their team and vice versa. Turner et al. (1994) defined this social norm not as the average views of the group but instead as the position that “best defined the group as a whole in contrast to other groups” (p. 455). Comparable to self-stereotyping, categorization is a cognitive function of the individual based on the individual’s perception of the prototypical member of the category.

Self-categorization and the evaluation of the self-category are largely “relational and comparative” (Tajfel & Turner, 1981, p. 16) with the definition of oneself occurring relative to

other groups or categories. Intergroup comparisons motivate the attempt of groups to differentiate themselves from competitors. Differentiation occurs when individuals make group membership a salient part of the self-concept, when they are able to compare groups based on relevant attributes, and when the out-group is perceived as a relevant comparison group (Tajfel & Turner, 1981). Bartel (2001 cited in Ahearne et al., 2005) indicated “the focal organizations’ identifying characteristics become more salient and accessible when a distinct set of relevant comparisons are present” (p. 576). This suggests that the meaning ascribed to membership in groups is situated in an environment with comparable groups. For example, faculty members of the Harvard Business School would more readily compare themselves with the Yale School of Management than the local community college. This is because Yale provides a more relevant comparison group as a fellow Ivy League institution with similar characteristics to that of Harvard University. The purpose of differentiation is to competitively achieve superiority over out-groups and to attain status (Tajfel & Turner, 1981).

In effect, status is the “*outcome* of intergroup comparison” (Tajfel & Turner, 1981, p. 19 italics in original) reflecting the position of the group on a selected basis for comparison. Weber (1958b cited in Schneider, 2006) defined status as “the perceived worthiness of a person or group...[that] is normally expressed by the fact that above all else a specific *style of life* can be expected from all those who wish to belong to the circle” (p. 183, italics in original). Status is a socially expressed concept “announced to others by what a person consumes” (Schneider, 2006, p. 183). Status and brand identification can be expressed in the choice to utilize certain brands or support certain organizations. Individuals sharing status tended to follow the same patterns of resource consumption. For example, a person might choose to drive a Lexus to express identity

and membership in a high-status group. This further supports status group association and reinforces shared categorical or social identities.

Allan (2007) explained that status groups create and manage boundaries with the use of symbols and rituals. The use and maintenance of symbols and practices expresses “‘distance and exclusiveness’ from other groups” (Weber, 1925 cited in Adams & Sydnie, 2002). Similarly, Durkheim (cited in Allan, 2007) explored the common social elements of all religions in the form of symbols and totems. Durkheim found that at the heart of religion was the sacred and that sacredness can be placed on an object and expressed through association (Allan, 2007). Durkheim (cited in Allan, 2007) found that totems create a bond of kinship between peoples. They can be expressed through an emblem or logo and lead to rituals and symbols. For example, the breast cancer pink ribbon is a symbol that unites thousands of people dedicated to the search for a cure. The pink ribbon creates a connection between the people that identify with it and gather to support the cause. Durkheim (cited in Turner, Beeghley, & Powers, 1995) posited “‘totemic cults are nothing but the material symbolization of a force created by interaction and collective organization into clans” (p. 337). This statement suggests the presence of an emotional attachment or tie to the collective group surrounding a sacred symbol. Another example includes the use of a mascot in higher education. For individuals that identify with Notre Dame, the symbol might include the Fighting Irish emblem. For those identifying with Penn State, the symbol would be the Nittany Lion paw. In each case, the symbol offers a point of recognition and connection to that sense of belongingness with the group.

Durkheim (cited in Schneider, 2006) continued further by asserting a distinction between the mundane and the sacred through real human experience. Durkheim felt that the day-to-day small world of existence represented the profane while large group gatherings around a totem

represented the world of the sacred. For example, the Harley Davidson brand sponsors several week-long events each year where bikers gather by the thousands to experience a feeling of togetherness. Another example is the homecoming event at colleges and universities. During the course of these events, the individuals involved experience an energy surrounding their membership in the group. Durkheim coined this phenomenon “collective effervescence” as it referred to the “powers and feelings that people interpreted (or misinterpreted) as sacred spiritual energy” (Schneider, 2006, p. 260 parentheses in original). The totem, like the examples presented in the above paragraph, is the embodiment of the group’s spiritual energy. As in Durkheim’s work, social identity provides an outlet for groups to associate sharing a common emotional mood and common focus of attention.

It is essential to note that the groups resulting from the categorization process need not be physical in nature. Using a series of small group experiments, Tajfel (1970, 1971 cited in Tajfel & Turner, 1981) observed that the mere perception of belongingness to a group was adequate to generate discrimination and competition towards out-groups and in-group favoritism. In his experiments, Tajfel (1984 cited in Ashforth & Mael, 1989) found that in-group favoritism occurred even when the group was assigned at random with members having no prior interactions. This guided Turner to suggest the existence of “psychological groups” (Ashforth & Mael, 1989, p. 24). Members of psychological groups define themselves by the same category. However, interaction with and acceptance by other members is not required for identification in such groups. Like with colleges and universities, alumni might not know or interact with current students or faculty but still define themselves by their association with the organization. Instead, it is simply the perception of being a member of the category that permits the “psychological

reality apart from his or her relationships with its members” (Turner, 1984 cited in Ashforth & Mael, 1989, p. 24).

### **Self-Esteem Motivations and Self-Congruity Theory**

Sirgy (1982) and Dutton and colleagues (1994) asserted that individuals are motivated to enhance their self-concept by seeking experiences that maintain self-consistency, express self-distinctiveness, and enhance self-esteem. One mechanism individuals can employ to enhance the self-concept is by categorizing themselves in such a way that they enhance their self-esteem. The self-concept is the sum of the “individual’s thoughts and feelings having reference to himself as an object” (Rosenberg, 1979 cited in Sirgy, 1982, p. 287). Many identity and consumer researchers described the self-concept as a multidimensional construct comprised of the actual self, ideal self, social self, and ideal social self (see Sirgy, 1982). The actual self refers to how one perceives herself; the ideal self is how one would like to perceive herself; the social self is how one presents the self to others or the image one believes others to hold; and the ideal social self is how one would like others to perceive her (Sirgy, 1982). The multidimensional self-concept is situational and reflexive permitting variations in the association of attitudes, perceptions, and feelings held by others about the individual (Schenk & Holman, 1980 cited in Sirgy, 1982).

In 1982, Sirgy presented self-congruity theory which explained the motivational state towards a product arising from the need to enhance self-esteem, remain consistent, and express uniqueness. Self-congruity theory proposed that “consumer behavior is determined by an individual’s comparison of the image of themselves and the image of a brand, as reflected in a stereotype of a typical user of the brand” (Sirgy, 1982 cited in Helgesson & Supphellen, 2004, p. 208). Like presented in self-categorization theory, the individual holds a mental image of the

brand user or organization member thus supporting a category prototype. Self-congruity theory suggests that brand image cues evoke representations of the self-concept such that the resulting link either matches, or is congruent, or does not match the perceived self-schema. When the self-concept and perceived image of the product are salient or congruent, the individual has a higher propensity for selecting and using the product (Sirgy, 1982). For example, if brand image cues for Ben and Jerry's ice cream evoke personally held understandings of the self (i.e. socially responsible, ecologically conscious, quirky, etc.), the congruity between the person's self-concept and the organization will cause the individual to have a higher preference for the brand. Therefore, the selection of products, or in this situation association with institution of higher learning, becomes a symbolic self-expressive communication vehicle.

For a product or group association to be value-expressive it must be consumed visibly such that the symbolism displays the self-concept (Katz, 1960 cited in Sirgy, 1982). For instance, if the organization is perceived as prestigious the member gains the benefit of enhanced self-esteem by other individuals recognizing the existence of the affiliation. For example, Cialdini and colleagues (1976) in a series of three experiments showed the tendency of students to "bask in the reflected glory" (p. 366), or BIRG, by publically announcing their association with the institution after a football victory. To this end, Cialdini et al. (1976) determined that students sought to publically associate themselves with a successful other in an attempt to secure self-esteem. Another example is if an alumna perceives her alma mater to be a high prestige organization compared to relevant out-groups, she might feel compelled to donate money to enhance her self-esteem with the ability to display membership to the group with an exclusive donor bumper sticker or listing in the annual philanthropy report. In essence, a person will be motivated to associate with a positively evaluated group category to maintain a positive self-

image and social identity and likewise avoid association with a negatively evaluated social category to avoid deprecation of the self-concept.

When social identity is threatened, the individual attempts to either dissociate, alter the elements of the situation to compare the in-group and out-group on a new dimension, or seek positive distinctiveness through direct competition with out-groups (Tajfel & Turner, 1981). For example, employees of the New Jersey/New York Port Authority in the early 1990s made efforts to disconnect from their employer by leaving the organization or downplaying the association due to the negative public perception surrounding the issue of homelessness in Port Authority locations (Dutton et al., 1994). However, when the individual perceives it to be impossible to extricate themselves from a negatively perceived category or group, members use creative methods to redefine or alter the elements of comparison. In this case, an example is the “black is beautiful” social movement lead by African Americans in the 1960s. The social movement changed the values assigned to the attributes of the group so that qualities previously understood as negative, or skin color, would then be perceived as positive thereby developing a positive ethnocentric group identity (Tajfel & Turner, 1981). Group associations thus have the potential to be both positive and negative.

### **What is Identification?**

Social categorizations create identification, or the perception of oneness with a group (Ashforth & Mael, 1989). Identification occurs as a matter of degree rather than an all-or-nothing scenario (Dutton et al., 1994; Ashforth & Mael, 1989). Dutton, Dukerich, and Harquail (1994) suggested the strength of identification refers to the extent that which the self-concept is tied to the organization or brand. Identification causes an individual to psychologically perceive a connection to the group such that their fate is “intertwined with the fate of the group” (Ashforth



& Mael, 1989, p. 21). The individual, therefore, experiences the failures and successes of the group as their own. Identification thus introduces the potential for both positive and negative effects on the individual's sense of self (Dutton et al., 1994). It can lead to feelings of embarrassment, shame, and stress. For example, employees of BP, though not having direct influence over the Deepwater Horizon explosion and subsequent Florida Gulf oil spill in 2010, potentially experienced feelings of anxiety and shame due to their connection with the organization responsible for the event. While identified individuals are expected to display resilience and downplay negative information, they are also expected to react more strongly to extreme negativity as it is perceived as a breach of trust (Bhattacharya & Sen, 2003; Bergami & Bagozzi, 2002 cited in Bhattacharya & Sen, 2003). For instance, the Penn State University Jerry Sandusky child sex scandal tore through the campus community affecting alumni and stakeholders at every level. However, former student-athletes having played football under the leadership of coaches Paterno and Sandusky could potentially feel a sense of betrayal for the concealment of the crimes and thereby react to the information with anger and resentment.

As the self-concept is understood to have multiple levels, identification is also understood to occur on varying intensities. For example, alumni can identify with their major, the college that houses the major, as well as the university as a whole. Several researchers empirically tested the existence of identification on such levels as personal, group, or organization as a whole entity (Bagozzi et al., 2011; Millward & Postmes, 2010; van Dick et al., 2004; Foreman & Whetten, 2002; van Knippenberg & van Schie, 2000). Van Knippenberg and van Schie (2000) confirmed the hypothesis that work group identification is stronger than organization level identification and more correlated with satisfaction, turnover, motivation and involvement. Similarly, van Dick and colleagues (2004) exposed evidence of lower level group identification as well as

higher level abstract identification by surveying German school teachers and bank accountants. More recently, Bagozzi and colleagues (2011) tested three dimensions of identification across four focal targets using the Ducati motorcycle company. Their research highlighted that small group and virtual communities (lower level) supported stronger identification scores than the higher level targets of brand and company. Likewise, Millward and Postmes (2010) found that lower level foci offered higher levels of identification. The findings from each of these studies support the notion that identification occurs at varying levels of the organization with diverse attitudinal and behavioral outcomes. Operating under the assumption that identification influences donor behaviors, the findings from these studies also offer a potential explanation for why alumni fundraising campaigns are thought to be more successful at the lower (major or departmental) levels compared to generic university-wide efforts.

As previously mentioned, there are four components of social identity and identification including cognitive, affective, evaluative, and behavioral. There is widespread acceptance of the cognitive nature of identification. In essence, the knowledge of one's membership in a group supports identification (refer to the psychological group example above). However, some disagreement exists surrounding the existence of the affective component (Edwards, 2005). Those researchers supporting the notion that identification is strictly a cognitive construct argue that emotional aspects are outcomes of the cognitive processes (Bergami & Bagozzi, 2000 cited in Edwards, 2005; Ashforth & Mael, 1989). Other scholars suggest that the emotional aspects are engaged by the sense of belongingness and that the affective component of identification cannot be entirely separated from the cognitive element (van Dick et al., 2004; Ellemers et al., 1999; Harquail, 1998 cited in Edwards, 2005). A richer and more thorough explanation of the

measurement of the different components of identification is presented in a later section of this chapter.

Identification is a powerful construct capable of situating a person or entity (Albert, Ashforth, & Dutton, 2000). Identification can be applied across levels of analysis having implications for micro and macro phenomena. As such, the theories supporting identification emerge from the symbolic interactionist, conflict and functionalist paradigms. Several researchers explained the process of self-concept and categorization from the symbolic interactionist perspective (Stryker & Stratham, 1985 cited in Turner et al., 1994; Schenk & Holman, 1980 cited in Sirgy, 1982). Blumer (1969 cited in Calhoun, Gerteis, Moody, Pfaff, & Virk, 2007) recognized four central concepts of symbolic interactionism. First, people act on the basis of the meanings they have given to objects in their world. Second, people are associated through a process of making and interpreting indications. Third, social acts are constructed where actors observe, interpret and assess situations. Lastly, the “complex interlinkages of acts that comprise organization...are moving and not static affairs” (Blumer, 1969 cited in Calhoun et al., 2007, p. 69). From this account, the self is socially categorized by taking on the role the individual wishes others to have and varying the role based on situational determinants. The self is thus constructed and negotiated based on interactions.

In contrast, Turner and colleagues (1994) asserted that the self emerges from cognitively categorizing the self in relationship to others. From the functionalist paradigm, the act of categorizing the self and others into cognitive groupings creates order in the social environment. Functionalism focuses on that which holds society together. In this case identification refers to shared social identity and is a mechanism of increasing solidarity for members of a focal organization. However, Turner rejected the functionalist model that assumes society as an

organized institution for a conflict model where group conformity to norms is the result of acceptance of group expectations (Turner, 1991 cited in Turner et al., 1994). Even this perspective of a conflict model tends towards the theories of Coser who was deemed a “conflict functionalist” (Turner, 1986, p. 166). Coser asserted that conflict is a process that supports the functioning of the vital parts of a social entity. From Coser’s perspective, conflict strengthened, maintained, and reestablished system integration. Coser proposed that low intensity conflict encouraged the creation of group norms and conformity to these norms reduced tension. In this example, identification creates boundaries between in and out-groups. As a group experiences external conflict the boundaries are fortified, norms of behavior are validated, and members can expect to experience greater solidarity (Allan, 2007).

### **What Identification is Not**

Perhaps the most similar construct, and the one most often confused with identification, is organizational commitment. Organizational commitment refers to “the relative strength of an individual’s identification with and involvement in a particular organization” (Mowday, Porter, & Steers, 1982 cited in Riketta, 2005, p. 361). Commitment is not rooted in social identity theory or self-categorization theory (Ashforth et al., 2008). In the case of commitment, the individual and the organization remain separate entities contrasting the understanding of identification as the perception of oneness with the group. Commitment centers on the attitudes one holds in regard to the organization (van Dick et al., 2004). Commitment is thereby conceived as a broader construct than identification relating to factors such as acceptance of organizational goals, willingness to work hard in the name of the group, and a desire to maintain connection to and position within the organization (Riketta, 2005).

Then there are the explanations that suggest each is a nested construct within the other. One such approach suggests that identification is a part of commitment. For example, O'Reilly and Chatman (1986 cited in Herrbach, 2006) presented three dimensions of commitment including congruence between organization and individual values, identification, and involvement. The reverse perspective asserts that commitment is a part of identity (Van Dick et al., 2004; Ellemers et al., 1999). From this vantage point, commitment is the result of the self-categorization process. Still, empirical evidence is inconsistent on whether commitment and identification are distinguishable and distinct constructs.

One of the most thorough studies addressing the two similar constructs was conducted by Riketta in 2005. Riketta (2005) conducted a meta-analysis and compared the correlates of identification and commitment. Riketta (2005) found that the correlation, though not perfect, represented 62% shared variance. Nevertheless, identification was found to be distinct from commitment as the correlates for each construct differed. Many researchers indicated that identification is not associated with specific behaviors and is strictly a perceptual and cognitive construct (van Knippenberg & van Schie, 2000; Ashforth & Mael, 1989) that is correlated with variables about the organizational identity, salient rival organizations and attractiveness (van Knippenberg & Sleebos, 2006 cited in Ashforth et al., 2008; Edwards, 2005; Dutton et al., 1994; Mael & Ashforth, 1992). In addition, Herrbach (2006) found that identification, unlike commitment, can also be associated with negative emotions and experiences. Meanwhile, commitment is associated with satisfaction and absenteeism whereas identification is more commonly associated with job involvement and extra-role behaviors (van Knippenberg & Sleebos, 2006 cited in Ashforth et al., 2008; Riketta, 2005).

## **Summary**

In review, social identity is the self-image derived from categorical group membership. Social identity theory and self-categorization theory indicate that people categorize the self and others into groups. The act of categorization situates the self in an ordered environment and decreases uncertainty. Individuals categorize the self based on the need maintain self-consistency, express self-distinctiveness, and enhance self-esteem. Self-congruity theory suggests when a person perceives the brand or group to be salient with the actual, ideal, social, or ideal social self-concepts, the individual experiences more preference for the entity. Categorization, and subsequent identification, is relational and comparative to relevant out-groups. Identification occurs as a matter of degree based on the extent to which the self is tied to the organization. Identification occurs at multiple levels (i.e. Major, Department, and University) and encompasses four known components including awareness of membership, emotional attachment, comparison to relevant others, and behavior on behalf of the group or based on group norms. Lastly, though similar, identification is conceptually distinct from organizational commitment.

## **Formation of Brand Identification**

Brand identification is related to how an individual perceives the entity in question. The process of interpreting the brand is understood to include the acts of sensegiving, sensemaking, and narrative creation (Press & Arnould, 2011; Ashforth et al., 2008; Escalas, 2004; Humphreys & Brown, 2002; Ligas & Cotte, 1999). Each of the three mechanisms involves the communicative channels between the organization and the individual. For example, sensegiving refers to the projector role of the exchange and involves the efforts of the organization to direct the “meaning construction of others toward a preferred redefinition of organizational reality”

(Gioia & Chittipeddi, 1991 cited in Ashforth et al., 2008, p. 342). It refers to the efforts and tactics used by the organization to guide the thoughts and behaviors of members. These tactics include branding efforts, relationship marketing techniques, use of specific language, and the formation and execution of organization specific rites and rituals.

Scholars exploring the link between communication and identification have found the relationship to be statistically or conceptually significant (Kuenzel & Halliday, 2008; Bhattacharya & Sen, 2003; Smidts, Pruyn, & van Riel, 2001). For example, Smidts and colleagues (2001) collected data on three diverse organizations to determine if communication to employees and communication climate affected identification. Similarly, Kuenzel and Halliday (2008) investigated communication, along with additional variables discussed later in this chapter, as a potential antecedent of identification. Both studies employed modified versions of the identification scale created by Mael and Ashforth (1992) and both studies used structural equation modeling (LISREL) analysis. Smidts and colleagues (2001) found that communications augment perceived prestige which leads to employee identification. Another contribution of their research is the finding that communication climate is more related to identification than communication content. The authors accounted for this occurrence by alluding to social identity theory and how positive communication climates form increased feelings of in-group belonging (Smidts et al., 2001). Kuenzel and Halliday (2008) used a two-item scale to measure communication which was far fewer statements than the modified 28-item Smidts et al. (2001) scale. Still, Kuenzel and Halliday (2008) found communication to have significant effects on identification. In a conceptual review, Bhattacharya and Sen (2003) proposed a model of consumer-company identification. The authors proposed that organizational identity is conveyed through communication of documents, reports, signs, and

symbols (Bhattacharya & Sen, 2003). From their perspective, identification is based on perceptions of the organizational identity shaped by such attributes as the mission, structure, and climate (Bhattacharya & Sen, 2003). Such communications assist in the establishment of a relationship between individual and organization by stimulating the interpretation of the brand in the mind of the consumer.

Sensemaking, in contrast to sensegiving, is the internal meaning construction conducted by the individual and based on the communications as they attempt to understand and create order in their environment (Press & Arnould, 2011). If sensegiving is the projector role of the exchange, sensemaking refers to the receiver role and surrounds an internal narrative process. Individuals create stories to organize their lives into experiences. It is the personal interpretation in accordance with the individual's life and experiences that determines the meaning of brands and organizations. Consumers then "match incoming narrative information to episodes stored in memory to comprehend the information" (Escalas, 2004, p.169). The new narrative can result in three outcomes. First, the story matches with a previously existing memory and can cause beliefs and experiences to be reinforced. Second, the new story can help to fill gaps in information from previous experiences. And finally, the new story can provide definitive information about things that were not previously understood (Escalas, 2004).

Humphreys and Brown (2002) are the only two researchers located in an extensive literature search to explore narratives of organizational identification in a higher education setting. Humphreys and Brown (2002) evaluated the quest for university status as experienced by senior managers of Westville Institute in the UK. Using an ethnographic study including 42 semi-structured interviews and observations, the authors analyzed organizational identification amongst the institute staff. The leaders at Westville Institute sought to create an organizational



identity that valued the attainment of university status. As such, Humphreys and Brown (2002) analyzed the varying narratives of interview participants to see if the unsuccessful, expensive public campaign for university status produced crisis for organization members. The findings suggest that identification narratives evolve over time. The researchers found that the separation of construed external image and aspirations caused break-downs for the senior staff and the narratives that they held surrounding the institute. The researchers also found issues of power and authority emergent from senior manager narratives. Some staff experienced a sense of exclusion and subsequently disidentified with Westville. Disparate narrative themes emerged based on insensitivity of senior managers. Though the researchers encountered ethical objections from the institute that ceased the study for over a year, the researchers completed the research and concluded that university narratives cannot be constituted monologically. In doing so, the authors argued, the organization disabled and discredited the dynamic nature of a kaleidoscope of interpretative narratives (Humphreys & Brown, 2002).

Similarly, though more relevant to the present study, Escalas (2004) used an experiment to determine if narrative processing related to a connection between the self and the brand which, in turn, influenced attitudes and behaviors. As individuals think in a “story-like” (Escalas, 2004, p. 168) progression, a link is formed between the brand and the self. This self-brand connection (SBC), or the dependent variable in the study, is considered the degree to which the individual incorporates the brand into the self-concept (Escalas, 2004). The explanation of SBC is comparable to the explanations of brand identification as presented by Dutton and colleagues (1994). To reiterate from Chapter 1, Dutton et al. (1994) defined brand identification as the degree to which a member defines herself in terms of the organization and that membership in the organization then shapes the self-concept. So, in essence, Escalas (2004) tested whether

narrative processing leads to enhancement of SBCs, a construct like identification. Though Escalas (2004) used a nonrandom sample of university students, the experimental design included random assignment of the student participants. The experimental treatment included narrative advertisement storyboards immediately preceded and followed by questionnaires. Escalas (2004) found that narrative processing enhanced SBCs which effected attitude towards the brand and intent to purchase.

As with the consumer behavior scholarship, sensemaking is the process that individuals experience surrounding the interpretation of the personnel, marketing, branding, and communications (Fournier, 1998 cited in Press & Arnould, 2011). Press and Arnould (2011) qualitatively examined how identification forms by interviewing members of a community agriculture program and employees of an advertising agency. The researchers interviewed each participant three times over the course of the study to collect longitudinal data. This permitted the researchers to clearly see the process of identification formation. The authors found three emergent paths leading to identification with the organization. First, the authors suggested an instantaneous identification they called epiphany. Epiphany supports the easy adaptation of an individual to an organization and occurs when similarities between the self and organization are previously recognized and confirmed on contact. Second, Press and Arnould (2011) found that emulation occurs as a gradual process involving multiple iterations of exchanges between organization and individual. The final path to identification, termed exploration, forms over time and is perceived to be an emotional and intellectual exercise. In this path, individuals compare the communication exchanges weighing the sensemaking and sensegiving efforts against their current life position. In each case, Press and Arnould (2011) found value change to be part of “the iteration process of identity formation” (p. 660). The data from their research suggested a

far less deterministic model but still presented evidence for identification influencing a change in values of the individual.

### **Antecedents of Identification**

The antecedent variables accepted in the brand identification literature are remarkably similar to those found in the alumni donor research as suggested in Chapter 1. For example, researchers of identification explore precursors, or antecedents, and related attitudinal or behavioral outcomes. Similarly and as previously suggested, researchers of alumni donor behaviors examine characteristics that could precede supportive and positive organizational outcomes. Both the alumni and identification literature investigate variables related to the individual, the organization, and the communication exchanges between both parties. Subtle differences, however, exist in the two threads of literature. Specifically, identification research demonstrates the theoretical and statistical significance of brand image, defined here as the total conceptualization of a brand based on its attractiveness, distinctiveness, self-expressive value, and prestige. The following paragraphs review literature surrounding the interpretation of brand image and brand experience variables. As previously stated, preference is given to those studies conducted in a higher education environment trailed by those pieces from the for-profit and general nonprofit sectors that are most relevant to the current research. This section ends with a summary of the literature surrounding the antecedents of identification.

#### **The Mael and Ashforth Landmark Study**

Prior to a thorough analysis of the literature surrounding antecedents of identification such as brand image, it is important to note the contributions of Mael and Ashforth (1992) to the study of identification. Mael and Ashforth (1992) presented the first study applying organizational identification to the field of higher education. In this study, the authors tested a

proposed model of identification using alumni of a male religious college. Using social identity theory, the authors constructed a definition of organizational identity and hypothesized a list of organizational and individual antecedents. The authors hypothesized that distinctiveness, prestige, interorganizational competition, intraorganizational competition, sentimentality, and presence of a mentor would affect brand identification. The authors posited that brand identification would then affect positive outcomes like donation, recruitment, attendance at events, and positive word-of-mouth (WOM) support.

Mael and Ashforth (1992) randomly sampled 700 of 2,000 alumni. The alumni office at the school mailed the questionnaires directly. Two-hundred and ninety-seven usable responses were returned for a response rate of 42%. The authors conducted a regression analysis and tested identification as a mediator by using the Baron and Kenny (1986) methodology. The results indicated that the organizational antecedents of prestige, distinctiveness, and internal competition (negative) are associated with identification. The results showed that the individual antecedents of satisfaction, tenure, and sentimentality are associated with identification. The authors also found recency of attendance, number of schools attended, and existence of a mentor not to be associated with identification. The outcomes of donations, legacy, and participation were associated with identification. Though interorganizational competition was not found to be statistically significant in the Mael and Ashforth (1992) study, this current study includes the variable as an outcome of identification. As identification is seen as relational and comparative (Tajfel & Turner, 1981), and as the focal institution is part of a greater university system, it introduces the opportunity to retest the variable in a setting more conducive to interorganizational comparisons.

This article is well cited by the scholarly community. Mael and Ashforth (1992) provided an influential contribution to identification research including a thorough explanation of the brand identification construct and theoretically based antecedents and outcomes. However, perhaps their most significant contribution included the measurement tool that has been used and replicated by many other scholars. Specifically, the authors constructed original identification and prestige scales considered easily adaptable and reliable ( $\alpha=.87$  and  $.77$  respectively). The scale, though constructed for use at an all-male religious institution thus introducing the question of applicability, is highly regarded as the best option when measuring identification (Riketta, 2005). While the study is strong and influential there are a few weaknesses to note. For example, some alumni did not receive the questionnaire due to living overseas or changing location suggesting potential sampling bias. The authors indicated it was not possible to assess sampling bias due to the college not keeping demographic records. Mael and Ashforth (1992) also neglected to report on regression criticism procedures as well as issues of validity.

### **Interpretation of Brand Image**

Brand image is the conceptualization held in the mind of the individual surrounding the organization's level of attractiveness, distinctiveness, self-expressive value, and prestige. Attractiveness is the positive mental associations of the brand or how magnetically drawn an individual feels to the brand. This study defines distinctiveness as uniqueness and recognizable difference in comparison to other relevant entities. Self-expressive value refers to the amount of opportunity presented by the brand for a person to express their self-concept. Lastly, prestige refers to an individual's beliefs about the perception of the brand held by others. Together these four concepts combine to create the brand image held in the mind of the individual.

**Attractiveness and self-expressive value.** An immediate gap in the brand identification literature materialized around the brand image variables of attractiveness and self-expressive value. Though both variables were presented in the early theoretical work of Dutton and colleagues (1994) and Bhattacharya and Sen (2003), only Kim et al. (2001), Dukerich and colleagues (2002), and Ahearne et al. (2005) empirically tested them. Dutton and colleagues (1994) applied concepts presented by Ashforth and Mael (1989) and developed a model of organizational identification surrounding organizational identity and construed external image. Similarly, Bhattacharya and Sen<sup>6</sup> (2003) proposed a model of consumer-company identification based on the earlier works of Mael and Ashforth (1992) and Dutton et al. (1994). In both models, the authors proposed that the attractiveness of the organizational identity would strengthen identification. The authors also noted that the attractiveness was subjectively evaluated based on the need for self-continuity, self-distinctiveness, and self-enhancement (Bhattacharya & Sen, 2003; Dutton et al., 1994).

Kim and colleagues (2001) explored the effect of brand personality on brand asset management by using the concept of brand identification in the cellular phone industry. The authors proposed that attractiveness, distinctiveness, and self-expressive value of the brand along with brand identification would affect brand loyalty and positive word-of-mouth (WOM). The authors sampled 180 university students in Korea of which 150 responded for a response rate of 83 percent. The authors found positive relationships between attractiveness, distinctiveness, and self-expressive value of the brand and that these relationships affected consumer brand identification. The results indicated that brand identification had a direct effect on WOM.

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<sup>6</sup> Bhattacharya and Sen (2003), in their model, also proposed identification to affect loyalty and resilience to negativity. The first of these variables was also examined by Kuenzel and Halliday (2010) who found the relationship to be statistically significant and Kim et al. (2001) who found the relationship to be statistically insignificant. These variables are excluded from the current study as limited research has shown them to be correlated with identification and alumni donor behaviors.

Several issues arose with the reliability and validity of this study. First, the authors relied on prior validation of seven different instruments without making changes for their target population. Next, the researchers found that the distinctiveness measurement was “generally reliable” but only achieved a Cronbach’s alpha of .50. This level is far less than the acceptable .70 baseline established by Nunnally (1978). Also with the measurements, the authors’ model goodness of fit assessment was actually lower than what is generally accepted in literature. Kim et al. (2001) conducted their study in the for-profit cellular phone industry in Korea. As none of the empirical studies in higher education brand identification include these theoretically-driven variables, the current study incorporates them to further explore their relationship to brand identification.

Building on the theoretical model established by Dutton, Dukerich, and Harquail (1994), Dukerich and colleagues (2002) used the theoretical model to understand voluntary cooperative behavior of professionals. The study explored attractiveness as a precursor of identification by using focus groups and a cross-sectional survey of physicians. Though the study used a survey, it was a time series design as the data were collected at two points in time. The authors surveyed over 1,500 physicians and received 258 usable responses. The authors found that attractiveness was positively related to identification. Though the findings lent support for the correlation of attractiveness and identification, the instrument appeared quite similar to a satisfaction measure. Also, the authors referred to additional paths in the path analysis that were not represented in the hypotheses.

Later, Ahearne and colleagues (2005) empirically tested organizational identification in context of the customer-company (C-C) relationship. The authors created a model that suggests construed external image, perception of boundary spanning agents, and perception of company

are antecedents of C-C identification. The variable called “perceived company characteristics” referred to the attractiveness of the brand. Based on the work of Dutton and colleagues (1994), Ahearne et al. (2005) asserted that the motivational needs of the self drives individuals to select companies that have attractive characteristics. Ahearne et al. (2005) indicated that C-C identification is likely to occur in contexts when: 1.) the product/service is important to the customer, 2.) the company is distinct among comparisons, and 3.) the customer has frequent interaction with the product or service and employees. These three contexts motivated the researchers to select an industry where the pre-existing contexts would be met. Ahearne et al. (2005) surveyed a random sample of 2,000 physicians. The authors used an instrument similar to that of Sen and Bhattacharya (2001) and Bagozzi and Bergami (2002, cited in Ahearne et al., 2005) to capture perceived company characteristics. Though the exact reliability score was not presented, all measures achieved Cronbach’s alpha scores above .70. One hundred and seventy-eight physicians returned the completed survey for a low 9 percent response rate. Through the use of structural equation modeling (LISREL) the authors found that identification fully mediates the relationship between perceived company characteristics and extra-role behaviors.

**Construed external image and distinctiveness.** Perhaps the most commonly explored antecedent of identification is construed external image, or prestige. Reiterating from the *Theoretical Underpinnings of Identification* section, individuals are motivated to enhance their self-concept. As such, individuals look to prestigious brands and organizations as vehicles to express the self-concept and experience positive self-esteem. In the higher education brand identification literature, all seven quantitative studies (Porter et al., 2011; Newbold et al., 2010; Kim et al., 2010; Sung & Yang, 2008; Arnett et al., 2003; Mael & Ashforth, 1992; Cialdini et al., 1976) and two qualitative studies (Drezner, 2009; Balmer & Liao, 2007) included prestige as a



potential antecedent of identification. The earliest of these was the landmark study conducted by Cialdini and colleagues (1976).

Cialdini et al. (1976) tested the tendency of an individual to publicly announce their association with successful others, or “bask in the reflected glory” (p. 366) (BIRG). Though the article did not look specifically at identification as the construct was not theoretically developed at that point, the study was the first to explore self-affiliations with a team entity. The authors covertly monitored the apparel of students in an introductory psychology course at seven large universities on a Monday after a football game. The researchers assessed if more team apparel was worn after a victory that preceding weekend. The authors then conducted two separate phone surveys, first of 173 undergraduates and then with 170 undergraduates, with experimental manipulations to see if more “we” pronouns were used if the team won.

The findings included a higher presence of school apparel on Mondays after a football win thus supporting the BIRG phenomenon. This finding suggested that an individual publicly seeks to associate herself with a successful or prestigious entity. Then the authors analyzed pronoun usage (“we”) during phone interviews. The authors found support for the theory in that subjects used “we” more with a positive than negative outcome particularly when public prestige was threatened. Though the Cialdini et al. (1976) article is widely cited in the literature, the study occurred at Division I schools thus questioning the transferability to smaller Division II and Division III institutions. Still, in the three studies, the authors found this BIRG effect to occur even when the individual in question had nothing to do with the source of success. Instead it is the affiliation or membership that is enough to elicit a public announcement of the connection. Like Mael and Ashforth (1992), the authors’ findings lend support for the

theoretical understanding surrounding the need to enhance self-esteem through self-categorization with a prestigious entity.

Like Cialdini et al. (1976), several other authors included prestige in their models as an antecedent of brand identification in higher education (Porter et al., 2011; Newbold et al., 2010; Kim et al., 2010; Drezner, 2009; Sung & Yang, 2008; Balmer & Liao, 2007; Arnett et al., 2003). Arnett and colleagues (2003) explored relationship marketing in conjunction with identity salience in an effort to see if participation, reciprocity, prestige, and satisfaction influenced donor likelihood. Identity salience refers to the tendency of individuals to categorize the self into hierarchically arranged identities and that those most relevant categories can affect behavior (Arnett et al., 2003). Though the study did not use a measure of identification, the identity salience concept comes directly from the social identity theory literature and supports the notion of self-categorization and self-definition driving behavioral patterns. Using a model constructed from social identity theory and social exchange theory, the authors modified the survey instrument from Mael and Ashforth (1992) and queried 4,481 alumni for three separate years at one institution. Using the survey and secondary data, the authors found that identity salience mediated the relationship between participation and prestige and donating or promoting. Prestige was found to be related to identity salience and to the respondents' level of satisfaction.

Sung and Yang<sup>7</sup> (2008) assessed the impact of institutional image and image-related constructs on student's support attitude. The authors hypothesized that the organizational image drives a student's commitment to and identification with organization. Sung and Yang (2008) asserted that minimal research has been conducted on service oriented organizations like

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<sup>7</sup> Sung and Yang (2008) also found brand personality and reputation to be significantly related to identification. Reputation, however, was found to have a weak impact on supportive behaviors. Kuenzel and Halliday (2010) also explored reputation and found it to influence identification. As the reputation construct is similar to institutional prestige, and as these are the only two studies located in a thorough literature search that included the variable in the model, it was omitted from analysis in the current study.

universities. The authors used a census sample of 2,800 university freshman and received 1,642 returned instruments. The authors used structural equation modeling (AMOS) and found prestige to affect supportive behaviors. Put simply, image (independent variable) affected attitude (dependent variable).

Approaching the higher education experience from both academic and athletic perspectives, Kim and colleagues (2010) and Porter et al. (2011) proposed that athletic and academic prestige affect identification. Kim and colleagues (2010) investigated the effects of identification with academic and athletic programs on university identification and intent to support the institution. The authors used a cross-sectional survey of 306 students from three universities in Korea. The results of the study showed perceived prestige of athletics on identification with athletics and perceived prestige of academic department on department identification had a positive direct effect. This study gave a clear and direct explanation of identification. The study also explored multiple targets for identification, something that was not previously explored in this context. Several criticisms of this study surfaced, however. First, the researchers used nonrandom sampling techniques. Next, the conceptual model is too simplistic including only athletic and academic prestige as antecedents of identification. This presents the chance that variables have been omitted and thus cannot be controlled for statistically. The authors proclaimed that their model experienced a low goodness of fit measurement and root mean square error (Hair, Anderson, Tatham, & Black, 1998 cited in Kim et al., 2010). This could be due to the overtly simplistic model.

Similarly, Porter, Hartman, and Johnson (2011) tested a general model of giving. The authors explored two categories of antecedents: factors in the external environment that elevate perceived status, and individual experiences. The authors used a web-based survey instrument of

mid-career professionals and executives. Porter and colleagues (2011) employed Mael and Ashforth's (1992) survey instrument and achieved high levels of reliability for the prestige and identification scales ( $\alpha = .80$  and  $.90$  respectively). The authors used multiple regression and Baron and Kenny's (1986) approach to mediator analysis. In the multiple regression model, the authors found perceived prestige and perceived athletic prestige to be statistically significant in their relationship to identification.

Porter et al. (2011) provided a more thorough and comprehensive model than did Kim et al. (2010). While the study provided a logical model categorizing antecedents as environmental or individual experiences, several concerns arose when reading this article. First, the authors wrote about alumni but sampled two different populations, mid-career professionals and executives. This left the authors with a sample of 110 alumni from 74 different colleges from 26 different states. The authors did not give detail on the decision to sample this way aside from the suggestion that the two groups reflected more of an alumni base of university having individuals from all ages and diverse backgrounds. I would venture to question why the authors chose not to use alumni then if they wanted the sample to reflect an alumni base. The authors also did not provide insight or anticipations on how the breakdown of types of colleges, listed as 25 private and 44 public though not totaling 74, might affect identification. Lastly, though the authors sampled two separate populations they analyzed them together.

The last three studies from the higher education brand identification literature (Newbold et al., 2010; Drezner, 2009; Balmer & Liao, 2007) highlighted both prestige and distinctiveness as antecedents of identification. Distinctiveness refers to the uniqueness and recognizable difference in the organization when compared to other relevant entities. Balmer and Liao (2007) analyzed the relationship between student and institution through the lens of corporate brand

identity. The authors proposed that students are not customers but life-long organization members of a corporate brand community. Balmer and Liao (2007) used qualitative inquiry in the form of focus groups and semi-structured interviews. The authors looked at three groups: one at the university main campus, an overseas collaborative campus, and those who started overseas and transferred to the main campus. The findings suggested that there are three types of student identification: brand member, brand supporter, and brand owner. Brand member referred to the individuals studying at the overseas partner institute experiencing identification with the institute and having low or nonexistent knowledge of brand manifestations. Brand supporter alluded to the group that started abroad and finished at the university main campus. These students experienced a shift of primary affiliation. The last category, brand owner, refers to the individuals that permanently reside at the main campus. These students noted the importance of prestige and the sense of membership in the brand community. The study is unique as it explored identification across a university and satellite location. Although the authors suggested that student identification is related to reputation, prestige, brand community, ethos and identity, and differentiation, the authors did not say how these antecedents actually affected the formation of identification amongst the three groups. From a methodological standpoint, the authors did not provide a mix of reporting and direct participant quotes, did not provide an audit trail, nor did they indicate how many focus groups or interviews were conducted.

Like Balmer and Liao (2007), Drezner (2009) also used qualitative methods to gain fuller understanding of identification. Drezner (2009) conducted a qualitative study that suggested prestige and distinctiveness are influential over identification during a program evaluation of the United Negro College Fund's (UNCF) National Pre-Alumni Council (NPAC) at historically

black colleges and universities (HBCU). Drezner (2009) used a different conceptualization of prestige as it related to the African American student community. Drezner (2009) referred first to prestige in the modified model from Mael and Ashforth (1992). However, after referencing the model, the author expressed the concept of racial uplift as a mechanism of enhancing the self-concept. The author investigated if prosocial behaviors can be learned and encouraged through establishing a bond with the school. Using social identity theory, the author explored whether relationship marketing and social exchange assisted in developing identification at HBCs. Drezner (2009) conducted a series of 25 semi-structured interviews, document analyses, and observations. The author purposively sampled 13 students and four advisors from 13 HBCUs. The author cross checked information by institutions with multiple stakeholders and compared the interviews with the documents as a form of triangulation. Drezner (2009) found that the program created connections to the university, taught students how to be supportive and fostered stronger ties. The author contributed to the literature by applying the theoretical model created by Mael and Ashforth (1992) to the African American student population.

Applying social identity theory to a primarily commuter college campus, Newbold and colleagues (2010) developed an alumni relationship model. The independent institutional variables included distinctiveness and prestige. The authors conducted a cross-sectional research study and focus groups. The authors found institutional distinctiveness and prestige to be positively correlated to identification. Though the researchers found these variables to be significant, several criticisms emerged from the choice of statistical tests and design. First, the exact number of individuals sampled was not provided. Also, the authors failed to assert if the focus groups yielded the survey instrument or how they created the instrument. Also, the model is counter intuitive to the theories underlying identification as the authors chose to link individual

antecedents to involvement and not to identification or outcomes directly. The authors used Pearson correlation coefficients to assess the relationships between interval data and nominal data was analyzed with t-tests. The authors make assertions regarding the results of the correlation analysis. However, as the chosen statistical tests are less robust, caution should be observed when interpreting the results.

In the for-profit and general nonprofit sectors, several authors studied prestige and distinctiveness as they related to brand identification (Boroş et al., 2011; Kuenzel & Halliday, 2008; Carmeli, Gilat, & Waldman, 2007; Carmeli, Gilat, & Weisberg, 2006; Fuller, Marler, Hester, Frey, & Relyea, 2006; Ahearne et al., 2005; Bhattacharya & Sen, 2003; Kim et al., 2001; Smidts et al., 2001; Bhattacharya et al., 1995; Dutton et al., 1994). Again, Dutton and colleagues (1994) and Bhattacharya and Sen (2003) in their theoretical presentations suggested a model that proposes prestige and distinctiveness as antecedents of identification. Both articles suggested that individuals are “sensitive to how they think outsiders view the organization” (Dutton et al., 2004, p. 248). As such, the authors propose that individuals gain social value through association with an organization and thus the more prestigious the individual perceives the entity the stronger the identification. In a related sense, individuals consistently attempt to resolve the tension between being similar to others and different from others (Bhattacharya & Sen, 2003). This need for distinctiveness prompted Dutton and colleagues (1994) and Bhattacharya and Sen (2003) to indicate that members acquire distinctiveness from the uniqueness of the focal organization which further affect the construed external image.

Two studies (Carmeli et al., 2007; Carmeli et al., 2006) focused specifically on prestige as the primary antecedent to identification. Carmeli and colleagues (2006) examined the perceived prestige in three stakeholder groups, customers, competition, and vendors as it relates

to identification. The authors surveyed 217 employees of four electronic companies in Israel. Of 217, the authors received 182 returned surveys. Carmeli and colleagues (2006) found that prestige was significant and positively related to identification for each of the three stakeholder groups. In a second study, Carmeli and colleagues (2007) put a unique twist on the analysis of prestige as an antecedent to identification. The authors broke prestige down into two sub constructs, social responsibility and financial performance. The authors indicated that prestige is derived from these two sub constructs that are perceived differently by individuals. The authors surveyed 217 employees and their direct managers of four competing electronics companies in Israel. The authors collected 161 usable surveys (matched employee and supervisor). Though the sub constructs are highly correlated, the authors found social responsibility to be significantly related to identification. However, the authors also found that the financial performance of the company did not relate to identification. This multidimensional perspective of prestige is uncommon to the identification literature which, instead, frequently defines the construct as how outsiders evaluate the entity.

Two studies explored construed external image and need for identification in relation to brand identification (Boroş et al., 2011; Fuller et al., 2006). The need for identification refers to an individual's personal propensity to identify with social groups. Need for identification suggests the individual's "desire to be 'imprinted upon'" (Glynn, 1998 cited in Boroş et al., 2011, p. 113). Those individuals with high need for identification may attempt to publicly identify with organizations more than those with a lower need for identification. Therefore this need to identify will be reflected in the individual's desire to use the organization as a mechanism of enhancing self-esteem, or expressing self-continuity and self-distinctiveness.



Fuller and colleagues (2006) explored the relationship of construed external image and organizational identification through the moderating influence of need for self-esteem. Fuller and colleagues (2006) used Mael and Ashforth's (1992) identification scale and Riordan, Gatewood, and Bill's (1997 cited in Fuller et al., 2006) prestige scale. The authors measured need for self-esteem with the use of Hill's (1987 cited in Fuller et al., 2006) scale. The authors described the need for self-esteem as the desire for attention and admiration from relevant others. Though slightly different from need for identification, or the desire to foster a sense of belonging attached to a group, need for self-esteem addresses the existence of differences across individual self-needs. The authors surveyed 305 employees of a health services company. The authors received 251 returned surveys though only 191 were usable for a response rate of 64%. The authors found that construed external image was positively correlated with identification. Fuller and colleagues (2006) also found that the interaction between prestige and need for self-esteem was statistically significant. In essence, a strong relationship exists between construed external image and identification for those individuals that had a high need for self-esteem. Conversely, the authors found no relationship between prestige and identification for those with low need for self-esteem.

Boroş and colleagues (2011) explored the three facets of identification as presented by Ellemers et al. (1999) including the cognitive, evaluative, and emotional aspects. The authors used two antecedents including perceived prestige and need for identification. Boroş et al. (2011) sampled 300 men and 63 women from three Romanian organizations. The author used Mael and Ashforth's (1992) identification scale ( $\alpha=.85$ ), the affective commitment scale from Myer and Allen (1991 cited in Boroş et al., 2011), and evaluative identification scale from Ellemers et al. (1999). The authors found perceived prestige to have a large impact on both

cognitive and evaluative identification but not on commitment (Boroş et al., 2011). Need for identification showed just as strong links with the three dimensions of identification as did prestige. The authors interpreted this result such that identification does not only occur in response to the need for enhanced self-esteem. Stating it in another way, individuals do not only identify with high prestige organizations. As the authors hypothesized, prestige was highly correlated with need for identification. While the authors paid attention to the integrity of their data by testing for convergent validity, discriminant validity, normal distribution, and kurtosis, the authors neglected to reveal the sampling frame and any efforts to reduce sampling or nonresponse bias.

Finally, five studies conducted in the for-profit or general nonprofit sectors analyzed prestige in a brand identification model with other antecedent variables (Kuenzel & Halliday, 2008; Ahearne et al., 2005; Dukerich et al., 2002; Smidts et al., 2001; Bhattacharya et al., 1995). Bhattacharya<sup>8</sup> and colleagues (1995) suggested that customers identify with organizations as members. The authors proposed bringing customers inside as members as a way to increase identification and create a sense of belongingness. Using social identity theory, the authors created a model linking organizational and product characteristics (perceived prestige, confirmation of expectations), affiliation characteristics (length of membership, visibility of membership, participation in similar organizations), and activity characteristics (contact, donation) to member identification with the organization.

Bhattacharya et al. (1995) conducted three focus groups with eight to ten members in an effort to develop the instrument. The authors surveyed 1,043 museum members from a list of

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<sup>8</sup> Bhattacharya and colleagues (1995) also explored donations as an antecedent of identification. This was the only study found in the identification literature to perceive donations as a precursor to identification. The authors operationalized donations as a frequency variable and found no statistically significant relationship to exist. This study addresses donation behavior in a later section as an outcome of identification.

14,274 members. The authors used stratified proportionate sampling and ended with a 306 usable responses. The authors found that a higher level of organizational prestige is associated with higher levels of identification. Participation in other similar organizations is negatively related to identification. Visibility of membership was not statistically significant in relation to identification. The study is widely cited in the scholarly identification literature. The authors strengthened the study by using stratified random sampling, conducting a nonresponse bias analysis, and performing regression criticism. However, the authors did not mention additional steps taken to ensure validity or reliability.

Smidts et al. (2001) and Dukerich et al. (2002) examined perceived prestige in addition to one other variable. Smidts and colleagues (2001) looked at communications while Dukerich and colleagues (2002) analyzed attractiveness as related to organizational identification. Both authors found that prestige is significantly related to identification. Likewise, Ahearne and colleagues (2005), in the same study where they found attractiveness significantly related to identification, also found that construed external image did not significantly influence C-C identification but did affect extra-role behaviors. This contribution is important to social identity research. In essence, these results suggest that perceived prestige of an organization can affect consumer behaviors without having the customer identify with the organization.

More recently, Kuenzel and Halliday (2008) studied the effects of prestige, satisfaction, and communication on brands identification. As suggested in the *Formation of Brand Identification* section above, the authors found organizational communication to affect identification. In the same study, Kuenzel and Halliday (2008) used quantitative methods to create and test a model using car owners in the UK of two car brands. The authors used social identity theory in the creation of the model. The results indicated that prestige affected brand

identification. The authors used two different car companies but analyzed the groups together. So, for example, though the Ford and Mercedes owners might assert differences in the level of prestige, these differences were not compared.

**Summary of brand image.** Brand image antecedents of identification relate to social exchange. For instance, if the organization is perceived to be attractive, distinctive, a vehicle for self-expression or prestigious, an individual can satisfy the self-concept motives for self-enhancement through association. As social exchange theory posits “people and organizations interact in such a manner so as to maximize their rewards and minimize their costs” (Bagozzi, 1974, p. 77). Applying the concept to an alumni philanthropic situation, donors must weigh the value of the donation exchange in relationship to the cost of parting with their money. When donors give money to their alma mater, they do not receive products or services in return (Arnett et al., 2003). Instead, the transaction is driven by the criterion of value. Institutional efforts to solicit funds provide a mechanism of injecting value in the potential exchange. The brand image held by alumni provides an understanding of the organization’s ability to express the self-concept and enhance self-esteem through connection to a prestigious other. Blau (1968 cited in Arnett et al., 2003) stated that the “most important benefits involved in social exchange do not have any material value on which an exact price can be put at all, as exemplified by social approval and respect” (p. 90). Similarly, Barnard indicated that nonmaterial incentives, like recognition, prestige, pride, or accomplishment, are more powerful motivators than money (Tompkins, 2005). Communications from the institution convey the opportunity to receive these nonmaterial benefits. These rewards received as a result of the exchange aid to solidify trust and cooperation between the involved parties.

## Brand Experience

According to social identity theory and the subsequent research, perception of the brand is not the only mechanism that affects identification. Brand experience is defined as the experiential aspects of consumption created in response to brand-related stimuli during the encounter (Chang & Chieng, 2006). Brand experience refers to the participation and satisfaction variables in the model. Participation specifically refers to concepts such as tenure with the organization, number of competitive organizations, frequency of contact or interactions with the organization, and attendance at events like homecoming. Satisfaction, on the other hand, refers to the confirmation of expectations. As previously noted, these variables are highly explored in the alumni donor literature as influential over supportive behaviors. These variables are also understood to correlate with identification.

**Participation.** As suggested, Mael and Ashforth (1992) first applied social identity and organizational identification to higher education. Mael and Ashforth (1992) believed that the amount of time involved with the organization affected identification. As such, the authors tested tenure as an individual antecedent and found it to significantly affect identification. This result was directly supported by Bhattacharya and colleagues (1995) and contradicted by Newbold et al. (2010). Bhattacharya and colleagues (1995) tested if tenure in the focal organization is positively related to identification. After transforming the tenure variable due to positive skew, the authors found the log of tenure to be significantly and positively related to identification. Newbold<sup>9</sup> and colleagues (2010), on the other hand, tested tenure as a personal variable in their alumni relationship model. The model created by Newbold et al. (2010) posited

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<sup>9</sup> Newbold and colleagues (2010) also investigated working on campus and living on or near campus as related to campus involvement. The results suggested a relationship between living on or near campus and participation in campus activities. The results did not suggest a relationship between working on campus and participating. The researchers neglected to give a thorough explanation of variables and analytic procedures behind their conclusions.

that individual antecedents would increase student involvement and thereby identification. The findings surrounding the individual antecedents were mixed likely due to how they were operationalized and analyzed. The authors found that students with longer tenure were not more likely to be involved with university activities.

Mael and Ashforth (1992) also posited that the number of competitive organizations attended would be negatively associated with identification. By this logic, an individual that attended three undergraduate institutions would be less likely to identify with the focal organization than someone attending only the focal organization. However, Mael and Ashforth (1992) found this relationship to be insignificant. Bhattacharya et al. (1995) and Newbold et al. (2010) also included the number of competitive organizations in the identification model. In contrast to Mael and Ashforth (1992), both studies found a significant inverse relationship between number of competitive organization and the dependent variable.

Participation, according to Arnett et al. (2003), permits the individual to develop a “more salient identity related to the university” (p. 93). Involvement in university activities thus provides students with positive experiences surrounding the organization and reifies membership. Arnett and colleagues (2003) posited that participation in activities was correlated with university identity salience. The results suggested the relationship to be statistically significant. Likewise, Porter and colleagues (2011) hypothesized that attendance at university sporting, cultural, and academic events would relate to identification. The authors also suggested that involvement in student organizations related to identification. The results indicated that attendance at academic events and university group involvement was positively associated with identification. The authors also found attendance at cultural events to be negatively related to identification. This result, though not comprehensively discussed, could highlight a sampling

bias issue. For example, does participation in cultural events negatively affect identification or is it more likely that individuals attending cultural events might be in a marginalized group and have generally less identification with the organization?

Similar to the concepts of tenure, number of competitive organizations, and involvement, Bhattacharya and colleagues (1995) expressed that contact with the organization influences identification. The authors posited that frequent contact with the organization amplifies the propensity of the individual to categorize themselves as a member of the group. In testing this hypothesis, the authors found visiting frequency to correlate significantly with identification. The results support the theoretical work conducted by Ahearne et al. (2005). Ahearne and colleagues (2005) indicated that the frequency of interaction and frequency of product or service usage provided the appropriate contexts for the formation of identification. The authors did not, however, test these contexts empirically and thus their contribution on the matter is purely theoretical.

A discrepancy exists across the literature about how to best operationalize the participation variable. For example, some scholars measured participation and involvement using total number of visits (Bhattacharya et al., 1995) or total number of university involvements (Newbold et al., 2010). While contextually this mechanism might be appropriate for the Bhattacharya et al. (1995) study that explored museum membership and identification, Newbold and colleagues (2010) indicated that further understanding is required to determine the nature of activities that constitute involvement. Other researchers (Porter et al., 2011; Arnett et al., 2003) used a measure of participation that also captured level or intensity. For example, Arnett et al. (2003) asked respondents to list the activities or organizations in which they participated. Then, the respondents were instructed to assert how actively they participated on a

seven-point Likert scale ranging from not active to very active. Likewise, Porter and colleagues (2011) asked the respondent to rate on a three-point scale (no involvement, moderate involvement, or high involvement) the nature of participation in a variety of school organizations. They then used the maximum value assuming this would uncover leadership roles and intensity of involvement. For the purpose of the current study, the researcher used a mechanism similar to that of Arnett et al. (2003) and Porter et al. (2011) in an attempt to capture intensity of participation.

**Satisfaction.** Mael and Ashforth (1992) and Bhattacharya et al. (1995) conceived that satisfaction with the organization's contributions to the individual's personal goals related to identification. In both studies the authors found satisfaction to be statistically significant with identification. More recently, Kuenzel and Halliday (2008) defined satisfaction as the emotional response of an individual towards a brand after purchase. In the perspective of the authors, satisfaction suggests a fulfillment of the self-definitional needs. Kuenzel and Halliday (2008) tested satisfaction as it relates to identification in the for-profit global car industry. The authors found satisfaction to have the highest path coefficient (.27) indicating strong influence on brand identification. The authors also created a rival model that used satisfaction as a mediator variable. The results of the rival model analysis suggest that the hypothesized model had a better fit for the data.

Arnett and colleagues (2003) suggested that satisfaction is a mechanism of consumer retention and performance evaluation. The authors suggested that satisfaction reaffirms the social identity and influences supportive behaviors. For example, satisfied alumni identify more with the university and support the organization. The authors perceived satisfaction to be an overall evaluation of different aspects of the relationship with the organization. The authors used



a modified version of the Westbrook and Oliver (1981 cited in Arnett et al., 2003) satisfaction scale consisting of four items on a seven-point Likert-type measurement. Arnett et al. (2003) tested satisfaction and, though they found it to be related significantly to identity salience, they suggest that the results do not provide support for satisfaction as a central construct. In the rival model the authors tested satisfaction as a mediator variable similar to the procedures used by Kuenzel and Halliday (2008). The rival model suggested that satisfaction was not a significant predictor of identity salience. In essence, the results of the study stress that satisfaction potentially plays a different function than the one hypothesized in the study (Arnett et al., 2003). The rival model showed that prestige and reciprocity related to satisfaction but that satisfaction was not related to donating or promoting. And, the respecified model illustrated that satisfaction is not an antecedent of identity salience. The authors address the discrepancy by suggesting satisfaction could be related to variables not included in the analyzed models.

**Summary of brand experience.** The brand experience antecedents are related to embeddedness. Embeddedness suggests that individuals do not act in isolation as they attribute meaning to brands and organizations. Granovetter (1985 cited in Calhoun et al., 2007) argued that economic environments are deeply embedded in social and structural relationships such that they modify and constrain behaviors. This suggests that consumer perceptions of a brand would be shaped by surrounding social and structural environments. In essence, an individual's tenure with the organization, levels of involvement with student groups, amount of contact with the university and representatives, and overall perception of the university's performance in meeting and exceeding expectations contributes to identification and subsequent behaviors.

Granovetter's (1985 cited in Calhoun et al., 2007) writings on economic embeddedness determined that people prefer transacting with individuals of known reputation and that trust is

garnered from past experiences in social networking. As individuals engage in experiences with the brand they build personal relationships and trust with the organization. Simply, these relationships and trust affect perception of the brand image and the extent to which the individual identifies with the organization.

### **Summary of Antecedent Literature**

It is well documented in the literature that an individual's perception of the organization's brand affects identification. Specifically, the brand is evaluated on attractiveness, distinctiveness, self-expressive value, and prestige. Of these brand image antecedents, prestige is the most fervently endorsed as a predictor of identification. In addition to perception of brand image, experience with the brand is also significant. Participation in the organization through tenure, involvement in activities, and contact with the organization shapes the brand image in the mind of the individual and also supports brand identification. Participation confirms social identity through embedded membership. Satisfaction, or confirmation of expectations, also shapes brand image. The literature on the antecedents of identification thus suggests that interpretation of brand and experiences with the entity affect identification.

### **Positive Outcomes of Identification**

Dutton et al. (1994) stated that "people who strongly identify with the organization are likely to focus on tasks that benefit the whole organization rather than on purely self-interested ones" (p. 255). The researchers insinuated that behaviors directed towards promoting the focal organization proceed naturally from identification. With strong identification an overlap exists, blurring the lines between the individual and organization, further permitting the individual to simultaneously contribute to the self and the institution. The previous sections highlighted the organizational and personal antecedents understood to affect identification. This section presents

some of the positive attitudinal and behavioral outcomes associated with identification. The section opens with an examination of how identification affects supportive behaviors like donations, promotion, and attendance at events. Then the section reviews literature about the mechanism by which identification yields a greater competitive attitude towards out-groups. This section concludes with a theoretically based explanation of how identification reinforces antecedents and a summary of the outcomes literature.

## **Support**

Support refers to behaviors conducted in the best interest of the organization. Specifically, support refers to donations, promotion of the entity, and seeking contact with the university. Mael and Ashforth (1992) found identification to significantly correlate with ranking of financial contributions. Similarly, Arnett et al. (2003) found identity salience to positively relate to donor behaviors. The authors used structural equation modeling (LISREL) and found the model to explain 17% of variance in donating. Kim and colleagues (2010) and Porter et al. (2011) explored identification with academic and athletic programs as they related to intent to donate. Kim et al. (2010) found athletic, departmental, and university identification to all positively impact intent to support the institution. Likewise, Porter and colleagues (2011) found that identification positively influenced intention to give on all measurements of giving.

In the general nonprofit sector, Tidwell<sup>10</sup> (2005) posited a relationship exists between organizational identity, commitment, satisfaction, and prosocial behaviors among nonprofit volunteers in the Pacific Northwest. In essence, the author explained that when volunteers

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<sup>10</sup> Tidwell (2005) also explored the effect of identification on volunteerism. The author found a direct positive relationship with subjectively measured volunteerism, and objectively measured volunteerism. The author also found satisfaction to be related to both measures of volunteerism but not to financial contributions. As the author had the overseers of nonprofit volunteers rate the objective prosocial behaviors of each individual, it created a potential measurement issue introducing subjectivity and recall bias.

identified with the nonprofit they had higher levels of donating and volunteering, commitment, and satisfaction. Tidwell (2005) sampled 435 volunteers at four nonprofit organizations. The quantitative time series design included two data collection periods. The author received 185 returned surveys after the first round and 169 returned surveys after the second round. The findings suggested that organizational identification had a direct positive significant relationship with financial contributions. The results also indicated that there was a direct and positive relationship between organizational identification and satisfaction and commitment. Satisfaction and commitment were not, however, related to financial contributions.

Though several studies investigated the effect of identification on donations, a lack of consensus emerged surrounding the most appropriate measurement of capturing the donation variable. Mael and Ashforth (1992) chose to use ranking to indicate priority of donating to the school as actual dollar amount of contribution is heavily influenced by income which can also be related to age and lifecycle. The authors also argue against the use of frequency of donation as it is confounded by personal preferences towards intermittent versus lump sum donation practices. On the contrary, Arnett and colleagues (2003) used secondary data provided from the university to avoid common method bias that could result in asking the respondent about donation behaviors on the same instrument as the independent variables. Kim et al. (2010) and Porter et al. (2011) measured intent to donate. As self-reported intentions operate as a proxy for unavailable actual giving measurements, they do not measure behavior. Lastly, Tidwell (2005) asked respondents to explain the percentage of monthly income donated to the organization. This mechanism addressed the concerns put forth by Mael and Ashforth (1992) in regards to donations being driven by income. The current study used available secondary data from the Office of Development at the focal university as the measure of donations and donation

frequency. While the concerns of Mael and Ashforth (1992) were considered, the researcher also collected income and age variables for the purposes of statistical control and analysis.

Promotion of an organization takes on many different forms and is sometimes categorized under the umbrella construct of extra-role or organizational citizenship behavior. For example, several researchers explored the effect of identification on WOM support (Porter et al., 2011; Kuenzel & Halliday, 2008; Ahearne et al., 2005; Arnett et al., 2003; Bhattacharya & Sen, 2003; Kim et al., 2001; Dutton et al., 1994; Mael & Ashforth, 1992). WOM refers to the positive things an individual might say to endorse the university. Others investigated behaviors that promote the symbol of the organization (Donavan et al., 2006; Cialdini et al., 1976). Bhattacharya and Sen (2003) provided theoretical arguments for promotion as the resulting outcome of identification. Bhattacharya and Sen (2003) suggested that promoting the company to others was a way to validate their identity claims.

In the higher education brand identification literature, only Mael and Ashforth (1992), Arnett et al. (2003), and Porter et al. (2011) explored promotion as an outcome. Mael and Ashforth (1992) found that identification was statistically significant with willingness to advise son and others to attend the school. While Arnett and colleagues (2003) found their model to explain 17 percent of variance of donating, their model explained 60 percent of variance in promoting. The authors measured promotion as “talking up” (p. 96) the university. Similarly, Porter and colleagues (2011) found that identification directly affects promotions or the willingness to endorse the university to others.

The remaining studies highlighting WOM promotion as an outcome of identification come from the for-profit and general nonprofit sectors. Kim<sup>11</sup> et al. (2001) found brand

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<sup>11</sup> Kim and colleagues (2001) also explored the effect of brand personality and identification on loyalty. The results indicated that the relationship between identification and loyalty was not significant. This finding was later

identification to have a direct effect on WOM in the cellular phone industry in Korea. Likewise, Ahearne and colleagues (2005) and Kuenzel and Halliday (2008) found identification to yield positive WOM support in the medical and car industries respectively. In both studies identification was tested and confirmed as a mediator between the proposed antecedents and the outcome of promotion.

Bhattacharya and Sen (2003) indicated that promotion takes on a social and physical form. The social form refers to oral communications in support of the entity like the previously discussed WOM outcome. The physical form refers to the adoption of visible markers through the collection of symbols, memorabilia, or other tangible representations of the brand. The physical form of promotion was the subject of investigation for Cialdini and colleagues (1976). As previously mentioned, Cialdini and colleagues (1976) found individuals to wear university-related clothing after a football victory. By doing so, the students publicly asserted their association with the successful team. In a similar fashion, Donovan<sup>12</sup> et al. (2006) surveyed a convenience sample of 401 college sports fans and found that brand identification influences the likelihood of obtaining organizational symbols for personal use or as gifts. Symbol passing and collecting highlights the use of consumer goods as a medium of self-expression and as mechanism for enhancing self-esteem (Donovan et al., 2006).

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contradicted by Kuenzel and Halliday (2010) who explored the effect on reputation and brand personality congruence on loyalty proposing identification as a mediator in the model. In this study, the authors presented a problem with the work completed by Kim et al. (2001) asserting that they did not actually examine brand personality and reputation as antecedents of brand identification based on issues of measurement.

<sup>12</sup> Donovan and colleagues (2006) surveyed college sports fans to determine if identification is affected by the significant other's perception and the physical proximity to the entity. The results suggested that individuals living closer to the entity had lower levels of identification. The authors provided a potential explanation including that closeness might cause the individual to take the entity for granted while distance might cause an air of mystery or uniqueness to surround the organization. In either case, this research study included proximity to the institution to further analyze the potential effects of geography on identification.

## **Seeking Contact**

Dutton, Dukerich, and Harquail (1994) claimed that individuals experiencing strong identification will seek more contact with the focal organization. From their perspective, increased contact with the organization enhances the self-continuity that one desires. Mael and Ashforth (1992) explored several areas where an alumnus could seek contact with his alma mater. The contact outcome variables in their model included reading alumni magazines, listening to alumni tapes, attending college banquet, attending graduate school dinner, attending alumni study hall, and attending special lectures. Mael and Ashforth (1992) found that two outcome variables were statistically significant. These included listening to alumni lecture tapes and attending special lectures. However, the results indicated that identification was not a significant predictor of attendance at the college banquet, study hall, school dinner, or reading the alumni magazine. Only the landmark study by Mael and Ashforth (1992) addressed contact with the organization as a result of identification in a higher education setting. As such, the current study explored contact with the university referring to attendance at institution sponsored events like homecoming, alumni weekend, family weekend, academic events, cultural events, etc.

## **Competitive Attitude towards Out-Groups**

Much of the theoretical work behind identification emphasized the relational and comparative nature of social identity (Tajfel & Turner, 1981; Turner et al., 1994). Ashforth and Mael (1989) indicated that the awareness of out-groups underscores the boundary of the membership group and drives increased competition towards out-groups. Dutton et al. (1994) explained that identification creates heightened social attraction with in-groups and increased competitiveness with out-groups. As such, the authors proposed that organizational

identification yields greater competitive attitudes towards out-group members. Mael and Ashforth (1992) included intergroup competition as a variable in their model of identification. However, the researchers conceived of interorganizational competition as an antecedent of identification and not an outcome. Additionally, the results indicated that perceived interorganizational competition was not significant. An explanation of their findings included the notion that the school fell short in academic standing in comparison to relevant rivals. The authors partialled out the effects of prestige and satisfaction to reveal a weak association between interorganizational competition and identification. As the landmark study by Mael and Ashforth (1992) was the only research located in the higher education, for-profit, and general nonprofit sectors literature that included the theoretically driven variable of competitive attitude towards out-groups, it was also included in the model of the current study.

### **Summary of Positive Outcomes**

In review, the literature boasts positive outcomes surrounding the effect of identification on donations, verbal and physical promotion of the organization, attendance at events, and competitive attitude towards out-groups. Individuals with strong identification act on behalf of the best interests of the focal organization. Also, as individuals experience strong identification they promote the organization as a way of expressing a facet of their own identity. One last important outcome of identification is the reinforcement of antecedents. Ashforth and Mael (1989) indicated that identification would likely “reinforce the very antecedents of identification, including the distinctiveness of the group’s values and practices, group prestige, salience and competition with out-groups, and the traditional causes of group formation” (p. 26). As the individual identifies with the group, the characteristics and practices of the focal organization become more salient to the individual thus creating a feedback loop. The researcher of the



current study was unable to locate any empirical studies that assessed the reinforcement of identification antecedents. As such, this study did not include the outcome variable of reinforced antecedents.

### **Methodology of Previous Studies**

Of the brand identification literature included in this chapter, only three studies used qualitative research methods in the form of focus groups and interviews. The remainder of the studies employed quantitative methods. This section highlights the analytic and statistical procedures used by the identification researchers. Then the section explains measurement issues surrounding the four known components of identification. Finally, the section highlights measurement challenges surrounding the two closely related concepts of identification and commitment.

### **Design and Analysis**

In the higher education identification literature three studies used qualitative methods (Drezner, 2009; Balmer & Liao, 2007; Humphreys & Brown, 2002). The remaining seven used quantitative methods to explore the antecedents and consequences of identification. Of the seven quantitative studies in higher education identification, three used structural equation modeling (Kim et al., 2010; Sung & Yang, 2008; Arnett et al., 2003), two used multiple regression in conjunction with Baron and Kenny's (1986) mediator analysis (Porter et al., 2011; Mael & Ashforth, 1992), one used t-tests and Pearson's coefficients only (Newbold et al., 2010) and the remaining study used the Wilcoxon T test (Cialdini et al., 1976). Of the quantitative studies, the most common design included cross sectional survey research with only Cialdini et al. (1976) including a time series and experimental component and Arnett et al. (2003) comparing the cross

sectional information to secondary data. In general, the predominant use of cross sectional designs indicates a focus on correlations and a general lack of ability to make causal assertions.

Likewise, in the for-profit and general nonprofit sectors structural equation modeling was the most commonly used analytic procedure followed by multiple regression. Two studies used ANOVAs and one used the Baron and Kenny (1986) mediation analysis methodology. Like the higher education brand identification literature, the for-profit and general nonprofit sectors most commonly used cross sectional survey research. Exceptions to this included factorial designs used by Wyer (2010) and Ellemers and colleagues (1999) and time series designs employed by Dukerich and colleagues (2002), Herrbach (2006), Lam et al. (2010) and Tidwell (2005).

Though much of the identification research investigated the antecedents and consequences of identification, Ashforth and colleagues (2008) introduced criticisms surrounding such static models. Referring to those studies using structural equation modeling or those proposing models of antecedents and consequences, Ashforth and colleagues (2008) indicated that these works provide, at best, a snapshot image of identification. The authors asserted that much research of this type is heavily focused on outcomes and thereby overlooked the process that is identity emergence.

### **Measurement: The Four Components of Brand Identification.**

As previously mentioned, the literature highlights four components of identification including cognitive, affective, evaluative, and behavioral. The literature most commonly limited the measurement of identification to the cognitive component with the use of the scale created by Mael and Ashforth (1992). Few studies explored the subcomponents in an effort to determine if they were distinct and capable of being measured as such. For example, Ellemers and colleagues (1999), employing an experimental factorial design using 119 randomly assigned students,

explained that the cognitive and affective components of identification are distinguishable from the evaluative component. Their research supported the notion that social identity can be perceived as three separate factors and provided support for Tajfel and Turner's (1981) original conceptualization. Though they found three aspects of social identity the authors asserted that keeping them together boosts internal consistency of the measurement scale. The authors noted high correlations between the three dimensions suggesting that, though conceived as separate constructs, the ability to accurately measure each independently will require further investigation.

Later Van Dick et al. (2004), with the presentation of the fourth component, explained that identification begins with the cognitive component through self-categorization and is followed by the other three facets. Likewise, Boroş and colleagues (2011) tested the expanded model of identification and found that cognitive and affective identification directly affects behavior. Boroş et al. (2011) expanded on the understanding of the components with the results that found evaluative identification not to impact behavior suggesting it instead serves the purpose of self-enhancement.

Riketta (2005) analyzed the differences between commonly used measurements of identification such as the Mael and Ashforth (1992) scale and the Organizational Identification Questionnaire (OIQ) created by Cheney (1983 cited in Riketta, 2005). Riketta (2005) found the Mael and Ashforth (1992) scale used most often with results close to those using other measures. Riketta (2005) asserted that the Mael and Ashforth (1992) scale seemed the most representative identification scale in terms of empirical analysis. The author also found less variation in correlations of identification measures with the use of the Mael and Ashforth (1992) instrument.

The OIQ on the other hand exhibited less discriminant validity than the Mael and Ashforth (1992) scale and was more similar to the affective commitment scale (ACS).

### **Measurement: Identification versus Commitment**

Taking the instrument analysis further, Riketta (2005) in his meta-analysis compared identification with organizational commitment. The overlap that exists between the two constructs arises from the fact that each is purported to measure similar psychological states (Edwards, 2005). Riketta found identification to highly correlate with commitment corresponding to 62% shared variance. The OIQ, as it is understood to capture a broader conceptualization of identification, proved to be more similar to the commitment measures. The Mael and Ashforth (1992) scale, on the other hand, defined identification more narrowly and correlated less with commitment (Riketta, 2005). Still, Riketta (2005) found identification to overlap less with satisfaction and more with involvement than commitment. The author found identification to correlate differently with absenteeism and intent to leave than commitment. In general, Riketta (2005) claimed that identification measures may be better predictors of extra-role behaviors due to the narrow focus and that the OIQ is practically interchangeable with commitment scales. This assertion provided further support for the use of the Mael and Ashforth (1992) measurement of identification.

### **Summary of Methodology**

The most common method used to explore the antecedents and consequences of identification was structural equation modeling and regression analysis. Though identification is acknowledged in the literature as having four distinct subcomponents, researchers faced a challenge when measuring them separately. Thus the most common subcomponent used as a general mechanism of understanding identification is the cognitive facet commonly measured

using Mael and Ashforth's (1992) instrument. Riketta (2005) in his meta-analysis found the Mael and Ashforth (1992) instrument to be most appropriate to measuring identification particularly in comparison to the OIQ. Finally, the literature addressed that identification is similar to organizational commitment. Most scholars accept that a conceptual overlap exists between the two constructs. However, both identification and commitment have different correlates and can be captured using different measurement instruments.

### **Conceptual Framework**

Figure 1 outlines the process, antecedents, and consequences of brand identification. The organizational identity is communicated to the target population. The communications help to sculpt the perceived prestige, distinctiveness, attractiveness, and self-expressive value of the organization in the mind of the individual. These communications provide the individual with a complete brand image. Then the consumer compares their perception of the brand or organization with their self-concept motivated by the need for self-continuity, self-distinctiveness, and self-enhancement. The level of congruence between the brand and the individual's self-concept determines the amount of identification experienced by the person. Other individual antecedents like satisfaction and participation affect the evaluation process related to the self-concept and thereby identification. Brand identification then yields outcomes such as donations, promotion, and competitive attitude towards out-groups.

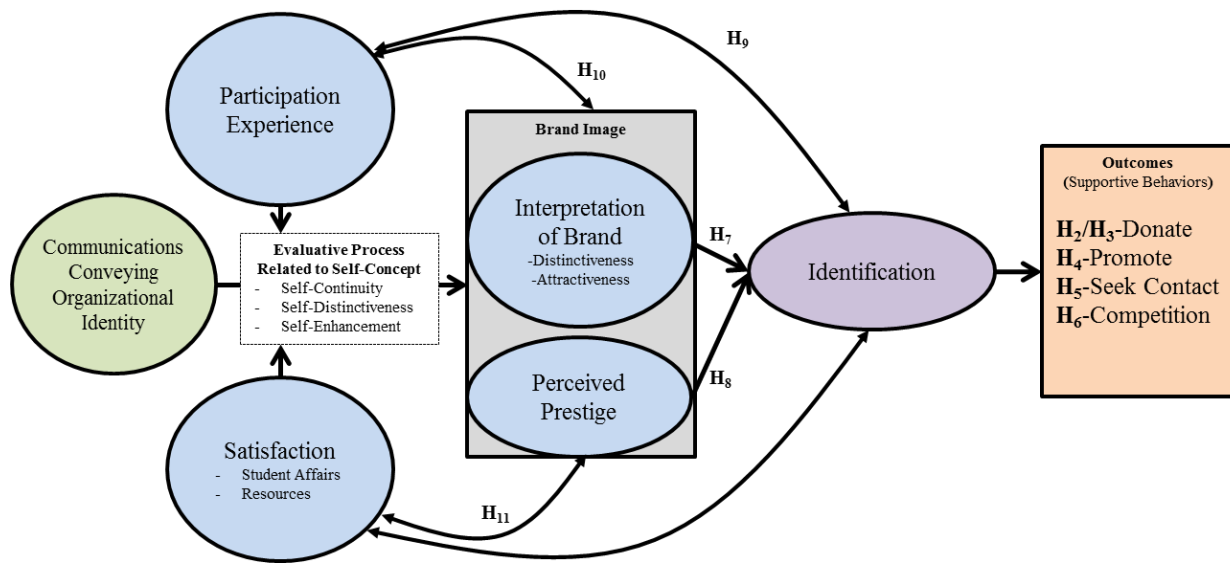


Figure 1. Conceptual framework. Effect of participation, satisfaction, and brand image on identification and subsequent positive outcomes exhibited by alumni.

### Communications Conveying Organizational Identity

Laidler-Kylander and colleagues (2007) explained that organizational identity is the perception that the agency attempts to create while image is the perception of the brand in the minds of the stakeholders. The latter exists in the minds of the consumer and the former is the basis for marketing and brand management activities transmitted as communications. It is the communication of those organizational identity values and characteristics that result in brand image, perceived attractiveness, prestige, and distinctiveness of the organization. In this proposed situation, marketers and advertisers inject meaning into products with brand management activities and control the information about the brand as it enters into public domain (Ligas & Cotte, 1999). Examples of brand management activities include highly visible public marketing and advertising campaigns, use of logos, slogans, and symbols, as well as consumer relations.

### **Evaluative Process Related to Self-Concept**

Once the organizational identity is communicated it is up to the individual and social environments to assist in the negotiation of brand meaning or to accept the meaning that was presented by the marketers. According to Ligas and Cotte (1999), consumers in the individual and social environments use “creative ways to combine and adapt meaning to fit their lives” (p. 609). Individuals assess the attractiveness of communicated images by how well the image preserves the continuity of the self-concept, provides distinctiveness, and enhances self-esteem (Dutton et al., 1994). And, as self-congruity theory asserted, consumers tend to prefer brands that are consistent with their self-concept and that permit self-expression (Arora & Stoner, 2009; Sirgy, 1982). Therefore, the researcher posited the following:

H<sub>7</sub>: Interpretation of brand will be positively associated with identification.

H<sub>8</sub>: Perceived prestige will be positively associated with identification.

### **Participation and Satisfaction Affecting the Evaluative Process and Brand Image**

The extent to which one is involved with the university and the degree to which expectations have been confirmed encompass the concept of brand experience. Brand experience influences perception of the brand and the evaluative process by which an individual assesses the ability of the organization to satisfy the self-concept motivations. As students participate in university sponsored events and activities, they develop a more salient identity with the institution which is further reinforced with future involvements. For example, if a student participates in the campus activities board, his perception of the distinctiveness, attractiveness, and self-expressive value are affected by his involvement. In essence, participation in the student organization strengthens his social identity and validates his perception of brand image. Satisfaction, on the other hand, refers to the extent to which the organization confirms an

individual's expectations. Satisfaction with various facets of the organization, like academics, social events, or facilities increases the brand image. It is for this reason the researcher hypothesized that:

H<sub>9</sub>: Participation experience will be positively associated with identification.

H<sub>10</sub>: Participation experience will be positively associated with brand image.

H<sub>11</sub>: Satisfaction will be positively associated with brand image.

### **Brand Identification**

Brand identification is a vital concept for an individual to feel like a part of the brand community or like an “insider”. Individuals with a stronger emotional attachment to a brand have a more favorable the attitude toward the brand. These emotional ties, or sentiment-laden attachments between a consumer and specific brand, can vary in intensity and can manifest in feelings of love, passion, connection, and desire to maintain close proximity to the object (Thomson, MacInnis & Park, 2005). Experiencing these feelings makes a brand more relevant to the consumer (Freling & Forbes, 2005). Therefore, the researcher suggested that:

H<sub>1</sub>: The stronger an alumna's brand identification, the more likely she will donate money to the organization.

### **Outcomes**

Identification promotes a psychological attachment between an individual and brand or organization (Bhattacharya et al., 1995). This attachment causes individuals to commit to the achievement of the organizational goals and expend effort on behalf of the organization. As such, the researcher hypothesized the following:

H<sub>2</sub>: The stronger an alumna's brand identification, the larger the sums of money she will donate to the organization.



H<sub>3</sub>: The stronger an alumna's brand identification, the greater the number of donations she will make to the organization.

Identification inspires the individual to communicate support for the company thereby validating their social identity claims (Bhattacharya & Sen, 2003). Promoting the focal organization permits the organization to further express the self-concept and meet the needs for self-distinctiveness, self-continuity, and self-enhancement. Promotion can include verbal referrals, recommendations, recruitment efforts or it can manifest in the act of visibly showing affiliation with clothing, décor, or collection of memorabilia (Bhattacharya & Sen, 2003). For these reasons, the researcher posited:

H<sub>4</sub>: The stronger an alumna's brand identification, the more likely she will promote the university.

H<sub>5</sub>: The stronger an alumna's brand identification, the more likely she will return to campus for events.

Identification accentuates the boundaries between in-groups and out-groups. Though differentiation does not cause competition, the simple act of categorizing people into groups has been shown to sufficiently produce competitive behavior (Tajfel et al., 1971 cited in Dutton et al., 1994). Following this logic, the researcher proposed the following:

H<sub>6</sub>: The stronger an alumna's brand identification, the more likely she will have a competitive attitude towards out-groups.

### **Summary**

The alumni donor literature acknowledges that prestige, type of institution, age, income, involvement, satisfaction, department, and institutional efforts to elicit funds affect alumni propensity to donate. The brand identification literature explored several similar variables to that

of the alumni donor literature but also commonly investigates perception of brand image as a driver of identification. The current study contributes to the understanding of alumni donor behaviors by including the brand image variables in the identification model.

Identification emerged from social identity theory, self-categorization theory, and self-congruity theory. These theories suggest that individuals categorize themselves and others as a mechanism of creating order in the social environment. As such, an individual defines the self by association with organizations. As highlighted in the brand identification literature above, when the university's brand is seen as attractive, distinctive, prestigious, and as a vehicle to express the self it supports the formation of identification. In addition, experiences participating in various facets of college life and alumni groups also lead to identification. Brand identification, in turn, leads to positive supportive behaviors like donations, promotion, seeking contact, and harboring a competitive attitude towards out-groups.

Most of the identification researchers used quantitative survey research methodology with the exception of three qualitative studies. The most commonly used instrument to measure identification was one created by Mael and Ashforth (1992). Though similar to commitment, identification is a separate and unique construct correlating with different variables and understood to creating more of a psychological attachment than commitment. This study further contributes to the limited but increasingly relevant brand identification literature in the field of higher education. This study uses quantitative survey methodology in conjunction with secondary data from the Office of Development at the university in question. Though the current study is cross sectional in nature, a limited ability exists to assert causality based on the understanding of temporal order surrounding those events that occurred while a student as all respondents are graduated alumni.

## CHAPTER 3

### METHODOLOGY

#### **Overview**

The purpose of this research was to explore the relationship of brand identification and alumni supportive behaviors. More specifically, the study explored the relationship between participation experience, satisfaction, interpretation of brand, perceived prestige, identification and the outcomes of donations, promotion, seeking contact, and competitive attitude towards out-groups. The literature review highlighted that brand image, or the interpretation of the attractiveness, distinctiveness, self-expressive value, and prestige, affects brand identification. Experiences in the form of tenure with the organization, frequency of interactions, attendance of events, and satisfaction also affect brand identification. Brand identification, in turn, is related to positive outcomes such as donations, promotion, seeking contact, and harboring a greater competitive attitude towards out-groups. This chapter presents the methodological design, rationale, and sampling design used to examine brand identification and alumni supportive behaviors. This chapter explains the variables in this study, instruments used to collect data on the variables, and the mode of collection. This chapter concludes by addressing ethical considerations and steps taken to reduce error.

#### **Research Design and Rationale**

This study used quantitative survey methods in an effort to determine if brand identification has an effect on alumni supportive behaviors. The site of this study was a medium-sized (enrollment approximately 15,000) state-owned institution of higher education in the Mid-Atlantic region of the United States. This long-established institution was well recognized in the Mid-Atlantic region of the United States and resided within a larger university

system. This research used both primary and secondary data sources. Monette, Sullivan, and DeJong (2008) indicated that “the strength of surveys is their potential for generalizability” (p. 164). Using a survey therefore allowed for inferences to be drawn about the population of individuals graduated from the university in question. The data obtained from the survey were then linked to the secondary data for the purpose of this inquiry.

As survey research is useful in determining attitudes, behaviors and perceptions of individuals (Monette et al., 2008), it was the preferred method of data collection for exploring the antecedents of brand identification as well as the effect of brand identification on supportive behaviors such as donating money, promoting the institution, and having a competitive attitude towards out-groups. In addition to the utility of survey research, it also offered conveniences such as being inexpensive and taking few resources to implement. The time needed to obtain data via self-administered questionnaire was far less than by personal interviews. The survey was cross-sectional in nature with data collected at one point in time. This design provided the ability to sample a large quantity of university alumni across a geographically diffuse area in an attempt to identify strength of association between variables. Though cross-sectional research is known to limit the ability to make causal assertions regarding the relationship between variables, this study allowed the depiction of patterns and correlations between the variables and provided data and information to understand those patterns.

### **Design Threats to Internal and External Validity**

The researcher minimized threats to validity by ensuring that the questions appropriately measured the constructs, conducting a pilot study, using a large sample of alumni, checking the representativeness of the respondent population, and statistically controlling for spuriousness. The researcher used cognitive interview techniques and a pilot test to check for the validity of the

survey instrument. When the survey was finalized, the researcher disseminated the instrument to a large census of over 45,000 alumni. Representativeness of the respondent population was checked against the known characteristics of the target population. The researcher also evaluated the criteria needed for causal assertions. The researcher reached conclusions of correlations between variables and examined potential confounding factors statistically.

### **Hypotheses**

The hypotheses for this study are as follows:

1. The stronger an alumna's brand identification, the more likely she will donate money to the organization.
2. The stronger an alumna's brand identification, the larger the sums of money she will donate to the organization.
3. The stronger an alumna's brand identification, the greater the number of donations she will make to the organization.
4. The stronger an alumna's brand identification, the more likely she will promote the university.
5. The stronger an alumna's brand identification, the more likely she will return to campus for events.
6. The stronger an alumna's brand identification, the more likely she will have a competitive attitude towards out-groups.
7. Interpretation of brand will be positively associated with identification.
8. Perceived prestige will be positively associated with identification.
9. Participation experience will be positively associated with identification.
10. Participation experience will be positively associated with brand image.

11. Satisfaction will be positively associated with brand image.

## **Variables**

### **Independent Variables**

This study gathered data for the independent variables using the survey instrument. These variables included participation experience, interpretation of brand, perceived prestige, satisfaction, and brand identification.

**Participation experience.** Participation experience referred to the individual's engagement in university-related activities. Participation experience was separated into two timeframes including 1) those involvements while a student, and 2) those involvements occurring post-graduation. Arnett et al. (2003) suggested that participation in extra-curricular activities be examined not only by list but also by how actively the individual participated. The study used a scale created by the researcher that lists different activities. The respondent assigned how actively they participated in each of the areas. The 9 item measurement scored questions on a 7-point Likert-style scale reflecting the respondent's degree of participation with that item, ranging from 1 = participated daily to 7 = did not participate. One additional question asked about presence of a mentor. Two instances of participation, including Greek Life and NCAA Athletics, were provided by the Office of Development and used separately in the analysis.

The researcher conducted a factor analysis upon receiving the dataset from the Offices of Alumni and Development. Though the participation questions totaled 9 items, only three loaded appropriately<sup>13</sup>. The other questions loaded on multiple factors and were therefore excluded from the index. The researcher calculated a summary score by adding all items for the variable.

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<sup>13</sup> The three items used in the creation of the participation index are found under Participation Experience in Table D1 of Appendix D.

The researcher used a mean substitution methodology for missing values. The Cronbach's Alpha reliability coefficient for the participation index was .6519. Though the reliability coefficient was lower than desired, the index was theoretically consistent and thus the researcher used it in the study.

**Interpretation of brand.** Interpretation of the brand summarized the individual's perceptions of the brand. This study operationalized the interpretation of brand variable with the following indicators: attractiveness, distinctiveness, and self-expressive value. As seen in the literature review, the relationship of attractiveness to brand identification is theoretically and statistically significant (Ahearne et al., 2005; Bhattacharya & Sen, 2003; Kim et al., 2001; Dutton et al., 1994). This study defined attractiveness as the positive mental associations of the brand or how magnetically drawn an individual feels to the brand. Also highlighted in the literature review, distinctiveness was a statistically significant antecedent of identification (Balmer & Liao, 2007; Ahearne et al., 2005; Bhattacharya & Sen, 2003; Kim et al., 2001; Dutton et al., 1994; Mael & Ashforth, 1992; Ashforth & Mael, 1989). This study defined distinctiveness as uniqueness and recognizable difference in comparison to other relevant entities. Finally, this study defined self-expressive value as the amount of opportunity presented by the brand for a person to express their self-concept. Self-expressive value was captured with the responses surrounding visibility of membership (Bhattacharya & Sen, 2003; Dutton, et al., 1994), the enhancement of self-esteem through association (Dutton, et al., 1994) and the perception of the self in the organization.

The study used an index created by the researcher that inquired in the areas of attractiveness, distinctiveness, and self-expressive value. The 8 item measurement scored questions on a 5-point Likert-style scale reflecting the respondent's degree of agreement with

that item, ranging from 1 = strongly agree to 5 = strongly disagree. The researcher conducted factor analysis on the data. Though originally the interpretation of brand variable was perceived to have three sub-factors, distinctiveness, attractiveness, and self-expressive value, the questions only loaded on two factors<sup>14</sup>. The one factor, distinctiveness, emerged as expected and had a Cronbach's Alpha of .8366. The other factor combined attractiveness and self-expressive value and was internally consistent with a reliability coefficient of .9014. When both sub-factors were analyzed together, the interpretation of brand index had a Cronbach's Alpha reliability coefficient of .9043. The researcher calculated a summary score of each separate factor and of the two factors combined by adding all items. This gave the researcher the freedom to analyze each sub-factor separately during the analysis. The researcher used a mean substitution methodology for missing values.

**Perceived prestige.** Perceived prestige referred to an individual's beliefs about the perception of the brand held by others. Together, perceived prestige and interpretation of brand combine to create the brand image. Brand image is the sum of brand associations in the mind of the individual (Chang & Chieng, 2006). In the alumni donor literature, prestige was well documented as having influence over propensity to donate (Holmes, 2009; Sung & Yang, 2008; Liu, 2006 cited in McDearmon, 2010). However, the alumni donor literature failed to examine the interpretation of the brand as operationalized here to include distinctiveness and attractiveness. For this study, the two variables were separated so that interpretation of brand could be examined in isolation from prestige. The researcher used the brand image combined variable on only two occasions during this study, first while testing Hypothesis 10 and again when testing Hypothesis 11.

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<sup>14</sup> The items used in the creation of the interpretation of brand index are found under Interpretation of Brand in Table D1 of Appendix D.



This study used a modified version of the perceived organizational prestige measure developed by Mael and Ashforth (1992). The 3 item measure<sup>15</sup> scored questions on a 5-point scale reflecting the respondent's degree of agreement with that item, ranging from 1 = strongly agree to 5 = strongly disagree. An initial factor analysis of the data confirmed that the three items loaded together as expected. The researcher determined that the prestige index had a Cronbach's Alpha score of .8301. The researcher calculated a summary score by adding all items for the variable. The researcher used a mean substitution methodology for missing values. Previous studies (Porter, et al., 2011; Kuenzel & Halliday, 2010; Kuenzel & Halliday, 2008; Arnett et al., 2003; Bhattacharya, et al., 1995) also used the perceived organizational prestige measure from Mael and Ashforth's (1992) identification scale. These studies indicated the instrument showed internal consistency with high Cronbach's Alpha scores ( $\alpha = .69$  to  $.84$ ), average variance extraction ( $.53$  to  $.74$ ), and composite reliability ( $CR = .77$  to  $.85$ ). These studies also tested and found that the instrument had convergent and discriminant validity.

**Satisfaction.** This study defined satisfaction as the fulfillment or confirmation of one's expectations. This study modified the Quality of College Life (QCL) Survey (Sirgy, Grzeskowiak, & Rahtz, 2007) to measure the respondent's satisfaction level. The original QCL included 70 items that load on primary and secondary factors in the areas of academic, social, facilities, and overall satisfaction. Originally, Sirgy et al. (2007) found support for the first and second order factors in the instrument. In 2010, Sirgy et al. also validated the instrument in a cross cultural replication of the original study. The QCL scale was lengthy and included highly detailed items that posed the threats of respondent fatigue and recall bias. Therefore, the researcher modified the scale to include 12 items scored on a 5-point scale reflecting the

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<sup>15</sup> The three items modified from the original Mael and Ashforth (1992) used in the creation of the prestige index are found under Perceived Prestige in Table D1 of Appendix D.

respondent's degree of satisfaction with that item, ranging from 1 = very satisfied to 5 = very dissatisfied.

The factor analysis of the data yielded unexpected results. The satisfaction questions loaded on three separate factors<sup>16</sup>. Four questions loaded on a factor that surrounded student affairs ( $\alpha=.8481$ ). Four questions loaded on a factor that surrounded resources ( $\alpha=.7324$ ). The last four questions loaded on the brand image variable along with prestige and interpretation of brand ( $\alpha=.9263$ ). With further inspection, the researcher concluded that these four questions did contribute to the image of the brand in the mind of the consumer. The questions explored overall satisfaction with the university, overall satisfaction with their educational experience, satisfaction with the rigor of the experience, and satisfaction with how prepared the individual felt to get a job. The researcher calculated a summary score for each index by adding all items for the variable. The researcher used a mean substitution methodology for missing values.

**Brand identification.** This study defined brand identification as the degree to which an individual defines the self in terms of an organization thus shaping the self-concept. This study used the identification scale developed by Mael and Ashforth (1992) modified to measure the alumni's identification with the institution. The 6 item modified index<sup>17</sup> scored questions on a 5-point scale reflecting the respondent's degree of agreement with that item, ranging from 1 = strongly agree to 5 = strongly disagree. The factor analysis showed that these six items loaded together. The Cronbach's Alpha reliability score for the index was .8795. The researcher calculated a summary score by adding all items for the variable. The researcher used a mean

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<sup>16</sup> The four satisfaction questions that loaded on student affairs are listed under Satisfaction (Student Affairs) in Table D1 of Appendix D. The four satisfaction questions that loaded on resources are listed under Satisfaction (Resources) in Table D1 of Appendix D. The items used in the creation of brand image index are found under Brand Image in Table D1 of Appendix D.

<sup>17</sup> The six items modified from the original Mael and Ashforth (1992) used in the creation of the identification index are found under Identification in Table D1 of Appendix D.

substitution methodology for missing values. Previous studies (Boroş, et al., 2011; Porter, et al., 2011; Kuenzel & Halliday, 2010; Lam, et al., 2010; Kuenzel & Halliday, 2008; Donavan, et al., 2006; Bhattacharya, et al., 1995) also used Mael and Ashforth's (1992) identification scale. These studies indicated the instrument showed internal consistency with high Cronbach's Alpha scores ( $\alpha = .81$  to  $.90$ ), average variance extraction ( $.67$  to  $.89$ ), and composite reliability ( $CR = .83$  to  $.94$ ). These studies also tested and found that the instrument had convergent and discriminant validity.

### **Dependent Variables**

This study assessed the dependent variables using data from the survey instrument as well as data from the university's Office of Development. The dependent variables included total money donated, total number of times donated, promotion, desire to seek contact, and competitive attitude towards out-groups.

**Total money donated.** Total money donated referred to the amount of dollars given to the institution by the alumni from the point of graduation until the point of data extraction. This study used data provided by the Office of Development at the school in question. The variable was a continuous level measurement. With this continuous level variable, the researcher created levels of donor behavior.

**Total number of times donated.** Total number of times donated referred to the distinct count of monetary gifts given to the institution by the alumni from the point of graduation until the point of data extraction. This study used data provided by the Office of Development at the school in question. The variable was a continuous level measurement.

**Promotion.** Promotion was defined as the act of supporting and publicizing the organization. The study used a scale created by the researcher that focused on the areas of

wearing university gear, recommending the institution, and positive word-of-mouth support. The 3 item measurement<sup>18</sup> scored questions on a 5-point Likert-style scale reflecting the respondent's degree of agreement with that item, ranging from 1 = strongly agree to 5 = strongly disagree. The researcher factor analyzed the data and found the three items to load together. The researcher then calculated the Cronbach's Alpha of the promotion index ( $\alpha=.6751$ ). Though the reliability coefficient was low, the researcher kept and used the index as it was theoretically consistent. The researcher calculated a summary score by adding all items for the variable. The researcher used a mean substitution methodology for missing values.

**Seeking contact.** The study defined contact as the alumni's interest in returning to campus for events. This study measures contact with a single item question<sup>19</sup> regarding how many times in the past year the respondent returned to campus.

**Competitive attitude.** Dutton et al. (1994) indicated that an increased competitive attitude towards out groups was the result of identification. This study defined competitive attitude towards out-groups as the perceived rivalry between the school and competitor institutions. This study used a modified version of the perceived interorganizational competition section of the identification scale developed by Mael and Ashforth (1992). The 3 item measure<sup>20</sup> scored questions on a 5-point scale reflecting the respondent's degree of agreement with that item, ranging from 1 = strongly agree to 5 = strongly disagree. The factor analysis showed the three items loading together. The three item index had a Cronbach's Alpha reliability score of .6377. Though the reliability coefficient was low, the researcher kept and used the index as it was theoretically consistent. The researcher calculated a summary score by adding all items for

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<sup>18</sup> The items used in the creation of the promotion index are found under Promotion in Table D1 of Appendix D.

<sup>19</sup> The single item used to measure seeking contact is found under Seek Contact in Table D1 of Appendix D.

<sup>20</sup> The items used in the creation of the competitive attitude index are found under Competitive Attitude in Table D1 of Appendix D.

the variable. The researcher used a mean substitution methodology for missing values. Porter et al. (2011) previously used a modified version of the competitive scale developed by Mael and Ashforth's (1992). However, this study reported a much higher level of internal consistency with an elevated Cronbach's Alpha score ( $\alpha = .90$ ).

### **Control Variables**

This study assessed the control variables using data from the survey instrument and from the university's Office of Development. The control variables were age, race/ethnicity, income, need for identification, major, years since graduated, occupation, if they were a transfer student, if the student lived at home, and if so, how long they lived at home.

**Age.** Age referred to the number of years the respondent has been alive. The study used data provided by the Office of Development at the school in question. The variable was a continuous level measurement.

**Race and ethnicity.** This study defined race as a category of genetically distinct characteristics as driven by geographical heritage. This study defined ethnicity as a group sharing a common culture. This study used data provided by the Office of Development at the school in question. The variable was a nominal level measurement. Once the data were obtained from the Offices of Alumni and Development it was discovered that only 81 respondents had race and ethnicity information on file. As such, the race and ethnicity variable was omitted from further analysis.

**Income.** This study attempted to define income using four wealth indicators provided by the Office of Development. These indicators were created by a privately contracted company and factor multiple variables into the assessment. However, of the four wealth indicators, two were nominal and referred to an overarching category schema. These variables were available

for less than 50% of the respondents. The other two indicators provided dollar amounts but were specifically created surrounding recent large purchases made by the individual. For the purposes of this study, none of these four wealth indicators could clearly be a proxy for the income of the individual. Due to the question of validity, the researcher decided not to use the four wealth indicators in the analysis.

**Need for identification.** Need for identification referred to the personal desire to obtain a sense of belonging. This study used two questions from the need for identification scale developed by Kreiner and Ashforth (2004). These 2 items<sup>21</sup> scored questions on a 5-point scale reflecting the respondent's degree of agreement with that item, ranging from 1 = strongly agree to 5 = strongly disagree. The researcher created a variable that categorized respondents as either "seekers" or "no need" based on their responses to the two questions.

**Major and College.** Major referred to the field of study pursued while at the university in question and college is the school where the major resides. This study used data provided by the Office of Development at the school in question. The variable was a nominal level measurement.

**Years since graduated.** The years since graduated variable referred to the calculated difference between the current year and the year that the alumni graduated. This study used data provided by the Office of Development at the school in question. The variable was a continuous level measurement.

**Occupation.** This study defined occupation as the respondent's profession. The study used a single open-ended item to record occupation.

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<sup>21</sup> The items used to measure Need for Identification are found under Need for Identification in Table D1 of Appendix D.

**Transfer.** Transfer student status referred to whether the alumni attended a different university prior to attending the university in question. The study used a single item to record transfer status, “Did you transfer into the institution?” The variable was dichotomous with the potential responses of yes or no.

**Commuter.** This study defined commuter as one who lived at home while attending college. The study used a single item to record commuter status and asks, “Did you commute to the institution?” The variable was dichotomous with the potential responses of yes or no.

**Commuter duration.** If the alumni answered “yes” for the commuter question, they were asked to disclose how long they commuted to the school. This variable was a categorical level measurement.

### **Data Sources, Sampling and Collection**

#### **Data**

The study used primary and secondary data sources. The Office of Development at the university provided data on alumni donations, frequency of donation, graduation year, age, ethnicity, income via wealth indicator, and major. The Office of Development had access to a dataset of all alumni of the institution and donor information dating back to 1986. Only the data corresponding to those participants in the survey was extracted for use in this study. Potential limitations of the secondary dataset included known gaps in the information due to system conversions and subsequent additional coding. As previously discussed, the study gathered the data for the variables of participation experience, interpretation of brand, perceived prestige, satisfaction, brand identification, and need for identification from the survey instrument.

## **Frame Design**

The target population of the study included individuals who graduated from the selected state-owned institution of higher education. The survey population included individuals who graduated from the selected state-owned institution of higher education within the last 66 years with an updated email address in the system. This was based on the assumption that graduates have longer tenure within the organization. As previously suggested, the Offices of Development and Alumni Relations for the university in question maintained the sample frame for this study. The list included up-to-date email contact information for exactly 45,015 graduated alumni donors and non-donors with donations ranging back to 1985.

As with any study, the chance existed that the sampling frame did not appropriately cover the target population. The Offices of Development and Alumni Relations compiled donor lists from alumni records and previous giving histories. The Offices retained approximately 90,000 mailing addresses and 45,041 email addresses. Of the 45,041 email addresses, 26 addresses were flagged as incorrect by the Qualtrics software and were therefore excluded from the sampling frame of this study. As such, the survey population was technically restricted to those alumni who updated their current email information with the alumni office or 45,015 individuals. The restricted population was not intended as the greater target population but rather the operationalized population used for the purposes of surveying. As the survey population was restricted to alumni with active email accounts in the system, there was an issue of undercoverage as eligible members of the target population were excluded if they failed to update email information with the university. The potential also existed for overcoverage due to ineligible elements in the sampling frame.



## **Sample Design and Size**

This study used a population sampling design. The study selected all alumni donors and non-donors with active email addresses on file. The sampled population included 45,015 individuals. As this was a large sample it thus increased the statistical power of the study. There were two primary sources of sampling error associated with this sample design. One source arose from the fact that only a subset of the target population was surveyed. Another source of sampling error arose from the fact that not all elements of the frame were measured (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2009). Alumni selected and surveyed that did not respond failed to be observed.

## **Mode of Collection**

The most appropriate method of data collection for this study was a self-administered email-based instrument. The web-based survey was created using Qualtrics software. The web survey offered a low cost and timely method of delivery. Also, there were no data entry requirements with the web survey as it was done automatically.

The Office of Alumni Relations sent out the cover letter and survey in an email to the sampling frame. As individuals participated in the survey, the software tracked responses by email address. Two follow-up emails and survey links were sent to those nonresponders by the Office of Alumni Relations scheduled through the Qualtrics software. The Offices of Alumni Relations and Development matched the survey responses to the secondary data contained in their files. All identifying information was then stripped off of the data file. The Offices of Alumni Relations and Development then created a unique identifier for each record. This was to ensure confidentiality of the participants. The Offices of Alumni Relations and Development omitted three records of which two were duplicate respondents and one respondent was listed on

file as deceased. The master dataset was then provided to the researcher. The researcher never viewed personal information and there was no way to identify the records in the dataset. The master dataset contained information from 2,852 respondents. However, the final dataset contained 2,763 respondents for a response rate of 6.1%.

### **Efforts to Reduce Error**

As previously mentioned, the researcher employed several procedures to reduce error and increase validity. To ensure that the survey questions were easy to understand and valid, this study included one round of cognitive interviews and a pilot study. The interviews and field pre-test efforts assisted in the reduction of discrepancies between the true answer and the response, also known as measurement error (Groves et al., 2009). The researcher performed cognitive interviews on 2 members of the target population. Using cognitive interview techniques ensured appropriate comprehension of the questions, ability to recall information, ability and will to answer the questions as well as issues with the response process.

The researcher distributed the survey to a test sample of 9 individuals in a field pre-test that determined the overall appropriateness of the survey instrument. The field pre-test highlighted ambiguous questions and ensured that the survey was not confusing or misleading. It also checked for validity of the instrument to guarantee that the questions captured the intended measures. Based on the results of the pilot, significant changes to the survey were unnecessary therefore alleviating the need for another small scale test. At the completion of the pilot, the researcher made subtle adjustments and finalized the survey instrument (Appendix A). The Office of Alumni Relations then emailed the pre-notification announcement in an alumni e-newsletter announcing the purpose of the study and forthcoming survey.

Unit and item non-response created challenges for the study. By using a pre-notification article in the alumni e-newsletter (see Appendix B), offering the survey through an email link, and two follow-up reminders, this study attempted to reduce non-contact and increase response. In addition, the use of Qualtrics survey software permitted automatic email reminders and offered the ability to make the survey visually appealing. Item non-response was reduced by using questions from previously validated instruments, writing questions that were easy to understand, ordering the questions in a way that flowed smoothly and placed the more sensitive questions at the end, testing the questions with the cognitive interviews, and also by clearly explaining all concepts involved in the questionnaire. Finally, as an attempt to increase participation, this study offered an incentive to those respondents that successfully completed the questionnaire. The incentive included a chance to win one of ten prizes like a Nook® reader, NFL licensed Pittsburgh Steelers jersey, or \$50 gift card to the Bookstore.

### **Data Analysis**

This study employed several statistical tests in an effort to satisfy the research questions and hypotheses. First, the researcher imported the master file obtained from the Offices of Alumni Relations and Development into Microsoft Access. The researcher recoded the variables such that the highest level of agreement received the highest number in the scale and cleaned the dataset. During this process the researcher, while focusing on questions one through 14 of the survey instrument, omitted 89 records from further analysis based on the incompleteness or lack of information provided. The final dataset contained 2,763 usable surveys. The researcher exported the file to Microsoft Excel and imported it into STATA statistical analysis software package.

As previously suggested, the researcher conducted exploratory factor analysis (Appendix C) on the survey questions that made up the index variables. The researcher created index scores where the respondent answered at least fifty percent of the related questions. For those null values the researcher calculated the mean of the provided answers and multiplied it by the number of questions in the index. The researcher ran univariate descriptive statistical analysis by checking the distribution and symmetry of the variables, measures of central tendency, spread, frequency information, and correlations. The researcher also transformed skewed variables and created several other variables (like average donation, number of months between graduation and first donation, etc.) that would provide additional opportunities for analysis. The researcher addressed the research questions and hypotheses after cleaning, preparing, and preliminarily exploring the dataset.

The researcher employed logistic regression to examine if brand identification affects the odds of donating as the dependent variable was dichotomous. The study also used t-tests of two sample means to examine the difference between donors and non-donors across the levels of identification. The researcher conducted simple chi-square tests and bivariate Ordinary Least Squares (OLS) regression techniques to preliminarily assess the relationships between variables. The study then used multiple regression to examine the effects of participation experience, satisfaction, interpretation of the brand, and perceived prestige on brand identification. Multiple regression was also used to determine the effects of brand identification on donation amount, number of times donated, seeking contact, promotion, and competitive attitude towards out-groups for the non-donor population and donor population categorized by donation level. The researcher tested for interaction effects between gender and identification in addition to gender and interpretation of brand as there was a lack of clear understanding of the variation in

identification by gender in the literature. At each stage, the researcher conducted regression criticism to ensure correctness and trustworthiness of results. Lastly, the researcher then used the Baron and Kenny (1985) mediation methodology to determine if identification mediated the relationship between the independent and dependent variables.

In addition to regression, the researcher assessed the representativeness of the survey respondents by conducting a nonresponse analysis to determine if the nonrespondents differed on any characteristic from the respondent population in the target population as well as the total alumni population. The researcher presented a detailed account of the statistical methods, tests, and subsequent results in Chapter 4.

### **Ethical Considerations**

This study gave several considerations toward ethical treatment of participants and stakeholders. The study provided full disclosure of reasons for studying the alumni population, outlined risks, how risks are minimized as well as the fair treatment of all participants especially women and minorities. The study disseminated a cover letter to the alumni accompanying the survey that explained the purpose of the research, how they were selected, the confidential quality of the study, how the findings were used, and the voluntary nature of participation. The degree of privacy was high as the individual had the option of completing the survey in the comfort of their own home. Also, the nature of the research topic was not sensitive or potentially embarrassing to the respondent (Groves et al., 2009) suggesting that the privacy of the respondents was not encroached upon.

This study adhered to the strict guidelines of the Institutional Review Board (IRB). The confidentiality of the participants was diligently protected in the design. As previously stated, the Office of Alumni sent out the cover letter and survey in an email. The Offices of Alumni and

Development matched the primary survey data to the secondary data on file and immediately removed all identifying information. They then sent the combined dataset to the researcher who had no way to identify respondents. At no point in time did the researcher have access to personal information of the respondents. Lastly, in terms of information management, the researcher kept this data in only two locations.

### **Summary**

This chapter outlined the methodological design of this study along with the sampling design, explored variables, and data analysis. As asserted, this study employed quantitative methods using data from a survey instrument and secondary data source. This study explored the independent variables of participation experience, satisfaction, interpretation of brand, perceived prestige, and brand identification. This study examined the relationship of these independent variables to the dependent variables of donation amount, number of times donated, promotion, seeking contact, and competitive attitude towards out-groups. The study controlled for the need for identification, age, major, gender, years since graduated, transfer student status, and commuter status. The study made use of census, or population, sampling techniques. The chapter described several mechanisms to reduce error and presented techniques employed for statistical analysis.

## CHAPTER 4

### RESULTS

#### **Overview**

The purpose of this research was to explore the effect of brand identification on alumni supportive behaviors like donations, promotion, desire to seek contact with the organization, and harboring a competitive attitude towards out-groups. The previous chapter described the study design, sampling methodology, variables in question, general analytical procedures used, and ethical considerations afforded to participants. This chapter expands on the previously presented information as it presents the results of the data collection and analysis. First, the chapter provides details about the descriptive characteristics of the respondents. This section also verifies the representativeness of the sample with details from the nonresponse analysis. Second, the chapter examines the hypotheses of the study. The findings are presented on how identification affects donation behavior, how identification affects other positive outcomes, and the nature of relationships between variables in the conceptual model. Third, the chapter investigates additional alumni donor trends that further inform the hypotheses. Finally, the chapter summarizes the results to recapitulate that which will be addressed in the discussion.

#### **Descriptive Statistics and Nonresponse Analysis**

The following section provides information surrounding the respondents that participated in the study. First, the section presents descriptive information about all respondents. Second, the section compares characteristics between donors and non-donors. Then the section continues with a further examination of those donors by age, gender, school, transfer status, commuter status, and involvements. Finally, the section concludes with a summary of the nonresponse analysis.

## Descriptive Statistics

The survey took an average of 16 minutes to complete for those individuals that finished the instrument in one session. The original dataset included 2,852 respondents representing a 6.3% response rate. Of those individuals, 1,655 were donors (58%) and 1,197 were non-donors (42%). After cleaning the data, the final dataset included 2,763 usable responses. Of those respondents, 1,617 were donors (59%) and 1,146 were non-donors (41%). Females represented 57% of the respondents while males represented 43%. Data was unavailable for the gender of one respondent. The average age of the respondents was 46.5 years old and respondents attended the institution for an average of 4.2 years.

In terms of the variables in the model, the univariate analysis results are presented in Table 1.

Table 1

### *Univariate Analysis of Variables in Conceptual Model*

Variable	Obs	Mean	Std. Dev.	Min	Max
INTERPRETATION	2743	30.93715	4.936982	8	40
PRESTIGE	2761	10.55469	2.188304	3	15
SATISFACTION (SA)	2738	16.67348	2.530805	4	20
SATISFACTION (R)	2736	15.23308	2.391103	6	20
IDENTIFICATION	2761	21.52184	4.586286	6	30
PARTICIPATION	2727	4.492079	2.084178	1	19
NUMBER DON	1617	11.23377	16.10343	1	236
PROMOTION	2761	10.62894	2.194368	3	15
RETURN	2741	1.69792	1.251842	0	6
COMPETITION	2742	10.59701	1.816479	3	15
AGE	2448	46.51593	14.13273	21	87
NEED_FOR_ID	2265	1.681236	.4661002	1	2
TRANSFER	2723	.1266985	.332696	0	1
COMMUTE	2749	.7919243	.4060051	0	1

In the case of most variables, only about one to 1.5% of the observations were missing. The two variables with the most missing responses included age and need for identification. The number of donations variable indicated 1,617 populated responses, or the distinct count of



donors. For the purposes of analysis, the researcher populated this field with a zero for those non-donors thus increasing the observations back up to 2,763. (See Table E1 in Appendix E for a presentation of the bivariate relationships between the variables in the conceptual model.)

### **Comparison of Donors and Non-Donors**

The researcher then explored differences in characteristics and survey responses between the donor and non-donor populations. First, the researcher assessed the number of years that the respondents spent in attendance at the institution. The researcher found that the donor population (4.32 years) had a slightly higher average number of years in attendance than did the non-donors (4.09 years). After assessing length of tenure with the organization, the researcher compared the two populations by age. The researcher found that donors appeared to be older than non-donors averaging 51.9 years old compared to 39.5 years for those non-donors. Adding gender to the cross tabulation, both males and females among the donors tended to be older. This suggested that the age division in the original tabulation was likely not a spurious association. The researcher found that the highest percentage of donors (38.6%) represented the 45 to 59 year old age group. The second highest percentage of donors (24.6%) represented the 60 and older age group. Comparatively, the highest percentage of non-donors (40.8%) represented the 30 to 44 year old age group followed by the under 30 age group (23.3%).

### **Further Analysis of the Donor Population**

Once several differences between the donor and non-donor populations were established, the researcher continued to analyze the donor population. There were 1,617 donors in the dataset. The total donation amounts ranged from \$1 to greater than \$250,000. The researcher then assessed the donation amounts by top percentages. The results are provided in Table 2.

Table 2

*Distribution of Donors by Top Percentages, Average Age, and Combined Donation Amounts*

Percent of Donors	Number of Donors	Average Age	Percent of Total Donations in Dataset
Top .025%	4	63.5	22.3%
Top 1%	16	61.5	43.7%
Top 5%	80	61.3	69.7%
Top 10%	161	60.1	79.2%
Top 20%	321	59	88.0%
Top 25%	402	58.5	90.7%
Top 50%	808	56.1	97.5%
Bottom 50%	809	48	2.5%

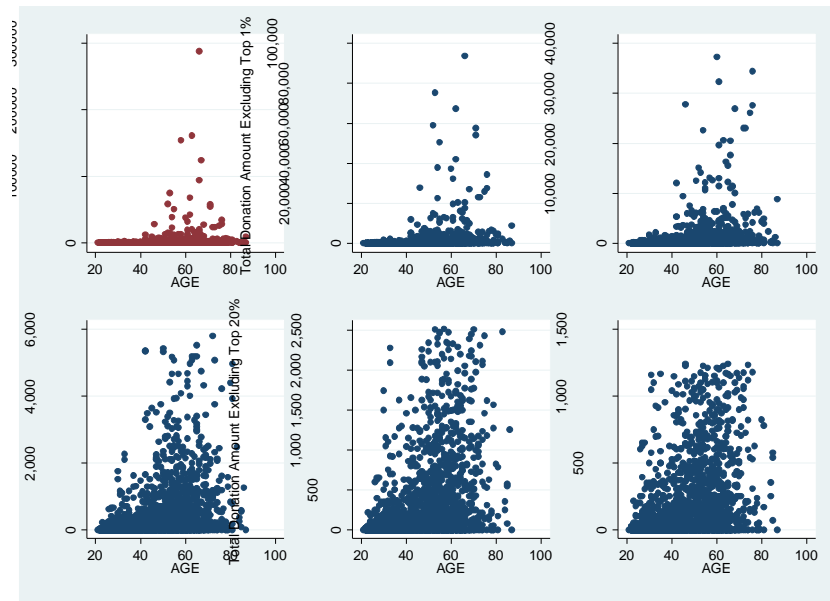
*Note.* The total distinct count of donors was 1,617, or the sum of the last two rows in Table 2 (Top 50% + Bottom 50%).

The results presented in Table 2 suggested that the average age increased in the top donor percentages. The table showed that the top one percent of donors were an average of 61.5 years old. However, when looking at the top 50% together the average age dropped to 56.1 years old. The table also displayed that the top one percent of donors, 16 individuals, accounted for 44% of the total donation amount in the dataset. This result closely resembled that of Clotfelter (2001) who noted approximately 50% of giving was completed by the top one percent of donors. In the case of this study, the top ten percent of donors represented about 80% of total donations while the bottom fifty percent accounted for only 2.5% of the total donations in the dataset.

**Age and Gender.** The researcher further observed the relationship between age and donation amount as well as gender and donations. The researcher found that age correlated with whether or not a person chose to donate. Additionally, the researcher found that 56.5% (886) of women were donors and 61.2% (731) of men were donors. The average donation dollar amount for females was \$90.66 and for males was \$148.64.

Considering the distribution of donors and donation amounts presented in Table 2, the researcher then assessed age correlations with donations after excluding the top five percent of donors. The researcher found that the original correlations increased in strength between age

with donations and age with the choice to donate. Continuing on this trend of analysis, the researcher assessed the relationship between age and total donation amounts while incrementally excluding the top percentages.



*Figure 2.* Comparison scatter plots of total donation amount and age incrementally excluding top donor percentages. The first scatter plot in the top left includes all donors. Moving to the right the next plot excludes the top .025%, and the next excludes the top 1%. The second row bottom left excludes the top 5%, the next excludes the top 10%, and the last plot on the bottom right excludes the top 20%.

The information displayed in Figure 2 showed that, as the top donor percentages were excluded, the relationship between age and donation became more linear. Originally, the researcher found a weak correlation (.1223) between age and donations. As the top .025% of donors was excluded, the researcher found the strength of the correlation to increase (.1827). Once the top 1% of donors were excluded, the researcher found the correlation to be moderate (.2709). When the top 5% of donors were excluded, the researcher found the correlation to increase to .3414. Excluding the top 10%, the correlation between age and total donations grew

to .3705. Finally, when the top 20% of donors were excluded from analysis, the researcher found the correlation to slightly decrease (.3581) though the relationship remained moderately strong.

**College.** In addition to age and gender the researcher observed responses by college of attendance. The researcher compared the data of responses by college of attendance in this particular study. The results are presented in Table 3.

Table 3

*Tabulation of Respondents by College of Attendance*

COLLEGE	Respondents		Total
	Non-Donor	Donor	
EDUCATION	242 41.02%	348 58.98%	590 100.00%
FINE ARTS	58 31.69%	125 68.31%	183 100.00%
HEALTH	226 48.39%	241 51.61%	467 100.00%
HUMANITIES	279 41.83%	388 58.17%	667 100.00%
NATURAL SCIENCES	125 37.43%	209 62.57%	334 100.00%
BUSINESS	202 40.89%	292 59.11%	494 100.00%
GRADUATE STUDIES	3 27.27%	8 72.73%	11 100.00%
CONTINUING EDUCATION	3 100.00%	0 0.00%	3 100.00%
UNCLASSIFIED	5 71.43%	2 28.57%	7 100.00%
TOTAL	1,143 41.47%	1,613 58.53%	2,756 100.00%

*Note.* Percentages refer to row totals. Pearson  $\chi^2(8) = 26.5698$ ;  $Pr = 0.001$

The results in Table 3 suggested that those majors residing in the College of Graduate Studies had the highest fraction of respondents that donated (72.7%). However, the sample was only comprised of eight individuals that donated. The second highest fraction of respondents that donated corresponded to the College of Fine Arts (68.3%). The third highest fraction of respondents that donated was from the College of Natural Sciences (62.6%). The remaining

colleges had fractions of respondents that donated above 50% except for those unclassified individuals (28.6%) and the School of Continuing Education (0%).

**Transfer and commuter status.** The researcher then explored transfer and commuter status as they related to donations. Approximately 13% of the respondents (345) were transfer students. Of these individuals, 48% donated to the institution. The commuter population accounted for 79% (2,177) of the respondents. The researcher anticipated a large number of commuters due to the information on the institution's website that only approximately 30% of students live on campus. Of these commuter respondents, 56.2% donated money to the institution.

**Involvements.** In addition to the survey questions corresponding to the participation index, the researcher obtained data on participation in NCAA athletics and Greek Life (fraternities and sororities). Literature on participation in Greek Life was mixed. Several authors showed that Greeks gave more (Marr et al., 2005; Monks, 2003; Belfield & Beney, 2000) while Okunade and colleagues (1994) found that Greeks donated less. Initial crosstab results indicated that the relationship between participation in Greek Life and donating was significant. Of those 613 individuals that participated, 70.5% were donors. However, when exploring Greek participation using complex regression models it was not significant in the choice to donate, the total amount donated, or the total number of times donated. Similarly, the initial crosstab results indicated that the relationship between participation in NCAA athletics and donating was significant. Of those 194 respondents that participated in athletics, 70.6% donated money to the institution. However, exploration of athletic participation in the complex regression models showed the variable to be statistically insignificant.

## **Nonresponse Analysis**

To check the representativeness of the sample, the researcher conducted a nonresponse analysis. First, the researcher compared the gender of respondents with that of the target population. The researcher found that the respondents were representative within one percent of the gender categorization of all alumni with email addresses on file. The gender percentages of alumni donors in the sample were also within one percent of those alumni donors with email addresses on file. Second, the researcher compared the donor and non-donor percentages in the respondent population to that of the target population. The Offices of Alumni Relations and Development indicated that the alumni donor population represented 38.9% of those individuals with active email addresses on file. However, donors comprised 58.5% of the survey respondent population. This suggested that the donor population was oversampled in this study.

Next, the researcher compared the college of the respondents with that of the target population. Of the nine colleges at the institution, six were represented in the sample within one percent of those alumni with active email addresses on file. Likewise the donor population was representative within one percent in all but the same three colleges. The business school was slightly underrepresented by 2.5% (all respondents) and five percent (donors), the school of social sciences was overrepresented by approximately ten percent (all respondents and donors), and the college of health was underrepresented by ten percent (all respondents) and six percent (donors). Finally, the researcher compared the age of the respondents to that of the alumni with active email addresses on file. In the respondent group, those individuals between 21 and 39 were under sampled by about 13% while those individuals between 50 and 69 were oversampled by about 14%. However, the researcher found this discrepancy not to exist within the respondent donor population. The researcher concluded that the study data was generally representative of

the target population. The researcher presented the potential effects of the few instances of over and under sampling in the limitations section of the discussion chapter.

### **Testing the Hypotheses**

This study focused on eleven hypotheses. The first three hypotheses addressed brand identification and the donation behaviors of alumni. The fourth, fifth, and sixth hypotheses examined the effect of brand identification on other positive outcomes such as promotion, seeking contact with the organization, and competitive attitude towards out-groups respectively. The seventh, eighth, ninth, tenth, and eleventh hypotheses analyzed the relationships between the antecedent variables in the model and brand identification. The following section presents the results from the statistical tests surrounding the hypotheses in the above listed groupings. For each hypothesis, the researcher selected the most parsimonious model that was supported by the literature. Other explored models that were less parsimonious and that failed to increase explanatory power of the model were excluded from this document.

### **Brand Identification and Donation Behaviors**

The researcher explored the effect of brand identification on the act of donating, the amount of money donated categorized into levels, and the number of times the individual donated money to the institution. The researcher used a series of regression techniques to address these effects.

**Hypothesis 1.** The first hypothesis posited that the stronger an alumni's brand identification, the more likely the individual will donate money to the organization. In an effort to test this hypothesis the researcher used logistic regression. The researcher chose logistic regression as it is appropriate when the dependent variable is dichotomous. In this test, the

dependent variable was whether or not the individual was a donor (y/n). The results of the logistic regression output are presented in Table 4.

Table 4

*Logistic Regression of the Donor Variable on the Identification and Satisfaction Indexes*

*Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Logistic regression			Number of obs	=	1977	
			LR chi2(7)	=	467.86	
			Prob > chi2	=	0.0000	
Log likelihood = -1120.9518			Pseudo R2	=	0.1727	
DONOR	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
IDENTIFICATION	1.031939	.0131074	2.48	0.007*	1.006566	1.057952
SATISFACTION (STUDENT AFFAIRS)	1.113648	.0259231	4.62	0.000*	1.063981	1.165633
NEED FOR IDENTIFICATION	1.088098	.125087	0.73	0.232	.8685895	1.363081
AGE	1.077766	.0045371	17.79	0.000*	1.06891	1.086695
FEMALE	.9801364	.1037836	-0.19	0.425	.7964444	1.206195
TRANSFER	.7079515	.1062307	-2.30	0.011*	.527567	.9500126
COMMUTER	.9637103	.1324492	-0.27	0.394	.7361395	1.261633

Note. \*P<.05.

The results presented in Table 4 indicated that the logistic regression model was significant ( $P = 0.0000$ ) with a pseudo  $R^2$  of .1727. In the case of logistic regression the pseudo  $R^2$  lacks the direct explained-variance interpretation like that of OLS (Hamilton, 2009). Nevertheless, Table 4 showed that for every one point increase in identification, the odds of donating increased by approximately 3.2%. Because the results of the regression output presented in Table 4 showed brand identification as statistically significant in the choice to donate, the researcher failed to reject the first hypothesis. Additional results demonstrated that for every one point increase in satisfaction with student affairs, the odds of donating increased by 11.4%. For every one year increase in age, the odds of donating increased by 7.8%. And finally, odds of donating decreased by 30% if the student transferred into the institution.



The results of the logistic regression supported those from the t tests that the researcher executed during the preliminary data analysis. The researcher conducted two t tests, one with assumed equal variances (see Table F1 in Appendix F) and one with assumed unequal variances (see Table F2 in Appendix F), and a nonparametric Wilcoxon rank-sum test (see Table F3 in Appendix F). Both t tests showed a statistically significant difference between the mean identification score for donors and non-donors. The Wilcoxon rank-sum test also provided support for the results indicating that there was a statistically significant difference between sample populations. Once the researcher determined the results of the first hypothesis, and in this case showed a significant and positive relationship between identification and the choice to donate, the researcher then tested the second hypothesis.

As the researcher employed listwise regression, many observations were lost in each model. The researcher found the missing observations to be from the age and need for identification variables. In an effort to determine if the missing values introduced a systematic problem, the researcher created dummy variables for both variables in question. The need for identification dummy variable was insignificant in each model and thus excluded. The age dummy variable, on the other hand, was statistically significant in several models. However, regardless of the statistical significance of the missing age values dummy variable, the remaining variables in the model were unchanged maintaining similar coefficients and P values as those presented in Tables 4 through 11. The researcher provided a summary (see Appendix G) surrounding the analysis of the missing values for the age and need for identification variables.

**Hypothesis 2.** The second hypothesis posited that the stronger an alumni's brand identification, the larger the sums of money the individual will donate to the organization. The first hypothesis analyzed those correlates of choosing to donate money. The second hypothesis

was concerned exclusively with those donors in the dataset and the variables that influenced overall donation amount. The original donation variable was a continuous level measurement and severely skewed. The researcher attempted to transform the variable but none of the common transformations effectively corrected the abnormality or asymmetry. The researcher opted to create donor levels instead of employing negative binomial regression which is designed for use with count variables. The researcher categorized donation levels in the following manner: Level 1 under \$100 (n=431), Level 2 between \$100 and \$299 (n=386), Level 3 between \$300 and \$999 (n=403), Level 4 between \$1,000 and \$9,999 (n=346), and Level 5 greater than \$10,000 (n=51). The researcher then used ordinary least squares multiple regression to test this hypothesis. The results of the regression output are presented in Table 5.

Table 5

*Multiple Regression Analysis of Donor Level on the Identification, Satisfaction, and Participation Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1103	
Model	259.635402	8	32.4544252	F( 8, 1094) = 27.54	
Residual	1289.21501	1094	1.1784415	Prob > F = 0.0000	
Total	1548.85041	1102	1.40549039	R-squared = 0.1676	
				Adj R-squared = 0.1615	
				Root MSE = 1.0856	
DONOR LEVEL	Coef.	Std. Err.	t	P> t	Standardized Coefficient
IDENTIFICATION	.0166143	.0084438	1.97	0.025*	.06235
SATISFACTION					
(STUDENT AFFAIRS)	.0165261	.0152378	1.08	0.139	.0326967
PARTICIPATION	.0613679	.0159291	3.85	0.000*	.111651
NEED FOR					
IDENTIFICATION	.0723167	.0747941	0.97	0.167	.0281342
AGE	.0337178	.0026644	12.65	0.000*	.3623655
FEMALE	-.1555276	.0670591	-2.32	0.011*	-.0650698
TRANSFER	-.2569084	.1055683	-2.43	0.008*	-.0675077
COMMUTER	-.0404917	.0808775	-0.50	0.309	-.0142857
_cons	-.1677314	.3279344	-0.51	0.305	.

Note. \*P<.05. This table excludes those non-donor respondents.

The results presented in Table 5 showed that the regression model was significant ( $P=0.0000$ ) with 16.2% of the variance in the donor level explained. Identification ( $t=1.97$ ;  $P=.025$ ), participation ( $t=3.85$ ;  $P=.000$ ), age ( $t=12.65$ ;  $P=.000$ ), gender ( $t=-2.32$ ;  $P=.011$ ), and transfer status ( $t=-2.43$ ;  $P=.008$ ) were statistically significant. The results suggested that, all else being equal, for every one unit increase in identification, donor level increased by .02. While holding the other variables in the model constant, for every one unit increase in participation, donor level increased by .06. All else being equal, for every one year increase in age, donor level increased by .03. And finally, both females and transfer students donated less money than their male and non-transfer counterparts. The researcher then checked for interaction effects between gender and identification and found the interaction term to be statistically insignificant.

Assessing the standardized coefficients, the researcher noted that an increase in age by one standard deviation increased donor level by a standard deviation of .362. Increasing participation by one standard deviation, on the other hand, only increased donor level by .112 standard deviations. This means that, in terms of standardized units, age was over 3.3 times as influential over the model as was participation. Additionally, participation was 1.8 times as influential over the model as compared to identification (.062). Therefore, age had the strongest effect on the model. Participation, identification, gender (-.065), and transfer status (-.068) had moderate effects, while commuter status (-.014), need for identification (.028), and satisfaction with student affairs (.033) had weaker effects over the model. The researcher also found the model to exhibit minimal multicollinearity with a mean variance inflation factor (VIF) of 1.12. The variable with the highest VIF score was identification (1.32). The remaining variables in the model ranged from VIF scores of 1.01 (transfer status) to 1.19 (satisfaction). As the results of

the regression showed brand identification as statistically significant and positively related to donor level, the researcher failed to reject the second hypothesis.

**Hypothesis 3.** Hypothesis 3 posited that the stronger an alumna's brand identification, the greater the number of donations she will make to the organization. The number of donations variable was skewed. Therefore, the researcher transformed the variable using the log function. The log transformation improved the normality and symmetry of the variable's distribution. The researcher then used multiple regression to test this hypothesis. The results of the regression are presented in Table 6.

Table 6

*Multiple Regression Analysis of the Log Number of Donations on the Identification and Participation Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1108 F( 7, 1100) = 49.60 Prob > F = 0.0000 R-squared = 0.2399 Adj R-squared = 0.2351 Root MSE = 1.0268		
Model	366.092764	7	52.2989663			
Residual	1159.79761	1100	1.05436147			
Total	1525.89038	1107	1.37840142			
log NUMBER DONATIONS	Coef.	Std. Err.	t	P> t	Standardized Coefficient	
IDENTIFICATION	.018723	.0074336	2.52	0.006*	.0708779	
PARTICIPATION	.0435401	.0150495	2.89	0.002*	.0798994	
NEED FOR IDENTIFICATION	.0866763	.0705495	1.23	0.110	.0340355	
AGE	.0436796	.0025029	17.45	0.000*	.4752374	
FEMALE	.0075121	.0632619	0.12	0.453	.0031735	
TRANSFER	-.126752	.0998197	-1.27	0.102	-.0335654	
COMMUTER	-.0100142	.0761468	-0.13	0.448	-.003567	
_cons	-1.260731	.2418387	-5.21	0.000	.	

Note. \*P<.05.

The results presented in Table 6 showed that the regression model was significant (P= 0.0000) with 23.5% of the variance in the log of the number of donations explained by the independent variables. Identification (t=2.52; P=.006), participation (t=2.89; P=.002), and age (t=17.45; P=.000) were statistically significant. All things being equal, with every one unit

increase in identification, the log of the number of donations increased by .02. Irrespective of the other variables in the model, participation was significant and positive. With every one unit increase in participation the log of the number of donations increased by .04. And, finally, all else being equal, age was positive and significant. For every one year increase in age, the log of the number of donations increased by .04. The researcher then checked for interaction effects between gender and identification and found the interaction term to be statistically insignificant.

Evaluating the standardized coefficients, the researcher again found age to have the most influence over the model. If age increased by one standard deviation, the log number of times donated increased by .475 standard deviations. Identification and participation, on the other hand, had similar standardized coefficients with .071 and .080, respectively, and exhibited moderate effects on the model. Comparing age to the standardized units of identification and participation, the results showed that age was approximately 6 times more influential over the log number of donations. The remaining variables had a weaker effect on the model. The researcher also found the model to exhibit minimal multicollinearity with a mean VIF score of 1.08. Again, the variable in the model with the highest VIF score was identification (1.15). The remaining variables in the model ranged from VIF scores of 1.01 (transfer status) to 1.11 (need for identification). As with Hypothesis 1 and Hypothesis 2, the results of the regression showed brand identification as statistically significant and positively related to the log of the number of donations. Therefore, the researcher failed to reject the third hypothesis.

### **Brand Identification and Other Positive Outcomes**

In addition to donation behaviors, the researcher hypothesized that identification would affect promotion activities, desire to seek contact with the organization, and harboring a

competitive attitude towards relevant out-groups. Again, the researcher used multiple regression to explore the relationships between these variables.

**Hypothesis 4.** The fourth hypothesis posited that the stronger an alumni's brand identification, the more likely the individual will promote the university. Recall from Chapter 3 that promotion included the act of wearing clothing with the institution's logo, recommending the institution to others, and talking about the institution in a positive manner. The researcher used multiple regression to test this hypothesis. The results of the regression output are presented in Table 7.

Table 7

*Multiple Regression Analysis of Promotion on the Identification, Prestige, Interpretation of Brand, Participation, and Satisfaction Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1957	
Model	5621.31622	10	562.131622	F( 10, 1946)	= 270.43
Residual	4044.996	1946	2.07862076	Prob > F	= 0.0000
				R-squared	= 0.5815
				Adj R-squared	= 0.5794
Total	9666.31221	1956	4.94187741	Root MSE	= 1.4417
PROMOTION	Coef.	Std. Err.	t	P> t	Standardized Coefficient
IDENTIFICATION	.077827	.0101055	7.70	0.000*	.1638825
PRESTIGE	.1415633	.0198196	7.14	0.000*	.1409439
INTERPRETATION OF BRAND	.17673	.0108446	16.30	0.000*	.3990683
PARTICIPATION	.162528	.0161044	10.09	0.000*	.1554512
SATISFACTION (STUDENT AFFAIRS)	.0730951	.015746	4.64	0.000*	.0821423
NEED FOR IDENTIFICATION	.0844107	.0737617	1.14	0.127	.0176699
AGE	-.0341924	.0024905	-13.73	0.000*	-.2165034
FEMALE	-.1369904	.0674017	-2.03	0.021 *	-.0303424
TRANSFER	.189525	.0964203	1.97	0.025 *	.0291786
COMMUTER	.3534881	.0843473	4.19	0.000*	.0630407
_cons	1.28812	.300236	4.29	0.000	.

Note. \*P<.05.

The results presented in Table 7 showed that the regression model was significant ( $P=0.0000$ ) with 57.9% of the variance in promotion explained. In this model, all variables except the need for identification ( $t=1.14$ ;  $P=.127$ ) showed a statistically significant relationship. All things being equal, for every one unit increase in the identification index, promotion increased by .07. Similarly, holding all other variables constant, as prestige ( $t=7.14$ ;  $P=.000$ ) increased by one unit, promotion increased by .14. As interpretation of the brand ( $t=16.30$ ;  $P=.000$ ), participation ( $t=10.09$ ;  $P=.000$ ), and satisfaction ( $t=4.64$ ;  $P=.000$ ) increased, promotion increased by .17, .16, and .07 respectively. The model showed females as less likely to promote the institution. Age was also a factor suggesting that older alumni promoted the school less than those younger respondents. This model suggests that there was a statistically significant difference in the promotional behaviors based on transfer and commuter status. In each case, commuters and transfer students promoted the institution more than their live-on and non-transfer counterparts. The researcher then checked for interaction effects between gender and identification as well as gender and interpretation of brand. The researcher found the interaction terms to be statistically insignificant.

Reviewing the standardized coefficients, the results showed that an increase in interpretation of brand by one standard deviation increased promotion by .399 standard deviations. An increase in age by one standard deviation resulted in a decrease in promotions by .217 standard deviations. Increasing identification, participation, and prestige by one standard deviation resulted in an increase of promotion by .164, .155, and .141 standard deviations, respectively. This suggests that, in terms of standardized units, interpretation of brand was over 2.8 times as influential over the model as was prestige, 2.6 times as influential over the model as was participation, and 2.4 times as influential as identification. Additionally, identification was

two times as influential over the model as compared to satisfaction with student affairs (.082). Therefore, interpretation had the strongest effect on the model. Identification, participation, prestige, age, and satisfaction with student affairs had moderate effects. The remaining variables showed weaker effects over the model.

Finally, the researcher found the model to exhibit minimal multicollinearity with a mean VIF of 1.46. In this case, two variables exhibited VIF scores above two. These were interpretation (2.79) and identification (2.11). The remaining variables in the model ranged from 1.02 (transfer status) to 1.81 (prestige) VIF. This model lent support to Hypothesis 3 as identification was statistically significant ( $t = 7.70$ ;  $P = .000$ ) and positively related to promotional behaviors. As such, the researcher failed to reject the hypothesis.

**Hypothesis 5.** The fifth hypothesis posited that the stronger an alumna's brand identification, the more likely she will return to campus for events. The researcher regressed the seek contact variable on identification, participation, and the control variables to test this hypothesis. The results of the regression output are presented in Table 8.



Table 8

*Multiple Regression Analysis of Contact Variable on the Identification and Participation Indexes**Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1953	
Model	706.043619	7	100.863374	F( 7, 1945)	= 76.62
Residual	2560.43564	1945	1.31641935	Prob > F	= 0.0000
				R-squared	= 0.2161
				Adj R-squared	= 0.2133
Total	3266.47926	1952	1.67340126	Root MSE	= 1.1474

SEEK CONTACT	Coef.	Std. Err.	t	P> t	Standardized Coefficient
IDENTIFICATION	.0067307	.0059556	1.13	0.130	.0243004
PARTICIPATION	.2744968	.0129191	21.25	0.000*	.4460223
NEED FOR IDENTIFICATION	-.0683834	.0588101	-1.16	0.123	-.024592
AGE	-.0040143	.0019105	-2.10	0.018*	-.0436562
FEMALE	.0137117	.0536913	0.26	0.399	.0052168
TRANSFER	.0867971	.0760763	1.14	0.127	.0230931
COMMUTER	.22814	.0669899	3.41	0.000*	.0699729
_cons	.4353642	.1851743	2.35	0.010	.

Note. \*P<.05.

The model presented in Table 8 was significant ( $P = 0.0000$ ) with 21.3% of the variance in the dependent variable explained. Participation ( $t = 21.25$ ;  $P = .000$ ), age ( $t = -2.10$ ;  $P = .018$ ), and commuter ( $t = 3.41$ ;  $P = .000$ ) were statistically significant in the model. All things being equal, with every one unit increase in participation, seek contact increased by .27. The model also showed that, holding all other variables constant, with each year increase in age returning to campus decreased though the coefficient was near zero. The results showed that commuter students return to campus more than their live-on counterparts. Finally, the researcher then checked for interaction effects between gender and identification. The researcher found the interaction term to be statistically insignificant.

Assessing strength of effect, the researcher concluded that participation was the most influential variable in the model. If participation increased by one standard deviation, seeking

contact would increase by .446 standard deviations. Or, in another way, increasing participation was over 18.6 times more effective in increasing contact than was brand identification. In the case of this model, only the participation variable had a strong effect, while commuter status had a moderate effect, and all other variables showed a weak effect. Lastly, the researcher found the model to exhibit minimal multicollinearity with a mean VIF of 1.07. In this case, identification had the highest VIF score (1.15). The remaining variables in the model ranged from VIF scores of 1.02 (transfer status) to 1.11 (need for identification). The results suggested that brand identification did not influence the desire to seek contact with the institution in a statistically significant manner. Therefore, the researcher rejected Hypothesis 5.

**Hypothesis 6.** The sixth hypothesis posited that the stronger an alumna's brand identification, the more likely she will have a competitive attitude towards out-groups. The researcher used the other universities in the state system as the relevant out-groups for comparison. The three questions in the index assessed the respondents' perceptions that the institution in question was superior over the other schools. The researcher used multiple regression to test this hypothesis. The results of the regression output are presented in Table 9.

Table 9

*Multiple Regression Analysis of Competitive Attitude Variable on the Participation, Satisfaction, Identification, Interpretation of Brand, and Prestige Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1959	
Model	3200.4955	9	355.610611	F( 9, 1949)	= 188.71
Residual	3672.69745	1949	1.88440095	Prob > F	= 0.0000
				R-squared	= 0.4656
				Adj R-squared	= 0.4632
Total	6873.19296	1958	3.51031305	Root MSE	= 1.3727
COMPETITIVE ATT.	Coef.	Std. Err.	t	P> t	Standardized Coefficient
IDENTIFICATION	.0277179	.009578	2.89	0.002*	.0692575
PRESTIGE	-.083259	.0188282	-4.42	0.000*	-.0984692
INTERPRETATION OF BRAND	.2420972	.0098049	24.69	0.000*	.6486329
PARTICIPATION	.0574102	.0153314	3.74	0.000*	.065129
NEED FOR IDENTIFICATION	-.0039382	.0701776	-0.06	0.478	-.0009779
AGE	.0041369	.0023693	1.75	0.041*	.0310934
FEMALE	-.5304359	.064087	-8.28	0.000*	-.1393797
TRANSFER	-.1281495	.0913756	-1.40	0.081	-.0234363
COMMUTER	-.1059847	.080137	-1.32	0.093	-.0224179
_cons	3.338933	.2537927	13.16	0.000	.

Note. \*P<.05.

The model presented in Table 9 showed that the regression model was significant ( $P=0.0000$ ) with 46.3% of the variance in competitive attitude explained by the independent variables. Controlling for the other variables in the model, as identification increased by one point, competitive attitude increased by .03. Prestige ( $t=-4.42$ ;  $P=.000$ ) presented with a negative coefficient suggesting that as prestige increased by one unit, competitive attitude decreased by .08. Initial examination of this result seems counterintuitive. Further discussion of the nature of this relationship is presented in Chapter 5. Additional results showed that, all else being equal, as interpretation of brand ( $t=24.69$ ;  $P=.000$ ) increased by one unit, competitive attitude increased by .24. Likewise, while controlling for other variables in the model, as participation ( $t=3.74$ ;  $P=.000$ ) increased by one point, competitive attitude increased by .06. This model also

suggested that gender was statistically significant indicating that female alumni had less competitive attitude than did their male counterparts. The researcher then checked for interaction effects between gender and identification as well as gender and interpretation of brand. The researcher found the interaction terms to be statistically insignificant.

Similar to the beta scores from Table 7, the results showed interpretation of brand as having the strongest effect on the model presented by the standardized coefficient. Here, one standard deviation increase in the interpretation of brand yielded a .649 standard deviation increase in competitive attitude. In this case, increasing interpretation of brand was more than 10 times as effective as participation, 9.4 times as effective as identification, and 6.6 times as influential as prestige. Again, gender (-.139) presented with a moderate and negative effect on the model. In summary, interpretation of brand clearly showed the strongest effect on the model. Gender, prestige (-.098), identification (.069), and participation (.065) had moderate effects on the model. And need for identification (-.001), age (.031), transfer (-.023), and commuter status (-.022) had the weakest effects.

Additionally, the researcher found the model to exhibit minimal multicollinearity with a mean VIF of 1.43. In this case, two variables exhibited VIF scores above two. These were interpretation (2.52) and identification (2.09). The remaining variables in the model ranged from VIF scores of 1.02 (transfer status) to 1.81 (prestige). The researcher failed to reject the hypothesis as brand identification ( $t=2.89$ ;  $P=.002$ ) exhibited a statistically significant and positive relationship with competitive attitude.

### **Assessing the Conceptual Model**

After exploring the effects of brand identification on outcomes like donations, promotional behavior, desire to seek contact with the organization, and competitive attitude, the

researcher examined the relationships of the other variables in the conceptual model. The researcher first investigated the relationship between the antecedent variables and identification to address Hypotheses 7, 8, and 9. Then the researcher investigated the relationship between antecedent variables, namely participation and satisfaction, and brand image to address Hypotheses 10 and 11.

**Hypotheses 7, 8, and 9.** The seventh through ninth hypotheses posited that interpretation of brand would be positively associated with identification, prestige would be positively associated with identification, and participation would be positively associated with identification, respectively. The researcher used multiple regression to test these hypotheses. First, the researcher regressed identification on the antecedent and control variables. The results of the regression output are presented in Table 10.

Table 10

*Multiple Regression Analysis of Identification on the Participation, Satisfaction, Interpretation of Brand, and Prestige Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1957	
Model	22506.6897	9	2500.7433	F( 9, 1947)	= 239.21
Residual	20354.6104	1947	10.4543454	Prob > F	= 0.0000
				R-squared	= 0.5251
				Adj R-squared	= 0.5229
Total	42861.3001	1956	21.9127301	Root MSE	= 3.2333
IDENTIFICATION	Coef.	Std. Err.	t	P> t	Standardized Coefficient
PARTICIPATION	.1861535	.0358693	5.19	0.000*	.0845541
SATISFACTION (STUDENT AFFAIRS)	.1360074	.035178	3.87	0.000*	.0725836
INTERPRETATION OF BRAND	.5188415	.0212892	24.37	0.000*	.5563772
PRESTIGE	.1983234	.0442205	4.48	0.000*	.0937707
NEED FOR IDENTIFICATION	1.197531	.16318	7.34	0.000*	.1190475
AGE	.0038382	.0055847	0.69	0.246	.0115414
FEMALE	-.030016	.1511567	-0.20	0.422	-.0031573
TRANSFER	.3204966	.2161147	1.48	0.069	.0234325
COMMUTER	-.1238664	.1891403	-0.65	0.257	-.0104905
_cons	-1.825769	.6720506	-2.72	0.004	.

Note. \*P<.05.

The model presented in Table 10 showed the results of regressing identification on the antecedent index variables as seen in the conceptual model presented in Chapter 2 (Figure 1). The model was significant ( $P= 0.0000$ ) with 52.3% of the variance in identification explained. In this model, all of the antecedent independent variables were statistically significant and positive. All things being equal, the model concluded the following: with each unit increase in participation ( $t=5.19$ ;  $P=.000$ ), identification increased by .19; for every one unit increase in satisfaction with student affairs ( $t=3.87$ ;  $P=.000$ ), identification increased by .14; for every one unit increase in interpretation of brand ( $t=24.37$ ;  $P=.000$ ), identification increased by .52; and finally, as prestige ( $t=4.48$ ;  $P=.000$ ) increased by one unit, identification increased by .20. Additionally, the need for identification control variable was statistically significant and positive.

The statistical significance of this control variable suggested that, all else equal, as the need for identification increased by one unit, identification increased by 1.19. Or, in other words, as respondents felt a higher need to identify they experienced higher identification index scores. The researcher then checked for interaction effects between gender and interpretation of brand. The researcher found the interaction term to be statistically insignificant in the model.

Also noting strength of effect of each variable, the researcher compared standardized coefficients. Again, as in Table 7 and Table 9, interpretation of brand presented with the strongest effect. In the model from Table 10, increasing interpretation of brand by one standard deviation increased identification by .556 standard deviations. Alternatively, increasing prestige, participation, and satisfaction with student affairs, increased identification by .094, .085, and .073, respectively. This means that, considering the standardized units, interpretation of brand was more than 5.9 times more influential than prestige, 6.6 times more influential than participation, and 7.6 times more effective than satisfaction with student affairs at influencing identification. In summary, interpretation of brand clearly showed the strongest effect on the model. Need for identification (.119), prestige, participation, and satisfaction with student affairs had moderate effects on the model. In addition, age (.012), gender (-.003), transfer (.023), and commuter status (-.010) had the weakest effects.

The researcher assessed multicollinearity and found a minimal mean VIF score of 1.31. Only one variable in the model, interpretation of brand (2.14) presented with a VIF score above two. All other variables in the model presented with VIF scores ranging from 1.02 (transfer status) to 1.79 (prestige). The results presented in Table 10 showed support for hypotheses seven, eight, and nine. That is, the results showed that the interpretation of brand, prestige, and

participation variables were positively associated with identification. Therefore, the researcher failed to reject these three hypotheses.

**Hypotheses 10 and 11.** The tenth and eleventh hypotheses posited that participation would be positively associated with brand image and satisfaction would be positively associated with brand image, respectively. Recall from Chapter 3 that brand image was the sum of prestige, interpretation of brand, and four additional questions that the factor analysis showed loaded together. The researcher originally regressed brand image on participation, satisfaction, and the control variables. The model presented as significant and had an adjusted  $R^2_a$  of .4359 and a root MSE of 6.56. In the original model, participation, satisfaction, need for identification, age, and commuter were significant. However, the researcher sought to determine if brand identification would have a significant effect as an additional independent variable in the model. The researcher then created a new model. The results of the second regression model are presented in Table 11.



Table 11

*Multiple Regression Analysis of Brand Image Variable on the Identification, Participation and Satisfaction Indexes Controlling for Need for Identification, Age, Gender, Transfer Status, and Commuter Status*

Source	SS	df	MS	Number of obs = 1956	
Model	90805.9769	9	10089.553	F( 9, 1946) = 334.83	
Residual	58639.8131	1946	30.1335114	Prob > F = 0.0000	
				R-squared = 0.6076	
				Adj R-squared = 0.6058	
Total	149445.79	1955	76.4428593	Root MSE = 5.4894	
BRAND IMAGE	Coef.	Std. Err.	t	P> t	Standardized Coefficient
IDENTIFICATION	.9147973	.0315643	28.98	0.000*	.4893838
PARTICIPATION	.0907551	.0611696	1.48	0.069	.0220732
SATISFACTION (STUDENT AFFAIRS)	.9492939	.0629588	15.08	0.000*	.2712659
SATISFACTION (RESOURCES)	.6574432	.063127	10.41	0.000*	.1816478
NEED FOR IDENTIFICATION	.1716839	.2809748	0.61	0.271	.0091391
AGE	.0702246	.0091343	7.69	0.000*	.1130588
FEMALE	.11926	.2589761	0.46	0.323	.0067168
TRANSFER	.0666048	.3668944	0.18	0.428	.0026078
COMMUTER	.8769884	.3226111	2.72	0.004*	.0397742
_cons	7.791263	1.169232	6.66	0.000	.

Note. \*P<.05.

The model presented in Table 11 showed the results of regressing brand image on the identification, participation, satisfaction with student affairs, and satisfaction with resources index variables. The addition of identification to the original model increased the  $R^2_a$  to .6058 and decreased the root MSE to 5.48. The model was significant ( $P=0.0000$ ). Participation ( $t=1.48$ ;  $P=.069$ ), however, was not significant in the model. This result, though failing to support Hypothesis 10, presented insight on the potential reciprocal nature of the antecedents of identification. Other results highlighted that, all things being equal, as identification ( $t=28.98$ ;  $P=.000$ ) increased by one unit, brand image increased by .91. In addition, both satisfaction index variables had a statistically significant positive relationship with brand image. All things equal, as satisfaction with student affairs ( $t=15.08$ ;  $P=.000$ ) increased by one unit, brand image

increased by .95. Similarly, with every one unit increase in satisfaction with resources ( $t=10.41$ ;  $P=.000$ ), brand image increased by .66. Therefore the researcher failed to reject Hypothesis 11. The model suggested that with each year increase in age brand image increased by .07. Commuter students also had higher brand image perceptions than their counterparts that lived on campus. Next, the researcher tested for interaction effects between gender and identification. The researcher found the interaction term for gender and identification to be statistically insignificant in the model.

Assessing the standardized coefficients, the researcher noted that an increase in identification by one standard deviation increased brand image by a standard deviation of .489. Increasing satisfaction with student affairs by one standard deviation, on the other hand, only increased brand image by .271 standard deviations. This means that, in terms of standardized units, identification was about 1.8 times as influential over the model as was satisfaction with student affairs. Additionally, identification was 2.7 times as influential over the model as compared to satisfaction with resources (.182). Identification had the strongest effect on the model. Satisfaction with student affairs, satisfaction with resources, and age (.113) had moderate effects, while participation (.022), gender (.007), transfer status (.003), commuter status (.040), and need for identification (.009) had weaker effects over the model.

Then the researcher checked for multicollinearity and found a low mean VIF score of 1.22. The variable with the highest VIF score was satisfaction with student affairs (1.61). All other variables in the model registered with VIF scores ranging between 1.02 (transfer status) and 1.51 (satisfaction with resources). The results presented in Table 11 failed to support Hypotheses 10 because participation was statistically insignificant. However, the model showed

support for hypothesis 11 because satisfaction was positively associated with brand image.

Therefore the researcher rejected Hypothesis 10 and failed to reject Hypothesis 11.

**Mediation analysis.** The researcher conducted a mediation analysis using the Baron and Kenny (1986) methodology. The authors presented a test for mediation that included a series of three regressions. First, the researcher regressed the mediator, identification, on the independent or antecedent variables (Table 12). Then, the researcher regressed the dependent variables separately on the independent variables (Table 13). Finally, the researcher regressed the dependent variables separately on the mediator (Table 14). The researcher assessed each series of equations to evaluate whether they met the conditions designated by Baron and Kenny (1986).

Table 12

*Step 1 of the Baron and Kenny (1986) Mediator Model: Regressing the Mediator on the Independent Variables*

Source	SS	df	MS	Number of obs = 1956 F( 10, 1945) = 215.65 Prob > F = 0.0000 R-squared = 0.5258 Adj R-squared = 0.5233 Root MSE = 3.2292		
Model	22487.2542	10	2248.72542			
Residual	20282.133	1945	10.4278319			
Total	42769.3872	1955	21.8769244			

IDENTIFICATION	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PARTICIPATION	.1863849	.0358279	5.20	0.000*	.1161199	.2566499
SATISFACTION						
(STUDENT AFFAIRS)	.0996972	.0385729	2.58	0.005*	.0240488	.1753457
SATISFACTION						
(RESOURCES)	.0869053	.0379777	2.29	0.011*	.0124239	.1613866
INTERPRETATION						
OF BRAND	.5154354	.0213055	24.19	0.000*	.4736513	.5572194
PRESTIGE	.177506	.0449824	3.95	0.000*	.0892873	.2657247
NEED FOR						
IDENTIFICATION	1.211171	.1630619	7.43	0.000*	.8913765	1.530966
AGE	.0039275	.0055785	0.70	0.241	-.0070129	.014868
FEMALE	-.0745516	.1523751	-0.49	0.313	-.3733872	.224284
TRANSFER	.3099675	.2158774	1.44	0.076	-.1134079	.733343
COMMUTER	-.073734	.190064	-0.39	0.349	-.4464845	.2990165
_cons	-2.257352	.6999472	-3.23	0.000	-3.630078	-.8846265

Note. \*P<.05.

The model presented in Table 12 showed that the regression model was significant ( $P=0.0000$ ) with 52.3% of the variance in identification explained by the independent variables.

Baron and Kenny (1986) asserted that the independent variables in the first equation must affect the mediator. The model presented in Table 12 showed that participation ( $t=5.20$ ;  $P=.000$ ), satisfaction with student affairs ( $t=2.58$ ;  $P=.005$ ), satisfaction with resources ( $t=2.29$ ;  $P=.011$ ), interpretation of brand ( $t=24.19$ ;  $P=.000$ ), and prestige ( $t=3.95$ ;  $P=.000$ ) were statistically significant and positively associated with identification. Therefore in this first step, the criteria set forth by Baron and Kenny (1986) was met. The researcher then conducted the second step of the three step mediation process. The results are shown in Table 13.

Table 13

*Step 2 of the Baron and Kenny (1986) Mediator Model: Regressing the Dependent Variable on the Independent Variables*

Source	SS	df	MS	Number of obs = 1956 F( 10, 1945) = 80.65 Prob > F = 0.0000 R-squared = 0.2931 Adj R-squared = 0.2895 Root MSE = 1.2772		
Model	1315.60031	10	131.560031			
Residual	3172.85368	1945	1.63128724			
Total	4488.45399	1955	2.29588439			

DONOR LEVEL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PRESTIGE	-.0773216	.0177914	-4.35	0.000*	-.1122138	-.0424293
INTERPRETATION OF BRAND	.033577	.0084268	3.98	0.000*	.0170505	.0501034
PARTICIPATION	.0549219	.0141706	3.88	0.000*	.0271307	.0827132
SATISFACTION (STUDENT AFFAIRS)	.038991	.0152563	2.56	0.005*	.0090705	.0689115
SATISFACTION (RESOURCES)	.0278947	.0150209	1.86	0.032*	-.0015642	.0573535
NEED FOR IDENTIFICATION	.11105	.0644942	1.72	0.043*	-.0154351	.237535
AGE	.0561991	.0022064	25.47	0.000*	.051872	.0605263
FEMALE	-.1181425	.0602674	-1.96	0.025*	-.2363379	.0000529
TRANSFER	-.2523505	.0853838	-2.96	0.002*	-.4198039	-.0848971
COMMUTER	-.0392026	.0751741	-0.52	0.301	-.1866328	.1082276
_cons	-2.799839	.276843	-10.11	0.000	-3.342779	-2.256899

Note. \* $P<.05$ .

The model presented in Table 13 showed that the regression model was significant ( $P=0.0000$ ) with 28.9% of the variance in donor level explained by the independent variables. Baron and Kenny (1986) asserted that the independent variables in the second equation must affect the dependent variable. The model presented in Table 13 showed prestige ( $t=-4.35$ ;  $P=.000$ ), interpretation of brand ( $t=3.98$ ;  $P=.000$ ), participation ( $t=3.88$ ;  $P=.000$ ), satisfaction with resources ( $t=1.86$ ;  $P=.032$ ), and satisfaction with student affairs ( $t=2.56$ ;  $P=.005$ ) as statistically significant in relationship to donor level. The researcher then conducted the third and final step of the mediation analysis. The results are presented in Table 14.

Table 14

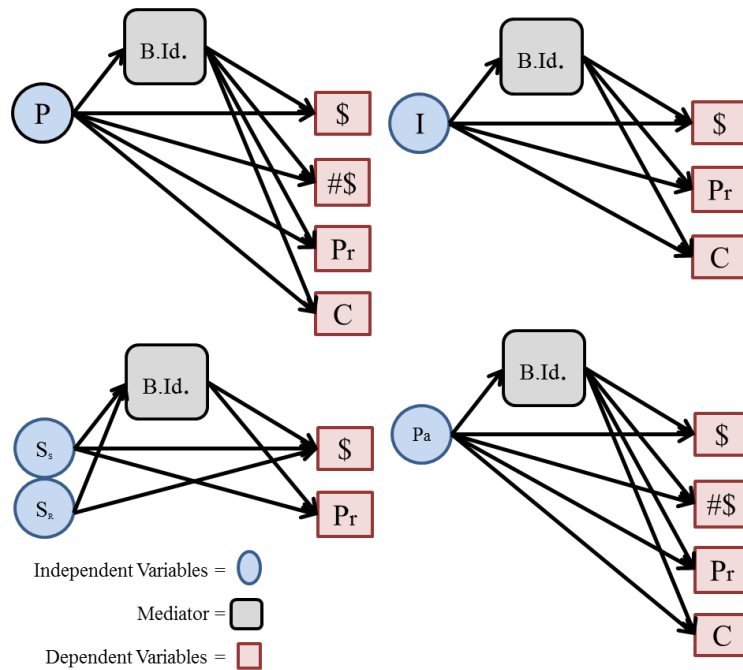
*Step 3 of the Baron and Kenny (1986) Mediator Model: Regressing the Dependent Variable on the Independent Variables and Mediator*

Source	SS	df	MS	Number of obs = 1956		
Model	1321.66197	11	120.151088	F( 11, 1944) = 73.76		
Residual	3166.79202	1944	1.62900824	Prob > F = 0.0000		
				R-squared = 0.2945		
				Adj R-squared = 0.2905		
Total	4488.45399	1955	2.29588439	Root MSE = 1.2763		
DONOR LEVEL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
IDENTIFICATION	.0172878	.008962	1.93	0.027*	-.0002884	.0348639
PRESTIGE	-.0803903	.01785	-4.50	0.000*	-.1153974	-.0453831
INTERPRETATION OF BRAND	.0246662	.0096046	2.57	0.005*	.0058297	.0435027
PARTICIPATION	.0516998	.0142589	3.63	0.000*	.0237354	.0796641
SATISFACTION (STUDENT AFFAIRS)	.0372675	.0152718	2.44	0.008*	.0073166	.0672183
SATISFACTION (RESOURCES)	.0263923	.0150306	1.76	0.040*	-.0030856	.0558701
NEED FOR IDENTIFICATION	.0901115	.0653568	1.38	0.084	-.0380653	.2182883
AGE	.0561312	.0022051	25.45	0.000*	.0518065	.0604559
FEMALE	-.1168536	.0602289	-1.94	0.027*	-.2349737	.0012665
TRANSFER	-.2577091	.0853693	-3.02	0.002*	-.4251342	-.0902841
COMMUTER	-.0379279	.0751244	-0.50	0.307	-.1852608	.109405
_cons	-2.760814	.2773882	-9.95	0.000	-3.304824	-2.216805

Note. \* $P<.05$ .

The model presented in Table 14 showed that the regression model was significant ( $P=0.0000$ ) with 29.1% of the variance in donor level explained by the independent variables. Baron and Kenny (1986) asserted that the mediator in the third equation must affect the dependent variable. The model presented in Table 14 showed identification ( $t=1.93$ ;  $P=.027$ ), prestige ( $t=-4.50$ ;  $P=.000$ ), interpretation of brand ( $t=2.57$ ;  $P=.005$ ), participation ( $t=3.63$ ;  $P=.000$ ), satisfaction with resources ( $t=1.76$ ;  $P=.040$ ), and satisfaction with student affairs ( $t=2.44$ ;  $P=.008$ ) as statistically significant in relation to donor level. In addition to the mediator affecting the dependent variable, Baron and Kenny (1986) also asserted that the researcher should detect a decrease in the size of the coefficients from step two to step three. In this case, the researcher identified a decrease in the coefficients for the variables in question for mediation. Therefore, the results of the three step mediation method suggested that brand identification partially mediates the relationship between prestige, interpretation of brand, participation, satisfaction with student affairs and donor level.

The researcher then conducted the same three step mediation process for each of the remaining dependent variables. The results of the mediation analysis are presented in Figure 3.



*Figure 3.* Results of Baron and Kenny Mediation Analysis. Identification partially mediated the relationship between the shown independent and dependent variables. The independent variables are as follows: P = Prestige, I = Interpretation of Brand, Pa = Participation,  $S_R$  = Satisfaction with Resources, and  $S_S$  = Satisfaction with Student Affairs. The mediator B.Id. = Brand Identification. The dependent variables are as follows: \$ = Donor Level, # \$ = Number of Donations, Pr = Promotion, and C = Competitive Attitude.

The results presented in Figure 3 showed that identification partially mediated several relationships in the model. The researcher found no instances of full mediation during the analysis which would emerge if the coefficients would decrease to zero from the second to third equations (Baron & Kenny, 1986). Brand identification partially mediated the relationship of all independent variables with donor level. Brand identification partially mediated the relationship of all independent variables, except satisfaction with resources, and promotion behaviors. Identification partially mediated the relationship between prestige, interpretation of brand, and participation with competitive attitude. Identification partially mediated the relationship between

prestige and participation with the number of donations. Finally, identification did not mediate the relationship between independent variables and the seek contact variable (not shown in Figure 3). This result is consistent with the findings from the testing of Hypothesis 5 in which case the researcher determined that identification was not statistically significant as related to seeking contact with the organization.

### **Summary of Hypothesis Tests**

There were eleven hypotheses proposed in this study. Of the proposed eleven, the data supported nine hypotheses including Hypotheses 1 through 4, Hypotheses 6 through 9, and Hypothesis 11. Brand identification was found to be a statistically significant predictor of donating, total dollars donated, number of times donated, promotion, and competitive attitude. Brand identification had a moderate strength of effect over the models that explored donor level, number of donations, promotion, and competitive attitude. Interpretation of brand, prestige, and participation were positively associated with identification. And, lastly, satisfaction was positively associated with brand image. Therefore, the researcher failed to reject these hypotheses.

The data neglected to support two of the hypotheses. Hypothesis 5 stated that the stronger an alumni's brand identification, the more likely she will return to campus for events. The data indicated that brand identification was not statistically significant as a predictor of the desire to seek contact with the organization. The other hypothesis that failed to be supported by the data was Hypothesis 10. Hypothesis 10 stated that participation experience will be positively associated with brand image. The results showed that, after adding brand identification to the model, participation was knocked out of significance. For this reason the researcher rejected Hypothesis 5 and Hypothesis 10.



### **Further Exploration**

The following section presents results of an additional analysis of the donor and non-donor populations. The information, though not specifically associated with the hypotheses, provided insight on characteristics of the donors as well as patterns of response. Because the crux of the study focused on interpretation of brand and brand identification as they related to alumni supportive behaviors, the researcher explored differences between the donors and non-donors on these two variables. Additionally, the researcher investigated differences in these two populations surrounding other supportive behaviors like promotion.

The results presented in Table 4 showed that identification was statistically significant in affecting the choice to donate. As such, the researcher further examined brand identification scores between the two populations. The researcher conducted a simple chi square test to assess the relationship between donor level and strength of identification. The range of scores of the identification variable stretched from six to 30. Strength of identification was defined such that scores less than 18 were weak, scores between 18 and 23 were neutral, and scores over 23 were strong. The results are presented in Table 15.

Table 15

*Relationship between Donor Level and Strength of Brand Identification*

DONOR LEVEL	IDENTIFICATION			Total
	Weak ID	Neutral ID	Strong ID	
Non-Donor	254	556	336	1,146
	55.34%	40.64%	35.90%	41.48%
Under \$100	68	216	147	431
	14.81%	15.79%	15.71%	15.60%
\$100 to \$299	51	200	135	386
	11.11%	14.62%	14.42%	13.97%
\$300 to \$999	54	216	133	403
	11.76%	15.79%	14.21%	14.59%
\$1000 to \$9999	25	161	160	346
	5.45%	11.77%	17.09%	12.52%
Over \$10000	7	19	25	51
	1.53%	1.39%	2.67%	1.85%
Total	459	1,368	936	2,763
	100.00%	100.00%	100.00%	100.00%

Note. Percentages refer to column totals. Pearson  $\chi^2(10) = 75.7741$ ;  $Pr = 0.000$

The results presented in Table 15 showed that the relationship was significant ( $Pr=.000$ ) between donor level and strength of identification. The results suggested that 55.3% of individuals with weak identification were also non-donors. In contrast, 64.1% of those respondents with strong identification donated money to the organization. Furthermore, forty-eight percent of respondents with strong identification donated over \$100 to the institution. Comparatively, only 29.9% of those respondents with weak identification donated over \$100. These results supported the findings from Tables 4 and 5 which showed identification affecting choice to donate and donor level

Broadening the examination of differences in identification between the donors and non-donors, the researcher then created two regression models for comparison. The researcher regressed identification on prestige, interpretation of brand, participation, satisfaction with student affairs, satisfaction with resources, need for identification, gender, age, transfer status, and commuter status. The first model included only those donors. The second model included only those non-donors. The results are presented in Tables 16 and 17.

Table 16

*Regression of Identification on Antecedent Variables for the Donor Respondent Population*

Source	SS	df	MS	Number of obs = 1102	
Model	11032.7269	9	1225.85855	F( 9, 1092)	= 124.18
Residual	10779.689	1092	9.87151011	Prob > F	= 0.0000
				R-squared	= 0.5058
				Adj R-squared	= 0.5017
Total	21812.416	1101	19.8114586	Root MSE	= 3.1419
IDENTIFICATION	Coef.	Std. Err.	t	P> t	Standardized Coefficient
PRESTIGE	.1538059	.05915	2.60	0.005*	.0725805
INTERPRETATION					
OF BRAND	.5312807	.0281249	18.89	0.000*	.5603923
PARTICIPATION	.176273	.0460479	3.83	0.000*	.0853626
SATISFACTION					
(STUDENT AFFAIRS)	.1479769	.0461838	3.20	0.000*	.0779891
NEED FOR					
IDENTIFICATION	1.078672	.2142101	5.04	0.000*	.1118026
FEMALE	-.0628306	.1942689	-0.32	0.373	-.0070024
AGE	.0003704	.0080587	0.05	0.482	.0010604
TRANSFER	.7184093	.3054338	2.35	0.010*	.0503009
COMMUTER	-.1475714	.234271	-0.63	0.265	-.0138718
_cons	-1.43976	.9869104	-1.46	0.073	.

Note. \*P&lt;.05.

Table 17

*Regression of Identification on Antecedent Variables for the Non-Donor Respondent Population*

Source	SS	df	MS	Number of obs = 855	
Model	10950.2609	9	1216.69566	F( 9, 845)	= 108.36
Residual	9488.2562	845	11.2287056	Prob > F	= 0.0000
				R-squared	= 0.5358
				Adj R-squared	= 0.5308
Total	20438.5171	854	23.9326899	Root MSE	= 3.3509
IDENTIFICATION	Coef.	Std. Err.	t	P> t	Standardized Coefficient
PRESTIGE	.2647372	.067401	3.93	0.000*	.1255362
INTERPRETATION					
OF BRAND	.5020804	.0331708	15.14	0.000*	.5470483
PARTICIPATION	.2013237	.0574946	3.50	0.000*	.0859641
SATISFACTION					
(STUDENT AFFAIRS)	.1001039	.05569	1.80	0.037*	.0538174
NEED FOR					
IDENTIFICATION	1.35375	.2528956	5.35	0.000*	.1301765
FEMALE	.0218467	.2399194	0.09	0.464	.0021715
AGE	-.0005665	.0098293	-0.06	0.477	-.0014433
TRANSFER	-.0409126	.3120292	-0.13	0.448	-.0031402
COMMUTER	-.0743997	.3203377	-0.23	0.408	-.0055152
_cons	-1.692265	1.010384	-1.67	0.047	.

Note. \*P&lt;.05.

The results of Table 16 and Table 17 showed the difference between donors and non-donors in the relationship between the antecedent variables and identification. Fifty percent of the variation in the donor population was explained in the model while 53% of the variation was explained in the non-donor population. In both cases, interpretation of brand presented with the strongest effect given the standardized coefficients. Also similar, gender, age, transfer status, and commuter status had the weakest effect size in each model. Though similar, the researcher identified two areas of difference between the samples. First, satisfaction with student affairs, though statistically significant and positively related to identification in both models, was slightly more influential in the donor model. The researcher anticipated this result as the alumni donor literature avidly presented satisfaction as a significant determinant of donations (McDearmon, 2010; Tsao & Coll, 2005; Monks, 2003; Clotfelter, 2001). This result corroborated the findings presented in Table 10 that displayed a significant and positive relationship between satisfaction with student affairs and identification across both populations. This result also agreed with the findings from t tests (see Appendix F) that showed a statistically significant difference between donors and non-donors on measures of satisfaction. Second, prestige had a smaller effect on the donor population than on the non-donor population.

The researcher ran the same model against each donor level. The results showed that interpretation of brand was the only antecedent statistically significant and positive as related to brand identification across all five levels. For those individuals donating under \$100, satisfaction with student affairs, participation, and interpretation of brand affected identification. For donors of \$100 to \$299 participation and interpretation of brand affected identification. For those donating \$300 to \$999 and those donating over \$10,000, only interpretation of brand was a

significant predictor of identification. For those alumni that donated \$1,000 to \$9,999 interpretation, satisfaction with student affairs, and prestige predicted identification.

The researcher desired to understand the differences in perception of brand image between donors and non-donors. To reiterate, brand image was the sum of the prestige index, the interpretation of brand index (sub-defined as distinctiveness and attractiveness), as well as four additional questions. The researcher conducted one t test with assumed equal variances (see Table F7 in Appendix F) and one t test with assumed unequal variances (see Table F8 in Appendix F). The researcher also conducted a nonparametric Wilcoxon rank-sum test (see Table F9 in Appendix F). Both t tests showed a statistically significant difference between the mean brand image score for donors (59.5) and non-donors (56.3). The donor sample standard deviation was lower suggesting that they are more similar in their perception of brand image than the non-donors. The Wilcoxon rank-sum test also provided support for the results indicating that there was a statistically significant difference in perception of brand between sample populations.

The researcher then compared the promotional activities by age group between donors and non-donors. The researcher found that, across both the donor and non-donor populations, younger respondents promoted the institution more than the older alumni. These results confirmed the findings from the t tests which suggested no statistically significant difference existed between donors and non-donors in terms of promotional behaviors. Instead, the age groups for both populations with the highest promotion scores were those respondents under 30 years old. The age groups for both populations with the second highest promotion scores were those respondents between 30 and 44 years old. The percentage of respondents that highly promoted the institution gradually decreased with age for donors and non-donors. However,

31.1% of those donors 60 and older highly promoted the institution as compared to 12.7% of those non-donors 60 and older.

### **Summary of Further Exploration**

In summary, the researcher found 64.1% of those respondents with strong identification donated money to the organization. The researcher found that the statistical significance of the antecedents was similar across the two samples in their relation to identification. However, satisfaction was only significantly related to identification for the donors. Additionally, the researcher noted a statistically significant difference in the perception of brand image across the two populations. There was less variation in the donors' perceptions of the brand in comparison to those non-donors. And finally, the researcher found similar patterns of promotion for donors and non-donors with the younger respondents more avidly promoting the institution.

### **Summary**

The researcher conducted analyses on 2,763 usable responses of which females made up 57% (1,567) while males represented 43% (1,195). Gender information was unavailable for one respondent. First, the researcher tested the hypotheses. Hypotheses 1 through 3 evaluated the effect of identification on donating, the amount donated, and the number of times donated. The researcher used logistic regression and found that identification was positive and statistically significant in the choice to donate. The researcher used multiple regression and found that identification was a statistically significant predictor of the amount donated as well as the log of the number of times donated. Therefore the researcher failed to reject Hypothesis 1, Hypothesis 2, and Hypothesis 3.

Then the researcher tested the effects of identification on promotion (Hypothesis 4), desire to seek contact with the organization (Hypothesis 5), and competitive attitude towards out-

groups (Hypothesis 6). The researcher constructed separate regression models to test each hypothesis. The results showed that identification was positively and significantly related to promotion behaviors and competitive attitude. The results also indicated that the relationship between identification and desire to seek contact was not statistically significant. Therefore, the researcher failed to reject Hypothesis 4 and Hypothesis 6 and rejected Hypothesis 5.

The last series of regressions tested the relationships between the antecedent variables and identification as well as brand image. Hypotheses 7, 8, and 9 posited that interpretation of the brand, prestige, and participation would be positively associated with identification. Regression results revealed that these three associations were positive and statistically significant. The researcher thus failed to reject Hypotheses 7, 8, and 9. Hypotheses 10 and 11 conceived that participation and satisfaction would respectively be positively associated with brand image. The results of the regression analysis showed mixed findings. The relationship between participation and brand image was not statistically significant. Therefore, the researcher rejected Hypothesis 10. However, the relationship between satisfaction and brand image was positive and statistically significant. The researcher thereby failed to reject Hypothesis 11.

The researcher completed the analysis by further comparing characteristics of the donor and non-donor populations. In the comparison, the researcher found donors to be older and at the institution slightly longer than those non-donors. Additionally, over 56% of women respondents were donors and 61% of male respondents were donors. The donors also had a higher and more similar conception of brand image. Likewise, more individuals with strong identification donated money to the institution while over 55% of those with weak identification resided in the non-donor category. The results suggested that one difference between donors and non-donors in prediction of identification was satisfaction. In the donor population only,

satisfaction was statistically significant and positively related to identification. Further information from the testing of the hypotheses, as well as the additional donor analysis, are discussed in Chapter 5.



## CHAPTER 5

### DISCUSSION

#### **Overview**

The purpose of this study was to determine what effects brand identification had on the supportive behavior of alumni such as donations, promotion, seeking contact, and competitive attitude towards out-groups. The study sought to examine the effects of brand identification on these supportive behaviors, to understand if identification is a potential mechanism for enhancing the supportive behaviors of alumni, and to satisfy the question of whether alumni that experience strong identification engage in more supportive behaviors than those alumni who do not experience strong identification. This chapter presents a discussion of the results of the study in four sections. First, this chapter offers an explanation of the findings as they relate to the hypotheses and the variables in the conceptual framework. The section highlights those findings in agreement with the literature and those that contrast the findings from previous studies. The section also provides observations surrounding the theoretical underpinnings of identification as they emerged from the data. Second, the chapter explains the limitations of the study. Third, the chapter highlights implications for policy and practice as well as suggestions for future research. Finally, the chapter summarizes the findings and presents a conclusion to the study.

#### **Findings**

The results of the study supported the value of including brand identification into the traditional donor models. Additionally, the results presented a strong argument for the merit of brand interpretation. The results indicated that perception of the university brand is imperative in achieving key outcomes. The following paragraphs discuss the results of this research as they contribute to the study of identification. Specifically, the section presents evidence most

strongly supporting the addition of identification to traditional alumni donor models and where support was lacking. Then the section describes the importance of interpretation of brand as it relates to outcomes. The section provides an account of the unanticipated results surrounding prestige, participation, and college of attendance. Finally, the section concludes with a summary of the findings.

### **The Value of Identification**

The results of this study showed that identification is a valuable construct in understanding the supportive behaviors of alumni. Brand identification was found to be statistically significant and positively related to choice to donate, donor level, number of donations, promotion, and competitive attitude. The four areas that emerged from the data yielding the strongest support for the value of identification included the choice to donate, promotional behaviors, harboring a competitive attitude towards relevant out-groups, and the effect of brand identification on brand image.

As the literature suggested, age had the strongest effect over the three donation behavior models (Weerts & Ronca, 2009/2007; Bingham et al., 2002; Clotfelter, 2001; Belfield & Beney, 2000). However, identification was statistically significant, positively related, and moderately influential over the three tested donation outcomes. In terms of the choice to donate, for every one unit increase in identification, odds of donating increased by 3.2 percentage points (see Table 4). To put it in another way, if the weak identification group is 17 points and the strong identification group is 24 points, then the strong identification group is 22.4% more likely to donate than the weak group<sup>22</sup>. This result supported findings from the literature review. The literature review indicated individuals with strong identification perceive the successes and

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<sup>22</sup> This figure was calculated by taking the difference between the lowest value in the strong identification category (24) and the highest value in the weak identification category (17) and multiplying it by the 3.2% result found in the logistic regression output Table 4.

failures of the organization as their own. Those individuals with strong identification perceived their personal fate and the fate of the organization as intertwined (Ashforth & Mael, 1989). The act of defining the self through association with the organization increased the individual's desires to assist the organization to succeed. It promoted the replacement of self-interests with the interests of the group (Dutton et al., 1994; Turner et al., 1994) as organizational successes meant personal success. For example, donating money, though placing a burden on the individual, could be perceived as the right choice because it helps the organization achieve its goals. The data from this study further reinforced this notion and showed that those respondents with stronger identification were more likely to contribute financially to the institution.

In addition to the choice to donate, identification strongly influenced brand image, promotional behaviors, and competitive attitude towards similar groups. These three outcomes, though separately statistically tested, are related theoretically and contribute to previously-conducted empirical research. Chapter 2 presented the theoretical underpinnings of identification stemming from social identity theory (Tajfel & Turner, 1981), self-categorization theory (Turner et al., 1987), and self-congruity theory (Sirgy, 1982). These theories denoted that individuals categorize the self and others in an effort to organize their social environment. The theories suggested that the act of categorizing the self and others into groups drives behaviors. The literature also explained that individuals compare the self to the organization or brand while being driven by three common self-concept motivations. These motivations include the need to be distinct, to enhance the self, and to be consistent (Sirgy, 1982). When the individual interprets the institution's brand image as attractive, distinctive, and prestigious, the individual has a higher propensity to select the brand as it is perceived as a vehicle for self-expression.

The results of this study showed identification as statistically significant and positively related to brand image such that, for every one unit increase in identification, brand image increased approximately .91 points. Assessing the standardized coefficients, brand identification clearly had the strongest effect on model. The standardized coefficients suggested that identification was close to twice as effective in influencing brand image as was satisfaction with student affairs and 2.7 times as effective as was satisfaction with resources. This result offered that, as individuals categorize themselves as a mechanism for creating social order, they are also motivated to enhance their self-concept by consuming brands that enhance self-esteem, maintain self-continuity, and express distinctiveness. The university brand acts as a symbolic device that permits the expression of values and offers stakeholders a point of connection (Sargeant et al., 2008; de Chernatony, 2001). The sense of belongingness to the institution that an individual experiences based on the connection will influence her evaluation of the organization's brand. If the individual has strong identification, they estimate the organization in a way that supports the three self-motivations. This result also presented the likelihood of reciprocal relations between identification and brand image. Nevertheless, brand image was not present in the alumni donor literature or models. The results of this study supported the merit of including brand identification to better understand alumni supportive behaviors.

As suggested, identification positively associated with promotional behaviors like recommending the school, wearing clothing with the institution's logo, and talking positively about the organization. Several theorists empirically determined that identification increased promotional behaviors in the form of word-of-mouth support (Porter et al., 2011; Kuenzel & Halliday, 2008; Bhattacharya & Sen, 2003; Kim et al., 2001) and recruitment (Bhattacharya & Sen, 2003; Mael & Ashforth, 1992). This research supported those previous findings as

identification was statistically significant and positively associated with promotion. And, though interpretation of brand had the strongest effect, identification presented with a moderately strong influence over the promotional behaviors model. The literature described that the individual compares the self and the organization, and if there is congruence or opportunity for self-enhancement, the organization is selected as a mechanism for self-expression. The literature indicated that for a product to take on a self-expressive role it must be consumed visibly (Katz, 1960 cited in Sirgy, 1982). This act of outward expression suggests that an individual with strong identification promotes the organization because, on some level, the organization is an intrinsic part of the self-definition as well as an opportunity for self-enhancement. Cialdini and colleagues (1976) presented an illustration of this phenomenon when students avidly wore clothing donning the school logo after a football victory. The authors explained that these students were “basking in the reflected glory” by publically announcing an association with a successful other (Cialdini et al., 1976, p. 366). Similarly, as with this research, alumni promoted the institution and gained the benefit of enhanced self-esteem by displaying membership to a group perceived to have a positive overall evaluation.

In addition to donations, influencing brand image, and increasing promotional behaviors, the merit of identification was further supported by the result of harboring of a competitive attitude towards relevant out-groups. Competitive attitude towards out-groups was formerly presented as a potential outcome of identification by Dutton and colleagues (1994) and Mael and Ashforth (1992). The results of this study were in contention with those previous findings from the landmark Mael and Ashforth (1992) study. Mael and Ashforth (1992) failed to find intergroup competition as a significant outcome of identification. Regardless, the researcher in this study decided to keep the variable in the model as the institution in question was part of a

larger university system. The results of this research suggested that identification, though showing a weak to moderate effect on the model, yielded competition which is supported also by theory and logic.

The positive and statistically significant result of brand identification and competitive attitude supported the findings from the original Tajfel and Turner (1981) experiments. These experiments indicated individuals display normative intergroup behaviors fueled by an awareness of out-groups. Recall from the literature review that social identity theory is “relational and comparative” (Tajfel & Turner, 1981, p. 16). Having a competitive attitude suggests that an individual categorizes the self by the organization and understands clear boundaries between comparable groups. In this research, individuals that defined the self in terms of the organization were more apt to feel competitively about the other universities in the school system. It implies that the individual feels a sense of belongingness or membership to the group such that he defines himself in the one organization and, just as importantly, not in the other organization. These comparisons of in and out-groups encourage members to achieve differentiation with the ultimate goal of superior status.

Though the data highlighted the merit of identification as a predictor of alumni supportive behaviors, the construct failed to be supported in relation to seeking contact with the organization. In the case of the regression model (Table 8), identification did not present as statistically significant in relation to contact with the organization. However, this result was not altogether unexpected. In the case of returning to campus, many other factors influence the outcome. Participation had the strongest effect on the model showing that, in terms of standardized units, participation was 10.4 times as influential over the model as age. However, variables like age or place in the lifecycle undoubtedly affect ability and choice to return. The

results presented age as statistically significant and inversely related to contact with the organization. In many instances age increases responsibilities and introduces competing priorities that could pose challenges to the individual's ability to return to school. Additionally, distance should be considered as a potential reason that many individuals do not return to campus on a frequent basis.

### **Interpretation of Brand Matters**

The second thematic finding that emerged from the data was the meaningfulness of an individual's perception of the organizational brand. In this case, interpretation of brand referred to the distinctiveness and attractiveness of the institution. Previous researchers found that distinctiveness and attractiveness positively influenced identification (Press & Arnould, 2011; Balmer & Liao, 2007; Ahearne et al., 2005; Bhattacharya & Sen, 2003). The importance of interpretation of brand additionally materialized around the outcomes of competitive attitude and promotional behaviors. As previously stated, when the institution is perceived as being attractive and distinctive, the individual can more easily use it as a symbolic way to enhance self-esteem, self-continuity, and self-distinctiveness.

Again, interpretation of brand impacts identification which then motivates outcomes and behaviors. An example of this emerged from the data surrounding the question about why the respondent chooses not to donate to the institution. The most commonly provided answers were that the individual cannot afford to donate, the individual has other giving priorities, and that the individual gave enough with tuition. However, when looking at the written-in qualitative responses, one of the most frequently provided answers referred to the change in mascot. The institution underwent a change in logo and mascot in the mid-2000s. The new logo and mascot presented a reimagining that became controversial within the culture of the institution.

The notion that an individual would cease to donate money due to a change in mascot supported the theories behind identification. Durkheim, while exploring commonalities between world religions, found that sacredness was placed on an object or totem that represented group association (cited in Schneider, 2006). The object or totem represented a point of recognition and a physical manifestation of group membership. In this case, those alumni that felt deeply connected to the institution and original mascot felt a sense of disconnect with the rebranding efforts. These individuals likely did not embrace the new mascot as the changes failed to align with their self-definition surrounding their association with the organization's previous image. Rituals and practices that conjured emotional attachment were lost with the new mascot. For example, one respondent indicated that they would never donate money to the organization due to the elimination of the mascot-driven fight song that the band would play at football games. Allan (2007) suggested that rituals and symbols, like the fight song, express exclusivity from other groups and provide defining traditions. For these stakeholders that identified with the previous mascot and logo, the perception of the brand was no longer attractive or representative of the self and thus affected their willingness to support the organization.

### **Unanticipated Results**

During the course of this study, several unanticipated results emerged from the data. These unanticipated results occurred surrounding the prestige, participation, and college of attendance variables. Prestige was well documented in the literature as being a driving factor of donation behaviors (McDearmon, 2010; Holmes, 2009; Sung & Yang, 2008). When the researcher of this study incorporated prestige in the donor models, the variable had little effect on the overall explanatory power. Prestige did not add value to the models and, therefore, the researcher excluded prestige from the hypothesis tests surrounding donor behaviors.



Prestige was also presented in previous studies as an important antecedent of identification (Boroş et al., 2011; Porter et al., 2011; Newbold et al., 2010; Kim et al., 2010; Ahearne et al., 2005; Bhattacharya et al., 1995; Mael & Ashforth, 1992). The findings from this research agreed with that of those previously conducted studies. However, the findings from this study further disagreed with previous works as the prestige variable presented with a negative coefficient in relationship to competitive attitude. At first glance it appeared counterintuitive that increased prestige leads to decreased competition. However, one proposed reason is that individuals feel less competitively when they perceive that those other institutions simply cannot compare with the school. An alternative reason could be that the school in question is consistently not perceived as highly prestigious thus decreasing the reason to feel competitively towards those other schools.

In addition to prestige, the research presented unexpected results surrounding participation. Some of the results regarding participation were anticipated including the positive association with donor level and number of donations, promotion, identification, and seeking contact. The literature portrayed that, as individuals were more deeply embedded in the institution through involvements, they experienced more opportunities for donations to different facets of the college (Tsao & Coll, 2005; Monks, 2003; Clotfelter, 2001). The results also suggested that with more involvement there existed more experiences to promote and more group reunions to return to campus to attend. However, participation did not register as statistically significantly related to brand image. This suggests that embeddedness through involvement was not a determining factor as it related to how the individual perceives the prestige, distinctiveness, and attractiveness of the brand.

Lastly, the literature highlighted differences across major and college of attendance in donation behaviors (Marr et al., 2005; Monks, 2003; Belfield & Beney, 2000; Okunade et al., 1994). Similarly, Belfield and Beney (2000) found that departmental campaigns were more effective in soliciting donations than generalized efforts driven by the entire institution. In support of this, the respondents in this study were asked to list how they most identified with the school. Fifty-eight percent of respondents selected major followed by forty-eight percent suggesting they identified by graduation year. However, when the researcher added college of attendance to the various multiple regression models, the variable did not yield statistically significant results and did not improve the explanatory power of the models. The researcher, therefore, omitted the college of attendance variable to preserve the parsimony of the models.

### **Summary of Findings**

The previous section highlighted the main findings of the study. First, the study supported the inclusion of brand identification in the traditional alumni donor models. Identification increased the odds of donating, the donor level, as well as supportive outcomes like promotion and being competitive towards contending institutions. However, identification was not supported by the outcome of seeking contact. Though lacking support, this result can be explained through many other related variables affecting the ability to return to campus. The second main result of the study showed that interpretation of brand is an important asset to a college or university. Interpretation of the brand influenced identification which leads to donations, promotion, and competition. This result was consistent with previous empirical and theoretical findings from the literature review.

Though many of the results of the study were anticipated by the researcher, unexpected results emerged surrounding the prestige, participation, and college of attendance variables.

Prestige did not influence donor behaviors as shown in previously conducted empirical studies. This finding suggested that the institution was potentially perceived as more prestigious than the comparable schools such that they could not compete. Or, perhaps the school being a state-run institution of higher education carried a less prestigious aura which ceased any desire for alumni and students to compare the school against similar institutions. Lastly, school of attendance was not supported as an influence over donation behaviors as had previously been found in the alumni donor literature.

### **Limitations**

There were several limitations of this research based on research design, survey instrument, variable availability, sampling plan, and subsequent data. First, as this was a cross-sectional study it limited the ability to make causal assertions. Primarily, the research design permitted the exploration of correlations between variables. However, in one instance the researcher expected to know the temporal order of student participation occurring prior to alumni participation. In spite of this, the results of the factor analysis indicated that these two variables were not distinct. The student participation questions double loaded on both the student and alumni factors causing the researcher to eliminate them from the index. This removed the expected ability to consider causation for this one relationship. Therefore the study was entirely correlational in nature.

Second, as the researcher used a survey instrument to collect portions of the data, it introduced potential problems related to self-reporting and common method bias. The researcher relied on respondent self-reporting for the survey instrument and thereby introduced the possibility of recall bias, misinterpretation of questions, fatigue, or socially desirable responding. Common method bias potentially occurred as the researcher collected the independent variables

and some dependent variables from the same instrument. Additionally, several respondents complained of severe technological problems caused by the Qualtrics survey software. These respondents failed to complete the instrument due to the technological issues.

Third, three issues materialized surrounding the control variables. The data from the survey suggested the existence of conceptual ambiguity surrounding the commuter status variable. For example, there are several off-campus apartment options situated geographically adjacent to the campus offered to the students at this institution. Therefore, these students though residing immediately next to the campus are considered to have commuter status. The researcher interpreted the use of the commuter variable in the brand identification and alumni donor literature to mean residing with parents or requiring some travel to get to the campus. Therefore, the lack of a clear definition of commuter status could have introduced error. Aside from the one variable from the survey, the researcher could not use two of the variables provided by the Offices of Alumni Relations and Development. The race and ethnicity variable proved to be incomplete and thus was dropped from analysis. More detrimental was the inability to use the four wealth indicators as a proxy for income. The researcher anticipated combining the four wealth indicators into a usable income measure. The presence of an income variable could have added value to the regression models as it is well documented as influencing donor behaviors (Weerts & Ronca, 2009; Tsao & Coll, 2005; Monks, 2003; Clotfelter, 2001; Belfield & Beney, 2000). When the wealth variables were provided to the researcher, it was immediately clear that the functionality of these four indicators was limited. The researcher, therefore, questioned the validity of these measures and reluctantly dropped them from analysis.

Fourth, the sampling used by the researcher presented limitations in addition to those presented by research design, survey instrument, and variable availability. Though the

researcher utilized a population or census sample it included only those graduated alumni with active email addresses on file. Therefore all generalizations were limited back to that specific population and not to the entire alumni population from the institution. Additionally, only one institution of higher education was used in this research. The type of institution, a public state-run university, could have affected the data. Cunningham and Cochi-Ficano (2002) in a thirteen year panel found that system schools averaged lower donations than did those independent colleges. Levine (2008) also found small private colleges to have consistently higher donation participation than those public or system universities. As the institution in question was part of a larger system making it susceptible to lower than average donations, it posed the potential for further limiting the ability for generalization.

During the nonresponse analysis, the researcher found that donors were oversampled and represented 59% of the respondents. According to the Office of Development at the institution, donors make up 38.9% of those alumni with active email addresses on file. Those donors might have had more interest in the survey subject matter thereby immediately presenting a difference between those individuals and their non-donor counterparts. Similarly, the 21 to 39 year olds were under sampled while the 50 to 69 year olds were over sampled. Therefore, these sampling concerns introduced the potential for biased results. Finally, through previous efforts made by the Office of Alumni Relations at the institution in question it was understood that only approximately 30% of alumni open their emails from the school. This notion potentially affected the overall response rate for the study even though the returned survey sample size for this research was large enough to yield statistically robust results. And, those respondents that partially completed the survey reduced the variability of the correlations making them automatically smaller.

## **Policy Implications and Suggestions for Future Research**

The results and limitations of the study raised several implications for policy and practice as well as suggestions for future research. This section presents a discussion of how the research informs policy and practice in higher education as it relates to identification and supportive alumni behaviors. The section also presents suggestions for future research in an effort to increase understanding of the identification construct and its utility in various situations and across different disciplines.

### **Implications for Policy and Practice**

Participation, satisfaction with student affairs, interpretation of brand, and prestige positively associated with identification. Furthermore, identification was shown in this study to affect donor behaviors, promotional behaviors, competitive attitude, and brand image. Therefore, the implications for policy and practice are two-fold. First, identification is a construct that deserves inclusion in alumni donor models. Inclusion of identification improved fit and showed that the connection experienced between the alumni and the institution influences supportive behaviors. For example, if identification increased by one standard deviation, donor level would also increase by .062 standard deviations. Compare this to a one standard deviation increase in satisfaction with student affairs which would yield only a .032 standard deviation increase in donor level. Thus, increasing identification is 1.9 times more effective in increasing donor level.

Second, and in a related matter, offices of development at colleges and universities would be benefitted by approaching fundraising from a systems perspective. Stevick (2010) indicated that a partnership model of fundraising is necessary in the changing field of higher education. For example, development offices could partner with student activities, student affairs, and the

marketing and communications offices to streamline the outgoing messages to various audiences. As suggested in Table 10, the combined impact of the offices of student activities, student affairs, and communications and marketing leaves an impression on the students and together engender identification. This result supports the notion that the institution could more effectively harness positive outcomes by reducing fundraising efforts that exist in a vacuum and increasing those collaborative efforts.

Next, the study suggested that how an individual perceives the university brand matters in terms of how they support the institution monetarily, through promotional activities, and having a competitive attitude towards comparative schools. Interpretation of brand, in terms of standardized units, definitively had the strongest effect over the model for promotional behaviors, competitive attitude, and identification. The data supported the importance of interpretation of brand as stakeholder perceptions affected alumni supportive behaviors. It suggested that resources would be well allocated on practices that increase the distinctiveness and attractiveness of the institution in the minds of the stakeholders. For example, many institutions of higher learning recently created positions dedicated to brand and image management (Ancil, 2008; Bunzel, 2007; Hemsley-Brown & Goonawardana, 2007). The value of these newly established positions is a point of debate among the field of higher education. While some perceive the positions as draining resources that could go to education, others perceive the positions as essential in competing for funds and students (Chapleo, 2008).

The results of this study supported the latter opinion that such brand management positions in higher education are critical in achieving the positive outcomes of promotion, competitive attitude, and brand identification. The results of this study suggested that an institution can affect the sense of belonging to the organization by enhancing the uniqueness and

appeal of the institution. Smidts and colleagues (2001) offered that feelings of in-group belongingness are formed by positive communication climates. These brand management professionals shape the out-going communications which effectively provide the stakeholders with a mental image of the university brand and offer a sense belonging through membership (Curtis et al., 2009). The brand management professional provides brand image cues in communications that evoke a sense of connection through self-congruity comparisons, self-enhancement through prestige, and uniqueness through distinctiveness. Therefore, the results of this study substantiated the value of brand management professionals in higher education.

Finally, satisfaction was one of the most well understood individual characteristic driving alumni donation behaviors (Tsao & Coll, 2005; Monks, 2003; Clotfelter, 2001). During the factor analysis the researcher discovered that there were two distinct satisfaction factors. The first included those items related to student affairs like social aspects and activities. The second factor referred to resources on campus like the library, technology, and bookstore. The researcher initially explored each model while including both satisfaction variables. However, the preliminary results showed that satisfaction with resources was not significant in most cases and, in those cases where it was, it added little to the explanatory power of the model. The results showed that satisfaction with student affairs was statistically significant and positively related to choice to donate, promotion, identification, and brand image. Satisfaction with resources was only statistically significant and positively related to brand image. Implications for this finding include the importance of satisfaction with student affairs. For example, with each unit increase in satisfaction with student affairs odds of donating increased by 11.4%, promoting increased by .07, identification increased by .14, and brand image increased by .95. These results imply that an individual's level of satisfaction with student affairs is more relevant



and influential over supportive behaviors than satisfaction with resources. Therefore the results of the study suggested that an area meriting attention in terms of eliciting positive outcomes includes student affairs.

### **Future Research**

Suggestions for future research on the subject of identification emerged from the study's limitations, the findings, and the literature review. One limitation in terms of causality was the cross-sectional nature of the study. Future research should approach identification with a longitudinal design that highlights trends. For example, a researcher could give the survey to incoming freshman and again to those students in the second or third semester. The researcher could explore whether identification is a strong predictor for first semester outcomes and could uncover ways to be presenting and promoting the institution to incoming students. A second limitation included the use of respondents from a singular location in the study. This research should be replicated at varying institutions to support external validity. Additionally, because the institution used in the study existed as a member of a greater system, it alludes to the ability to replicate the study across a system and compare results.

The findings of the study revealed that brand identification partially mediates the relationship between the antecedent variables and the positive outcomes. Though the Baron and Kenny (1986) mediation model is commonly used, it recently received critical attention from several researchers (Zhao, Lynch Jr., & Chen, 2010). Zhao and colleagues (2010) argued that there exists an ambiguity with those partial mediation effects as typically accompanied by direct effects. Because the notion of partial effect is unclear as presented in the work by Baron and Kenny (1986), Zhao and colleagues (2010) presented a typology of mediations and substituted a one-step bootstrap test of indirect effects. Future identification researchers should employ the

use of bootstrapping as a mechanism for testing mediation. Additionally, structural equation modeling (SEM) is a statistical technique that could offer value to exploring the relationships in the model at a simultaneous point. Future research should include the use of structural equation modeling techniques to better understand the conceptual model holistically as well as any reciprocal effects that exist between variables.

The literature review suggested that identification occurs on multiple levels. Recall that Bagozzi and colleagues (2011) tested identification across levels of a motorcycle company and determined that lower level brand community identification supported stronger identification than higher level company targets. As such, future research could include an analysis of identification across the larger school level, mid-level college, and lower-level major. Identification could then be explored across the relative strength of the major within an institution. Similarly, future research could include how identification occurs or is affected by attendance on satellite campuses. For example, researchers could examine identification of those individuals only having attended a satellite campus, those having split time between a satellite and main campus, those attending only the main campus, and those enrolled in e-learning programs.

The literature also revealed a misconception surrounding identification in higher education. It is assumed that identification is related to the success of athletics at the university or college. As previously stated in the introduction chapter, empirical support for the claim is varied (Porter et al., 2011; Kim et al., 2010, Cialdini et al., 1976). Future researchers of identification could test the assertion that identification is correlated with successful athletic teams. These researchers should give consideration to the differences in presence of NCAA athletics across Division I, Division II, and Division III institutions.

## **Summary and Conclusions**

This study expanded on the limited brand identification literature in higher education. The results showed consistency across the hypothesis tests and additional explorations of the data. The researcher sought to uncover the effects of brand identification on alumni supportive behaviors and to determine if identification enhances alumni supportive behaviors. The results of the study determined that identification positively influenced alumni supportive behaviors including choice to donate, donor level, number of donations, promotional activities, and harboring a competitive attitude. These results aligned with social identity theory and self-categorization theory as individuals with strong identification perceived their fate to align with that of the institution. Therefore, individuals with strong identification donate more money, engage in promotional activities, and are more competitive towards out-groups as they place the organization's interests above those of the self.

The study concluded that identification is a valuable construct that merits inclusion in the traditional alumni donor models. Support for the addition of identification into alumni models arose most prominently from the statistically significant and positive relationships with choice to donate, promotion, competitive attitude, and brand image. In contrast, identification was not associated with seeking contact with the institution. This result, however, can be explained by the competing variables of age and distance to the institution.

Additionally, this study revealed that interpretation of brand is a valuable construct in the understanding of alumni supportive behaviors. The results of this study showed that interpretation of brand was statistically significant and positively associated with identification, promotion, and competitive attitude towards out-groups. Again these results aligned with the underlying theories. In an effort to satisfy the three self-concept motivations of self-

enhancement, self-congruity, and self-distinctiveness, individuals evaluated the distinctiveness and attractiveness of the brand and determined if the organization was an appropriate vehicle for self-expression. If the brand was perceived by the individual as attractive and distinctive, promotional behaviors and competitive attitude increased.

In addition to those results that supported theory and previously conducted empirical research, several results of this study were unanticipated by the researcher. Prestige was inversely correlated with competitive attitude. This could indicate a decreased need to feel competitively towards others due to superiority or due to absence of prestige. Also, the participation variable was not statistically significant with brand image. This suggested that individuals did not formulate an understanding of the brand's attractiveness, distinctiveness, or prestige by participating in various activities. Lastly, though the researcher explored college of attendance in the model, it was ultimately excluded as it did not increase explanatory power. This contradicted previous findings that suggested a statistically significant difference in supportive behaviors by college of attendance.

As with any research, this study had several limitations. The study was correlational in nature thus limiting the ability to make causal assertions. The study was survey-based which introduced issues of sampling error, recall bias, socially desirable responding, common method bias, and technological difficulties. Limitations emerged surrounding three variables in the study. The lack of a consistent definition of commuter status likely introduced error and invalidity of the measure. Two measures obtained from the Office of Development, race and income, were excluded from analysis due to incompleteness and inability to create a valid proxy. The study took place at one state-run institution suggesting all generalizations can only be

applied to the university in question. Finally, the study oversampled the donor population which introduced the potential for additional error.

Several implications for policy and practice emerged from this study. First, identification added value and explanatory power when included in the traditional alumni donor models. This result supported the merit of identification in further understanding alumni supportive behaviors. Second, the results promoted a collaborative model of fundraising given the known antecedents of brand identification. Rather than offices operating in isolation, the model alluded to the notion that the effects of such offices as student affairs, student activities, and communications and marketing combine to provoke identification. Therefore, collaboration between such offices could provide more effective communication and fundraising efforts. Third, and though potentially controversial, the study supported the role of a brand management professional working at colleges and universities. As identification and interpretation of brand yielded positive outcomes, management of those facets could promote financial health of the institution. Finally, the results of the study pointed to differences in importance between satisfaction with student affairs and satisfaction with campus resources. The results of the study highlighted satisfaction with student affairs as a potential area for effective resource allocation.

In conclusion, brand identification and interpretation of brand are versatile constructs that could assist organizations to better understand the supportive behaviors of their stakeholders. The defining of the self in relationship to an organization as well perceiving the organization as attractive and distinctive can yield such positive outcomes like donations, promotional behaviors, and competitive attitude towards relevant out-groups. This research demonstrated that, specifically in higher education where there is decreased government funding and increased

competition, identification and interpretation of brand are mechanisms for enhancing alumni engagement and support.

## References

- Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34, 347-356.
- Aaker, J. L., & Fournier, S. (1995). A brand as a character, a partner and a person: Three perspectives on the question of brand personality. *Advances in Consumer Research*, 22, 391-395.
- Adams, B. N., & Sydie, R. A. (2002). *Classical sociological theory*. Thousand Oaks, CA: Pine Forge Press.
- Ahearne, M., Bhattacharya, C. B., & Gruen, T. (2005). Antecedents and consequences of customer-company identification: Expanding the role of relationship marketing. *Journal of Applied Psychology*, 90(3), 574-585.
- Albert, S., Ashforth, B. E., & Dutton, J. E. (2000). Organizational identity and identification: Charting new waters and building new bridges. *Academy of Management Review*, 25(1), 13-17.
- Albert, S., & Whetten, D. A. (1985). *Organizational identity*. In M. J. Hatch, & M. Schultz (Eds.), *Organizational identity: A reader* (pp. 89-118). New York, NY: Oxford University Press.
- Allan, K. (2007). *The social lens*. London, UK: Sage.
- Anctil, E. J. (2008). Recommendations for selling higher education. *ASHE Higher Education Report*, 34(2), 89-98.
- Arnett, D. B., German, S. D., & Hunt, S. D. (2003). The identity salience model of relationship marketing success: The case of nonprofit marketing. *Journal of Marketing*, 67, 89-105.
- Arora, R., & Stoner, C. (2009). A mixed method approach to understanding brand personality.

- Journal of Product & Brand Management*, 18(4), 272-283.
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325-374.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20-39.
- Baade, R. A., & Sundberg, J. O. (1996). What determines alumni generosity? *Economics of Education Review*, 15(1), 75-81.
- Bagozzi, R. P. (1974). Marketing as an organized behavioral system of exchange. *Marketing Notes and Communications*, 38(4), 77-81.
- Bagozzi, R. P., Bergami, M., Marzocchi, G. L., & Morandin, G. (2011). Customer-organization relationships: Development and test of a theory of extended identities. *Journal of Applied Psychology*, 97(1) 1-14.
- Balmer, J. M. T., & Gray, E. R. (2003). Corporate brands: What are they? What of them? *European Journal of Marketing*, 37(7/8), 972-997.
- Balmer, J. M. T., & Liao, M. (2007). Student corporate brand identification: An exploratory case study. *Corporate Communications*, 12(4), 356-375.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Belfield, C. R., & Beney, A. P. (2000). What determines alumni generosity? Evidence for the UK. *Education Economics*, 8(1), 65-80.
- Bergkvist, L., & Bech-Larsen, T. (2010). Two studies of consequences and actionable antecedents of brand love. *Brand Management*, 17(7), 504-518.



Bhattacharya, C. B, Rao, H., & Glynn, M. A. (1995). Understanding the bond of identification:

An investigation of its correlates among art museum members. *Journal of Marketing*, 59(4), 46-57.

Bhattacharya, C. B., & Sen, S. (2003). Consumer-company identification: A framework for

understanding consumers' relationships with companies. *Journal of Marketing*, 67, 77-88.

Bingham, F. G, Quigley, C. J., & Murray, K. B. (2002). An investigation of the influence

acknowledgement programs have on alumni giving behavior: Implications for marketing strategy. *Journal of Marketing for Higher Education*, 12(2), 1-14.

Boroş, S., Curşeu, P. L, & Miclea, M. (2011). Integrative tests of a multidimensional model of

organizational identification. *Social Psychology*, 42(2), 111-123.

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it

measured? Does it affect loyalty? *Journal of Marketing*, 73, 52-68.

Bunzel, D. L. (2007). Universities sell their brands. *Journal of Product & Brand Management*,

16(2), 152-153.

Calhoun, C., Gerteis, J., Moody, J., Pfaff, S., & Virk, I. (2007). *Contemporary sociological*

*theory* (2<sup>nd</sup> Ed.). Malden, MA: Blackwell.

Carmeli, A., Gilat, G., & Waldman, D. A. (2007). The role of perceived organizational

performance in organizational identification, adjustment and job performance. *Journal of Management Studies*, 44(6), 972-992.

Carmeli, A., Gilat, G., & Weisberg, J. (2006). Perceived external prestige, organizational

identification and affective commitment: A stakeholder approach. *Corporate Reputation Review*, 9(1), 92-104.

- Case Western Reserve University (n.d.). *Think:Brand*. Retrieved on February 5, 2012 from [http://case.edu/umc/downloads/brand\\_book.pdf](http://case.edu/umc/downloads/brand_book.pdf).
- Chang, P., & Chieng, M. (2006). Building consumer-brand relationship: A cross-cultural experiential view. *Psychology & Marketing*, 23(11), 927-959.
- Chapleo, C. (2008). External perceptions of successful university brands. *International Journal of Education Advancement*, 8(3/4), 126-135.
- Chapleo, C. (2011). Exploring rationales for branding a university: Should we be seeking to measure branding in UK universities? *Journal of Brand Management*, 18, 411-422.
- Cialdini, R. B., Borden, R.J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, 34(3), 366-375.
- Clotfelter, C. T. (2001). Who are the alumni donors? Giving by two generations of alumni from selective colleges. *Nonprofit Management & Leadership*, 12(2), 119-138.
- Commonwealth of Pennsylvania. (2011). *Line-item appropriations: 2010-11 total funds, 2011-12 proposed budget and 2011-12 enacted budget*. Retrieved on February 6, 2012 from: [http://www.portal.state.pa.us/portal/server.pt/community/current\\_and\\_proposed\\_commonwealth\\_budgets/4566](http://www.portal.state.pa.us/portal/server.pt/community/current_and_proposed_commonwealth_budgets/4566)
- Council for Advancement and Support of Education. (2011, February 2). *Statement on the results of the 2010 Voluntary Support of Education survey* [Press release]. Retrieved from [http://www.case.org/About\\_CASE/Newsroom/Press\\_Release\\_Archive/Statement\\_on\\_the\\_results\\_of\\_the\\_2010\\_Voluntary\\_Support\\_of\\_Education\\_Survey.html](http://www.case.org/About_CASE/Newsroom/Press_Release_Archive/Statement_on_the_results_of_the_2010_Voluntary_Support_of_Education_Survey.html)
- Council for Aid to Education. (2011, February 2). *Colleges and Universities Raise \$28 Billion in 2010 Same Total as in 2006* [Press release]. Retrieved from

[http://www.cae.org/content/pdf/VSE\\_2010\\_Press\\_Release.pdf](http://www.cae.org/content/pdf/VSE_2010_Press_Release.pdf)

- Cunningham, B. M., & Cochi-Ficano, C. K. (2002). The determinants of donative revenue flows from alumni of higher education. *The Journal of Human Resources*, 37(3), 540-569.
- Curtis, T., Abratt, R., & Minor, W. (2009). Corporate brand management in higher education: The case of ERAU. *Journal of Product & Brand Management*, 18(6), 404-413.
- Dall'Olmo Riley, F. & de Chernatony, L. (2000). The Service brand as relationships builder. *British Journal of Management*, 11, 137-150.
- de Chernatony, L. (2001). *From brand vision to brand evaluation*. Oxford, UK: Butterworth-Heinemann.
- de Chernatony, L., & Dall'Olmo Riley, F. (1997). The chasm between managers' and consumers' views of brands: The experts' perspectives. *Journal of Strategic Marketing*, 5, 89-104.
- Donavan, D. T., Janda, S., & Suh, J. (2006). Environmental influences in corporate brand identification and outcomes. *Brand Management*, 14(1/2), 125-136.
- Drezner, N. D. (2009). Why give?: Exploring social exchange and organization identification theories in the promotion of philanthropic behaviors of African-American millennials at private-HBCUs. *International Journal of Education Advancement*, 9(3), 147-165.
- Dukerich, J. M., Golden, B. R., & Shortell, S. M. (2002). Beauty is in the eye of the beholder: The impact of organizational identification, identity and image on the cooperative behaviors of physicians. *Administrative Science Quarterly*, 47, 507-533.
- Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39, 239-263.

- Edwards, M. R. (2005). Organizational identification: A conceptual and operational review. *International Journal of Management Reviews*, 7(4), 207-230.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. P. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29, 371-389.
- Escalas, J. E. (2004). Narrative processing: Building consumer connections to brands. *Journal of Consumer Psychology*, 14(1&2), 168-180.
- Foreman, P., & Whetten, D. A. (2002). Members' identification with multiple-identity organizations. *Organization Science*, 13(6), 618-635.
- Freling, T. H., & Forbes, L. P. (2005). An examination of brand personality through methodological triangulation. *Brand Management*, 13(2), 148-162.
- Fuller, J. B., Marler, L., Hester, K., Frey, L., & Relyea, C. (2006). Construed external image and organizational identification: A test of the moderating influence of need for self-esteem. *The Journal of Social Psychology*, 146(6), 701-716.
- Gaski, J. F., & Etzel, M. J. (1984). Collegiate athletic success and alumni generosity: Dispelling the myth. *Social Behavior and Personality*, 12(1), 29-38.
- Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology*. Hoboken, NJ: John Wiley & Sons.
- Hamilton, L. C. (2009). *Statistics with stata*. Belmont, CA: Brooks/Cole Cengage Learning.
- Hatch, M. (2006). *Organization theory*. New York, NY: Oxford University Press.
- Hatch, M. J., & Schultz, M. (2004). *Organizational identity: A reader*. New York, NY: Oxford University Press.

- Helgeson, J. G., & Supphellen, M. (2004). A conceptual and measurement comparison of self-congruity and brand personality. *International Journal of Market Research*, 46(2), 205-233.
- Hemsley-Brown, J., & Goonawardana, S. (2007). Brand harmonization in the international higher education market. *Journal of Business Research*, 60, 942-948.
- Herrbach, O. (2006). A matter of feeling? The affective tone of organizational commitment and identification. *Journal of Organizational Behavior*, 27(5), 629-643.
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25(1), 121-140.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28, 18-28.
- Humphreys, M., & Brown, A. D. (2002). Narratives of organizational identity and identification: A case study of hegemony and resistance. *Organizational Studies*, 23(3), 421-447.
- Judson, K. M., Aurand, T. W., Gorchels, L., & Gordon, G. L. (2009). Building a university brand from within: University administrators' perspectives of internal branding. *Services Marketing Quarterly*, 30(1), 54-68.
- Kim, T., Chang, K., & Jae Ko, Y. (2010). Determinants of organisational identification and supportive intentions. *Journal of Marketing Management*, 26(5/6), 413-427.
- Kim, C. K., Han, D., & Park, S. (2001). The effect of brand personality and brand identification on brand loyalty: Applying the theory of social identification. *Japanese Psychological Research*, 43(4), 195-206.

- Kreiner, G. E., & Ashforth, B. E. (2004). Evidence toward an expanded model of organizational identification. *Journal of Organizational Behavior*, 25(1), 1-27.
- Kuenzel, S., & Halliday, S. V. (2008). Investigating antecedents and consequences of brand identification. *Journal of Product & Brand Management*, 17(5), 293-304.
- Kuenzel, S., & Halliday, S. V. (2010). The chain of effects from reputation and brand personality congruence to brand loyalty: The role of brand identification. *Journal of Targeting, Measurement and Analysis for Marketing*, 18(3/4), 167-176.
- Laidler-Kylander, N., Quelch, J. A., & Simonin, B. L. (2007). Building and valuing global brands in the nonprofit sector, *Nonprofit Management & Leadership*. 17(3), 253-277.
- Lam, S. K., Ahearne, M., Hu, Y., & Schillewaert, N. (2010). Resistance to brand switching when a radically new brand is introduced: A social identity theory perspective. *Journal of Marketing*, 74, 128-146.
- Levine, W. (2008). Communications and alumni relations: What is the correlation between an institution's communications vehicles and alumni annual giving? *International Journal of Educational Advancement*, 8(3/4), 176-197.
- Ligas, M., & Cotte, J. (1999). The process of negotiating brand meaning: A symbolic interactionist perspective. *Advances in Consumer Research*, 26, 609-614.
- Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13(2), 103-123.
- Marr, K. A., Mullin, C. H., & Siegfried, J. J. (2005). Undergraduate financial aid and subsequent alumni giving behavior. *The Quarterly Review of Economics and Finance*, 45, 123-143.
- McAlexander, J. H., Koenig, H. F. & Schouten, J. W. (2004). Building a university brand

- community: The long-term impact of shared experiences. *Journal of Marketing for Higher Education*, 14(2), 61-79.
- McDearmon, J. T. (2010). What's in it for me: A qualitative look into the mindset of young alumni non-donors. *International Journal of Educational Advancement*, 10(1), 33-47.
- Melewar, T. C., & Akel, S. (2005). The role of corporate identity in the higher education sector. *Corporate Communications*, 10(1), 41-57.
- Millward, L. J., & Postmes, T. (2010). Who we are affects how we do: The financial benefits of organizational identification. *British Journal of Management*, 21, 327-339.
- Monette, D. R., Sullivan, T. J., & DeJong, C. R. (2008). *Applied social research*. Belmont, CA: Brooks/Cole Cengage Learning.
- Monks, J. (2003). Patterns of giving to one's alma mater among young graduates from selective institutions. *Economics of Education Review*, 22, 121-130.
- National Center for Education Statistics (2011). *Digest of education statistics 2010*. Retrieved on February 8, 2012 from: [http://nces.ed.gov/programs/digest/d10/tables/dt10\\_365.asp](http://nces.ed.gov/programs/digest/d10/tables/dt10_365.asp)
- Newbold, J. J., Mehta, S. S., & Forbus, P. R. (2010). Examining student identification with the alumni organization at a 4-year commuter campus. *Contemporary Issues in Education Research*, 3(4), 47-54.
- Nunnally, J. C. (1978). *Psychometric theory*, 2d ed. New York, NY: McGraw-Hill.
- Okunade, A., Wunnava, P. V., & Walsh, R. (1994). Charitable giving of alumni: Micro-data evidence from a large public university. *American Journal of Economics and Sociology*, 53(1), 73-84.
- Plummer, J. T. (2000). How personality makes a difference. *Journal of Advertising Research*, 79-83.

- Porter, T., Hartman, K., & Johnson, J. S. (2011). Books and balls: Antecedents and outcomes of college identification. *Research in Higher Education Journal*, 13, 1-14.
- Press, M., & Arnould, E. J. (2011). How does organizational identification form? A consumer behavior perspective. *Journal of Consumer Research*, 38(4), 650-666.
- Riketta, M. (2005). Organization identification: A meta-analysis. *Journal of Vocational Behavior*, 66, 358-384.
- Sargeant, A. (2001). Relationship fundraising: How to keep donors loyal. *Nonprofit Management & Leadership*, 12(2), 177-192.
- Sargeant, A., & Ford, J. B. (2007). The power of brands. *Stanford Social Innovation Review*, 5(1), 41-47.
- Sargeant, A., Hudson, J., & West, D. C. (2008). Conceptualizing brand values in the charity sector: The relationship between sector, cause and organization. *The Service Industries Journal*, 28(5), 615-632.
- Schneider, M. A. (2006). *The theory primer a sociological guide*. Lanham, MD: Rowman & Littlefield.
- Sirgy, M. J. (1982). Self-concept in consumer behavior: A critical review. *Journal of Consumer Research*, 9, 287-300.
- Sirgy, M. J., Grzeskowiak, S., & Rahtz, D. (2007). Quality of college life (QCL) of students: Developing and validating a measure of well-being. *Social Indicators Research*, 80, 343-360.
- Sirgy, M. J., Lee, D., Grzeskowiak, S., Yu, G. B., Webb, D., El-Hasan, K., ... Kuruuzum, A. (2010). Quality of college life (QCL) of students: Further validation of a measure of well-being. *Social Indicators Research*, 99, 375-390.



- Smidts, A., Pruyn, A. T. H., & van Riel, C. B. M. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management Journal*, 49(5), 1051-1062.
- Stevick, T. R. (2010). Integrating development, alumni relations, and marketing for fundraising success. *New Directions for Higher Education*, 149, 57-64.
- Sung, M., & Yang, S. (2008). Toward the model of university image: The influence of brand personality, external prestige, and reputation. *Journal of Public Relations Research*, 20(4), 357-376.
- Tajfel, H., & Turner, J. C. (1981). The social identity theory of intergroup behavior. In S. Worchel, & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7-24). Chicago, IL: Nelson Hall.
- Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *Journal of Consumer Psychology*, 15(1), 77-91.
- Tidwell, M. V. (2005). A social identity model of prosocial behaviors within nonprofit organizations. *Nonprofit Management & Leadership*, 15(4), 449-467.
- Tompkins, J. R. (2005). *Organization theory and public management*. Boston, MA: Wadsworth CENGAGE Learning.
- Tsao, J. C., & Coll, G. (2005). To give or not to give: Factors determining alumni intent to make donations as a PR outcome. *Journalism & Mass Communication Educator*, 59(4), 381-392.
- Turner, J. H. (1986). *The structure of sociological theory*. Chicago, IL: Dorsey Press.

- Turner, J. H., Beeghley, L., & Powers, C. (1995). *The emergence of sociological theory*. Belmont, CA: Wadsworth.
- Turner, J. C., Oakes, P. J., Alexander Haslam, S., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20(5), 454-463.
- U.S. Bureau of the Census. 2011. *Statistical Abstract of the United States: 2012*. Washington, DC: U.S. Government Printing Office.
- van Dick, R., Wagner, U., Stellmacher, J., & Christ, O. (2004). The utility of a broader conceptualization of organizational identification: Which aspects really matter? *Journal of Occupational and Organizational Psychology*, 77, 171-191.
- van Knippenberg, D., & van Schie, E. C. M. (2000). Foci and correlates of organizational identification. *Journal of Occupational and Organizational Psychology*, 73, 137-147.
- Waeraas, A., & Solbakk, M. N. (2008). Defining the essence of a university: Lessons from higher education branding. *Higher Education*, 57, 449-462.
- Weerts, D. J., & Ronca, J. M. (2007). Profiles of supportive alumni: Donors, volunteers, and those who “Do It All”. *International Journal of Educational Advancement*, 7(1), 20-34.
- Weerts, D. J., & Ronca, J. M. (2009). Using classification trees to predict alumni giving for higher education. *Education Economics*, 17(1), 95-122.
- Wyer, N. A. (2010). Selective self-categorization: Meaningful categorization and the in-group persuasion effect. *The Journal of Social Psychology*, 150(5), 452-470.
- Zhao, X., Lynch Jr., J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37, 197-206.

## Appendix A –Survey Cover Letter and Questions\*

You are invited to participate in a study that is being conducted by a doctoral student in conjunction with the Office of Alumni Relations. The purpose of the dissertation study is to explore the effect of identification, or the perception of oneness with a group, on alumni supportive behaviors like attendance at events, promotion of the institution to friends and family, and donations. The information gained from this study will also assist the Office of Alumni Relations to better serve you as a member of the alumni community. The Office of Alumni Relations will combine the survey responses with existing information on file like major, class year, giving history, and participation in athletics and Greek life. Once combined, all identifying information will be removed prior to sharing the data with the doctoral student researcher. The doctoral student researcher will NEVER have access to identifying information.

To thank you for your input and your time, completed [surveys \(click here\)](#) will be entered in a drawing to win one of 10 great prizes including:

- Nook reader
- NFL licensed jersey
- \$50 gift card to the Co-op Store.

Your participation is **voluntary** and the survey will take about ten minutes to complete. There are no known risks involved with this study. You may withdraw from the study at any time by contacting the doctoral student researcher at the address listed below. The information obtained in the study may be published in academic journals or presented at conferences but your identity will be kept strictly confidential.

**Please take the survey and let us know your thoughts and opinions!**

Thank you,

Amber Stephenson, Ph.D. Candidate  
&  
The Office of Alumni Relations

**Doctoral Student Researcher:**  
Amber Stephenson  
Ph.D. Candidate  
Administration & Leadership Studies

**Faculty Sponsor:**  
Dr. David B. Yerger  
Associate Professor  
Department of Economics

\*All information identifying the institution has been stripped from the cover letter and survey for the purposes of confidentiality.

Q1 How many years did you attend the school?

Q2 Please indicate how actively you participated in the following while a student at the school:

	Daily (1)	Weekly (2)	Monthly (3)	Once a Semester (4)	Once a Year (5)	Do Not Remember (6)	Never (7)
Intramural Athletics (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Honor Societies (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Government (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special Interest Clubs (Service, Cultural, Social, Religious, etc.) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working on Campus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 With how many faculty or staff members did you have a close relationship?

- ☐ 0 (1)
- ☐ 1 or 2 (2)
- ☐ 3 or 4 (3)
- ☐ 5 (4)
- ☐ More than 5 (5)
- ☐ Don't Know (6)
- ☐ Decline to Answer (7)

Q4 Please indicate how actively you participate in the following as an alumna/us:

	Daily (1)	Weekly (2)	Monthly (3)	Every 6 Months (4)	Once a Year (5)	Every Couple Years (6)	Never (7)
Alumni Events (Homecoming, etc.) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional Alumni Activities (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online Communities (Facebook, LinkedIn, etc.) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sponsored Events (Speakers, Concerts, etc.) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 Approximately how close, in miles, do you live to the school?

Q6 In the past 12 months, how many times have you returned to campus?

- ☐ I have not returned to campus this year. (1)
- ☐ One time (2)
- ☐ 2 - 4 times (3)
- ☐ 5 - 7 times (4)
- ☐ 8 - 11 times (5)
- ☐ Once a month (12 times or more) (6)
- ☐ Don't Know (7)
- ☐ Decline to Answer (8)

Q7 Please select the most appropriate response for each of the following items:

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
When someone criticizes the school it feels like a personal insult. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in what others think about the school. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I talk about the school, I usually say "we" rather than "they". (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school's successes are my successes. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When someone praises the school, it feels like a personal compliment. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a story in the media criticized the school, I would feel embarrassed. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People think highly of the school. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is considered prestigious to be an alumnus of the school. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school maintains a high standard of academic excellence. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 Did you transfer from another institution?

- ☐ Yes (1)  
☐ No (2)  
☐ Decline to Answer (3)

Q9 Including the school, how many colleges did you attend for undergraduate, graduate or professional study?

Q10 What is your occupation?

Q11 Please select the most appropriate response for each of the following items:

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
I seek out opportunities to feel a sense of belonging to a group. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often wear clothing with the school's logo. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I recommend the school to other people. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not feel a need to identify with an organization that I am a member of. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy talking to people about my experiences at the school. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Did you commute?

- ☐ Yes (1)  
☐ No (2)  
☐ Decline to Answer (3)

Answer If Did you commute? Yes Is Selected

Q12a How many fall and spring semesters did you commute?

- ☐ 1 semester (1)
- ☐ 2 to 3 semesters (2)
- ☐ 4 to 5 semesters (3)
- ☐ More than 5 semesters (4)
- ☐ Decline to Answer (5)

Q13 The State System of Higher Education includes the following universities: \_\_\_\_\_. Please select the most appropriate response for each of the following items about the school and system:

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
I am drawn to the school. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a rivalry between the system schools. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a positive image of the school. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school is superior over the other 13 system schools. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My association with the school makes me feel good about myself. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school is recognizably distinct from the other system schools. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school has the most successful alumni compared to the other system schools. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school is unique in comparison to other system schools. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like for people to know that I am an alumna/us. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My experience at the school is an important part of who I am. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school is an appealing university. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 Please tell us how satisfied you were with the following:

	Very Satisfied (1)	Satisfied (2)	Neutral (3)	Dissatisfied (4)	Very Dissatisfied (5)
Quality of your overall experience (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of your educational experience (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of the social aspects of your experience (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of the campus environment (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic rigor (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-campus housing (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campus activities/recreation (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Library services (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The bookstore (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology resources (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling prepared to get a job after college (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amount of fun you had (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Why do you choose to financially support the school? (Check all that apply)

- ☐ I am an alumna/us (1)
- ☐ I received an outstanding education (2)
- ☐ The school prepared me for my career (3)
- ☐ I believe in the school's mission (4)
- ☐ To continue improving the quality of education (5)
- ☐ To support faculty (6)
- ☐ Tax benefit (7)
- ☐ To help students (8)
- ☐ To give back to the university (9)
- ☐ Other (10) \_\_\_\_\_

Q16 Which area of need do you find to be most compelling to receive your support? (Check all that apply)

- ☐ Student scholarships (1)
- ☐ Academic programs/curriculum (2)
- ☐ Athletics (3)
- ☐ Facilities (4)
- ☐ Faculty support/enhancement (5)
- ☐ Research (6)
- ☐ Student life (7)
- ☐ Unrestricted support (8)
- ☐ Other (9) \_\_\_\_\_

Q17 Why do you choose not to financially support the school? (Check all that apply)

- ☐ I haven't been asked (1)
- ☐ I don't feel a connection (2)
- ☐ I can't afford to give now (3)
- ☐ As a state-owned university, it gets financial support from the state. (4)
- ☐ I have contributed by paying my tuition (5)
- ☐ I have other giving priorities (6)
- ☐ I don't feel good about how donations are used (7)
- ☐ I am unsure of the leadership (8)
- ☐ I am generally dissatisfied with the school (9)
- ☐ Other (10) \_\_\_\_\_

Q18 The Alumni Association has created a website and on-line community. Have you visited the website?)

- ☐ Yes (1)  
☐ No (2)

If No Is Selected, Then Skip To What features or services would attra...

Q19 As you have visited the alumni website, please answer the following:

	Yes (1)	No (2)
Is the information relevant to you? (1)	<input type="radio"/>	<input type="radio"/>
Have you visited the site more than one time? (2)	<input type="radio"/>	<input type="radio"/>
Have you registered for the on-line directory? (3)	<input type="radio"/>	<input type="radio"/>
Have you registered for an event on-line? (4)	<input type="radio"/>	<input type="radio"/>
Have you updated your address on-line? (5)	<input type="radio"/>	<input type="radio"/>

Q20 What features or services would attract you to the website/on-line community on a regular basis? (Check all that apply)

- ☐ Event registration (1)  
☐ Photographs (2)  
☐ Class notes (3)  
☐ Networking (4)  
☐ Alumni Directory (5)  
☐ Business Directory (6)  
☐ Career Development Series (7)  
☐ Social Media (Facebook, LinkedIn, etc.) (8)  
☐ News about students and faculty (9)  
☐ Other (10) \_\_\_\_\_

Q21 What alumni events would you be interested in attending? (Drag and drop items into the appropriate box)

_____ Regional alumni receptions and networking events (1)	Definitely Interested
_____ Regional cultural events (symphony/theater performance) (2)	
_____ Regional family events (sporting, theme park, etc.) (3)	
_____ Alumni dinner and dancing (4)	Maybe Interested
_____ Regional speaker series featuring successful alumni (5)	
_____ Regional lectures featuring faculty (6)	
_____ Special interest group reunions (athletics, Greek, etc.) (7)	Not Interested
_____ Class reunion (8)	
_____ Homecoming Activities (9)	
_____ Alumni educational or professional development workshops (10)	
_____ Fundraising event (11)	
_____ Special Interest topic or professional development podcasts (12)	
_____ Awards ceremonies (13)	
_____ Events corresponding to athletics (14)	
_____ Events welcoming new graduates to the area (15)	



Q22 Highlight the topics you want to see in the e-newsletter and Alumni Facebook page by clicking on them (to turn them green).

**ALUMNI**  
CONNECTIONS



**April 2012**

**Links**  
[Alumni News](#)  
[Academic News](#)  
[Athletic News](#)  
[Faculty News](#)  
[Current Student News](#)  
[College & Department Updates](#)  
[Student Life Updates](#)

**Business Operations**

- Fundraising
- Plans for future



**EVENTS**  
**Alumni Social Events**  
**Upcoming Campus Events**  
**Upcoming Alumni Events and Networking Opportunities**



Photos from Events

Q23 To help us better communicate with you, how do you most identify yourself with the school?

- ☐ By graduating year (1)
- ☐ By major (2)
- ☐ By college (3)
- ☐ By athletic team (4)
- ☐ By student activity (list activity) (5) \_\_\_\_\_

Q24 What alumni services would you be interested in receiving? (Drag and drop items into the appropriate box)

\_\_\_\_\_ Alumni merchandise (1) If "Alumni merchandise Not Interested" Is Selected, Then Skip To "The alumni association has creat..."

Definitely Interested

\_\_\_\_\_ On-line networking opportunities (2)

\_\_\_\_\_ On-line alumni directory (3)

\_\_\_\_\_ Career assistance/On-line career podcasts (4)

Maybe Interested

\_\_\_\_\_ Group travel/tours (5)

\_\_\_\_\_ Alumni credit card (6)

\_\_\_\_\_ Short-term medical insurance (7)

Not Interested

\_\_\_\_\_ Group insurance (8)

\_\_\_\_\_ Long-term care insurance (9)

Q24a Is there a specific product or product line you would like the Bookstore website to carry?

Q24b Would you be more inclined to shop from a merchandise paper catalog or online?

- ☐ Catalog (1)
- ☐ Online (2)
- ☐ No preference (3)

Q24c Do you feel the selection of alumni items should have a focus on throwback colors?

- ☐ Yes (1)
- ☐ No (2)
- ☐ No preference (3)

Answer If Do you feel the selection of alumni items should have... Yes Is Selected

Q24c<sub>1</sub> If so, what would you like to see available for purchase?

Q25 In the last six months, how many times have you experienced the following:

	Never (1)	Once or Twice (2)	3 - 6 Times (3)	More than 6 times (4)
Seen a TV ad for the school (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seen a billboard (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read a news article about the school (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heard a radio story about the school (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seen a print ad for the school (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visited the website (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read the magazine (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seen the school on Facebook, Twitter, YouTube or other social media (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Thank you for participating in the survey!**

## Appendix B –Pre-notification e-Newsletter Link


### Survey Coming Your Way: An Opportunity to Provide Valuable Alumni Feedback and Help a Doctoral Student

**This summer, the [Office of Alumni Relations](#) will send a survey to all alumni via e-mail. Your responses will assist Alumni Relations in developing outreach activities.**

A doctoral student is conducting the survey on our behalf, and she will use the results as part of her doctoral dissertation. So, your response will have double impact.

Watch your e-mail in the coming weeks for our announcement about how to do the online survey. The message also will tell you about several great prizes that participants will have a chance to win as a thank-you for your time and input.

*Posted on 10:06:11 ,*

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[The New J](#)  
[Credit Card](#)  
[Better Rev](#)  
[You!](#)

## Appendix C – Exploratory Factor Analysis

The researcher conducted exploratory factor analysis on the survey questions that made up the index variables. Table C1 shows the results of the factor analysis with promax rotation.

Table C1

### *Results of Exploratory Factor Analysis*

Question	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
Q2 <sub>1</sub> _PARTS_INTRAMURAL	-0.1774	0.1211	0.1866	0.0218	0.1363	0.9125
Q2 <sub>2</sub> _PARTS_HONOR	0.0035	-0.0840	0.0699	0.0175	0.2205	0.9491
Q2 <sub>3</sub> _PARTS_GOVERNMENT	-0.0946	-0.0301	0.1860	0.0769	0.1915	0.9179
Q2 <sub>4</sub> _PARTS_CLUBS	-0.1042	-0.0977	0.3288	0.0055	0.2353	0.8363
Q2 <sub>5</sub> _PARTS_WORKING	-0.0284	-0.1427	0.1244	-0.0049	0.2431	0.9301
Q3_PARTS_RELATIONSHIPS	0.1394	-0.0907	0.0603	0.0332	0.3489	0.8489
Q4 <sub>1</sub> _PARTA_EVENTS	-0.0611	0.0119	-0.0420	0.0540	<b>0.6558*</b>	0.6012
Q4 <sub>2</sub> _PARTA_REGION	-0.1230	0.0519	0.0053	0.0577	<b>0.4549*</b>	0.7909
Q4 <sub>3</sub> _PARTA_ONLINE	-0.0439	0.1210	0.0979	0.0192	0.2988	0.8333
Q4 <sub>4</sub> _PARTA_SPONSORED	0.0219	-0.0726	-0.2182	0.1013	<b>0.6341*</b>	0.6879
Q7 <sub>1</sub> _ID_CRITICIZES	0.0350	<b>0.7970+</b>	0.0337	0.0496	-0.0990	0.3515
Q7 <sub>2</sub> _ID_OTHERS	0.1331	<b>0.5881+</b>	0.0393	0.0274	0.0257	0.4881
Q7 <sub>3</sub> _ID_WE	0.0395	<b>0.5819+</b>	0.0790	0.0109	0.0567	0.5410
Q7 <sub>4</sub> _ID_SUCCESS	0.0433	<b>0.7708+</b>	-0.0440	0.0951	0.0030	0.3524
Q7 <sub>5</sub> _ID_PRAISE	-0.0090	<b>0.8788+</b>	-0.0015	0.0223	-0.0736	0.2842
Q7 <sub>6</sub> _ID_EMBARRASSED	-0.1099	<b>0.6860+</b>	-0.0370	0.0543	-0.0509	0.6384
Q7 <sub>7</sub> _PRSTG_HIGHLY	<b>0.6960^!</b>	0.0108	-0.1754	0.0988	0.0389	0.5208
Q7 <sub>8</sub> _PRSTG_PRESTIGIOUS	<b>0.6630^!</b>	0.1100	-0.2499	0.1166	0.0991	0.4726
Q7 <sub>9</sub> _PRSTG_EXCELLENCE	<b>0.6766^!</b>	0.0529	-0.1399	0.1704	-0.0171	0.4622
Q13 <sub>1</sub> _INT_DRAWN	<b>0.4110'!</b>	0.3301	0.1199	-0.0989	0.0761	0.4558
Q13 <sub>3</sub> _INT_POSITIVE	<b>0.6330'!</b>	0.1730	0.1503	-0.1017	-0.0394	0.3872
Q13 <sub>5</sub> _INT_FEEL_GOOD	<b>0.5118'!</b>	0.3404	0.0399	-0.0712	0.0850	0.3568
Q13 <sub>6</sub> _INT_DISTINCT	<b>0.3686'!</b>	0.2106	-0.0316	-0.0364	0.2466	0.6026
Q13 <sub>8</sub> _INT_UNIQUE	<b>0.3430'!</b>	0.2366	-0.0064	-0.0462	0.2444	0.5903
Q13 <sub>9</sub> _INT_LIKE	<b>0.5084'!</b>	0.3053	0.0487	-0.0706	0.1228	0.3710
Q13 <sub>10</sub> _INT_EXPERIENCE	<b>0.4234'!</b>	0.1851	0.2914	-0.1635	0.0157	0.5087
Q13 <sub>11</sub> _INT_APPEALING	<b>0.6360'!</b>	0.1575	0.1545	-0.1047	0.0201	0.3633
Q14 <sub>1</sub> _STSFX~OVERALL	<b>0.5343!</b>	-0.0074	0.5001	-0.0261	-0.1536	0.3319
Q14 <sub>2</sub> _STSFX~EDUC	<b>0.7094!</b>	-0.0947	0.2212	0.0847	-0.1436	0.3803
Q14 <sub>3</sub> _STSFX~SOCIAL	0.0434	0.0174	<b>0.7776#</b>	0.0518	-0.0480	0.3506
Q14 <sub>4</sub> _STSFX~CAMPUS	0.2128	0.0173	<b>0.5341#</b>	0.2153	-0.1023	0.4486
Q14 <sub>5</sub> _STSFX~RIGOR	<b>0.6079!</b>	-0.0855	0.1473	0.2498	-0.0920	0.4228
Q14 <sub>6</sub> _STSFX~HOUSING	0.0682	0.0202	0.2595	<b>0.3627\$</b>	-0.0659	0.7078
Q14 <sub>7</sub> _STSFX~ACTIVITIES	-0.0090	-0.0036	<b>0.4956#</b>	0.4134	0.0948	0.4295
Q14 <sub>8</sub> _STSFX~LIBRARY	0.0435	0.0269	0.0979	<b>0.6385\$</b>	0.0653	0.4971
Q14 <sub>9</sub> _STSFX~BOOKSTORE	0.0780	0.0903	0.0851	<b>0.6052\$</b>	0.0485	0.4919
Q14 <sub>10</sub> _STSFX~TECHNOLOGY	0.0961	-0.0015	0.0368	<b>0.5155\$</b>	0.1499	0.6409
Q14 <sub>11</sub> _STSFX~PREPARED	<b>0.4427!</b>	0.0028	0.1176	0.2279	-0.0656	0.6109
Q14 <sub>12</sub> _STSFX~FUN	0.0138	0.0855	<b>0.7345#</b>	0.0281	-0.0541	0.4061

*Note.* \* Participation; + Identification; ^ Prestige; ' Interpretation of Brand; ! Brand Image; # Satisfaction with Student Affairs; and \$ Satisfaction with Campus Resources. Questions were dropped from index creation if they did not cleanly load on the factors.

Table C1 shows that six of the participation questions did not cleanly load on factor and thus were dropped from analysis. The three remaining participation questions loaded together and were combined to form the participation index. The six brand identification questions, as originally set out by Mael and Ashforth (1992), loaded together and were combined to form the identification index. Recall from the methodology chapter that brand image was the combination of prestige and interpretation of brand. The researcher separated these constructs to analyze their effects separately but combined them to represent the overall brand image. This factor analysis showed that prestige and interpretation of brand loaded together. Unexpectedly, the factor analysis also showed that four of the satisfaction questions loaded with the other two brand image constructs. Therefore, to analyze brand image for use in Hypothesis 10 and Hypothesis 11, the researcher combined prestige, interpretation of brand, and the four other loading questions to create the brand image index. Finally, the eight remaining satisfaction questions loaded on two factors. Four loaded together and were combined to form the satisfaction with student affairs index. The other four loaded together and were combined to form the satisfaction with resources index.

## Appendix D – Operationalization of Variables

Table D1

*Variables, Variable Types, Location of Measurement, and Corresponding Hypotheses.*

Variables	Type	Location*	Hypotheses
Participation Experience	Independent	Q# 4 <sub>a</sub> , 4 <sub>b</sub> , 4 <sub>d</sub>	9, 10
Satisfaction	Independent	Q# 14 <sub>c</sub> , 14 <sub>d</sub> , 14 <sub>g</sub> , 14 <sub>i</sub> ( <i>Student Affairs</i> )	11
		Q# 14 <sub>f</sub> , 14 <sub>h</sub> , 14 <sub>i</sub> , 14 <sub>j</sub> ( <i>Resources</i> )	
Interpretation of Brand	Independent	Q# 13 <sub>6</sub> , 13 <sub>8</sub> ( <i>Distinctiveness</i> )	7
		Q# 13 <sub>1</sub> , 13 <sub>3</sub> , 13 <sub>11</sub> , 13 <sub>5</sub> , 13 <sub>9</sub> , 13 <sub>10</sub> ( <i>Attractiveness</i> )	
Perceived Prestige	Independent	Q# 7 <sub>7</sub> , 7 <sub>8</sub> , 7 <sub>9</sub>	8
Identification	Independent /Mediator	Q# 7 <sub>1-6</sub>	1, 2, 3, 4, 5, 6
Donation Total Amount	Dependent	Alumni Relations & Development	2
Times Donated	Dependent	Alumni Relations & Development	3
Promotion	Dependent	Q# 11 <sub>2</sub> , 11 <sub>3</sub> , 11 <sub>5</sub>	4
Seek Contact	Dependent	Q# 6	5
Brand Image	Dependent	Q# 13 <sub>6</sub> , 13 <sub>8</sub> , 13 <sub>1</sub> , 13 <sub>3</sub> , 13 <sub>11</sub> , 13 <sub>5</sub> , 13 <sub>9</sub> , 13 <sub>10</sub> , 7 <sub>7</sub> , 7 <sub>8</sub> , 7 <sub>9</sub> , 14 <sub>a</sub> , 14 <sub>b</sub> , 14 <sub>e</sub> , 14 <sub>k</sub>	10, 11
Competitive Attitude	Dependent	Q# 13 <sub>2</sub> , 13 <sub>4</sub> , 13 <sub>7</sub>	6
Need for Identification	Control	Q# 11 <sub>1</sub> , 11 <sub>4</sub>	-----
Gender	Control	Alumni Relations & Development	-----
Age	Control	Alumni Relations & Development	-----
School	Control	Alumni Relations & Development	-----
Graduation Year	Control	Alumni Relations & Development	-----
Occupation	Control	Q# 10	-----
Transfer Student Status	Control	Q# 8	-----
Commuter Status	Control	Q#12, 12 <sub>a</sub>	-----

\*Q# refers to corresponding survey questions (see Appendix B).

### Hypotheses:

1. The stronger an alumna's brand identification, the more likely she will donate money to the organization.
2. The stronger an alumna's brand identification, the larger the sums of money she will donate to the organization.
3. The stronger an alumna's brand identification, the greater the number of donations she will make to the organization.
4. The stronger an alumna's brand identification, the more likely she will promote the university.
5. The stronger an alumna's brand identification, the more likely she will return to campus for events.
6. The stronger an alumna's brand identification, the more likely she will have a competitive attitude towards out-groups.
7. Interpretation of brand will be positively associated with identification.
8. Perceived prestige will be positively associated with identification.
9. Participation experience will be positively associated with identification.
10. Participation experience will be positively associated with brand image.
11. Satisfaction will be positively associated with brand image.

## Appendix E – Bivariate Analysis of Correlations

Table E1

### *Bivariate Correlations Between Variables in the Model*

	INTERP	PREST	STSFX(SA)	STSFX(R)	IDENT	PART	DON	NUMBER	PROMO	RETURN	COMPET	AGE	NEED	TRANSF	COMMUTE
INTERP	1.0000														
PREST	0.6036*	1.0000													
STSFX (SA)	0.4694*	0.3386*	1.0000												
STSFX (R)	0.3875*	0.3852*	0.5420*	1.0000											
IDENT	0.6849*	0.4734*	0.3935*	0.3457*	1.0000										
PART	0.2453	0.1475	0.1154	0.0703	0.2594	1.0000									
DON	0.0508	0.0421	-0.0331	-0.0168	0.0196	0.1554	1.0000								
NUMBER	0.0758	0.1005	0.0271	0.0030	0.1219	0.2040	0.2730	1.0000							
PROMO	0.6535*	0.4614*	0.3843*	0.3490*	0.5731*	0.3620*	0.0269	0.0471	1.0000						
RETURN	0.1633	0.0618	0.0063	-0.0231	0.1533	0.5097*	0.0903	0.2382	0.3110*	1.0000					
COMPET	0.6326*	0.3211*	0.2800	0.2370	0.4931*	0.2302	0.0588	0.0940	0.3995*	0.1227	1.0000				
AGE	-0.0506	0.1931	-0.0619	-0.0570	-0.0243	-0.0579	0.1247	0.3020*	-0.1988	-0.0881	0.0115	1.0000			
NEED	0.2319	0.1631	0.1327	0.1074	0.2808	0.1943	-0.0104	0.0417	0.2292	0.0847	0.1512	-0.0295	1.0000		
TRANSF	-0.0186	-0.0092	0.0013	-0.0442	0.0407	0.0233	-0.0238	-0.0545	0.0661	0.0337	-0.0057	-0.0436	-0.0281	1.0000	
COMMUTE	0.0093	-0.0441	-0.0556	-0.1050	-0.0110	0.0080	-0.0628	-0.0938	0.0963	0.0782	-0.0046	-0.2225	0.0271	0.0365	1.0000

*Note.* \* Indicates moderate to strong correlation of .3 or above.

## Appendix F – Additional Comparative Analysis of Donors and Non-Donors

The researcher conducted t tests and a Wilcoxon rank-sum test to determine if the brand identification means were different between donors and non-donors. In each table, the difference in mean identification scores between donors and non-donors was statistically significant. The results are presented in Table F1, Table F2, and Table F3.

Table F1

*Two-sample T Test with Equal Variances comparing Brand Identification Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1145	20.81834	.1431477	4.84381	20.53748	21.0992
1	1616	22.0203	.1076508	4.327507	21.80915	22.23145
combined	2761	21.52184	.0872827	4.586286	21.35069	21.69299
diff		-1.201956	.1757105		-1.546494	-.8574191
diff = mean(0) - mean(1)				t = -6.8406		
Ho: diff = 0				degrees of freedom = 2759		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

Table F2

*Two-sample T Test with Unequal Variances comparing Brand Identification Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1145	20.81834	.1431477	4.84381	20.53748	21.0992
1	1616	22.0203	.1076508	4.327507	21.80915	22.23145
combined	2761	21.52184	.0872827	4.586286	21.35069	21.69299
diff		-1.201956	.1791088		-1.553189	-.8507237
diff = mean(0) - mean(1)				t = -6.7108		
Ho: diff = 0				Satterthwaite's degrees of freedom = 2285.95		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		



Table F3

*Two-sample Wilcoxon Rank-Sum (Mann-Whitney) Test comparing Brand Identification Scores of Donors and Non-Donors*

DONOR	obs	rank sum	expected
0	1145	1455578.5	1581245
1	1616	2357362.5	2231696
combined	2761	3812941	3812941

unadjusted variance 4.259e+08  
 adjustment for ties -2444046  
 adjusted variance 4.234e+08

Ho: SUM\_ID~N(DONOR==0) = SUM\_ID~N(DONOR==1)  
 z = -6.107  
 Prob > |z| = 0.0000

The researcher then conducted t tests and a Wilcoxon rank-sum test to determine if the means of satisfaction with student affairs were different between donors and non-donors. Again, in each table, the difference in mean satisfaction scores between donors and non-donors was statistically significant. The results are presented in Table F4, Table F5, and Table F6.

Table F4

*Two-sample T Test with Equal Variances comparing Satisfaction (Student Affairs) Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1133	16.23071	.079006	2.659348	16.0757	16.38573
1	1605	16.98604	.0596036	2.387865	16.86913	17.10295
combined	2738	16.67348	.0483662	2.530805	16.57865	16.76832
diff		-.7553287	.0971532		-.9458298	-.5648276

diff = mean(0) - mean(1) t = -7.7746  
 Ho: diff = 0 degrees of freedom = 2736

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

Table F5

*Two-sample T Test with Unequal Variances comparing Satisfaction (Student Affairs) Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1133	16.23071	.079006	2.659348	16.0757	16.38573
1	1605	16.98604	.0596036	2.387865	16.86913	17.10295
combined	2738	16.67348	.0483662	2.530805	16.57865	16.76832
diff		-.7553287	.0989673		-.9494047	-.5612527
diff = mean(0) - mean(1)					t = -7.6321	
Ho: diff = 0			Satterthwaite's degrees of freedom = 2268.61			
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

Table F6

*Two-sample Wilcoxon Rank-Sum (Mann-Whitney) Test comparing Satisfaction (Student Affairs) Scores of Donors and Non-Donors*

DONOR	obs	rank sum	expected
0	1133	1404340.5	1551643.5
1	1605	2345350.5	2198047.5
combined	2738	3749691	3749691

unadjusted variance 4.151e+08  
 adjustment for ties -7831529.5  
 adjusted variance 4.072e+08

Ho: SUM\_SA~A(DONOR==0) = SUM\_SA~A(DONOR==1)  
 z = -7.299  
 Prob > |z| = 0.0000

Finally, the researcher conducted t tests and a Wilcoxon rank-sum test to determine if the brand image means were different between donors and non-donors. In each table, the difference in mean brand image scores between donors and non-donors was statistically significant. The results are presented in Table F7, Table F8, and Table F9.

Table F7

*Two-sample T Test with Equal Variances comparing Brand Image Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1134	56.36323	.2779435	9.359723	55.81789	56.90857
1	1601	59.52817	.193961	7.760863	59.14773	59.90861
combined	2735	58.2159	.1644724	8.601448	57.8934	58.53841
diff		-3.164942	.3283744		-3.80883	-2.521055
diff = mean(0) - mean(1)				t = -9.6382		
Ho: diff = 0				degrees of freedom = 2733		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

Table F8

*Two-sample T Test with Unequal Variances comparing Brand Image Scores of Donors and Non-Donors*

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	1134	56.36323	.2779435	9.359723	55.81789	56.90857
1	1601	59.52817	.193961	7.760863	59.14773	59.90861
combined	2735	58.2159	.1644724	8.601448	57.8934	58.53841
diff		-3.164942	.3389298		-3.829608	-2.500277
diff = mean(0) - mean(1)					t = -9.3380	
Ho: diff = 0			Satterthwaite's degrees of freedom = 2144.99			
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

Table F9

*Two-sample Wilcoxon Rank-Sum (Mann-Whitney) Test comparing Brand Image Scores of*

*Donors and Non-Donors*

DONOR	obs	rank sum	expected
0	1134	1367465	1551312
1	1601	2374015	2190168
combined	2735	3741480	3741480

unadjusted variance 4.139e+08

adjustment for ties -656949.7

adjusted variance 4.133e+08

Ho: SUM\_BR~E(DONOR==0) = SUM\_BR~E(DONOR==1)

z = -9.043

Prob > |z| = 0.0000

## Appendix G – Use of Dummy Variables for Missing Value Indicators

The use of listwise regression, default in the STATA program, caused many observations to be excluded in each model. The researcher located the missing observations in the age and need for identification variables. The researcher determined if the missing values introduced a systematic problem by creating dummy variables for both variables in question. Each regression from Table 4 through Table 11 was re-run using the missing age and need for identification dummy variables. The need for identification dummy variable was insignificant in each model and thus dismissed. The age dummy variable, on the other hand, was statistically significant in several models. Table G1 presents the results of the AGE2 dummy variable in each of the models.

Table G1

### *Results of Inserting Age Missing Dummy Variable into Existing Models*

Hypothesis	Reference Table	Odds Ratio	Std. Err.	z	P> z
H <sub>1</sub>	4	2.282521	0.3716161	5.07	0*
Hypothesis	Reference Table	Coef.	Std. Err.	t	P> t
H <sub>2</sub>	5	0.2084406	0.0958243	2.18	0.015*
H <sub>3</sub>	6	0.3173932	0.0942307	3.37	0.001*
H <sub>4</sub>	7	-0.477514	0.1064365	-4.49	0.000*
H <sub>5</sub>	8	-0.0965605	0.078762	-1.23	0.110
H <sub>6</sub>	9	0.1274754	0.0965242	1.32	0.093
H <sub>7</sub> , H <sub>8</sub> , H <sub>9</sub>	10	-0.0207669	0.2327991	-0.09	0.465
H <sub>10</sub> , H <sub>11</sub>	11	0.8020259	0.394161	2.03	0.021*

Note. \*P>.05

The results presented in Table G1 showed that the missing value indicator for Age was statistically significant as related to choice to donate, donor level, log number of times donated, promotion, and brand image. This suggests that there may be a systematic problem surrounding age as related to these variables. It was not, however, statistically significant as related to seeking contact, competitive attitude, and brand identification. More importantly, regardless of

the statistical significance of the missing age values dummy variable, there were no material changes in the significance or estimated coefficients of the remaining variables in the model as presented in Tables 4 through 11.