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# Belongingness, school sense of community, and loneliness: predictors of institutional mission and values

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Belongingness, School Sense of Community, and Loneliness:  
Predictors of Institutional Mission and Values

A Thesis

Presented in

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Requirements for the Degree of

Master of Science

BY

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VITA

The author was born in Rochester, New York, July 18, 1986. He graduated from Avon High School, received his Bachelor of Arts degree from Niagara University, and a Master of Science degree in Psychology from DePaul University in 2010.

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## CHAPTER I

### INTRODUCTION

#### The Need to Belong

*The Need to Belong* (Baumeister & Leary, 1995) is hypothesized as a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships. Satisfaction of this drive involves two major criteria: (1) Individuals must engage in frequent, affectively pleasant interactions with others and, (2) these interactions must develop in temporally stable conditions where concern for the welfare of the parties involved is apparent. The *belongingness hypothesis* explicates that individuals will form social attachments readily under most conditions and resist the dissolution of existing social bonds. Furthermore, after a minimum belongingness requirement is met, further attempts to create social bonds will not be as subjectively advantageous as the formation of initial bonds (Baumeister & Leary, 1995). Originally, Baumeister and Leary (1995) compiled a literature review of existing research in support of the concept of belongingness as a fundamental human motivation. It is now widely accepted throughout social psychological research that the *need to belong* is encompassed in humanity's core social motives (Fiske, 2004). This quality of belonging is presumed to have an evolutionary basis with survival and reproductive advantages (Ainsworth, 1989; Axelrod & Hamilton, 1981; Moreland, 1987).

The proposed studies will explore whether there are moderating relationships of belongingness, as well as loneliness, between school sense of community and understanding of one's university mission, vision, and values. To date, no previous research investigated these combined relationships.

A wealth of research has accumulated in support of the belongingness hypothesis (e.g. Mellor, Stokes, Firth, Hayashi, & Cummins, 2008; Twenge, Baumeister, Tice, & Stucke, 2001; DeWall & Baumeister, 2006; MacDonald & Leary, 2005; Buckley, Winkel, & Leary, 2004; Gardner, Pickett, & Brewer, 2000; Leary, Tambor, Terdal, & Downs, 1995; Twenge, Catanese, & Baumeister, 2002; Baumeister, DeWall, Ciarocco, & Twenge, 2005). A classic example illustrating the strong effect and need for belongingness was the Sherif, Harvey, White, Hood, and Sherif (1988) "Robbers Cave" study where boys at a summer camp setting who were randomly assigned to camp groups quickly formed strong loyalties to their respective groups. This effect later dissipated when the groups were brought together in cooperative tasks which provide support that belongingness is a dynamic construct. Aside from a classic display of rapid group cohesion, this example demonstrated the urgency at which we seek out and form social bonds. In another study, participants who knowingly experienced electric shock together tended to regard each other more favorably than control groups who did not receive shocks (Latene, Eckman, & Joy, 1966). The need for group belongingness especially in times of distress exemplifies the power of the belongingness drive.

A lack of belongingness has been known to demonstrate a number of unpleasant outcomes. For instance, there is an abundance of research showing that the subjective absence of close social bonds may result in unhappiness (Argyle, 1987), depression (Eisses, Kluiters, Jongenelis, Pot, & Beekman, Ormel, 2004; Myers, 1992; Tambor & Leary, 1993, Hoyle & Crawford, 1994), anxiety (Tambor & Leary, 1993; Baumeister & Tice, 1990; Hoyle & Crawford, 1994), aggression (Twenge et al., 2001; Twenge & Campbell, 2003), guilt, and jealousy (Leary, 1990). Other research showed that social isolation and lack of belongingness may exacerbate mental illness (Baumeister & Leary 1995; Baumeister, Brewer, Tice, & Twenge, 2007) and may even reduce immune system functioning (Cacioppo, Hawkley, & Bernston, 2003). Given the strong evidence for social connection, as well as potential negative associations which accompany social isolation, one might suspect that exclusion from social groups would elicit a stronger need to belong and hence an increased motivation to build social bonds (Maner, DeWall, Baumeister, & Schaller, 2007).

Several studies showed that the need to belong is exacerbated by social exclusion. For example, Maner et al. (2007) asked students to write about an experience of personal rejection (need to belong made salient) or of social acceptance and then rate the degree to which they would use a campus service to find and make friends. Those participants who wrote about an experience of rejection were more likely to agree to use the social connection tool provided by the university. In a second task, students completed a personality questionnaire

and received either 'bogus feedback' or accurate feedback regarding their scores. Students receiving bogus feedback were told that previous participants who scored comparably ended up alone in life. Researchers found that foretelling a solitary life led participants to prefer working in groups as opposed to alone (Maner et al., 2007). Thus, participants sought out social bonds when their supposed future belongingness was compromised, leading to a heightened need to belong.

A perceived lack of belongingness also may have negative consequences in academic performance. Research showed that social exclusion affected intelligent performance. In a study by Baumeister, Twenge, and Nuss (2002), participants given similar 'bogus feedback' which foretold future social isolation and aloneness had dramatic effects on IQ test performance. Belief of future exclusion caused participants to answer significantly fewer questions correctly than participants in control conditions.

In a second experiment by these researchers, participants read an easy as well as a difficult passage from the graduate record examination (GRE). Findings showed that those participants in the 'future exclusion' condition performed comparable to control groups on easy passages. However, the exclusion participants performed significantly worse on difficult questions compared to control participants. These results were attributed to learning and memory difficulties where excluded participants, who were told they might be alone or isolated throughout their lives, had more trouble recalling difficult or thought-

provoking information (Baumeister et al., 2002). These results indicated that exclusion (jeopardized future belongingness) may impair reasoning and extrapolation. These impairments may in turn result in decrements in executive function (Baumeister, Brewer, Tice, & Twenge, 2007). Taken together, research shows that in an attempt to fulfill the fundamental need to belong, less imperative cognitive processes such as intelligent thought will suffer. These findings have major implications for student development on campus. Students with an unsatisfied need to belong may have trouble with academic performance during attempts to form significant social relationships with others.

Research also explored alternative instances where social exclusion and rejection may have counter-productive consequences thwarting or diminishing the need to belong. In these circumstances, students may not seek future belongingness. For example, social exclusion at times may cause participants to behave in a manner which yields destructive consequences such as hostility and reduced helpfulness toward new individuals. Twenge et al. (2001) found that socially excluded individuals behaved aggressively toward individuals who provoked their exclusion. These findings were replicated by other researchers who recorded video messages of participant career goals to a supposed partner (confederate). Participants were then told that either their partner had to leave suddenly for personal reasons (control) or that the partner was not interested in meeting the participant after viewing the video recording (exclusion condition) (Maner et al., 2007). Those participants in the exclusion condition rated their

perception of the supposed partner in a negative and hostile manner (Maner et al., 2007). Such interactions may have negative effects in attempts to fulfill the need to belong. In other words, to respond to exclusion with hostility or reduced helpfulness most likely perpetuates social exclusion. These negative reactions to social exclusion might be considered somewhat of a self-fulfilling prophecy where one's stereotyped behavior toward another causes that individual to act according to their assigned stereotype. These findings are consistent with Baumeister et al. (2002), who reasoned that other executive function impairments may explain counter-productive reactions to exclusion.

Group exclusion also may lead to decreases in pro-social behavior. For example, one study using 'bogus feedback' methods showed decreases in a wide variety of pro-social behaviors such as willingness to perform favors or to participate in student fund organizations (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). Surprisingly, much of the research involving the need to belong and paralleled social exclusion falls short in terms of the examination of subjective social deficiencies such as loneliness.

### *Loneliness*

Weiss (1973) suggested that feelings of loneliness are attributable to insufficient amounts of social contact as well as lack of perceived meaningful and intimate relationships with others. Such statements, however, were criticized conceptually (Perlman, 1987) suggesting that insufficient social contact may not be the best indicator of the subjective experience of loneliness. More

descriptive definitions contend that loneliness reflects an individual's subjective deficiencies in maintaining social relationships (Russell, Cutrona, Rose, & Yurko, 1984) or a lack of intimate connections in terms of one's social relationships (Reis, 1990). This definition of loneliness is relatable to the conceptualization of belongingness in terms of formation and maintenance of social bonds.

Belongingness is considered a drive to form and maintain social relationships while loneliness exemplifies a subjective deficiency in the experience of these relationships. A primary goal of this paper will be to examine whether there exists a relationship between belongingness and loneliness. Another goal is to test whether these factors contribute to or effect student school sense of community as well as student perception of the university in terms of its mission, vision, and values.

For the purposes of the proposed studies, loneliness will be characterized in terms of "unpleasant feelings that arise when an individual perceives a discrepancy between their desired and existing social relationships" (Perlman, 2004; pg. 181). Notably, the simple exposure to social situations is not sufficient to satisfy the need to belong or improve subjective feelings of loneliness. For example, it was shown that lonely and non-lonely individuals do not differ significantly in the amount of time they spend with others. Those individuals who report feelings of loneliness do however spend less time with friends and family (people most likely to fulfill the need to belong; Jones, 1981). Therefore,

loneliness is considered a distinct and separate construct from the objective condition of aloneness (Rokach, 2004).

As is the case for *belongingness*, individual differences may occur in terms of one's subjective experience of loneliness. An individual may have relatively few close relationships and yet experiences no loneliness. In contrast, one may have a large social network and experience significant loneliness. These differences may be subjective (level of felt intimacy) or objective (number of actual social contacts) in nature depending on the individual (de Jong Gierveld & Havens, 2004). Therefore, most researchers have concluded that subjective and objective indicators of loneliness should be measured separately (Andersson, 1998; Perlman, 2004; Rokach, 2004; de Jong Gierveld & Havens, 2004).

For the current studies, we will additionally address how objective factors such as residency status, engagement in a number of campus activities, and student year in school influence subjective *need to belong* and *loneliness* scores in light of the above-mentioned research. Previous research by Pike and Kuh (2005) showed that students living on campus tended to be more engaged in the university community as well as more intellectually engaged as compared to non-residential students. For these reasons, students who are not living on campus may have an inflated need to belong when compared to resident students who are more frequently exposed to the culture and programs their institution offers on a daily basis. Furthermore, year in school may also be a contributing objective factor of loneliness. Research by Shaver, Furman, and



Buhrmester (1985) showed that first-year students, who are transitioning away from previous social support networks (e.g. family, friends), reported significantly more loneliness during their first year. Additionally, students who remained lonely had a tendency to be critical of the quality of the relationships they had formed (Shaver et al., 1985). This is consistent with the concept of loneliness as a subjective discrepancy between desired and existing social relationships (Perlman, 2004). Taken together, these objective factors may affect perceptions of belongingness as well as loneliness.

#### *Need to Belong and Loneliness: Separate Constructs?*

The need to belong and loneliness seem to share a common component in perceived connectedness to others. Loneliness is proposed as a lack of fulfillment of social contact with those to whom one feels connected (Baumeister & Leary, 1995). The concept of loneliness, however, is separate from the need to belong in that it is not a need to form and maintain relationships. Rather, loneliness is the result of one's subjective deficiencies in maintaining social relationships or lack of intimacy in social relationships (Russell, Cutrona, Rose, & Yurko, 1984; Reis, 1990).

While the need to belong and loneliness are separate, distinct constructs, they have been shown in previous research to be significantly but weakly correlated ( $r = 0.28$ ; Mellor et al., 2008). This weak correlation suggests that while these constructs are separate, they may share some unifying factors. It may also be the case that an unfulfilled need to belong is a risk factor for

loneliness. Subsequently, loneliness may be a risk factor for reduced well-being (Mellor et al. 2008; pg. 214). This relationship suggests that the need to belong may be moderated by loneliness, which in turn may lead to a decreased school sense of community (Pretty, Andrewes, & Collett, 1994) as well as a decreased understanding of university values.

#### *The Nature of Moderated Relationships*

In their classic paper, Baron and Kenny (1986) made the distinction between mediator and moderator relationships. A mediation model assumes that instead of a direct relationship between the predictor (independent) and criterion (dependent) variable, a third explanatory variable exists between the two. Hence, the independent variable causes the mediating variable which in turn causes the dependent variable. Conversely, a moderated model assumes that “the causal relation between two variables changes as a function of the moderator variable” (Baron & Kenny, 1986; pg. 1174). Therefore, the effect of the dependent variable is subject to change based on varying levels of the moderator.

Moderator variables are often used when there is a weak or inconsistent relationship between predictor and criterion variables (Baron & Kenny, 1986). The moderator variable serves as an additional predictor variable which contributes to the effect of the criterion variable. Moderation is the proposed relationship that the current studies will show in terms of belongingness and

loneliness as moderators between school sense of community and perception of the institutional mission, vision, and values.

*School Sense of Community: A Uniting Factor?*

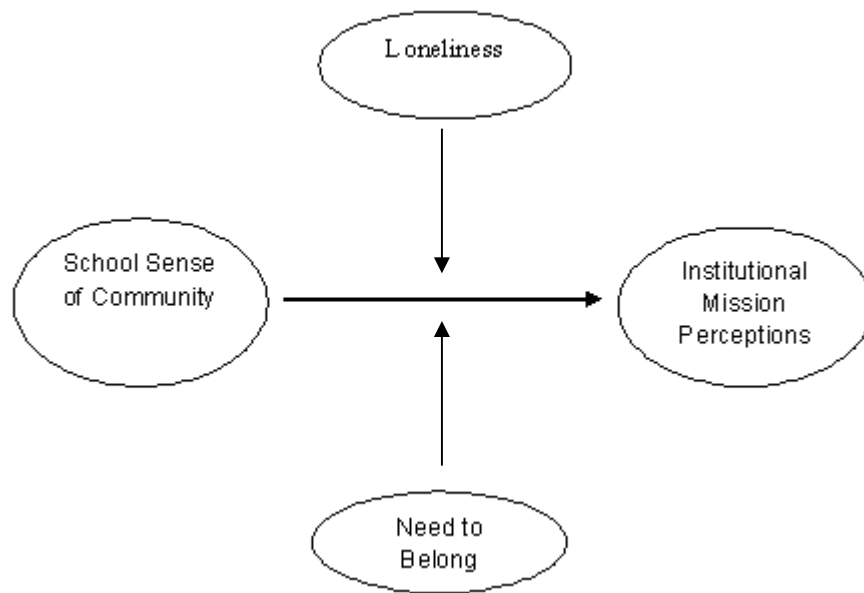
Nevertheless, it is possible that school sense of community plays an important role in the association between the need to belong and loneliness. For example, students who do not perceive significant connection with the university or its constituents may be driven to establish a sense of belongingness or perhaps feel loneliness as a result of a lacking connection. This distance between the student and the university may be the basis for an underdeveloped perception of the university's mission, its vision, and its values. Ferrari, Cowman, Milner, and Gutierrez (2009) found that students who held leadership roles in two or more campus clubs reported more of a sense of community on campus than students who were leaders of one or no campus club. Additionally, engagement in university activities may lead to an increased school sense of community. These findings are consistent with Royal and Rossi (1996) who suggested that learner's school sense of community is directly related to their engagement in school activities such that students with increased engagement will report increased school sense of community and vice versa.

School sense of community may be a factor moderated by the need to belong and/or loneliness in terms of understanding perceptions of the university's mission, its vision, and its values. Ferrari, Cowman, Milner, Gutierrez, and Drake (2009) found that faculty and staff perceptions of the

university as innovative and inclusive of pragmatic and risk-taking ideas were significant predictors of school sense of community variables. A college or university with a well-established innovative and inclusive mission that is visible to all may therefore facilitate school sense of community. Alternatively, if students have a strong knowledge and endorsement of their university's mission and values, they may also feel an increased school sense of community. School sense of community may also be affected by whether an individual's need to belong is currently being met or by an individual's subjective experience of loneliness in that community. Figure 1 demonstrates the current proposed moderated relationship between school sense of community and perception of one's institutional mission to be examined in the current studies. However, since multiple moderation effects are difficult in terms of interpretation, each proposed moderation variable will be tested in a separate model.

The proposed moderation model will be evaluated in two separate but related studies. Study 1 will examine the moderating relationship between school sense of community, the need to belong, and loneliness on subsequent perception of one's institutional mission and values at a large Catholic metropolitan university exemplifying Vincentian qualities of service and charity. Study 2 will replicate this proposed relationship found in Study 1 at a small Catholic and suburban university with similar values. This replication is necessary to establish further generalizability in the proposed model outside the context of a single university.

Figure 1

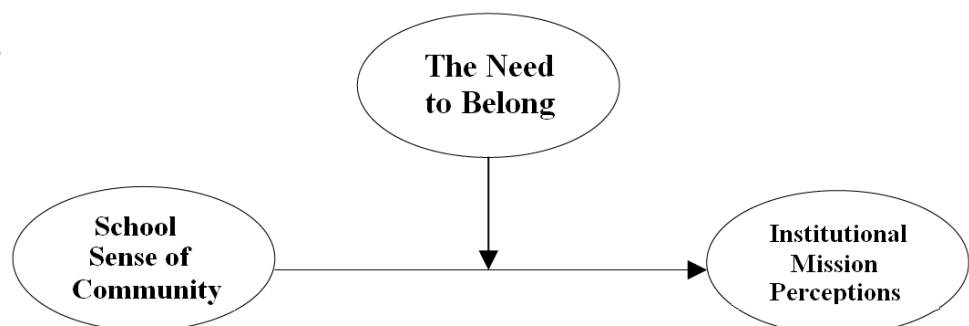


#### *The Need to Belong and School Sense of Community*

Sense of community has previously been defined as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillan & Chavis, 1986; pg. 9). Conceptually, there seems to be some overlap between the need to belong and sense of community. Tinto (1975) argued that insufficient interactions between students with peers and faculty as well as the differing values of other students, are likely to result in dropouts. In other words, students who feel they do not belong and have low sense of community tend to feel isolated and are at-risk of becoming dropouts. This illustrates the importance of unification between student and faculty in their understanding of institutional goals.

Previous motivational research showed that when individuals feel a sense of relatedness and connection (as well as a sense of importance as a member of a group) they were more likely to internalize the values of other members of that group (Deci, Vallerand, Pelletier, & Ryan, 1991). Furthermore, universities that stress the importance of belongingness and inclusion might better motivate and coordinate their student body toward academic success. Finn (1989) proposed an *identification-participation* model to account for student withdrawal. This model suggested that individuals who do not identify at least to a minimum extent with their institution, or feel valued or respected, will begin a gradual disengagement process which culminates in student dropout. Therefore, university programs explicitly designed to facilitate belongingness and sense of community may be a vital component in regard to student retention and promotion of academic achievement (Goodenow & Grady, 1993). Additionally, sense of membership may be a key contributor to commitment to schooling and acceptance of educational values (Goodenow & Grady, 1993). This account gives further testament to the proposed moderated relationship between school sense of community and the need to belong on student institutional mission perceptions. The proposed moderation relationship between school sense of community, the need to belong, and understanding of ones institutional mission and values is expressed in Figure 2.

Figure 2

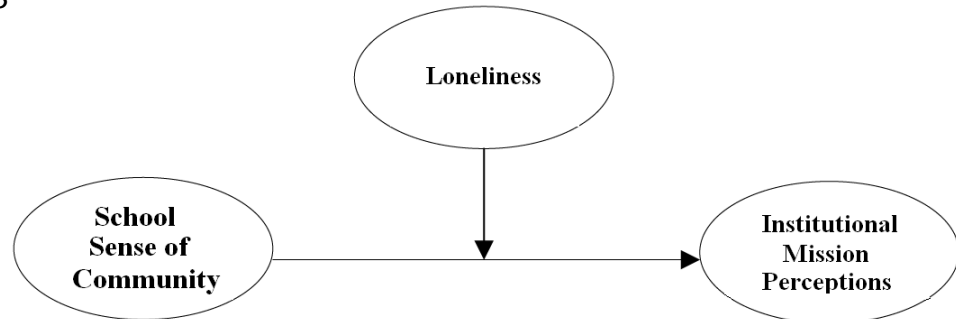


### *Loneliness and School Sense of Community*

Loneliness is considered in previous psychological literature to be an individual subjective deficiency in maintaining meaningful social connection with others (Jones, 1981). This perspective emphasizes the individual and overlooks potential environmental contributors to loneliness. For example, Felton and Shinn (1992) hypothesized an ecological approach to loneliness in that it may be the result of failure on the part of the community as a system to accommodate particular individuals. Membership into the community would thus aid in the establishment of an individual's sense of community. Pretty et al. (1994) found that decreased school rather than neighborhood sense of community was the strongest predictor of loneliness. Furthermore, the amount of social support reported by participants in that study was negatively correlated with loneliness scores. These findings suggest that school sense of community may be a contributing factor to student perceptions of their social surroundings (e.g. the university). In a related study, Nicpon, Huser, Blanks, Sollenberger, Befort, and Kurpius (2006) demonstrated that students who perceived themselves as less lonely and reported increased social support related to more positive academic persistence decisions. Establishment of school sense of community as well as maintenance of student programs to combat perceptions of isolation and loneliness may be essential for academic persistence and success as well as vital to student understanding of institutional values. The proposed moderation

relationship between school sense of community, loneliness, and understanding of one's institutional mission and values is expressed in *Figure 3*.

*Figure 3*



#### *The Role of Mission Statements in Promoting a School Sense of Community*

Mission statements are an organization's means of publicly proclaiming for critical assessment the institution's objectives, expectations, and values (Holland, 1999). Within higher education settings, mission statements focus the energies of employees to balance the relationship between educational goals and the needs of the outside world and integrate objectives held by diverse stakeholders enabling all to work toward common goals (Berg, Csikszentmihalyi, & Nakamura, 2003). Institutional missions may be conveyed through administrative operations, academic programs and policies, and student services (Ferrari & Cowman, 2004; Ferrari & Velcoff, 2006). They identify the institution's intentions to accomplish goals, and its premise for action (Amis, Slack, & Hinings, 2002).

Forming a credible institutional identity requires a university to identify its strengths and create its mission statement around these qualities (Berg et al.,



2003). In the context of higher education, it is important to emphasize the institutional identity in terms of its values. *Institutional values* are defined as goals and outcomes, as well as procedural operations, which are actualized to students and staff reflecting the identifiable benchmarks of the organization (Ferrari & Cowman, 2004; Filkins & Ferrari, 2004). These identifiable benchmarks are what sets the institution apart from all the others and should characterize student qualities as well (Woodrow, 2006). The skills and competencies acquired through higher education that reflect the institution's mission and values may impact student development (Ferrari & Cowman, 2004). For instance, if a university in its mission statement claims to promote and foster public service, intellectual integrity, critical thinking skills, moral and civic development, and racial and religious tolerance, then it is important to evaluate whether such virtues are realized and actualized by students (Ehrlich, 2000; Gardner, 1988; Halstead & Taylor, 2000).

However, only a few higher education institutions successfully used their mission statements as a strategic plan to identify their distinguished characteristics that set them apart from the rest (Tamburri, 1999). One study by Rapp (2000) assessed first-year students' expectations, perceptions, emotions, and knowledge about the university. Results showed that 50% of the time, students had misconceptions about the university. This outcome increased the distance between student expectations and experiences at that institution. In

order to close this gap, it is important for program administrators to understand students' initial perceptions of the institutional mission.

Additionally, Tinto's (1987) academic and social integration model of college student attrition proposed a potential lack of fit between college students' individual goals and the needs, demands, and goals that their higher education system places on them. This model is further testament to the necessity for comprehensive use of mission statements as distinguishing characteristics for higher educational institutions. These institutional mission values allow students to distinguish between possible fits for a more satisfying academic career.

The concepts of belongingness and loneliness are crucial in the study of institutional mission perceptions of students. These concepts are especially relevant in university settings which lack diversity. For example, Fisher and Hartmann (1995) reported that students of color on predominantly white campuses experience feelings of alienation, marginalization, isolation, and loneliness and that these feelings are a direct result of a lacking sense of belongingness. Belongingness, in this particular context, was defined as a subjective feeling of interpersonal closeness within a given social context (Lee & Robbins, 1995). Astin (1993) points out that the lack of closeness experienced by students of color is alarming because a sense of belonging is crucial to the academic and social adjustment of college life. Research has also shown that belongingness, which was measured by social integration, was a major predictor

of academic success (Milem & Berger, 1997). Goodenow and Grady (1993) found that students who have a high sense of belonging in school are more likely to be motivated and academically engaged than those with a low sense of belonging.

Therefore, it is important for institutions, especially those who claim diversity in their mission, to foster student development in inclusive ways. For example, one study assessing institutional mission perceptions of student leaders found that Caucasian students reported higher sense of community as compared to students of color who felt the need for stronger emphasis on diversity across campus (Ferrari, Cowman, Milner, & Gutierrez, 2009). These results suggest that higher education administrators need to focus energies toward holistic inclusion with regard to student populations (Ferrari et al., 2009). This inclusion should be apparent in institutional mission statements. Reay, Davies, David, and Ball (2001) showed that the desire to 'fit in' at a university impacted the choice of institution for working-class and minority applicants. This statement emphasizes the necessity of stressing institutional mission and points to potential as well as current students.

Faith-based institutions incorporate mission statements that reflect the complex values and objectives inherent in faith-based organizations (Bart, 2007; Feldner, 2006). These institutions are ideal for examining the role of mission statements in the university setting as distinguishing features with impacts on student development and success.

### *DePaul University*

DePaul University is an example of an institution using its mission statement as a means to distinguish itself from other higher educational institutions. DePaul University is a large, Catholic institution located in the city of Chicago, IL. The university's benchmark characteristics are its *urban, Catholic, and Vincentian* qualities and all the values that are associated with these terms. The *urban* identity of the university is expressed by connection and outreach to the community. Its connections include delivering quality education to locations in and immediately around the metropolitan area of the city of Chicago and to the global community. The university states that it expresses its *Catholic* mission and values by direct service to the poor and economically disenfranchised through programs such as student engagement in volunteer and community service directed at impoverished communities (Sullivan, 1997; Murphy, 1991). Although DePaul is a Roman Catholic school of higher education, its institutional uniqueness is related to a *Vincentian* identity through respect for human dignity, diversity, and individual "personalism" (see Murphy, 1991; Sullivan, 1997).

### *Niagara University*

Niagara University is also a relevant example of a mission-driven, faith-based institution stressing a dynamic education and personal growth. Niagara University is a small, Catholic institution located outside the city of Buffalo, NY. Niagara University shares common values with DePaul in that it is a Catholic, Vincentian university with emphasis on service to and connection with the

outside community and all the values associated with these terms including respect for human dignity and “personalism” (see Murphy, 1991; Sullivan, 1997).

DePaul and Niagara Universities are excellent institutions for comparison. Both institutions are founded on Catholic, Vincentian values with emphasis on service to community. Both institutions promote and strive in their mission to facilitate an environment of belongingness and inclusion. Therefore, assessment of factors such as school sense of community and belongingness are crucial when evaluating these institutions in terms of mission and values. If each university promotes and strives for inclusiveness, indoctrination of Catholic and Vincentian values, and service to community, then these principles should be apparent in student perceptions of their institution in terms of its mission, its vision, and its values.

Although similar in mission, we must also acknowledge institutional differences between DePaul and Niagara. Most saliently, differing geographical locations may play a role in student perceptions of their university. DePaul may be considered urban while Niagara may be considered suburban. Research by Chavis and Wandersman (1990) showed that sense of community is particularly vital in urban settings affecting various services such as health and prevention programs. Unfortunately, these urban settings tend to report lower school sense of community when compared to non-urban settings. Additionally, DePaul is roughly six times larger than Niagara in terms of student population. One study by Lounsbury and DeNeui (1998) showed that students reported

greater sense of community at schools with lower enrollment rates when compared to larger institutions. Newmann, Rutter and Smith (1989) also acknowledged that school size was a considerable factor in determination of school sense of community. Taken together, these studies suggest that school sense of community is vital in urban institutional settings but often exhibited to a lesser degree when compared to non-urban settings. These factors warrant further consideration when interpreting reports of school sense of community, belongingness, and loneliness in an attempt to understand student perceptions of institutional mission.

#### *Implications for Higher Education and Student Development*

In terms of the *Belongingness Hypothesis*, real, potential, or imagined changes in one's belongingness status will generate emotional responses (Baumeister & Leary, 1995). This effect is facilitated such that positive emotional experience is associated with feelings of increased belongingness while negative emotional experience associated with decreased belongingness. Therefore, an accumulation of negative experiences in social situations will lead to decreased perceived belongingness and should subsequently effect personal perceptions of loneliness.

Alternatively, individuals will report higher loneliness when their need to belong is not appropriately met (Mellor et al., 2008). Baumeister and Leary (1995) proposed that interpersonal interactions with others may have a stabilizing effect in that when people perceive their environment as caring, their

need to belong will be fulfilled. Freeman, Anderman, and Jensen (2007) provided support of this hypothesis when they reported that freshmen student perception of their instructors as encouraging, enthusiastic, friendly, and helpful were strongly associated with student sense of belonging in class. In the same study, it was found that student social acceptance was a significant predictor to student belonging at the university (Freeman, Anderman, & Jensen, 2007). Taken together, these studies suggest that student's sense of social acceptance both by university faculty as well as fellow students may be a crucial variable in relation to sense of belonging. In summation, "college students' sense of belonging at the university, especially early in their college careers, may be important for academic motivation and success in that setting" (Freeman et al., 2007; pg. 214; Tinto, 1987).

In the context of higher education, the need to belong has major implications for student success. An unsatisfied need to belong has shown to result in poor performance on IQ tests as well as on the GRE (Baumeister et al., 2002). If the need to belong is facilitated by positive social affect and positive social reception in groups, then we would expect a negative relationship between students with a satisfied need to belong and heightened reports of loneliness. Additionally, research suggests that when students felt a sense of belonging in a particular class, they also reported more positive motivational beliefs, felt more confident in accomplishing academic goals, and were more interested in classroom discussion (Freeman et al., 2007). Mellor et al. (2008)

reported that need to belong and loneliness are “significantly but weakly positively correlated,” suggesting that those with a higher need to belong tend to be more lonely. The goal of the present research is to assess whether these related factors, the need to belong and subjective experience of loneliness, will serve as moderators between school sense of community and student understanding of their institutional mission, vision, and values.

#### RATIONALE

To date, no published study assessed the construct of school sense of community with emphasis on moderating factors of belongingness and loneliness to account for student understanding of their universities mission, its vision, and its values. Previous research has shown that there is a relationship between school sense of community and the understanding of institutional values (see Ferrari, et al., 2008; Ferrari et al., 2009). However, the driving factors behind this relationship have yet to be identified. It is important to understand the relationship between school sense of community and feelings of belongingness as well as the construct of school sense of community and loneliness in order to craft institutional programs, activities, and mission values that best serve the student body.

Belongingness theory proposed that individuals have a “pervasive drive” to seek out and maintain a minimum number of lasting interpersonal relationships (Baumeister & Leary, 1995; pg. 497). Involvement with a novel social setting (i.e. the university) away from the support of previous social



networks (e.g. home, high school, etc.) may intensify one's need to belong (Watt & Badger, 2009). At faith-based colleges and universities, which maintain strong emphasis on inclusiveness, social justice, and social welfare (Ehrlich, 2000; Gardner, 1988; Halstead & Taylor, 2000), one might expect the administration to place a high priority on establishing and fulfilling student need to belong. Simply put, if an institution claims inclusiveness and belonging in its mission, these concepts should be experienced by the student body.

Study 1 will explore the relationship between students' school sense of community and their endorsement and knowledge of the institution's mission, vision, and values. In addition, it is expected in Study 1 that one's sense of belongingness at the institution should play a moderating role between school sense of community and institutional mission perceptions. Students who feel a part of the school community will tend to have their need to belong satisfied and hence a heightened perception of the institutional mission, vision, and values. Additionally, residency status at the university might play a role in fulfillment of the need to belong (see Pike & Kuh, 2005), such that students who commute to campus may not feel as immersed in campus culture and activity as resident students. Nicpon et al. (2006) found that freshman students living on-campus showed significantly higher GPA's than their off-campus counterparts. Nevertheless, commuter students may have a heightened need to belong and lowered school sense of community as compared to resident students. The

proposed study will additionally examine student belongingness as well as loneliness in terms of academic year in school.

Furthermore, student year in school may have an impact on school sense of community as well as the need to belong. Bronfenbrenner (1979) suggested that high school students who are headed to college go through an “ecological transition” where, as freshmen, they are faced with negotiating new roles in a new academic context. Nevertheless, as freshman students may not be initially as exposed to campus life as other upperclassmen, school sense of community may be low and need to belong heightened for this particular demographic. This relationship may have serious implications for freshman students as recent research has shown 20-30% of student dropouts occur during freshman year (Nicpon et al., 2006).

At present, no published study assessed the construct of school sense of community moderated by feelings of loneliness and their effect on student knowledge and endorsement of institutional mission, vision, and values. Loneliness has previously been correlated with need to belong measures (Mellor et al., 2008). Students who exhibit a sense of loneliness perceive a subjective deficiency and discrepancy between their desired and existing social relationships (Perlman, 2004). Students with a sense of loneliness and undeveloped understanding of the university may suffer in their academic as well as social college careers.

It is important to understand loneliness as well as its relationship to other facets of the university (e.g. school sense of community, belongingness, understanding of university mission) in order to create opportunities for students which prevent feelings of social isolation. Hence, Study 1 will also address the potential moderating factor of loneliness between school sense of community and institutional mission perceptions. Study 1 proposes that loneliness will moderate the effect between school sense of community and institutional mission perceptions. Furthermore, heightened scores on loneliness measures should consequently associate with decreased perceptions of the institutional mission.

The current research study aspires to explain in further detail the interaction between school sense of community and student perceptions of their university. We believe that additional factors such as student need to belong and subjective disparities which relate to student loneliness will reveal a more accurate account of this interaction.

Faith-based colleges and universities advocate inclusiveness and deep social connection and understanding (Halstead & Taylor, 2000). Therefore, these values should be translated and apparent to the student body. Study 2 will replicate the relationship found between student school sense of community and endorsement of the university mission, vision, and values at another faith-based university which embraces similar principles. Specifically, Study 2 will examine an urban versus suburban university in terms of the moderating effects

of belongingness and loneliness on school sense of community and perception of the university's mission, its vision, and its values.

In addition, when conducting self-report survey research, especially research which involves topics of a sensitive nature, it is necessary to include a measure of socially desirable response tendencies. Social desirability has been defined as "the tendency to endorse items in response to social or normative pressures instead of providing veridical self-reports" (Ellingson, Smith, & Sackett, 2001). For this reason, both studies will include measures of social desirability to ensure that scores most accurately represent the thoughts and ideas of those completing the measures included.

#### *Statement of Hypotheses and Research Questions*

##### *Study 1*

*Hypothesis I. A significant positive relationship will be found between need to belong scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

*Hypothesis II. Need to belong scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will more likely have a fulfilled need to belong and hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

*Hypothesis III. A significant negative relationship will be found between*

*loneliness scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

*Hypothesis IV. Loneliness scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will report reduced loneliness and hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

*Research Question I. How will student residency status associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values?*

*Research Question II. How will student year in school associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values?*

## *Study 2*

*Hypothesis V. A significant positive relationship will be found between need to belong scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

*Hypothesis VI. Need to belong scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will more likely have a fulfilled need to belong and*

*hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

*Hypothesis VII. A significant negative relationship will be found between loneliness scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

*Hypothesis VIII. Loneliness scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will report reduced loneliness and hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

*Research Question III. How will student residency status as well as year in school associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values as compared to Study I?*

*Research Question IV. How will urban and suburban institutions compare in terms of responses regarding student belongingness, loneliness, school sense of community, and perceptions of institutional mission?*

## CHAPTER II

### METHOD

Two separate but related survey studies are proposed. Both studies will examine the relationship between school sense of community and student perceptions of the institutional mission and values. Study 1 will assess whether there exists a moderating relationship of belongingness and/or loneliness between school sense of community and institutional mission perception. Study 2 will explore whether the relationship found in Study 1 may be replicated or exist at a similar faith-based institution with a comparable institutional mission and values.

#### *Study 1*

Study 1 will survey psychology students at a Midwestern university with various demographic items as well as reliable and valid self-report measures of student school sense of community, the need to belong, loneliness, and institutional mission perceptions. The goal of the first study will be to investigate the relationship between school sense of community as well as the factors of need to belong and loneliness, and whether these factors influence students' knowledge and endorsement of the institutional mission, vision, and values in support of civic and social engagement. More specifically, the goal of Study 1 will be to test the hypotheses that need to belong as well as loneliness play moderating roles between student school sense of community and knowledge and endorsement of the institutional mission, vision, and values. Additionally,

students with a low need to belong and high school sense of community will report increased knowledge and endorsement of the university mission, vision, and values. Moreover, Study 1 will investigate whether heightened loneliness scores are associated with decreased understanding of the institutional mission.

### *Participants*

In Study 1, 246 undergraduate students ( $M$  age = 20.21 ;  $SD$  = 3.45) participated in a set of paper and pencil as well as online surveys which consisted of reliable and valid self-report measures of: (1) school sense of community; (2) need to belong; (3) loneliness; (4) institutional mission perceptions; and (5) socially desirable response tendencies. Participants were largely female (76.1%), Caucasian (67.9%), and either Roman Catholic (36.6%) or reporting no religious preference (30.9%). There was a relatively even distribution of participants identifying as commuter (35.9%), dorm (36.3%), or living in campus apartments (27.8%). A large percentage of participants identified as freshman (42.0%) or sophomores (23.7%).

### *Psychometric Scales*

Data was collected using five self-report surveys measuring the need to belong, loneliness, school sense of community, perceptions of one's institutional mission, and socially desirable response tendencies.

*The DePaul Mission and Values Inventory.* All participants will be administered Ferrari and Velcoff's (2006) *DePaul Mission and Values Inventory* (DMV), a 39-item survey divided into two components. The *DMV* evaluates



perceptions of an urban, faith-based university's mission identity and activities. More specifically, the *DMV* investigates whether university stakeholders perceived benchmark characteristics and related programs reflecting the Catholic, Vincentian, and Urban tenants summarized in the mission statement. By focusing on these three specific domains, this inventory assesses two separate but related components of a university's mission effectiveness. The first component focused on perceptions of the *institution's identity*, as reflected in its mission statement. The second component was designed to assess perceptions of the *University's mission-driven activities* that reflected its identity through the vision and values of the school.

Two separate factor analyses performed on the *DMV* showed that 16 items reflected the mission identity (assessed using a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*), and 23-items assessed mission-driven activities (assessed using a 4-point scale ranging from 1 = *not important* to 4 = *very important*; or a NA = *not aware* option if a respondent had not previously heard of the activities the question referenced) (Ferrari & Velcoff, 2006). From these separate factor analyses five distinct subscales were reported and are discussed below.

Component one contains 16 questions rated along a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*) which tapped into the university's benchmark *institutional identity* as an Urban (sample item = "The university sponsors a variety of services and programs to demonstrate the connectedness

to the community that is characteristic of its urban identity”), Catholic (sample item = “[The university] freely invites all inquiries to freely examine Catholicism, other faith traditions, and other secular values systems in light of their respective contributions to the human experience”) and Vincentian (sample item = “I believe that we manifest Vincentian personalism by our care for each member of the university community”) institution. This section of the *DMV* inventory is separated into the 10-item subscale of *innovative/inclusiveness* and the 6-item subscale of *Catholic pluralism* (Ferrari & Velcoff, 2006).

(1) *The institution as innovative and inclusive.* This previously mentioned 10-item subscale reflects the university’s operational approach to include diverse stakeholders with various viewpoints and backgrounds. The institution prides itself on its willingness to take risks and engage in change in order to be on the “cutting edge” of higher educational operations. In order to evaluate student belief in the university as innovative and inclusive, *DMV* items assess several factors which are in agreement with and represent the university’s innovativeness and inclusiveness (author *M* score = 63.18, *SD* = 9.16; coefficient alpha = 0.76). These factors include: whether the university takes risks in an entrepreneurial way, that the university is pragmatic in its educational focus, that it remains relevant in a changing society, that it is keeping an urban identity, and that it fosters mutual understanding and respect for others. Sample items measuring innovative/inclusiveness include: *I believe that DePaul University is inclusive. DePaul provides access for all to higher education regardless of class,*

*race, gender, religion, sexual orientation, disability, ethnicity or economic barriers and I believe that we manifest Vincentian personalism by our care for each member of the university community.*

(2) *Catholic Pluralism*. The second subscale within the mission identity component labeled by Ferrari and Velcoff (2006) is termed Catholic pluralism (author *M* score = 27.65, *SD* = 4.52; coefficient alpha = 0.79). This subscale includes items which reflect the university's Catholic and urban identities. The university also provides curricula on Catholicism and other faiths, as well as offering ministry and programs for both Catholicism and other faiths. While maintaining a diverse and inclusive environment on campus, DePaul also has a responsibility of expressing its Catholic heritage. Items measuring Catholic Pluralism include: *I support DePaul's current approach to expressing its Catholic identity and I believe that at DePaul our very diverse personal values and religious beliefs contribute to an atmosphere that fosters mutual understanding and respect.*

Component two of the *DMV* inventory contained 23 items, rated along a 4-point scale (1 = *not at all important*; 4 = *very important*) that reflected how personally relevant to the participant a set of administrative *mission-driven activities* supporting the values and vision of the school are in each of the three benchmark areas (e.g., urban sample items = "community based service learning" and "Study abroad programs"; Catholic sample items = "Catholic worship services" and "Catholic sacramental opportunities"; and Vincentian

sample items = “Orientation Programs” and “Student Vincentian Heritage Tours”). Component two of the *DMV* inventory, *mission-driven activities*, included the 8-item subscale of *urban/global engagement*, the 6-item subscale labeled *university specific programs*, and the 9-item subscale called *faith formation programs* (Ferrari & Velcoff, 2006).

As briefly mentioned above, Ferrari and Velcoff (2006) also found three additional subscales which summarized institutional activities that were established to support the university's social justice and faith-based mission. These subscales are discussed below.

(3) *Urban/global engagement programs*. This particular subscale asks the importance of expressing mission-driven activities within the metropolitan area as well as in a global regard (both local and international efforts) (author *M* score = 26.52, *SD* = 4.56; coefficient alpha = 0.86). Programs which speak to urban and global engagement include service learning and study abroad programs respectively. Items in this subscale are meant to assess the importance of these programs to the individual. For example, *How important to you is having international students on campus?*

(4) *Vincentian heritage programs*. Items in this subscale are specific to DePaul University (author *M* score = 26.61, *SD* = 4.52; coefficient alpha = 0.79). These items focus on a variety of activities, which DePaul University has implemented to further promote the University's mission on campus. Examples of a few programs that were designed to express the mission include: Annual

Vincentian Lectures, Authors at Lunch presentations, a Vincentian Endowment Fund for grants, and Vincentian Assistance Fund for student financial emergencies (e.g., *How important do you view Student Vincentian Heritage Tours to be?*).

(5) *Catholic and Other Faith Formation Programs*. The third and final subscale of component two of the *DMV* assessing mission-driven activities assesses the importance of faith-based activities that are available to the students (author *M* score = 19.98, *SD* = 4.94, coefficient alpha = 0.86). Although DePaul has a Catholic heritage, the mission strives to be inclusive of all faiths while maintaining its Catholic identity. The University strives to do this by offering a variety of religious programs and activities, which allow students of any background or religion to strengthen their faith. Some programs included within these items are: Catholic and interfaith worship services, religious education and spiritual programs, and sacramental and other faith worship opportunities (e.g., *How important do you believe religious education and spirituality programs on campus to be?*).

*School Sense of Community*. Participants will also complete Hagborg's (1994) 11-item *School Sense of Community Index* which is derived from a lengthier 18-item measure created by Goodenow (1993). Goodenow's original scale contained three competing and underlying factors while the shortened version created by Hagborg (1994) has good internal consistency ( $r = 0.88$ ) and a high correlation with its 18-item counterpart ( $r = 0.90$ ). Hagborg (1994; 1998)

reported that students with strong school sense of community scores also reported increased motivation in school as well as higher academic performance, felt greater satisfaction in school, greater school commitment, and a more positive self-concept and internal locus of control. The 11 items included in the scale are scored on a 5-point Likert scale ranging from 1 = *Not At All True* to 5 = *Completely True*. A few sample items from this measure include, *There is at least one teacher or adult I can talk to if I have a problem* and *I feel a real part of my school*.

*The Need to Belong*. Participants will also complete the *Need to Belong Scale* developed by Schreindorfer and Leary (1996). The proposed study includes a modified version of this scale proposed by Kelly (1999, cited by Leary, Kelly, Cottrell, & Schreindorfer, 2006). This modified version consists of 10-items which measures individual differences in need for social inclusion. The *Need to Belong* scale assesses a person's desire to create or maintain interpersonal connection. Specifically, the measure assesses the respondents desire to be accepted by others, seek opportunities to belong to social groups, and react negatively to rejection or social ostracism. Items on the measure are scored on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Items which express a low need to belong are reverse scored so that higher scores are a reflection of a greater need to belong. Sample items from this measure include, *I try hard not to do things that will make other people avoid or reject me* and *I seldom worry about whether other people care about me*.

Need to belong scores have been known to correlate positively with group size and contributions when engaged in a group; specifically, that need to belong was positively associated with cooperation (De Cremer & Leonardelli, 2003). Additionally, need to belong scores have positively correlated with self-esteem (Leary, Cottrell, & Phillips, 2001), sensitivity to facial expression, social cues, and vocal tone (Pickett, Gardner, & Knowles, 2004), and frustration during group behavior (De Cremer & Leonardelli, 2003). Leary et al. (2006) reported that *Need to Belong* scale is correlated with, but distinct from, other variables which measure desire for social contact. These additional variables include measures of extraversion, sociability, and need for affiliation.

*Loneliness.* Students at both universities in Study 2 completed Russell's (1996) *Revised UCLA Loneliness Scale (RULS)* – Version 3. The RULS consists of 20 statements which express how people sometimes feel. The RULS is a one-dimensional, bipolar assessment of a global loneliness factor which is scored on a 4-point scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *always*) where higher scores indicate a greater degree of loneliness. The *RULS* consists of 11 negatively worded (lonely) items. For example, a negatively-worded sample item would be: *How often do you feel that your relationships with others are not meaningful.* The *RULS* also contains 9 positively worded (non-lonely) items. An example of a positively worded item would be: *How often do you feel that you are "in tune" with the people around you?* Positively worded items are reverse scored on the *RULS*. The *RULS* is considered a reliable and valid assessment of loneliness

(coefficient alpha = 0.89-0.94) (Russell, 1996). Additionally, the *RULS* has high convergent validity with other measures of loneliness, namely: the Rubenstein and Shaver (1982) *NYU Loneliness Scale* which addresses frequency and intensity of current loneliness as well as the degree to which an individual considers themselves as “lonely” as well as the Schmidt and Sermat (1983) *Differential Loneliness Scale* which consists of 20 dichotomous questions assessing loneliness in four separate contexts: family, friends, community, and romantic relationships.

The *RULS* has been administered to a variety of populations including college students (Russell, Kao, & Cutrona, 1987), public school teachers (Russell, Altmaier, & Van Velzen, 1987), hospital-based nurses (Constable & Russell, 1986), and the elderly (Russell & Cutrona, 1991). These studies mentioned have incorporated a variety of data collection methods including self-report surveys, mail surveys, and personal interviews.

*Social Desirability.* Social desirability has been defined as “the tendency to endorse items in response to social or normative pressures instead of providing veridical self-reports” (Ellingson, Smith, & Sackett, 2001). To eliminate any possibilities of socially desirable responding, participants also completed the *Marlowe-Crowne Social Desirability Scale (MC-C)* developed by Reynolds (1982). This is a 13-item measure which is considered to be reliable and valid assessment of socially desirable responding (author  $M = 5.67$ ,  $SD = 3.20$ ) (Reynolds, 1982). Sample items from the *MC-C* include, *I'm always willing to admit it when I make*



*a mistake and there have been times when I was quite jealous of the good fortune of others.*

#### *Procedure*

Students were recruited via online university subject pool throughout the winter quarter of 2010. These students were asked to complete survey data as partial fulfillment of coursework requirements. During the Spring quarter of 2010, students in a social psychology class completed by paper and pencil all previously discussed measures for course credit. All participants received an explanation that the information gathered would be used strictly for research purposes and no self-identifying information would be asked. Upon completion of the survey, students who chose to participate were debriefed and given contact information for principal investigators had they any further inquiry regarding the study.

### *Study 2*

The second proposed study will be conducted in an attempt to replicate the relationship between sense of community and perceptions of the institutional mission, vision, and values at a separate but related university. This second study will incorporate identical self-report measures of school sense of community, the need to belong, loneliness, institutional mission perceptions, and socially desirable response tendencies. In order to replicate the results of Study 1, the second study will incorporate the same measures. This process ensures that both institutions receive consistent measurement. A goal of Study 2 will be to examine whether school sense of community is moderated by the need to belong as well as loneliness toward understanding student perceptions of the institutional mission at a separate university which maintains a similar institutional mission and values.

#### *Participants*

*DePaul University.* Students were recruited via the online introductory psychology subject pool in fulfillment of course requirements. Each participant received course credit for their participation in this study. The survey was posted online for a period of time where students could access survey content. The survey contained demographic items as well as reliable and valid measures of (1) school sense of community, (2) need to belong, (3) loneliness, (4) institutional mission perception, and (5) socially desirable response tendencies. Participants from Study 1 were included as a comparison group in Study 2.

*Niagara University.* Students were recruited via undergraduate courses where participation in survey research yielded extra credit points toward their final grades. The survey was posted on [surveymonkey.com](http://surveymonkey.com) from spring semester 2009 to spring Semester 2010. Due to the discrepancies in size of these two institutions, data collection at Niagara University remained open for a longer time period to encourage increased sample size. Additionally, due to lacking online response rates, additional students were surveyed via paper and pencil at Niagara University during the spring semester of 2010.

Study 2 contained 261 undergraduate students ( $M$  age = 20.0;  $SD$  = 2.92) who responded to identical demographic items as well as measures of (1) school sense of community, (2) need to belong, (3) loneliness, (4) institutional mission perception, and (5) socially desirable response tendencies. Participants were largely female (65.1%), Caucasian (91.6%), and either Roman Catholic (48.6%) or reporting no religious preference (24.7%). The majority of participants were housed in dormitories (51.5%). However, a large percentage of participants were commuters (41.9%). Participants were largely junior (34.4%) or sophomore (32.0%) students.

#### *Psychometric Scales*

Data were collected using five self-report surveys measuring school sense of community, belongingness, loneliness, institutional mission perception, and socially desirable response tendencies.

The *DePaul Mission and Values Inventory* was administered to Study 2 participants. This reliable and valid measure is the same multi-dimensional, 39-item measure as described in Study 1. Additionally, identical school sense of community (Hagborg, 1994), need to belong (Kelly, 1999), loneliness (Russell, 1996), and social desirability (Reynolds, 1982) measures were administered to all participants in Study 2.

### *Procedure*

During the spring of 2010, students at both universities completed online as well as paper and pencil versions of the survey for course credit. Once received, participants were immediately presented with consent forms which outlined the basis for the research currently being conducted as well as contact information for principal investigators and the institutional review board. Participants were reassured that no information obtained throughout the course of research would be associated with their identity and that participation in the survey could be abandoned at any time. Those participants who chose to continue completed measures of their perceptions of the university mission, vision, and values, school sense of community, belongingness, loneliness, and socially desirable response tendencies. Upon completion, students received debriefing and contact information regarding the study.

## CHAPTER III

### RESULTS

A central focus of the proposed studies concerned the ability of belongingness, school sense of community, and loneliness to effectively predict student knowledge and endorsement of their institutional mission and values. It was hypothesized that subjective measures of belongingness and loneliness would serve as moderators which may contribute to the relationship between school sense of community and student understanding of their institutional mission and values.

#### *Study 1*

##### *Preliminary Analyses*

Preliminary analyses were carried out to ensure no significant differences existed between online ( $n = 58$ ) and paper-and-pencil ( $n = 188$ ) collection methods at DePaul University. Independent sample t-tests were carried out to determine whether mean differences existed on each measure based on collection method. No significant differences existed between these two methods. Therefore, all data collected were collapsed and no further comparisons of these two samples were conducted.

Additional analyses determined whether participants exhibited significant tendencies toward socially desirable responding. Table 1 presents the *zero order* correlations between social desirability tendencies and the DePaul Mission and Values Inventory, School Sense of Community Index, Need to Belong Scale, and

UCLA Loneliness Scale. As indicated by the table, socially desirable response tendencies were apparent for the urban and global engagement subscale of the DMV as well as for need to belong and loneliness scales. There were no significant correlations found between social desirability and the remaining DMV subscales or in terms of response to the school sense of community scale. However, in light of these findings, social desirability was entered as a covariate throughout further analysis.

For Study 1, 246 participants completed The DePaul Mission and Values Inventory (DMV) (Ferrari & Velcoff, 2005), School Sense of Community Index (Hagborg, 1994), Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorfer, 2005), UCLA Loneliness Scale (Russell, 1994), and Marlowe-Crowne Social Desirability Scale (Form-C) (Reynolds, 1982). Means, standard deviations, and Cronbach alpha values for all scales can be found in Table 2. As the table indicates, all measures demonstrated excellent internal consistency.

*Table 1. Zero-order Correlates with Regard to Social Desirability*

Measure	Social Desirability	n =
DePaul Mission & Values Inventory		
Innovative & Inclusiveness	.06	217
Catholic Pluralism	.09	228
Urban/Global Engagement	.14*	232
Vincentian Heritage Programs	.13	230
Catholic and Other Faith Formation Programs	.11	231
School Sense of Community Index	.26	58
Need to Belong Scale	-.15*	228
UCLA Loneliness Scale	-.31**	204

*N* = 58-232    \**p*<.05    \*\**p*<.01

*Table 2. Mean and Alpha Values for Study 1 Subscales*

Measure	Mean (SD)	Alpha
DePaul Mission & Values Inventory		
Innovative & Inclusiveness	53.78 (9.77)	.92
Catholic Pluralism	32.79 (6.43)	.88
Urban/Global Engagement	27.72 (4.91)	.89
Vincentian Heritage Programs	19.15 (5.29)	.86
Catholic and Other Faith Formation Programs	14.26 (5.83)	.89
School Sense of Community Index	36.00 (6.58)	.86
Need to Belong Scale	33.78 (6.63)	.83
UCLA Loneliness Scale	42.32 (9.71)	.93
Marlowe-Crowne (Form-C)	6.01 (2.77)	---

*N*=58-232    NOTE. Values in parenthesis are standard deviations.

*Hypothesis 1. A significant positive relationship will be found between need to belong scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

Study 1 examined the relationship between the need to belong and subsequent knowledge and endorsement of one's institutional mission and values. Linear regression analyses were conducted for each subscale of the DMV and tested independently focusing on the factor of need to belong with social desirability entered as a covariate. Table 3 illustrates the standardized regression coefficients in terms of the need to belong and understanding of the institutional mission.

*Table 3.* Standardized Regression Coefficients of the Relation between Need to Belong and Endorsement of the Institutional Mission

DePaul Mission & Values Inventory:	Need to Belong	
	( $\beta$ )	R <sup>2</sup>
Innovative & Inclusiveness	.201**	.043*
Catholic Pluralism	.175*	.036*
Urban/Global Engagement	.225**	.063**
Vincentian Heritage Programs	.205**	.056**
Catholic and Other Faith Formation Programs	.130	.029

*N* = 217-228      \**p* < .05      \*\**p* < .01

Note. ( $\beta$ ) = Standardized Regression Coefficient; R<sup>2</sup> = Model significance

As the table indicates, the need to belong was significantly and positively related to participant endorsement of the institutional mission in terms of innovate and inclusiveness,  $\beta = .210$ ,  $t(189) = 2.81$ ,  $p = .005$ , Catholic pluralism,  $\beta$



= .175,  $t(196) = 2.45$ ,  $p = .015$ , urban and global engagement,  $\beta = .225$ ,  $t(199) = 3.24$ ,  $p = .001$ , and Vincentian heritage programs,  $\beta = .205$ ,  $t(195) = 2.93$ ,  $p = .004$  providing support for Hypothesis I. The need to belong was not significantly related to endorsement of Catholic and other faith formation programs.

*Hypothesis II. Need to belong scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a school sense of community will more likely have a fulfilled need to belong and hence a better understanding of the institutional mission as compared to students not feeling a school sense of community.*

A principal concern of Study 1 was to determine whether the moderated relationship of school sense of community and the need to belong would predict student institutional mission perceptions. Means for school sense of community and need to belong variables were computed and subtracted from all respective scores in order to normalize the data. Cross products were computed by multiplying the centered school sense of community and need to belong variables. Table 4 displays each variable individually as well as their cross products (school sense of community x need to belong) in relation to student understanding of the institutional mission and values.

*Table 4. Standardized Regression Coefficients for School Sense of Community X  
Need to Belong Interaction Among Student Institutional Mission Perceptions*

	SSOC	NTB	SSOC X NTB
DePaul Mission & Values Inventory:	( $\beta$ )	( $\beta$ )	( $\beta$ )
Innovative & Inclusiveness	.494 <sup>†</sup>	.164	-.125
Catholic Pluralism	.504 <sup>†</sup>	.104	-.091
Urban/Global Engagement	.150	.166	-.131
Vincentian Heritage Programs	.068	.034	.148
Catholic and Other Faith Formation Programs	.017	.061	-.239

*N* = 58-232 † *p* < .0001

NOTE. SSOC = School Sense of Community; NTB = Need to Belong

As the table indicates, school sense of community was a significant predictor of knowledge and endorsement of the institutional identity both as innovative and inclusive,  $\beta = .494$ ,  $t(53) = 3.90$ ,  $p = .000$ , and in terms of Catholic Pluralism,  $\beta = .504$ ,  $t(53) = 3.97$ ,  $p = .000$ . The overall model explained a significant proportion of variance in innovative and inclusiveness scores,  $R^2 = .26$ ,  $F(4, 53) = 4.62$ ,  $p = .003$  as well as in Catholic Pluralism scores,  $R^2 = .26$ ,  $F(4, 53) = 4.56$ ,  $p = .003$ . Although need to belong scores approached significance on their own, the moderating relationship between school sense of community and need to belong scores was not a significant predictor of institutional mission perceptions. Therefore, Hypothesis II did not find support, using participants at DePaul University.

*Hypothesis III. A significant negative relationship will be found between loneliness scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

Study 1 also examined the relationship between the loneliness and subsequent knowledge and endorsement of one's institutional mission and values. Linear regression analyses were conducted for each subscale of the DMV and tested independently focusing on the factor of loneliness with social desirability entered as a covariate. Table 5 illustrates the standardized regression coefficients in terms of the loneliness and understanding of the institutional mission.

As the table indicates, loneliness was significantly and negatively related to participant endorsement of the institutional mission in terms of innovate and inclusiveness,  $\beta = -.207$ ,  $t(175) = -2.64$ ,  $p = .009$ , and Catholic pluralism,  $\beta = -.211$ ,  $t(180) = -2.72$ ,  $p = .007$ . Thus, Hypothesis III was supported such that as loneliness scores increased, knowledge and endorsement of the institutional identity decreased. However, this same trend was not supported for part two of the DMV assessing mission-driven activities which speaks to the final three subscales.

*Table 5.* Standardized Regression Coefficients of the Relation between Loneliness and Endorsement of the Institutional Mission

DePaul Mission & Values Inventory:	Loneliness	
	( $\beta$ )	R <sup>2</sup>
Innovative & Inclusiveness	-.207**	.045*
Catholic Pluralism	-.211**	.049**
Urban/Global Engagement	-.058	.029
Vincentian Heritage Programs	.037	.024
Catholic and Other Faith Formation Programs	.081	.019

$N = 204-232$

\* $p < .05$

\*\* $p < .01$

Note. ( $\beta$ ) = Standardized Regression Coefficient; R<sup>2</sup> = Model significance

*Hypothesis IV. Loneliness scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will report reduced loneliness and hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

Similarly, a concern of Study 1 was also to determine whether the moderated relationship of school sense of community and loneliness would predict student institutional mission perceptions. Means for school sense of community and loneliness variables were computed and subtracted from all respective scores in order to normalize the data as with Hypothesis II. Cross products were computed by multiplying the centered school sense of community

and loneliness variables. Table 6 displays each variable individually as well as their cross products (school sense of community x loneliness) in relation to student understanding of the institutional mission and values.

*Table 6.* Standardized Regression Coefficients for School Sense of Community X Loneliness Interaction Among Student Institutional Mission Perceptions

	SSOC	LONE	SSOC X LONE
DePaul Mission & Values Inventory:	( $\beta$ )	( $\beta$ )	( $\beta$ )
Innovative & Inclusiveness	.548***	.105	-.076
Catholic Pluralism	.516***	.085	.009
Urban/Global Engagement	.191	.153	-.007
Vincentian Heritage Programs	.197	.000	-.134
Catholic and Other Faith Formation Programs	.039	.190	.022

*N* = 58-232                      \*\*\**p* < .001

NOTE. SSOC = School Sense of Community; LONE = Loneliness

As the table indicates, similar to the findings of Hypothesis II, school sense of community was a significant predictor of knowledge and endorsement of the institutional identity both as innovative and inclusive,  $\beta = .548$ ,  $t(53) = 3.59$ ,  $p = .001$ , and in terms of Catholic Pluralism,  $\beta = .516$ ,  $t(53) = 3.42$ ,  $p = .001$ . The overall model explained a significant proportion of variance in innovative and inclusiveness scores,  $R^2 = .21$ ,  $F(4, 53) = 3.59$ ,  $p = .011$  as well as in Catholic Pluralism scores,  $R^2 = .23$ ,  $F(4, 53) = 4.03$ ,  $p = .006$ . However, the moderated relationship between school sense of community and need to belong scores was

not a significant predictor of institutional mission perceptions. Therefore, Hypothesis IV did not find support at DePaul University.

*Research Question I. How will student residency status associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values?*

Pike and Kuh (2005) reported that residency status at the university might play a role in fulfillment of the need to belong, such that students who commute to campus may not feel as immersed in campus culture and activity as resident students. Study 1 asked whether residency status played a role in need to belong scores or loneliness scores and subsequent knowledge and endorsement of the institutional mission. Residency status was dummy-coded and entered as a factor into the regression equation for each DMV subscale. Each dummy code was referent to commuter status so that any significant differences found at dormitory or campus apartment living would reflect a significant difference from this group. Students living in dorms,  $\beta = -.272$ ,  $t(165) = -3.36$ ,  $p = .001$ , as well as campus apartments,  $\beta = -.221$ ,  $t(165) = -2.71$ ,  $p = .008$ , reported significantly lower knowledge and endorsement of Vincentian heritage programs. Residency status was not a significant predictor of any other DMV subscale.

Research Question II. *How will student year in school associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values?*

Study 1 also asked whether student year in school played a role in need to belong scores or loneliness scores and subsequent knowledge and endorsement of the institutional mission. Year in school (freshman, sophomore, junior, or senior) was dummy-coded and entered as a factor into the regression equation for each DMV subscale. Each dummy code was referent to freshman status so that any significant differences found at dormitory or campus apartment living would reflect a significant difference from this group. There were no significant differences found among DMV responses in terms of student year in school.

## *Study 2*

A central focus of Study 2 concerned the ability of belongingness, school sense of community, and loneliness to effectively predict student knowledge and endorsement of their institutional mission and values at a separate faith-based institution. It was hypothesized that subjective measures of belongingness and loneliness would serve as moderators which may contribute to the relationship between school sense of community and student understanding of their institutional mission and values.

### *Preliminary Analysis*

Preliminary analyses were carried out to ensure no significant differences existed between online ( $n = 45$ ) and paper-and-pencil ( $n = 216$ ) collection methods at Niagara University. Independent sample t-tests were carried out to determine whether mean differences existed on each measure based on collection method. No significant differences existed between these two methods. Therefore, all data collected were collapsed and no further comparisons of these two samples were conducted.

Additional analyses were conducted to determine whether participants exhibited significant tendencies toward socially desirable responding. Table 7 presents the *zero order* correlates between social desirability tendencies and the DePaul Mission and Values Inventory, School Sense of Community Index, Need to Belong Scale, and UCLA Loneliness Scale. As the table indicates, socially desirable response tendencies were apparent for the Vincentian heritage



programs subscale as well as school sense of community and loneliness scales. There were no significant correlations found between social desirability and the remaining DMV subscales or in terms of response to the need to belong scale. However, in light of these findings, social desirability was entered as a covariate throughout further analysis.

For Study 2, 261 participants completed The DePaul Mission and Values Inventory (DMV) (Ferrari & Velcoff, 2005), School Sense of Community Index (Hagborg, 1994), Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorfer, 2005), UCLA Loneliness Scale (Russell, 1994), and Marlowe-Crowne Social Desirability Scale (Form-C) (Reynolds, 1982). Means, standard deviations, and Cronbach alpha values for all scales can be found in Table 8.

*Table 7. Zero-order Correlates with Regard to Social Desirability*

Measure	Social Desirability	n =
DePaul Mission & Values Inventory		
Innovative & Inclusiveness	.090	260
Catholic Pluralism	.096	260
Urban/Global Engagement	.104	259
Vincentian Heritage Programs	.124*	257
Catholic and Other Faith Formation Programs	-.011	261
School Sense of Community Index	.182**	257
Need to Belong Scale	-.086	259
UCLA Loneliness Scale	-.224**	261

*N* = 257-261    \**p*<.05    \*\**p*<.01

*Table 8. Mean and Alpha Values for Study 2 Subscales*

Measure	Mean (SD)	Alpha
DePaul Mission & Values Inventory		
Innovative & Inclusiveness	52.75 (9.08)	.89
Catholic Pluralism	32.33 (5.36)	.81
Urban/Global Engagement	26.16 (5.59)	.89
Vincentian Heritage Programs	17.75 (4.68)	.78
Catholic and Other Faith Formation Programs	14.46 (6.35)	.92
School Sense of Community Index	38.38 (7.14)	.87
Need to Belong Scale	32.24 (6.50)	.79
UCLA Loneliness Scale	38.61 (10.25)	.94
Marlowe-Crowne (Form-C)	7.32 (2.77)	---

N=257-261

NOTE. Value in parenthesis is standard deviations.

Study 2 replicated initial findings at a similar faith-based Vincentian institution. Study 2 tested all original hypotheses at a suburban institution using identical measures and methodology.

*Hypothesis V. A significant positive relationship will be found between need to belong scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

Study 2 examined the relationship between the need to belong and subsequent knowledge and endorsement of one's institutional mission and values. Linear regression analyses were conducted for each subscale of the DMV and tested independently focusing on the factor of need to belong with social desirability entered as a covariate. Table 9 illustrates the standardized regression coefficients in terms of the need to belong and understanding of the

institutional mission. As the table indicates, unlike Study 1 there was no significant relationship between the need to belong and scores reflecting knowledge and endorsement of the institutional mission. Hypothesis V was not supported in Study 2.

*Table 9.* Standardized Regression Coefficients of the Relation between Need to Belong and Endorsement of the Institutional Mission

DePaul Mission & Values Inventory:	Need to Belong	
	( $\beta$ )	R <sup>2</sup>
Innovative & Inclusiveness	.085	.015
Catholic Pluralism	-.008	.010
Urban/Global Engagement	.017	.013
Vincentian Heritage Programs	.044	.017
Catholic and Other Faith Formation Programs	.021	.001

*N* = 259-261

Note. ( $\beta$ ) = Standardized Regression Coefficient; R<sup>2</sup> = Model significance

*Hypothesis VI. Need to belong scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a school sense of community will more likely have a fulfilled need to belong and hence a better understanding of the institutional mission as compared to students not feeling a school sense of community.*

A principal concern of Study 2 was to determine whether the moderated relationship of school sense of community and the need to belong would predict student institutional mission perceptions. Means for school sense of community

and need to belong variables were computed and subtracted from all respective scores in order to normalize the data. Cross products were computed by multiplying the centered school sense of community and need to belong variables. Table 10 displays each variable individually as well as their cross products (school sense of community x need to belong) in relation to student understanding of the institutional mission and values.

*Table 10.* Standardized Regression Coefficients for School Sense of Community X Need to Belong Interaction Among Student Institutional Mission Perceptions

	SSOC	NTB	SSOC X NTB
DePaul Mission & Values Inventory:	( $\beta$ )	( $\beta$ )	( $\beta$ )
Innovative & Inclusiveness	.405 <sup>†</sup>	.113	.032
Catholic Pluralism	.392 <sup>†</sup>	.013	.100
Urban/Global Engagement	.129*	.066	-.052
Vincentian Heritage Programs	.133*	.064	.055
Catholic and Other Faith Formation Programs	.090	.028	.090

*N* = 257-261

\**p* < .05

† *p* < .0001

NOTE. SSOC = School Sense of Community; NTB = Need to Belong

As the table indicates, school sense of community was a significant predictor of knowledge and endorsement of the institutional identity as both innovative and inclusive,  $\beta = .405$ ,  $t(245) = 6.86$ ,  $p = .000$ , and in terms of Catholic pluralism,  $\beta = .392$ ,  $t(245) = 6.60$ ,  $p = .000$ . Furthermore, school sense of community was a significant predictor of mission-driven programs and activities of urban and global engagement,  $\beta = .129$ ,  $t(244) = 2.01$ ,  $p = .045$ , as well as Vincentian heritage,  $\beta = .133$ ,  $t(241) = 2.06$ ,  $p = .040$ . School sense of

community was not a significant predictor of knowledge or endorsement of Catholic and other faith formation programs. Additionally, the overall model explained a significant proportion of variance for innovative and inclusiveness scores,  $R^2 = .18$ ,  $F(4, 245) = 13.01$ ,  $p = .000$ , as well as Catholic pluralism scores,  $R^2 = .16$ ,  $F(4, 245) = 11.96$ ,  $p = .000$ . However, the interaction of need to belong with school sense of community did not contribute additional variance in predicting perceptions of the institutional mission. As a result, Hypothesis VI was not supported in Study 2.

*Hypothesis VII. A significant negative relationship will be found between loneliness scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values.*

Study 2 also examined the relationship between the loneliness and subsequent knowledge and endorsement of one's institutional mission and values. Linear regression analyses were conducted for each subscale of the DMV and tested independently focusing on the factor of loneliness with social desirability entered as a covariate. Table 11 illustrates the standardized regression coefficients in terms of the loneliness and understanding of the institutional mission.

As the table indicates, loneliness was a significant predictor of endorsement of the institutional identity as innovative and inclusive,  $\beta = -.334$ ,  $t(250) = -5.47$ ,  $p = .000$ , and in terms of Catholic pluralism,  $\beta = -.287$ ,  $t(250) = -4.64$ ,  $p = .000$ . These findings offer support for Hypothesis VII. However, the

loneliness factor was not a significant predictor of mission-driven activities subscales.

*Table 11.* Standardized Regression Coefficients of the Relation between Loneliness and Endorsement of the Institutional Mission

DePaul Mission & Values Inventory:	Loneliness	
	( $\beta$ )	R <sup>2</sup>
Innovative & Inclusiveness	-.334 <sup>†</sup>	.114 <sup>†</sup>
Catholic Pluralism	-.287 <sup>†</sup>	.090 <sup>†</sup>
Urban/Global Engagement	-.029	.012
Vincentian Heritage Programs	-.106	.026
Catholic and Other Faith Formation Programs	.003	.000

*N* = 259-261 † *p* < .0001

Note. ( $\beta$ ) = Standardized Regression Coefficient; R<sup>2</sup> = Model significance

*Hypothesis VIII. Loneliness scores will play a significant moderating role in the effect of school sense of community on institutional mission perceptions, such that those students reporting a heightened school sense of community will report reduced loneliness and hence a better understanding of the institutional mission as compared to students reporting a lower school sense of community.*

Similarly, a concern of Study 2 was to determine whether the moderated relationship of school sense of community and loneliness would predict student institutional mission perceptions. Means for school sense of community and loneliness variables were computed and subtracted from all respective scores in

order to normalize the data. Cross products were computed by multiplying the centered school sense of community and loneliness variables. Table 12 displays each variable individually as well as their cross products (school sense of community x loneliness) in relation to student understanding of the institutional mission and values.

*Table 12.* Standardized Regression Coefficients for School Sense of Community X Loneliness Interaction among Student Institutional Mission Perceptions

	SSOC	LONE	SSOC X LONE
DePaul Mission & Values Inventory:	( $\beta$ )	( $\beta$ )	( $\beta$ )
Innovative & Inclusiveness	.320 <sup>†</sup>	-.142*	.077
Catholic Pluralism	.333 <sup>†</sup>	-.092	.104
Urban/Global Engagement	.165*	.067	-.009
Vincentian Heritage Programs	.105	-.046	.006
Catholic and Other Faith Formation Programs	.126	.084	.072

*N* = 257-261    \**p* < .05    † *p* < .0001

NOTE. SSOC = School Sense of Community; LONE = Loneliness

As the table indicates, school sense of community was a significant predictor of institutional identity both in terms of innovative and inclusiveness,  $\beta = .320$ ,  $t(245) = 4.59$ ,  $p = .000$ , and in terms of Catholic pluralism,  $\beta = .333$ ,  $t(245) = 4.75$ ,  $p = .000$ . Additionally, school sense of community was a significant predictor of the urban and global engagement subscale,  $\beta = .165$ ,  $t(244) = 2.17$ ,  $p = .031$ . Loneliness was a significant predictor of endorsement of the innovative and inclusive subscale,  $\beta = -1.42$ ,  $t(245) = -2.02$ ,  $p = .045$ . However, the

interaction term between school sense of community and loneliness was not a significant predictor of knowledge and endorsement of the institutional mission. Therefore, Hypothesis IV was not supported at Niagara University.

*Research Question III. How will student residency status as well as year in school associate with need to belong and loneliness scores in terms of knowledge and endorsement of the institutional mission, vision, and values as compared to Study I?*

Study 2 asked whether residency status played a role in need to belong scores or loneliness scores and subsequent knowledge and endorsement of the institutional mission. Residency status was dummy-coded and entered as a factor into the regression equation for each DMV subscale. Each dummy code was referent to commuter status so that any significant differences found at dormitory or campus apartment living would reflect a significant difference from this group. Students living in dorms reported a significant negative relation in their knowledge and endorsement of Catholic pluralism,  $\beta = -.136$ ,  $t(246) = -2.16$ ,  $p = .031$ , as well as Vincentian heritage programs,  $\beta = -.184$ ,  $t(242) = -2.83$ ,  $p = .005$ . Residency status was not significant for the remaining DMV subscales. These findings are consistent with Study 1 where Catholic/Vincentian values are reported differentially when comparing students living in dormitories with commuters.

Year in school was dummy-coded in the same fashion and entered into the regression equation. Results showed that seniors demonstrated significant



differences in endorsement of Vincentian heritage programs,  $\beta = .158$ ,  $t(247) = 2.22$ ,  $p = .027$ , when compared to other years. This finding is a deviation from Study 1 results where no significant differences were found when entering school year into the regression equation.

*Research Question IV.* *How will urban and suburban institutions compare in terms of responses regarding student belongingness, loneliness, school sense of community, and perceptions of institutional mission?*

Study 2 was finally concerned with whether each institution demonstrated mean differences in response to the measures presented in the study. An *analysis of variance* (ANOVA) was carried out to investigate whether responses varied by institution. Table 13 demonstrates the mean differences observed in each measure based on institutional affiliation.

*Table 13.* Mean Difference Scores for All Included Measures Based on Institutional Affiliation

Measure	DePaul U n = 58-232	Niagara U n = 257-261	<i>p</i> value
DePaul Mission & Values Inventory:	<u>Mean Score (SD)</u>		
Innovative & Inclusiveness	54.16 (10.86)	52.76 (9.01)	.315
Catholic Pluralism	33.18 (6.62)	32.24 (5.39)	.261
Urban/Global Engagement	27.04 (5.34)	26.03 (5.49)	.216
Vincentian Heritage Programs	19.78 (5.30)	17.74 (4.63)	.004**
Catholic and Other Faith Formation Programs	14.89 (6.83)	14.60 (6.46)	.762
School Sense of Community Index	35.83 (6.20)	38.34 (7.14)	.016*
Need to Belong Scale	34.41 (6.43)	32.18 (6.38)	.019*
UCLA Loneliness Scale	43.27 (10.01)	38.59 (10.09)	.002**
Marlowe-Crowne (Form C)	5.88 (2.52)	7.30 (2.79)	.001***

\**p*<.05      \*\**p*<.01      \*\*\**p*<.001

As the table indicates, the Vincentian heritage programs subscale of the DMV varied by institution. Additionally, DePaul and Niagara University's displayed mean differences in their responding to school sense of community, need to belong, loneliness, and social desirability scales. Specifically, mean differences by institution were seen in the Vincentian heritage programs subscale of the DMV as well as school sense of community index, need to belong scale, UCLA loneliness scale, and Marlowe-Crowne social desirability measure (Form-C).

## CHAPTER IV

### DISCUSSION

#### *Study 1*

##### *Major Findings*

Study 1 examined whether belongingness or loneliness functioned as moderators in the relationship between school sense of community and knowledge and endorsement of the institutional mission and values. The findings presented provide insight into whether these factors work together toward a better understanding of student institutional mission perceptions.

Hypothesis I asked whether a positive relation existed between the need to belong and knowledge and endorsement of the institutional mission, vision, and values. Results provided support that while the need to belong significantly and positively predicted knowledge and endorsement of DMV subscales assessing institutional identity, it was not a significant predictor of mission-driven activities subscales. Institutional identity specifically focuses on the institutional benchmarks apparent in the university's mission statement. These sections of the DMV assess perceptions of inclusiveness and belongingness within the university (Ferrari & Velcoff, 2006). Therefore, one might expect that the need to belong associate to subscales reflecting institutional identity. The results of the present study were consistent with previous institutional mission research, such that students sense of belongingness and engagement at school

were significantly related to their endorsement of institutional values (Ferrari et al., 2009).

The present study also was consistent with research of the need to belong concept. The belongingness hypothesis proposed that interpersonal interactions with others may have a stabilizing effect in that when people perceive their environment as caring, their need to belong will be fulfilled (Baumeister & Leary, 1995). The current study provides support to the idea that when individuals perceive their institution as caring and inclusive, their need to belong may also be fulfilled.

Mission-driven activities subscales assessed the endorsement of the mission through various programs, activities and values held by the university. This study suggested that belongingness may not be directly related to whether students endorse or participate in various campus programs. Belongingness is necessarily a subjective feeling and may not encompass student agreement with campus programming. Belongingness is defined as a sense of being accepted, included, and encouraged by others (Baumeister & Leary, 1995). It may be the case that students do not obtain their sense of belonging from endorsement of campus activities and programs per se. In fact, feelings of belonging have previously been associated to student engagement (Osterman, 2000). Engagement is a distinct construct from endorsement of programs or activities and should therefore be measured separately.

Additionally, research has shown that at times the need to belong is diminished or extinguished after instances of social rejection (Twenge et al., 2001; Twenge et al., 2007; Maner et al., 2007). The current findings may be consistent with this research in that individuals who are, or feel they are, excluded may report significantly lower endorsement of mission-driven activities. Results indicated that the need to belong was not a significant predictor of mission-driven activities. However, need to belong scores were significantly and positively correlated to mission-driven activities scores.

Table 14 illustrates the zero order correlates of need to belong and mission-driven activities subscales, controlling for socially desirable responding at DePaul University. As the table indicates, although the need to belong is not a significant predictor of mission-driven activities, these measures remain highly correlated. This finding was consistent with previous institutional mission research where belonging to several campus programs or activities was highly related to endorsement of mission-driven activities subscales (Ferrari et al., 2009; Ferrari et al., in press).

Consequently, as need to belong scores increased, the endorsement of the programs and activities inherent in two of the three mission-driven activities subscales increased. The present study was consistent with the belongingness hypothesis where individuals who demonstrate higher need to belong may endorse activities which restore belongingness status (Baumeister & Leary, 1995). This finding is also consistent with Maner et al. (2007) which showed

students were more likely to support and endorse campus programming when their belongingness status was compromised.

*Table 14.* Zero Order Correlates of Need to Belong and Mission-Driven Activities Subscales at DePaul University

Measure	DMV (3)	DMV (4)	DMV (5)	NTB
DMV (3)	[.89]			
DMV (4)	.11	[.86]		
DMV (5)	.12	.09	[.89]	
NTB	.27†	.22***	.12	[.83]

$n = 180$  \*\*\* $p < .001$  † $p < .0001$  Value contained in brackets is Cronbach alpha.

NOTE. DMV (3) = urban/global engagement scale, DMV (4) = Vincentian

heritage programs scale, DMV (5) = Catholic and other faith formation

scale, NTB = need to belong scale.

Hypothesis II assessed whether the need to belong served as a moderator in the relationship between school sense of community and knowledge and endorsement of the institutional mission, vision, and values. Results showed that while this model explained a significant proportion of variance, the majority of this variance was contributed by the school sense of community variable. The need to belong did not provide significant additional variance to the model.

Results focused on hypothesis II in the present study were interesting as need to belong scores initially predicted institutional identity scores in the DMV. Deci, Vallerand, Pelletier, and Ryan (1991) showed that when students reported a sense of relatedness and connection they were more likely to internalize the values of other members of that group. This finding is consistent with the

current results which demonstrated that students tended to endorse institutional identity when they reported greater school sense of community.

However, these results were inconsistent with the criteria of a moderation model which assumes that “the causal relation between two variables changes as a function of the moderator variable” (Baron & Kenny, 1986; pg. 1174). Therefore, the effect of the dependent variable is subject to change based on varying levels of the moderator. In the current study, the effect of knowledge and endorsement of the institutional mission and values was not subject to significant change based upon varying levels of belongingness.

Goodenow and Grady (1993) found that sense of membership may be a key contributor to commitment to schooling and acceptance of educational values. Yet, school sense of community and sense of belongingness have previously been defined as conceptually distinct (see Hagborg, 1998). This study offers support to this claim as school sense of community and need to belong measures were not significantly correlated. School belongingness has been defined as the extent of personal membership as well as the respect and support students feel in school (Hagborg, 1998).

While student need to belong was a significant predictor of endorsement of institutional identity initially, this relationship became non-significant when the school sense of community variable was introduced. This finding offers some evidence for a mediation model:

“A variable functions as a mediator when it meets the following conditions: (a) variations in the level of the independent variable significantly account for variations in the presumed mediator, (b) variations in the mediator significantly account for variations in the dependent variable, and (c) when paths  $a$  and  $b$  are controlled, a previously significant relation between the independent and dependent variables is no longer significant” (Baron & Kenny, 1986; pg. 1176). The need to belong was no longer a significant predictor of institutional mission perceptions when the variable of school sense of community was introduced (condition c).

Perhaps the relation between school sense of community, the need to belong, and knowledge and endorsement of the institutional mission and values would be better tested as a mediation model in light of these results. This model would fit with belongingness and school sense of community research which maintains that student sense of belongingness precipitates the feeling of being part of the school community (Hagborg 1994; Hagborg, 1998). Therefore, perhaps it is the sense of belonging that precipitates feelings of a school sense of community, which in turn predicts institutional identity. This would be consistent with Baumeister and Leary’s (1995) hypothesis which suggested that the fundamental motivation to belong trump’s many other human motivations (e.g. school sense of community).

Hypothesis III examined whether a significant negative relationship existed between loneliness scores and scores reflecting knowledge and



endorsement of the institutional mission, vision, and values. Results indicated that loneliness served as a significant predictor of institutional identity such that as loneliness scores increased, endorsement of identity-related subscales measuring inclusiveness within the university decreased. This finding fits with previous loneliness research where individuals reporting greater loneliness tend to score lower on measures of inclusion (Mellor et al., 2008).

There was no significant relation between loneliness scores and knowledge and endorsement of mission-driven programs or activities. Studies 1 and 2 incorporated a measure of loneliness which assessed subjective deficiencies between desired and existing personal relationships. It was hypothesized that heightened loneliness would predict scores related to the vision and values of DePaul University assessed by these mission-driven subscales. Gibbs (1995) reported that non-involvement in the student community (e.g. classroom and student programming) may lead to feelings of loneliness, isolation, low motivation to learn, as well as low achievement.

Intuitively, one might suspect that increased loneliness may account for decreased endorsement of and engagement in university programming. Joiner, Lewinsohn, and Seeley (2002), however, found that measures of loneliness predicted lack of pleasurable engagement. Therefore, one might suspect that individuals reporting greater loneliness would also report reduced endorsement of activities related to the institutional mission. Weiss (1973) suggested that social loneliness consists of a lack of engagement in social networks with peers

and is characterized by a sense of exclusion. A heightened sense of loneliness may relate to endorsement of campus programming. However, the results of Study 1 are inconsistent with previous research literature.

Conceivably, students reporting varying degrees of loneliness may not differ in their knowledge or endorsement of university programming and activities. A lonely student may believe these programs and activities to be just as important as a student reporting very little loneliness. There may be some distinction between knowledge and endorsement and engagement in this matter. Perhaps lonely students feel this discrepancy in their personal relationships and, as a result, engage less frequently in university programming. Findings of this nature would be consistent with Joiner, Lewinsohn, and Seeley (2002). Alternatively, lonely students may be attempting to reconcile relationship discrepancies by further endorsement or engagement in activities and programming. Further examination of this matter is warranted.

Hypothesis IV assessed whether loneliness served as a moderator in the relationship between school sense of community and knowledge and endorsement of the institutional mission, vision, and values. Results in Study 2 showed that while this model explained a significant proportion of variance, the majority of this variance was contributed by the school sense of community variable. Loneliness did not provide significant additional variance to the model. This finding was similar to the tested moderation relationship between the need to belong and school sense of community toward institutional mission

perceptions. Loneliness had initially predicted institutional identity scores. However, this relation became non-significant once the factor of school sense of community was introduced. This finding was consistent with previous institutional mission research where school sense of community was positively associated with knowledge and endorsement of institutional values (Ferrari et al., 2008). This finding was also consistent with previous research which maintains that loneliness is a separate construct from to belongingness (in this case school belongingness) (Mellor et al., 2008, Baumeister & Leary, 1995, Russell, Cutrona, Rose, & Yurko, 1984; Reis, 1990).

Nicpon et al. (2006) suggested that loneliness predicted institutional persistence decisions such that decreased loneliness related to greater determination in higher education. Furthermore, school sense of community has previously been shown to predict academic engagement (Goodenow & Grady, 1993). These constructs appear related in terms of keeping students in school and engaged. Results from Study 1 suggested the possibility of a mediating role between school sense of community and loneliness toward predicting institutional mission and values. Therefore, a test for a mediating relation between these variables is warranted.

Perhaps, loneliness and school sense of community share some common relation in terms of predicting institutional values. Pretty et al. (1994; 1998) found that school rather than neighborhood sense of community was the strongest predictor of loneliness. It would be a worthwhile endeavor to test

whether these variables mediate knowledge and endorsement of the institutional mission, vision, and values.

Study 1 proposed research questions regarding whether student residency status and year in school had any predictive ability in terms of knowledge and endorsement of the institutional mission. Interestingly, students who lived on campus or in campus-affiliated apartments reported significantly lower endorsement of Vincentian heritage programs as compared to commuter students. Intuitively, one might suspect that students living on or around a university whose mission promotes Vincentian qualities would endorse those same qualities. This was not the case for this particular sample of DePaul University students. This may reflect a lack of knowledge regarding Vincentian heritage programs and activities for this particular sample of students.

Study 1 found no significant differences in terms of student year in school. It was proposed that perhaps lower-level students may report heightened need to belong and loneliness scores while reporting decreased school sense of community as they make their transition into a campus environment. Study 1 does not support this rationale.

### *Study 2*

Study 2 examined whether belongingness or loneliness served as moderators in the relationship between school sense of community and knowledge and endorsement of the institutional mission and values at a separate faith-based institution. The findings presented provide insight into whether these factors work together toward a better understanding of student institutional mission perceptions at institutions outside of DePaul University.

Hypothesis V asked whether a positive relation existed between the need to belong and knowledge and endorsement of the institutional mission, vision, and values. Unlike Study 1, results indicated that the need to belong was not a significant predictor of knowledge and endorsement of the institutional mission, vision, and values at Niagara University, Buffalo, NY. There are several reasons why this may have occurred. To begin, Niagara is a small, suburban university serving an even smaller student community. University dynamic in terms of community environment may have played a role in knowledge and endorsement of institutional values. Aside from these cosmetic differences, it may have been the case that Niagara University endorses belongingness to a separate institutional identity and value set. While both DePaul and Niagara base their institutional identity in Catholic, Vincentian values, there may be differences in how these institutions carry out their mission. In short, Niagara students may demonstrate a heightened need to belong in terms of some other institutional aspect which is not categorized in the five DMV subscales.

Faith-based institutions incorporate mission statements that reflect the values and objectives inherent in faith-based organizations (Bart, 2007; Feldner, 2006). In the context of higher education, forming a credible institutional identity requires a university to identify its strengths and create its mission statement around these qualities (Berg et al., 2003). Future cross-institutional research may require development of more university-specific measures assessing institutional identity and mission-driven activities.

Hypothesis VI assessed whether the need to belong served as a moderator in the relationship between school sense of community and knowledge and endorsement of the institutional mission, vision, and values. Similar to DePaul University students, results showed that while this model explained a significant proportion of variance, the majority of this variance was contributed by the school sense of community variable. The need to belong did not provide significant additional variance to the model. Both universities demonstrated this model's predictive ability in innovative and inclusiveness and Catholic pluralism. Distinguishably, school sense of community was a significant predictor of urban and global engagement as well as Vincentian heritage program subscales of the DMV at Niagara University.

This finding offers additional insight into why need to belong scores had little to do with institutional mission perceptions at Niagara University. There may be some factor inherent in school sense of community which better characterizes the institutional identity as well as mission-driven activities at

Niagara University. Lounsbury and DeNeui (1998) found that students from smaller schools reported greater sense of community than students from larger schools. However, the findings for school size and sense of community have been mixed (see Battistich, Solomon, Watson, & Schaps, 1997). Further examination of this occurrence is warranted.

Hypothesis VII examined whether a significant negative relationship existed between loneliness scores and scores reflecting knowledge and endorsement of the institutional mission, vision, and values at Niagara University. Results indicated that loneliness served as a significant predictor of institutional identity such that as loneliness scores increased, endorsement of identity-related subscales decreased. These findings were consistent with the examination of loneliness as a predictor of institutional identity at DePaul University. It may therefore be the case that increased loneliness predicts some negative consequences on perceptions of institutional identity. The results reported in both the current studies support this notion.

Hypothesis VIII assessed whether loneliness served as a moderator in the relationship between school sense of community and knowledge and endorsement of the institutional mission, vision, and values. Results showed that while this model explained a significant proportion of variance, the majority of this variance was contributed by the school sense of community variable. This finding was consistent with Study 1 as well as previous institutional mission research where school sense of community was positively associated with

knowledge and endorsement of institutional values (Ferrari et al., 2008).

Loneliness provided significant additional variance to the model in terms of innovative and inclusiveness. However, the interaction of school sense of community with loneliness provided no significant additional variance at Niagara University.

This finding is consistent with Study 1 as well as previous work assessing loneliness in that it may provide additional information regarding how students view their social settings (Pretty et al. 1994). Specifically, loneliness provided additional explained variance in terms of institutional innovativeness and inclusiveness. This finding is inconsistent with Study 1 but may clarify Niagara University students' perceptions regarding their institutional as innovative and inclusive. Fisher and Hartmann (1995) proposed that feelings of alienation, marginalization, isolation, and loneliness contribute to student's decreased sense of belongingness. Subjective deficiencies in student relationships are troubling in higher education as they may be related to academic and social adjustment of college life (Astin, 1993).

These findings are somewhat similar to the results reported at DePaul University using the current model. However, school sense of community remained a significant factor in predicting urban and global engagement at Niagara University when entered into this model. There may be discrepancies between these institutions in terms of engagement on campus. Perhaps Niagara University presents engagement opportunities as more or less central to its core



curriculum. This may speak to previous notions that school sense of community may be more central to Niagara University in terms of its mission, vision, and values. This relationship may also reflect one specific moment in time at Niagara University. As it stands, measurement of student institutional mission perceptions is a new endeavor at Niagara while it has been researched for some time at DePaul.

Additionally, the relationship between loneliness and innovative and inclusiveness became non-significant when this model was tested at DePaul University. This was not the case at Niagara University. It may be the case that qualitative differences exist between DePaul and Niagara in terms of factors precipitating loneliness. This finding may also reflect various differences in setting between DePaul and Niagara. However, it is important to remember that loneliness is considered a subjective deficiency between desired and existing social relationships. Under this definition, objective factors such as location should not account for student reporting of loneliness. Conversely, there may exist some discrepancy regarding availability to engage in new social relationships at each institution. If this were the case, location could play a role in subjective experiences of both belongingness and loneliness. Perhaps additional measures assessing various factors contributing loneliness is warranted at each institution.

Study 2 proposed research questions regarding whether student residency status and year in school had any predictive ability in terms of

knowledge and endorsement of the institutional mission. Consistent with results from Study 1 regarding residency status, students living on campus or in campus apartments at Niagara reported a significant negative relation regarding Vincentian heritage programs but also in term of Catholic pluralism. As with Study 1, this relationship is puzzling and counterintuitive.

Additionally, it was found that Niagara University seniors held a significant positive endorsement of Vincentian heritage programs when compared to other years. This finding is unique to Niagara but its cause is unknown. Perhaps Niagara programming builds upon Vincentian values differently than DePaul. However, this statement cannot be supported by the current study. Further investigation into student perception of Vincentian values across university cohorts is warranted.

A final research question proposed in Study 2 concerned whether students at DePaul and Niagara Universities displayed any mean differences in their responses to the included measures. Results showed that institutions disagreed in terms of their perceptions of Vincentian heritage programs. This is not surprising as many items regarding Vincentian heritage are programs/activities specific to DePaul University. Therefore, disagreement in terms of endorsement of programming in this section might be expected. No significant differences were found between institutions in response to any other DMV subscale. This finding is important as it is the first piece of evidence that the DMV provides validity outside of DePaul University. It would be interesting

to investigate whether this measure holds similar predictive ability at other faith-based institutions.

Moreover, DePaul and Niagara Universities displayed mean differences on measures of school sense of community, the need to belong, loneliness, and social desirability measures. DePaul reported a greater need to belong and perceptions of loneliness. Additionally, Niagara reported a greater school sense of community. However, these findings must be taken with a grain of salt as Niagara students were more prone to give socially desirable responses. Further inquiry into this matter is warranted when conducting future cross-institutional evaluations of this nature.

#### *Implications for the Study of Institutional Mission, Vision, and Values*

The current studies shed some light into students' understanding of their university in terms of its mission, vision, and values. The present findings illustrated the positive predictive power of school sense of community and, more importantly, the need to belong in understanding knowledge and endorsement of institutional identity. Furthermore, both present studies explicate the negative relation between factors of loneliness on knowledge and endorsement of institutional identity. However, prediction of student institutional mission perceptions based on school sense of community with moderators of need to belong and loneliness was not supported. It would appear that these factors all play some important role in student perception of their institution. However, the exact nature of how these factors work together to produce a more

satisfying student environment have yet to be determined. Further research into the role of these variables as they relate to both institutional identity and mission-driven activities is warranted.

Nevertheless, the current studies provided support that students with greater sense of community and belongingness also report greater knowledge and endorsement of the university's institutional mission, vision, and values. Additionally, these studies provide support that students who report a lesser degree of loneliness also subscribe to greater knowledge and endorsement of institutional values.

Osterman (2000) asserted that a primary goal of educational institutions should be the facilitation of sense of belonging and community. Satisfaction of need to belong as well as facilitation of sense of community have previously been found to affect student perceptions to produce positive academic outcomes (see Osterman, 2000). University administrators who wish to promote sense of community, belongingness, and inclusiveness would do well to promote educational as well as extracurricular programs which allow students to form and maintain social bonds on and around campus. Moreover, inclusion of institutional values in campus programming may facilitate endorsement of those values. Students who report a sense of importance as a member of a group are more likely to internalize the values of other members of that group (Deci, Vallerand, Pelletier, & Ryan, 1991). Thus, administrators may wish to promote engagement in university programming which is analogous to the institutional

mission. This may be achieved at times by simply informing students of programming already available to them.

#### *Limitations of Study 1 and 2*

There were several noteworthy limitations which may have influenced the generalizability of the current studies. To begin, all students involved in the present studies completed self-report measures which contained elements of socially desirable responding; specifically in terms of the need to belong and loneliness which were two major factors involved in the moderation models proposed. Additionally, there are qualitative differences between characteristics of these two institutions which may warrant more specific measures of institutional mission and values. Specifically, institutional differences became apparent in responses to the Vincentian heritage subscale as well as in response to need to belong and school sense of community measures.

The current studies incorporate two separate models which were tested individually. Therefore, moderators of belongingness and loneliness were tested separately in terms of school sense of community and institutional mission perceptions. A comprehensive examination of all variables included in these studies may have been more informative.

Interestingly, there were varying response rates at each institution. Students at DePaul University completed significantly fewer measures as compared to students at Niagara University. These discrepancies in response rates may have affected results obtained at each institution.

The results presented in these studies are exploratory in nature and therefore require follow-up investigation. DePaul University has a history in terms of evaluation of mission and values. Support of findings at DePaul may be inferred from previous research while institutional mission work at Niagara is relatively novel and therefore limited.

#### *Future Directions*

The present studies warrant future investigation into student institutional mission perceptions. One possible future direction may be to replicate these studies by means of a mediation model. Results discussed in the current studies do not support school sense of community with moderating factors of belongingness and loneliness. However, these results do satisfy preliminary assumptions of mediation that warrant further consideration.

Additionally, belongingness and loneliness factors predicted reports of institutional identity but not mission-driven activities. Future research may wish to examine the relationship of student belongingness or loneliness as it relates to whether students not only endorse but *engage* in these activities. Increased engagement in student programming has correlated with student knowledge and endorsement of mission-driven activities subscales in previous work (Ferrari, McCarthy, & Milner, in press).

Furthermore, the measures included in the current studies assessing school sense of community, the need to belong, and loneliness were uni-dimensional in nature. That is, each variable was rated on a continuous single

factor scale. Future research may wish to incorporate multi-dimensional measures of school sense of community, belongingness, and loneliness in order to specify which aspects of these variables students are endorsing; and, whether they are endorsing certain aspects more so than others.

Finally, future research may wish to take a closer look at the institutional dynamic and its role in student understanding of institutional mission and values. While there are no doubts that these separate institutions differ in their presentation of Catholic and Vincentian values, it is unknown as to how they differ. Future direction in comparing faith-based institutions may require more in-depth analysis of university presentation of mission and values.

## CHAPTER V

## SUMMARY

Baumeister and Leary (1995) proposed an inherent and fundamental motivational drive which explicates individual need to construct and maintain lasting positive interpersonal relationships. The “Need to Belong” hypothesis has fueled empirical research involving constructs of social exclusion, psychological well-being, and influences on intelligent performance. Surprisingly, however, there are relatively few studies which assessed belongingness in the specific context of higher education. This lack of focus is distressing as research suggests when students feel a sense of belonging in a particular classroom, they tend to report more positive motivational beliefs, feel more confident in accomplishing academic goals, and are more interested in classroom discussion (Freeman, Anderman, & Jensen, 2007). Even fewer are the number of studies which assessed belongingness in terms of student understanding of university values. Student social acceptance has shown to be a significant predictor to student belonging at the university.

The current studies attempted to predict student perceptions of their institution, its mission, vision, and values using constructs of school sense of community as well as moderators of perceived belongingness and loneliness. The proposed studies surveyed two separate but related universities in terms of institutional values. Students responded to measures of school sense of



community, belongingness, loneliness, and institutional mission perceptions in both online and paper-and-pencil formats.

Results indicated that school sense of community was a significant predictor of the institutional mission in terms of institutional identity in both university samples. School sense of community moderated by need to belonging did not account for significant additional variance at either institution. Similarly, the relationship of school sense of community moderated by loneliness was non-significant. However, these factors were significant predictors of institutional mission perceptions when tested individually. These results offer insight to the examination of institutional mission perceptions at varying faith-based institutions.

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Appendix A. The DePaul Mission and Values Inventory (DMV)

**Catholic Identity**

**SD=STRONGLY DISAGREE, DIS=DISAGREE, SWD=SOMEWHAT DISAGREE**

**I= INDIFFERENT**

**SWA=SOMEWHAT AGREE, AGR=AGREE, SA=STRONGLY AGREE**

- |                         |                                                                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SD DIS SWD I SWA AGR SA | 2. I believe that DePaul invites all inquirers to freely examine Catholicism, other faith traditions, and other secular values systems in light of their respective contributions to the human experience. |
| SD DIS SWD I SWA AGR SA | 3. I believe that the curricula of DePaul's Schools and colleges have appropriate expressions of the university's Catholic identity <i>as described above</i> .                                            |
| SD DIS SWD I SWA AGR SA | 4. I believe that at DePaul our very diverse personal values and religious beliefs contribute to an atmosphere that fosters mutual understanding and respect.                                              |
| SD DIS SWD I SWA AGR SA | 5. I support DePaul's current approach to expressing its Catholic identity.                                                                                                                                |
| SD DIS SWD I SWA AGR SA | 6. University Ministry provides a variety of services and programs designed to serve the university community and enhance the institution's Catholic, Vincentian, and religiously pluralistic identity.    |

7. Please comment as to your perceptions of the importance of these services and programs:

*How important to you are these activities?*

**NIM= NOT IMPORTANT**

**SIM=SOMEWHAT IMPORTANT**

**IMP=IMPORTANT**

**VI= VERY**

**IMPORTANT**

**NA= NOT AWARE**

- |                                                               |     |     |     |    |    |
|---------------------------------------------------------------|-----|-----|-----|----|----|
| 8. Catholic worship services                                  | NIM | SIM | IMP | VI | NA |
| 9. Catholic sacramental opportunities                         | NIM | SIM | IMP | VI | NA |
| 10. Interfaith worship                                        | NIM | SIM | IMP | VI | NA |
| 11. Worship opportunities for other faith traditions          | NIM | SIM | IMP | VI | NA |
| 12. Religious education and spirituality programs             | NIM | SIM | IMP | VI | NA |
| 13. Service programs (Winter/Spring service trips, etc.)      | NIM | SIM | IMP | VI | NA |
| 14. Please make comments on this "Catholic Identity" Section: |     |     |     |    |    |



### Vincentian Identity

**SD=STRONGLY DISAGREE, DIS=DISAGREE, SWD=SOMEWHAT DISAGREE  
I= INDIFFERENT  
SWA=SOMEWHAT AGREE, AGR=AGREE, SA=STRONGLY AGREE**

- |                         |                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SD DIS SWD I SWA AGR SA | 15. I believe that we manifest <b>Vincentian personalism</b> by our care for each member of the university community.                                                                                                                                                                                                                                          |
| SD DIS SWD I SWA AGR SA | 16. I believe that DePaul University is <b>innovative</b> . DePaul is never content with maintaining a “business as usual” approach. Our efforts are marked by innovation and a single-minded pursuit of new and effective approaches to meet the needs of our students, society, and the educational marketplace.                                             |
| SD DIS SWD I SWA AGR SA | 17. I believe that DePaul University is <b>inclusive</b> . DePaul provides access for all to higher education regardless of class, race, gender, religion, sexual orientation, disability, ethnicity or economic barriers. The DePaul community is welcoming and draws great strength from its diversities.                                                    |
| SD DIS SWD I SWA AGR SA | 18. I believe that DePaul University <b>takes risks</b> that are consistent with its mission and values. Historically the university has always stepped outside of tradition and beyond “status quo” approaches, encouraging and demonstrating an adventurous and entrepreneurial spirit. The measure of our success has always been the measure of our risks. |
| SD DIS SWD I SWA AGR SA | 19. I believe that DePaul University is <b>pragmatic</b> grounding its education in the realities of everyday life. Through its curricula and through the delivery of its programs and services, the university offers students practical solutions to their needs for higher education, career advancement and personal growth.                               |

- SD DIS SWD I SWA AGR SA 20. I believe that DePaul University's **mission and values** are visible to all. Its education and operations are grounded in Vincentian values of service, respect, personalism, justice, holistic education and creating quality educational opportunities especially for the underserved and disadvantaged in our society.
- SD DIS SWD I SWA AGR SA 21. I believe that the heritage of Vincent De Paul remains relevant to the university today.
- SD DIS SWD I SWA AGR SA 22. I support DePaul's current approach to expressing its Vincentian identity.
- SD DIS SWD I SWA AGR SA 23. The Office of University Mission and Values provides a variety of services and programs designed to serve the university community and enhance the institution's Catholic, Vincentian, and religiously pluralistic identity.

24. Please comment as to your perceptions of the importance of the services and programs:

*How important to you are these activities?*

**NIM**= NOT IMPORTANT  
**IMP** IMPORTANT  
**NA**= NOT AWARE

**SIM**=SOMEWHAT IMPORTANT

**IMP**=IMPORTANT

**VI**= VERY

	<b><u>NIM</u></b>	<b><u>SIM</u></b>	<b><u>IMP</u></b>	<b><u>VI</u></b>	<b><u>NA</u></b>
25. Vincentian Endowment Fund (grants for student projects that enhance the university's Vincentian and Catholic identity)	NIM	SIM	IMP	VI	NA
26. Vincentian Assistance Fund (emergency financial assistance primarily for students)	NIM	SIM	IMP	VI	NA
27. Annual Vincentian Lectures (Vincent de Paul, Louise de Marillac and Frederic Ozanam Lectures)	NIM	SIM	IMP	VI	NA
28. Orientation programs (programs for new students introducing them to the university's mission and values)	NIM	SIM	IMP	VI	NA
29. Mission/Heritage published materials	NIM	SIM	IMP	VI	NA
30. Student Vincentian Heritage Tours (Semi-annual study trips for students to Vincentian sites in Paris/France)	NIM	SIM	IMP	VI	NA

31. *Please make comments on this " Vincentian Identity" section:*

### Urban Identity

**SD=STRONGLY DISAGREE, DIS=DISAGREE, SWD=SOMEWHAT DISAGREE  
I= INDIFFERENT  
SWA=SOMEWHAT AGREE, AGR=AGREE, SA=STRONGLY AGREE**

- SD DIS SWD I SWA AGR SA      32. I support DePaul's current approach to expressing its urban identity.
- SD DIS SWD I SWA AGR SA      33. The university sponsors a variety of services and programs to demonstrate the **connectedness to the community** that is characteristic of DePaul's urban identity.

34. Please comment as to your perceptions of the importance of the services and programs:

*How important to you are these activities?*

**NIM= NOT IMPORTANT      SIM=SOMEWHAT IMPORTANT      IMP=IMPORTANT      VI= VERY IMPORTANT  
NA= NOT AWARE**

35. Community initiatives such as support of Chicago Public School reform	NIM	SIM	IMP	VI	NA
36. Community Based service learning	NIM	SIM	IMP	VI	NA
37. DePaul Community Service Association	NIM	SIM	IMP	VI	NA
38. Study abroad programs	NIM	SIM	IMP	VI	NA
39. International sites	NIM	SIM	IMP	VI	NA
40. International students on campus	NIM	SIM	IMP	VI	NA
41. University Wide Service Days	NIM	SIM	IMP	VI	NA
42. Diversity efforts	NIM	SIM	IMP	VI	NA

43. Please make comments on this "Urban Identity" section:

### Additional Questions

**SD=STRONGLY DISAGREE, DIS=DISAGREE, SWD=SOMEWHAT DISAGREE  
I= INDIFFERENT  
SWA=SOMEWHAT AGREE, AGR=AGREE, SA=STRONGLY AGREE**

- |                         |                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| SD DIS SWD I SWA AGR SA | 44. I believe that the university's identity, mission and values are reflected in the institution's strategic plan "Vision Twenty 12". |
| SD DIS SWD I SWA AGR SA | 45. I believe that our institutional identity, mission and values positively impact our student's educational experiences.             |
| SD DIS SWD I SWA AGR SA | 46. I believe that our institutional identity, mission and values are an integral part of what makes a DePaul education distinctive.   |
| SD DIS SWD I SWA AGR SA | 47. I believe that our institutional identity, mission and values positively impact my experience as a faculty or staff member.        |

48. *Please make comments, if you wish*

49. What should we have asked?

*Appendix B. School Sense of Community Scale*

For the following, please rate each using the scale below on how true the statement is for you. (Please review the scale and write the corresponding number as appropriate).

1	2	3	4	5
Not At All True	Somewhat True	Pretty True	Very True	Completely True

1. I feel a real part of my school.
2. People notice when I'm good at something.
3. Other students in this school take my opinions seriously.
4. Most teachers at my school are interested in me.
5. There's at least one teacher or adult in this school I can talk to if I have a problem.
6. People at this school are friendly to me.
7. I am included in lots of activities at my school.
8. I am treated with as much respect as other students.
9. The teachers here respect me.
10. People know I can do good work.
11. Other students like the way I am.

*Appendix C. Need to Belong Scale***Need to Belong Scale**

(Leary, Kelly, Cottrell, & Schreindorfer, 2005)

**Instructions:** For each of the statements below, indicate the degree to which you agree or disagree with the statement by writing a number in the space beside the question using the scale below:

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Neither agree nor disagree
- 4 = Moderately agree
- 5 = Strongly agree

- \_\_\_\_\_ 1. If other people don't seem to accept me, I don't let it bother me.
- \_\_\_\_\_ 2. I try hard not to do things that will make other people avoid or reject me.
- \_\_\_\_\_ 3. I seldom worry about whether other people care about me.
- \_\_\_\_\_ 4. I need to feel that there are people I can turn to in times of need.
- \_\_\_\_\_ 5. I want other people to accept me.
- \_\_\_\_\_ 6. I do not like being alone.
- \_\_\_\_\_ 7. Being apart from my friends for long periods of time does not bother me.
- \_\_\_\_\_ 8. I have a strong need to belong.
- \_\_\_\_\_ 9. It bothers me a great deal when I am not included in other people's plans.
- \_\_\_\_\_ 10. My feelings are easily hurt when I feel that others do not accept me.

*Appendix D. UCLA Loneliness Scale (Version 3)*

UCLA Loneliness Scale (Version 3)

*Instructions:* The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by writing a number in the space provided. Here is an example:

How often do you feel happy?

If you never felt happy, you would respond "never"; if you always feel happy, you would respond "always."

<u>NEVER</u>	<u>RARELY</u>	<u>SOMETIMES</u>	<u>ALWAYS</u>
1	2	3	4

- \_\_\_ 1. How often do you feel that you are in tune with the people around you?
- \_\_\_ 2. How often do you feel that you lack companionship?
- \_\_\_ 3. How often do you feel that there is no one you can turn to?
- \_\_\_ 4. How often do you feel alone?
- \_\_\_ 5. How often do you feel part of a group of friends?
- \_\_\_ 6. How often do you feel that you have a lot in common with the people around you?
- \_\_\_ 7. How often do you feel that you are no longer close to anyone?
- \_\_\_ 8. How often do you feel that your interests and ideas are not shared by those around you?
- \_\_\_ 9. How often do you feel outgoing and friendly?
- \_\_\_ 10. How often do you feel close to people?
- \_\_\_ 11. How often do you feel left out?
- \_\_\_ 12. How often do you feel that your relationships with others are not meaningful?
- \_\_\_ 13. How often do you feel that no one really knows you well?
- \_\_\_ 14. How often do you feel isolated from others?
- \_\_\_ 15. How often do you feel you can find companionship when you want it?
- \_\_\_ 16. How often do you feel that there are people who really understand you?
- \_\_\_ 17. How often do you feel shy?
- \_\_\_ 18. How often do you feel that people are around you but not with you?
- \_\_\_ 19. How often do you feel that there are people you can talk to?
- \_\_\_ 20. How often do you feel that there are people you can turn to?

Items 1, 5, 6, 9, 10, 15, 16, 19, and 20 should be reversed. Higher scores indicate greater degrees of loneliness.

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Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66, 20-40.

*Appendix E. Social Desirability Scale*

Instructions: For the following, please rate each item as either *True* or *False*.

1. It is sometimes hard for me to go with work if I am not encouraged. T F
2. I sometimes feel resentful when I don't get my way. T F
3. On a few occasions, I have given up doing something because I thought too little of my ability to succeed. T F
4. There have been times when I felt like rebelling against people in authority even though I knew they were right. T F
5. No matter whom I'm talking to, I'm always a good listener. T F
6. There have been occasions when I took advantage of someone. T F
7. I'm always willing to admit it when I make a mistake. T F
8. I sometimes try to get even rather than forgive and forget. T F
9. I am always courteous, even to people who are disagreeable. T F
10. I have never been irked when people expressed ideas very different than mine.  
T F
11. There have been times when I was quite jealous of the good fortune of others.  
T F
12. I am sometimes irritated by people who ask favors of me. T F
13. I have never deliberately said something that hurt someone's feelings. T F