

ABSTRACT

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Shira Fishman, Ph.D., 2009

Directed By: Dr. Arie Kruglanski, Distinguished University Professor, Psychology

Social connections are fundamental to our existence. As a result, social exclusion is a painful and distressing experience. When belonging is thwarted, people seek inclusion which can be achieved through group membership. Thus, excluded individuals and/or those whose need to belong is particularly strong will be particularly motivated to join groups. Moreover, to the extent that the need to belong is satisfied by closeness with other group members, and closeness is a feature of group cohesion, excluded individuals or ones with a strong need to belong are likely to be attracted to highly cohesive groups. Finally, the subjective importance of a group to its members should determine the degree of perceived cohesion. Importance of a group is defined as the group's centrality to individuals' social identity. The more central a given dimension is to one's identity, the greater the attraction to individuals sharing that dimension (Byrne, 1961). Hence, the more important the group, the greater the attraction of the members to each other, defining group cohesion. Ultimately then, the greater the individuals' prior experience of exclusion or the

greater their need to belong, the greater their motivation should be to join important (vs. less important) groups. These notions are investigated in the present dissertation. A review of the literature on social exclusion and the similarity-attraction hypothesis is presented followed by two studies showing that, both in the lab and in the real world, individuals who have been socially excluded want to join and/or feel more connected to important groups.

SOCIAL EXCLUSION AND THE DESIRE TO JOIN IMPORTANT GROUPS

By

Shira Fay Fishman

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Advisory Committee:
Professor Arie Kruglanski, Chair
Professor Gary Lafree
Dr. Kathleen Smarick
Professor Michelle Gelfand
Professor Charles Stangor

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Chapter 1: Introduction

Social connections are fundamental to our existence. As a result, social exclusion is a painful and distressing experience. Emotions evoked by social exclusion far surpass the magnitude of other emotions, as feelings of exclusion are evoked easily and vividly long after the details of the memory have faded. Major theoretical models seek to explain the reactions evoked by social exclusion but few question the behaviors that occur after an episode of rejection. The current research focuses on behaviors of ostracized individuals and the types of groups that appeal to these individuals.

The key to understanding reactions to exclusion is the need to belong (Baumeister & Leary, 1995) and the need for acceptance, which is undercut by social exclusion. The need to belong is fundamental to our well being both physically and mentally. For example, social connections have a strong positive effect on physical and mental health (Bolger, Zuckerman, & Kessler, 2000; Spiegel, Bloom & Gotheil, 1983), with mortality rates higher for those who are single, divorced or widowed (Lynch, 1977). Belonging appears to help individuals fight off disease (Goodwin, Hunt, Key, & Samet, 1987) and bolster immune functioning (Keicolt-Glaser, Garner, et al., 1984; Keicolt-Glaser et al., 1987) while isolation and exclusion are linked to depression, loneliness, and anxiety (e.g., Leary, 1990; Baumeister & Tice, 1990). According to Terror Management Theory, affiliating with a group can buffer the self from the threat of insignificance and create the perception of immortality (Castano, Yzerbyt, & Paladino, 2004).

Given the deleterious effects of social exclusion, one should be motivated to avoid situations of isolation. Social isolation is experienced as an extremely traumatic incident (Stroud et al., 2000; Williams & Zadro, 2005; Zadro, 2004) and the pain inflicted is an indication to the individual of an offense requiring immediate attention in order to avoid or control social exclusion. As reviewed in the coming chapter, reactions to isolation differ, but one common reaction is attempting to gain reacceptance into the group. Studies show that following an episode of social exclusion individuals are likely to engage in prosocial behaviors such as rating others more positively (Wheaton, 2001), succumbing to persuasion techniques more easily (Carter-Sowell & Williams, 2005) and engaging in non-conscious mimicry (Lakin & Chartrand, 2005). In fact, ostracism creates such a strong pull to belong that individuals may be attracted to groups offering the promise of inclusion, regardless of the cost to the individual. Involvement with extremists groups promising acceptance of the individual is one potential byproduct of social exclusion. However, the literature is strangely silent on the types of groups that may be attractive to lonely, excluded or rejected individuals. The current research seeks to explore this issue and understand why socially excluded individuals are attracted to certain groups.

When belonging is thwarted, people seek inclusion. Becoming involved with a highly cohesive group promises rapid acceptance and security in belonging as cohesive groups fulfill the need to belong. Importance might be one way to assess cohesiveness of a group; the more important the group is to the individual member, the more cohesive the group. No research in social psychology has directly studied whether people believe that importance implies cohesion but the research on

similarity and attraction suggests the use of this heuristic. The work on similarity and attraction shows that when issues are important, similarity leads to increased affection (e.g., Byrne, 1961). Applying this logic to groups, if a group is perceived as important, meaning that the group is central to the individual's identity, the members should be more similar because they share an important aspect of their identity. Greater similarity should lead to greater attraction, signifying greater cohesiveness of important groups. Thus, perceived importance of the group to its members should increase the perception that members are similar to each other, more attracted to each other and, therefore, more cohesive.

Combining the research on social exclusion and the similarity-attraction effect, the current research argues that socially excluded individuals will seek to join important groups more than non-important groups because important groups imply cohesiveness and therefore better fulfill the need to belong lacking in excluded individuals. The present work builds on previous ideas in two unique ways. First, it argues that when the group is perceived as important, greater attraction leads to perceptions of cohesion among group members. Because members share a central aspect of their identity with other members, attraction will increase, leading to the perception of greater group cohesion. Second, because of the perception of greater cohesion among members of highly important groups, socially excluded individuals would want to join important (vs. unimportant) groups to a greater extent than socially included individuals.

A review of the literature on social exclusion is presented followed by a literature review on the similarity-attraction hypothesis. Two experiments then are

presented to test the hypothesis that socially excluded individuals are more attracted to important groups. One lab study and one field study explore the issue of whether socially excluded individuals desire important groups to a greater extent than socially included individuals. Study 1, conducted in the lab, manipulated social exclusion and inclusion and measured participants' attraction to important and unimportant groups. Study 2 used different operationalizations of both the need to belong and the importance of the organization in order to strengthen the findings. Using the real life scenario of students pledging a fraternity, the second study used the need to belong used as a proxy for the manipulation of exclusion and inclusion. In other words, people with greater need to belong are treated here as psychologically analogous to excluded individuals whose need to belong is enhanced situationally. This study assumed that fraternities with a stricter pledge program are perceived as more important than fraternities with a less strict program. Based on the heuristic that liking for groups increases as the difficulty of admission increases (Aronson & Mills, 1959), the study assumed that if a pledge program was perceived as difficult then members of the pledge class would perceive it to be a greater part of their identity and thus more important. The relationship between the need to belong and liking for the fraternity was assessed over time. In a replication of study 1, this study shows that the higher the need to belong, the more included the participants feel in the fraternities, but only when the initiation program is difficult. There is no relationship between the need to belong and fraternities with easy initiation programs. Finally, the implications and potential applications of this research are discussed. Among these applications is the role of exclusion in attracting individuals to terrorist organizations.

Chapter 2: Social Exclusion

“I shall not today attempt further to define the kinds of material I understand to be embraced . . . but I know it when I see it” – Justice Potter Stewart, 1964

Being ignored, excluded or isolated is frequently studied but often ill defined in the literature. As articulated by Justice Stewart in his attempt to describe pornography, social exclusion similarly eludes a clear definition. Many words have been used to describe the phenomena including, most frequently, social isolation, exclusion, ostracism and rejection. However, attempts to differentiate between such words have largely remained untested and a probing of the literature suggests that most researchers continue to use the words interchangeably.

Ostracism is frequently associated with the research of Kip Williams who defines ostracism as the process of being ignored or excluded. Similarly, studies that use exclusion often define it as being alone or ignored. Both ostracism and exclusion are typically understood as a process occurring over an unspecified length of time and is operationalized in research paradigms by having participants engage in a social interaction followed by a hypothetical or actual separation from the group. In contrast, rejection is used to identify a single episode, rather than a protracted experience, of denial by others. Despite these attempts at differentiation, in practice, few studies have differentiated, theoretically or empirically, between these concepts and, thus far, no research has tested differential consequences of the multiple terms being used in reference to exclusion phenomena.

Theoretical Perspectives

Four major theories of ostracism have emerged to explain why humans are so sensitive to exclusion and what happens when belonging is threatened. Each theory treats social exclusion as a threat, real or imagined, that evokes a painful reaction in the individual. The theories are not necessarily mutually exclusive and each may be associated with a different aspect of the phenomena. From an evolutionary perspective, social exclusion is maladaptive and natural selection should favor individuals who remain part of the group. The needs-theory perspective argues that four major needs are threatened by social exclusion, belonging, self-esteem, control and meaningful existence. The social monitoring system focuses primarily on exclusion as a threat to belonging and, finally, the cognitive deconstruction framework argues that social exclusion is experienced as physical pain leading to a flat emotional state for the individual.

Being a member of a group has an evolutionary advantage (Barner-Barry, 1986) as groups provide individuals with access to potential mates and increased protection from enemies (Gruter & Masters, 1986). As outliers are dropped from the group, remaining members are more cohesive, secure and likely to pass on their genes by mating with each other. In contrast, individuals without a group are likely to die, making sensitivity to exclusion a favored variable in natural selection. The intensity of pain after social exclusion may direct attention toward ostracism to determine (a) whether ostracism is occurring and (b) divert resources toward remaining part of the group (Williams, 2007).

According to the Needs-Theory, social exclusion threatens four fundamental needs: belonging, self-esteem, control and meaningful existence (Williams, 1997, 2001; Williams & Zadro, 2005). Upon initially encountering exclusion, individuals exhibit a reflexive pain response. Next, any or all of the needs are threatened leading to anger and sadness. A period of reflection follows where the individual ruminates on the situation, the reasons for the ostracism, etc. The individual can then address the threats which are most important and attempt to fortify those specific needs. For example, if belonging is threatened, the individual may choose to rectify the situation by acting in a pro-social manner, whereas, if control is thwarted, the individual may choose to act in a controlling or anti-social manner (Williams, 2007). These differences, discussed further below, may help illuminate reasons behind the myriad of responses that emerge after ostracism.

The need to belong is the primary threat in the Social Monitoring System and Sociometer Theories of ostracism (Gardner et al., 2005; Pickett & Gardner, 2005). The social monitoring system regulates the optimal level of belongingness, and, when threatened with exclusion, individuals become more sensitive to social cues in an attempt to be re-included or create effective future social interactions. Similarly, in the Sociometer Theory, low self-esteem acts as a signal that inclusion is at risk (Leary et al., 1995; 1998).

Finally, according to the cognitive deconstruction framework, social exclusion, experienced like physical pain, impacts the individual's ability to self-regulate producing a period of cognitive deconstruction, a flat emotional state (Baumeister et al., 2002, 2006; DeWall & Baumeister, 2005). A number of studies

have shown no mood impairment after social exclusion, supporting a state of flat affect after exclusion. Because their resources are otherwise engaged, such individuals cannot avoid engaging in impulsive acts of anger or outrage and some studies have shown aggression and anger after social isolation (Baumeister et al., 2006).

Methods of Ostracism

A number of different paradigms have been used to manipulate social ostracism. Perhaps the most famous paradigm is the game of cyberball. Originally this method was designed as a live ball tossing game (Williams, 1997) where a “participant” waiting for an experiment notices a ball and starts tossing between the actual participant and another confederate. In the exclusion condition, after receiving the ball a few times, the two confederates stop passing the ball to the actual participant. In an attempt to make the game more efficient, Williams et al (2000) created a virtual ball tossing game identical to the live game but requiring no confederates. Participants are informed that the ball tossing game is part of an experiment in mental visualization which requires them to mentally visualize their surroundings. Participants play “catch” with two other people who are supposedly connected online. In the ostracism condition, participants are excluded from the game after only a few catches. Whether participants believe they are playing against other people or against a computer, they feel the effects of ostracism and show decreased mood, less inclusion, lower self-esteem, less control and less meaning (Zadro et al., 2004).

A different operationalization of social exclusion involves receiving feedback that one will be alone in life (Baumesiter et al., 2002; Twenge et al., 2001). In this paradigm, participants fill out a personality questionnaire and receive accurate introversion/extroversion feedback. In addition, participants also receive one of three additional types of feedback: accepted/high-belonging, rejected/low-belonging, or negative feedback. In the accepted/high-belonging condition participants are told that they are the types of individuals who have long and rewarding relationships, stable marriages and lifelong friendships. In the rejected/low-belonging condition, participants are told that they are the types of individuals who will end up alone in life, have multiple marriages that will not last, and lose their friends by the time they are in their mid-20's. The negative feedback, used as a control condition, tells participants that they are accident-prone and will have a life of accidents and injuries.

Another common paradigm is the "get acquainted" paradigm which involves having a small group of participants engage in actual conversation with other participants (Nezlek et al., 1997). Participants are then separated and asked to identify the individual with whom they would most like to work. Following this, they receive bogus feedback, ostensibly from the others, either that everyone wanted to work with them (inclusion) or no one wanted to work with them (exclusion). Other manipulations of ostracism have been used with less frequency. As we continue to engage in more online social interactions, studies are increasingly manipulating exclusion using more updated media, including text messaging (Smith & Williams, 2004), chat rooms (Gardner et al., 2000; Williams et al., 2002), and virtual reality worlds (see Williams, 2007).

There are a number of reasons why researchers may want to measure, rather than manipulate, exclusion including instances when manipulating is not feasible such as in a field study or when measuring exclusion across time. Measuring exclusion is far less common, with no clear scale yet developed, but each of the following research programs attempts to measure an aspect of exclusion. Leary and colleagues created the Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorfer, 2005 as cited in Leary, Cottrell, & Phillips, 2001). The scale consists of a number of items that participants respond to along a continuum of agree-disagree, items include statements such as, "I try hard not to do things that will make other people avoid or reject me." To date, this scale has only been published within the context of another studies (e.g., Leary, Cottrell, & Phillips, 2001; Leary, Herbst, & McCrary, 2003). For example, to increase validity of a scale of dominance-responsive vs. acceptance-responsive self-esteem, the need to belong scale was shown to correlate highly with acceptance-responsive self-esteem, self-esteem as a monitor of social acceptance (see Leary, Cottrell & Phillips, 2001). More research needs to be done to further validate the scale of belonging.

Hill (1987) created the Scale of Interpersonal Orientation (IOS) to measure an individual's need to affiliate with others. Hill hypothesized that four motivations underlie the need for social contact: positive stimulation (finding satisfaction from being around others), attention (seeking attention from others), social comparison (using others as a reference for one's own behavior or attitudes) and emotional support or sympathy (wanting to be around others when upset). These four

motivations make up distinct subscales but taken together, the scale attempts to measure the desire to seek affiliation with others.

Lastly, work by Downey and colleagues argue that individuals differ in their sensitivity to rejection, conceptualized as a defense motivational system activated in situations where rejection is possible. Individuals who are high in rejection sensitivity, as measured by the Rejection Sensitivity Questionnaire, tend to expect rejection, even when it may not be occurring, and react with hostility (Downey et al., 2004). Rejection sensitivity is assumed to arise from chronic rejection and generally leads to maladaptive behaviors that may increase the chance of being rejected further. The scale consists of 18 items that involve hypothetical interpersonal interactions in which rejection is a possibility (e.g., “you ask your friend to do a big favor for you”). Respondents indicate their anxiety about the outcome and their perceived likelihood that the interaction would result in rejection. Scores are created by weighting the expected likelihood of rejection by the degree of anxiety and averaging the weighted scores across all the situations (Downey & Feldman, 1996).

Immediate Responses to Social Exclusion

The hurtful effects of ostracism are widespread and wide ranging. Both self-reported accounts and physiological measures concur that excluded individuals feel pain, with physiological reactions akin to physically painful stimuli. This occurs regardless of individual or situational variables that are often thought to buffer against difficult experiences. Such an acute response may be an adaptive reaction that focuses attention on the situation, ostensibly to assess the threat and direct energy towards employing coping mechanisms.

Williams and colleagues have repeatedly shown that playing cyberball increases feelings of sadness and anger and lowers levels of belonging, self-esteem, control and meaningful existence (reviewed in Williams & Zadro, 2005). Research has also shown that when participants are asked to remember a physically or socially painful experience, the levels of pain were higher when recalling a socially painful experience (Williams & Fitness, 2004 as cited in Williams, 2007). There is also evidence that experienced distress following a rejection experience is not moderated by either situational factors or individual differences. For example, individual differences such as levels of self-esteem (Leary et al., 1998), individualism-collectivism (Smith & Williams, 2004), introversion-extraversion (Nadasi, 1992), gender (Williams & Sommer, 1997), loneliness (Carter-Sowell et al., 2006) and social anxiety (Zadro et al., 2006) did not moderate the feelings of distress after social exclusion. Situational factors have similarly not moderated the effects of distress. For example, participants report similar feelings of exclusion regardless of whether they believe the other players are acting of their own volition, acting out a script, playing against the computer or playing against other people (Zadro et al., 2004).

Attempts to better understand the pain of social isolation have lead researchers to explore what happens physiologically during rejection. Zadro (2004) attached participants to an impedance cardiograph while playing cyberball. Although ostracism did not produce a strong threat response (increased blood flow and arterial constriction), it did lead to an increase in blood pressure during the game. Similarly, Stroud et al. (2000) found that participants engaged in group settings involving interpersonal rejection experienced increased blood pressure and cortisol levels as

compared to participants engaged in nonsocial tasks. However, it must be noted here that the participants engaged in the social interaction were engaged in various acts involving abuse, rejection or exclusion and the control participants were engaged in nonsocial tasks, thus, what accounts for these results may not be entirely clear. Nevertheless, there appears to be some initial data that rejection is indeed experienced in a similar manner to that of pain or other distressing stimuli.

Eisenberger, Lieberman and Williams (2003) placed participants in a functional magnetic resonance imagery scanner while playing cyberball. When excluded, participants showed increased activation of the dorsal anterior cingulate cortex, the region of the brain that shows activation during exposure to physical pain. The activation of this part of the brain was highly positively correlated with participants' self-reported distress. Further, as part of the study, the participants were either rejected intentionally (they stopped throwing the ball) or unintentionally (their computer was not yet hooked up to the network). Only when participants were intentionally rejected was there increased activity in the right ventral prefrontal cortex, the part of the brain that moderates the pain response. Further, activation of this area was negatively correlated with participants' self-reported distress levels. A meta-analysis by Dickerson and Kemeny (2004) showed that increased levels of cortisol, a hormone that helps an organism survive and deal with danger, was associated with social-evaluative tasks (tasks that could be judged negatively by other people). Finally, Gunnar et al. (2003) reported higher levels of cortisol in children who were rejected by their peers, according to sociometric measures. Together, these physiological responses indicate the ubiquity of pain as the immediate response to

rejection. Rarely is there such strong data to indicate that one experience, exclusion, is felt so uniformly for so many individuals across diverse backgrounds and personality characteristics. The effects of social exclusion appear to be rather extensive and few, if any, are protected against its effects.

What Happens After Social Exclusion?

What happens after the immediate pain of social exclusion is more varied and individual personalities may buffer and protect against future damage. The factors that lead to the various reactions have not been fully explored but some data suggest that it depends on the type of rejection one encounters. Responses can be categorized into four reactions: fight, flight, freeze and tend-and-befriend (Williams, 2007).

Interest in aggression and social exclusion has grown in recent years with research demonstrating a causal relationship between anti-social behaviors and aggression against those who may or may not have been the source of the exclusion (Bourgeois & Leary, 2001; Tice et al., 2002; Twenge et al., 2001). For example, Twenge and colleagues (2001) used the life-alone or get-acquainted paradigms to show an increase in derogation and aggression (using noise blasts) following social exclusion. The results were consistent regardless of the methods of exclusion, measure of aggression or presence of provocation by the other person. In only one case was there no increase in aggression, when the target had just praised the participant (study 3).

In the real world individuals often avoid situations they find uncomfortable or displeasing. Because of the nature of research, only a few studies allow participants the chance to leave (it makes it difficult to study their responses) but there is some

data indicating that participants are motivated to leave a situation rather than experience social exclusion. For example, in one study using the ball tossing paradigm found that participants were unlikely to want to continue working with a group that ostracized them but were equally willing to work with a new group or work alone (Predmore & Williams, 1983). When allowed to quit the game of cyberball, excluded participants were more likely to quit compared to included participants (Williams et al., 2000). Excluded participants showed disinterest in working with the group and derogation toward the rejecters (Pepitone & Wilpeski, 1960). In another study, participants were excluded or accepted using the get-acquainted paradigm and were then given the opportunity to leave or stay and help the interviewer on an unrelated task. Only accepted participants were likely to stay and help the interviewer (Tice et al., 2002). Despite the limited number of studies allowing participants to leave, the data suggest that excluded individuals are likely to exit the situation quickly.

Freezing in the face of exclusion may be a highly adaptive response such as when an animal catches sight of a predator and remains still to avoid detection. In different ways, a fight or flight response severs ties with the group, making freezing an adaptive response if the goal is to continue involvement with the group. After receiving life-alone feedback, participants were more likely to show a reduction in complex cognitive thought and more likely to report time as standing still, flat emotions, meaninglessness and lethargy (Baumeister et al., 2002; Twenge et al., 2003). Supporting this idea, these authors typically find no effect of social exclusion on mood. Participants receiving life-alone feedback are less susceptible to physical

pain as well (DeWall & Baumeister, 2006). These results may appear to be in contrast with those reported previously, for example, Eisenberger (et al., 2006) reports that pain tolerance is lower following ostracism by cyberball. This discrepancy, discussed below, may be due to the different manipulations of ostracism.

Finally, attempts to make ones self more likable, engaging in “prosocial” behaviors, include acts such as assisting others or creating stronger interpersonal bonds. Interestingly enough, not all prosocial behaviors can be positive for the individual. Often such behavior can make the individual an easy target of social manipulation. Thus, gaining acceptance back into the group is not necessarily in the best interest of the individual. For example, Williams and Sommer (1997) had participants engage in an idea-generating task after playing cyberball. They found that female participants worked harder in the idea-generating task after being excluded. Presumably, they thought that their hard work would be rewarded with acceptance into the group. Interestingly enough, the women in the study were working toward enhancing the evaluation of the very group that had excluded them.

Numerous other studies have shown an increase in prosocial behavior after exclusion. In one study, after being excluded during cyberball, participants, in an Asch like paradigm, were more likely to conform to a unanimous incorrect majority (of people who were not playing cyberball) than participants who were included (Williams et al., 2000). Other studies have shown an increase in susceptibility to persuasion techniques such as foot-in-the-door and door-in-the-face after exclusion (Carter-Sowell & Williams, 2005). Perhaps ostracized individuals are likely to see all individuals in a more positive light as one study found that ostracized individuals

were more likely to evaluate favorably both a legitimate student group (one that helped members prepare for the job market) and an illegitimate group (one that taught to walk through walls through mind control) (Wheaton, 2001). Ostracism increases compliance, conformity and positive evaluations of others.

Ostracism has also been found to increase mimicry of others, a sign of increased affiliation. In one study, after ostracism, participants were more likely to engage in non-conscious mimicry, especially if the individual was an in-group member (Lakin & Chartrand, 2005). Conscious mimicry of model behavior was also more likely to increase after ostracism in a public goods dilemma (Ouwerkerk, Kerr, Gallucci, & van Lange, 2005). In addition, following ostracism, individuals become more socially attentive overall (Gardner et al, 2000; Pickett, Gardner & Knowles, 2004). Thus, being sensitive to social cues may be an attempt to re-gain favor amongst the group members after social exclusion. Finally, in a series of six experiments, Maner, DeWall, Baumeister, and Schaller (2007) found that excluded individuals were more likely to attempt to establish new bonds with people and had more positive evaluations of others if they anticipated future face-to-face contact with the individuals.

The question remains as to why an individual might display one set of reactions after social exclusion, for example, the desire to affiliate with others, as compared to another set. One clue might be found in the type of rejection experienced. For example, the majority of the studies showing an increase in aggression after exclusion have used the life-alone manipulation. Perhaps the life-alone feedback elicits depression-like symptoms, including flat, depression-like affect

(Baumeister et al., 2002; Twenge et al., 2003) and less susceptibility to pain (DeWall & Baumeister, 2006). In contrast, cyberball may increase anxiety symptoms, decreases in mood (Williams, 2007) and pain tolerance (Eisenberger et al., 2006), evoking the desire to be included in the group. Perhaps this is the result of threats to different types of needs. For example, a threat to belonging may increase the desire to be around others whereas a threat to meaning may lead to dejection and apathy, a result that has been found using the life-alone paradigm only. Why an individual would display one reaction over another is not completely understood, but results overall indicate that threats to belonging motivate the desire to be social. How this affects choice of groups remains in question.

Chapter 3: Similarity, Attraction and Importance

The link between similarity and attraction has long been established in the social psychology literature. Beginning in the 1940's and 1950's researchers found that friends held more similar attitudes as compared to non-friends. For example, Newcomb (1956) found that at first, freshman students were likely to befriend those in close proximity to themselves but that attitude similarity played an increasingly important role as the relationships developed. In this vein, Newcomb professed his ability to predict the degree of liking of two strangers simply by knowing the similarity of their attitudes (Newcomb, 1961). Based on this initial work, a research program was developed on the relation between similarity and attraction and it exerted a considerable impact on the field of social psychology. Some of its findings were intriguing and counterintuitive. For example, it was found that contrary to popular belief, attitude similarity appears to constitute a stronger predictor of attraction than physical attractiveness (Byrne, London & Reeves, 1968). Overall the similarity-attraction relation appears to be quite general and robust; accordingly, the phenomenon has been called social psychology's most dependable finding (Berscheid & Walster, 1978). Although initial studies established and replicated the effect, research quickly moved to explore the theoretical mechanisms and the moderators of the effect.

Methods

Following Newcomb's (1956) groundbreaking work, the seminal study linking similarity to attraction was conducted by Don Byrne (1961). The majority of studies in this area followed Byrne's original methodology, often using the same

questions to assess attraction. In Byrne's, (1961) study participants responded to 26 issues that ranged in importance, (as attested by pilot results), from the non-important (e.g., politics, classical music) to very important topics (e.g., integration, pre-marital sex). Two weeks later, the same participants were told that the survey had been used as part of a study on interpersonal relationships and that the survey had been completed by another class. Participants were then asked to review a survey, ostensibly completed by the member of the other class, and rate how attracted they were to that other person. In actuality, the bogus surveys were created by the experimenter to manipulate the similarity of attitudes between the participant and the ostensible other. To measure the consequent feelings toward the other, Byrne (1961) created the Interpersonal Judgment Scale (IJS) consisting of 8 statements rating the other's intellect, knowledge of current events, morality and adjustment. In addition, 2 statements of attraction were included, a rating of how much they liked the other person and a rating of how much they wanted to work with that other person on a future task. The IJS is still used in research today (e.g., Chen & Kenrick, 2002). Despite the myriad of studies on this topic that followed Byrne's (1961) original work, there exists little variability in procedures. The vast majority of the studies continue to use Byrne's (1961) paradigm, framing the experiment as an exercise in forming opinions about a stranger.

One aspect of the similarity-attraction research that has undergone change over the years was the specific content of the attitude statements, reflecting the shifting social relevance of topics and their interest to participants. In the original study, Byrne (1961) asked participants about racial integration, premarital sex, God,

Western movies, tv shows, classical music and politics. Over the years, other issues such as women in the workplace, abortion, mandatory English, affirmative action, flat tax rate and welfare legislation were added depending on the important issues of the day.

Beyond attitudinal similarity on social issues, personality characteristics have been also explored as a potentially important dimension of similarity. Studies investigating this question modeled their procedure on Byrne's (1961) research with personality questionnaires replacing the issue questionnaire. Byrne, Griffitt & Stefaniak (1967) used questions from the Repression-Sensitization Scale, which asks about how one responds to anxiety provoking stimuli. When participants were shown another survey with responses similar to their own, they reported greater liking for that person, as compared to a person who responded (as indicated by their survey) in a very different manner to threatening stimuli. Wetzel and Insko (1982) had participants rate their actual and ideal selves and were later shown a graphic depiction of the similarity of their actual and ideal selves to those of their alleged partner. They found that similarity on *ideal selves* was related to greater attraction, but similarity on *actual selves* was not (see also Herbst, Gaertner, & Insko, 2003). Likewise, surveys of voter preferences indicate that trait similarity leads to increases in attraction. For example, Caprara and colleagues (Caprara, Vecchione, Barbaranelli, Fraley, 2007) asked participants to rate themselves and a political candidate along 25 adjectives most representative of the big five personality dimensions. Voters, both in the US and in Italy, were more likely to see themselves as most similar to the political candidate of their own party. Other research shows an increase in attraction when individuals

share basic values, interests and hobbies (Davis, 1981; Jamieson, Lydon & Zanna, 1987), when another's competency on a task is similar to their own (Zander & Havelin, 1960), when individuals are in the same emotional state (Zimbardo & Formica, 1963) and when one's economic status is similar (Byrne, Clore, & Worchel, 1966). While similarity-attraction appears to hold for many types of similarities, similarity on attitudes appears the strongest predictor of attraction (Montoya & Horton, 2004).

Theoretical Background

Why should similarity lead to attraction? Three major hypotheses emerge from the research to explain this phenomenon. The first was proposed by Byrne in his original work on similarity and attraction. According to this hypothesis, individuals seek balance in relationships; therefore, we like others who share our views as this creates balance (Heider, 1958). According to Byrne and colleagues (Byrne & Clore, 1970) balance is important because agreement with another person validates one's beliefs and ensures correct interpretation of one's environment. Validation of one's attitudes induces positive affect (because of one's motivation to hold accurate and valid views on various topics); this positive affect generalizes to the other person who constituted the vehicle of validation, resulting in attraction. This premise, termed the consensual validation model or the affect model, has been the most frequently cited theoretical underpinning of the similarity-attraction link. For example, Tesser (1993) argued that individuals who share attitudes are likely to confirm each other's world-view, validate self-assessments, and provide uncomplicated interactions. In this way, attitude similarity is reinforcing because it gives evidence for one's ability to

effectively perceive and understand the environment around them (Byrne, Griffitt & Stefaniak, 1967).

A second theoretical model that advanced the similarity attraction relation argued that attraction is the result of thinking that other individuals like us. In this vein, Aronson and Worchel, (1966) maintained that attraction is the result of “assumed liking:” we assume that similar others will like us and ample evidence suggests that we like those who like us. Reciprocation of assumed liking is based on previous instances of positive reinforcement from those who like them. To test this idea, Aronson and Worchel (1966) manipulated attitudinal similarity and perceived attraction of a stranger toward the participant. In line with their hypothesis, the effect of the stranger’s attraction had a significant effect on attraction but attitude similarity did not. More recent evidence by Condon and Crano (1988), in line with the assumed liking model, suggests that the similarity-attraction link is mediated by the inference of a positive evaluation by the similar other. Individuals are attracted to similar others because they believe that this will result in a positive dyadic interaction (Condon & Crano, 1988).

A third theoretical model proposed recently argues that the similarity-attraction link is mediated by one’s cognitive evaluations of the target (Montoya & Horton, 2004). These authors noted that in Byrne’s (1961) Interpersonal Judgment Scale, participants rate the stranger’s intelligence, morality, knowledge of current events and degree of adjustment before they rate their attraction to the stranger. These four items suggest an overall quality assessment of the target which is made before the attraction ratings. Therefore, the model proposes a two-step process whereby (a)

attitudes imply information which guides the cognitive evaluation of the quality of the target person and (b) cognitive evaluations determine the degree of attraction to the target. Assume that Tom expresses his pro-choice attitudes to Sam. If Sam believes strongly in a women's right to choose, he may also infer that Tom holds other liberal attitudes (e.g., support for gay marriage), which he views positively, and, therefore, decide that Tom possesses other positive qualities such as compassion for others. Thus, Sam will create a positive cognitive evaluation of Tom and will feel attracted to him. According to Byrne's model, sharing one's pro-choice attitude leads to attraction; however, in the Montoya & Horton (2004) model, sharing attitudes implies similarity on other positive qualities which then lead to positive evaluations of others. Montoya and Horton's (2004) model makes three unique predictions: (1) attraction is influenced by similar attitudes only when the cognitive evaluation precedes attraction; (2) similar attitudes implies positive evaluations of the stranger whereas dissimilar attitudes implied negative evaluations; (3) controlling for the effect of cognitive evaluation negates the similarity-attraction link.

Testing the foregoing models against each other shows that each is a potential mediator of the similarity-attraction link. Thus, Singh, Yeo, Lin and Tan (2007) conducted two studies with Chinese students at a junior college in Singapore. In the first study, the researchers showed that similar attitudes influences affect, attraction to the stranger directly, and attraction to the stranger indirectly through affect. This result gives support to the Byrne consensual validation model. However, the findings also show that similar attitudes have a stronger direct effect on attraction (vs. their indirect effect), thus, the relationship appears more complex than implied by Byrne's

original assessment. The authors argue that to fully explore the three theoretical models of the similarity-attraction relation (consensual validation [affect], assumed liking, and cognitive evaluation), they should all be tested within the same experiment with order of presentation varied. This allows for the mapping of multiple path analyses to explore the unique effects and potential mediation of each of the three models. Findings show that each model is a potential mediator of the similarity-attraction relationship but that inferred attraction (Condon & Crano, 1988) has a stronger effect than cognitive evaluation (Montoya & Horton, 2004). In sum, interpersonal attraction appears to be mediated by affect, inferred attraction and cognitive evaluation, simultaneously. Of these theoretical variables, the indirect effect of affect is subtle while the effect of cognitive evaluation is pervasive (Singh et al, 2007).

Similarity breeds attraction – Dependent variables and Context

Similarity leading to attraction has been shown across diverse contexts, such as in organizational settings and voting behavior, with different dependent variable measures, such as behavioral outcomes, and using disparate indicators of similarity, such as personality characteristics. In Byrne's (1961) initial study, he found that strangers with similar views are liked more and are seen as more desirable work partners than strangers with dissimilar views. In addition, attitudinally similar strangers are judged more intelligent, better informed about current events, more moral and better adjusted (as compared to strangers with dissimilar attitudes).

Although liking has been commonly used as the dependent variable, behavioral outcomes of the similarity-attraction link show similar results; individuals

are likely to display behaviors indicating liking toward similar others. Women sat closer to a male stranger who was presented as similar (vs. dissimilar) and men sat directly across from a similar (vs. dissimilar) man (Byrne, Baskett, & Hodges, 1971). Matching or modeling behavior of another person increases as similarity increases (e.g., Rosekrans, 1967). Using boys in grades 6-8, Burnstein, Stotland, and Zander (1961), found that they were more likely to adopt the preferences of a deep sea diver described as similar to them in background and characteristics than a deep sea diver described as dissimilar. Similarly, Hilmert, Kulik, and Christenfeld (2006) manipulated similarity of taste in music and had participants and a confederate rate a new piece of music (pre-tested to generate a neutral rating by other students). When the confederate had similar taste in music, the participants were more likely to rate the music favorably after a positive review by the confederate. This theory of model-observer similarity has been studied most commonly with gender (e.g., Wolf, 1973) and age as moderator variables (e.g., Becker & Glidden, 1979).

Voting is another behavioral outcome that has been studied in the context of similarity and attraction. People are more likely to vote for a candidate to whom they feel similar. Using actual voting records from the 1972 election study, Quist and Crano (2003) found that similarity on policy issues predicted voting behavior. One may assume that agreement on policy issues should, by definition, predict voting behavior, but data suggest that this is not always the case (Crano, 1997). Further, individuals are increasingly likely to vote for a candidate who shares their own personality traits (Caprara, Vecchione, Barbaranelli, Fraley, 2007). In a study conducted both in the US and in Italy, participants were asked to rate their own traits

and the traits of a current political candidate (in the US, participants rated either Bush or Kerry). Participants rated the candidate from their own party as more similar to themselves than the candidate from the opposing party (Caprara, Vecchione, Barbaranelli, Fraley, 2007). Students are also more likely to support a bill proposed by their own party compared to a bill proposed by the opposing party. Shortly after the Watergate scandal, Garrett and Wallace (1975) published a study showing that students who had voted for Nixon (a Republican) were more willing to sign a petition to have him impeached when the petition was backed by a Republican congressman as compared to a Democratic congressman. The authors of this study attributed these effects to the shared political views of the students and the congressman.

In the context of organizational behavior research, research has focused on similarity with managers and fellow group members. In a study done at the University of Maryland, attitudinal similarity was shown to increase attraction to one's manager (Feren, Carroll & Olian, 1988). More generally, some researchers have argued that diversity may hinder performance of groups because groups with similar members will like each other more and therefore undergo fewer conflicts while working on the task (Thompson & Pozner, 2007). In their model of appropriateness in cultural organizations, Cooper, Doucet and Pratt (2007) argue that individuals who have low cultural intelligence, meaning that they lack awareness that behaviors differ amongst cultures, are more likely to be influenced by similarity-attraction dynamics.

Mediators and Moderators

Because individuals who are close minded can be seen as more accepting of those who agree with them and more rejecting of those who don't (Palmer & Kalin,

1985), similarity and attraction may be affected by openness of beliefs. In this vein, Byrne and Wong (1962) found that racial prejudice correlated with attraction to a stranger with similar beliefs. An initial study using the dogmatism scale showed marginal support for the hypothesis that higher dogmatism scores would lead to greater rejection of another, (Gormly & Clore, 1969). In a follow up research, Palmer and Kalin (1985) had participants complete the dogmatism scale (Troidahl & Powell, 1965) in addition to attitude statements. Controlling for topic importance, they found that dogmatism increased rejection of a disagreeing other. Similarly, individuals who are high on authoritarianism tend to be rigid and firm in their beliefs and, thus, may reject a disagreeing other as this represents an ambiguous and potentially threatening situation for this person. Using groups with high, medium and low scores on authoritarianism, Sheffield and Byrne (1967) failed to find an effect of authoritarianism and the similarity-attraction link. However, more recent evidence, using the right-wing authoritarianism (RWA) scale (Altemeyer, 1988) found that RWA authoritarianism moderated the similarity-attraction effect, especially when the dependent variable was the morality of the stranger. Authoritarians judged a disagreeing other as less moral and in one experiment, liked the disagreeing stranger less (Smith & Kalin, 2006). In a related vein, Kruglanski & Webster (1991) found in several studies that when the need for cognitive closure was aroused, individuals tended to reject an opinion deviate, one who espoused opinions different from the majority in a group. In brief, while the evidence is less than decisive, there appears to be some tendency for individuals who are more rigid in their beliefs, either for

dispositional or situational reasons, to be even less attracted than the more cognitively flexible individuals to others who do not share their beliefs.

Importance

The importance of the beliefs in question has strengthening effect on the similarity-attraction link. Liking for another increases when agreement concerns issues of personal importance. Recall that in Byrne's (1961) original work he found greater liking for a stranger when there was agreement on important issues (vs. unimportant issues). Participants who were similar on important issues liked the other student more than participants who were similar on unimportant issues. It appears that similarity matters but the relative importance of attitudes on which similarity is assessed matters as well.

Other studies support the notion that attitude importance moderates the relation between attitude similarity and liking or attraction to individuals holding the attitudes in question. For example, Byrne, London and Griffitt (1968) found that similarity matters but topic importance also matters for liking. Clore and Baldrige (1968) gave participants feedback that the other agreed/disagreed on interesting or on uninteresting topics. Both extent of agreement and interest in the topic mattered for attraction. Specifically, while agreement led to attraction for both interesting and uninteresting topics, this relation was much stronger for the former than for the latter topics. Similarly, Tesser (1993) found evidence that stronger attitudes, measured by extent of agreement or disagreement with attitude statements, and presumably constituting one sense of attitude importance predicted greater liking (or disliking) for the other.

Similar results have been found in studies of voting behavior; agreeing with a candidate's positions do predict voting behavior but these predictions are strengthened when the issues are important versus less important to the voter (Crano, 1997; Quist & Crano, 2003). For example, Crano (1997) found that by knowing a voters attitude toward an issue he could accurately predict their voting behavior. However, accuracy of the prediction was significantly increased when the issue was of high importance to the voter. Similarly, Leitner (1983) found that trait similarity (e.g., the degree to which an individual self identified as compassionate, caring, happy) predicted voting behavior but only when these traits were very important to the individual's self concept.

Defining Importance

Although the previous literature demonstrates the effects of importance, hardly any of the research in this domain defined importance explicitly. The majority of the relevant studies considered importance to mean personal or subjective importance. In this sense, an issue is important to an individual when he or she cares deeply about it and/or when the issue is personally relevant to her or him. The assessment of importance is generally carried out by asking participants to rate the issues on a scale of importance or to select an issue that is most important to the individual. For example, Palmer and Kalin (1985) had participants rate the importance of attitude statements along a 7 point scale ranging from very unimportant (1) to very important (7). In contrast, Byrne (1961) asked participants to select the issues that were *most* important and *least* important to them. None of the studies reviewed explicitly defined importance for the participants. As discussed in the

methods section, this type of procedure allows the researchers to expose the participant, in a second part of the experiment, to another alleged “participant” who may differ from her or him on issues of varying degrees of personal importance to her or him. Many of the studies rely on an independent sample who provides a general importance rating of a given issue and the sample is assumed to feel similarly about that issues. Thus, despite the emphasis on personal importance, there appears to be some “norm” of importance whereby a given population as a whole agrees on the importance of a given topic. A different procedure used by Clore and Baldridge (1968) had participants rate their interest in a topic two weeks before they respond to a survey of an alleged other student. Topic interest was used instead of importance as the researchers argued that these are two distinct variables which may not correlate (e.g., an avid stamp collector may feel that collecting stamps is rather trivial to people in general, yet she or he might be very interested in the topic). In their study, participants saw a survey by another student who (a) agreed with them on interesting and disagreed on uninteresting or (b) agreed on uninteresting and disagreed on interesting topics. However, the results did not differ from research utilizing an independent sample or research using topic, participants still like the student who agreed rather than disagreed with them, particularly when the topic was of high perceived interest. Thus, topic importance and general assessments of importance appear to be, at least in this instance, similar. In addition, the use of individualized (or idiographic) importance ratings may not be necessary as they yielding the same results as research utilizing an independent sample to rate the importance of the issues.

The current research will use importance to mean a central aspect of the individual's identity. This captures the idea that something is important when it is relevant and cared about by a given individual. Importance can thus be a subjective rating as what is central for one individual may not be central for another person. However, the definition also recognizes that individuals may share on what they feel is important, creating a norm of importance among members of a collectivity.

Groups and Importance

What happens when a group is perceived as important, meaning that the members of the group see it as central to their identity? In the present research I argue that perceptions of importance will lead to perceptions of cohesiveness. Because importance strengthens the similarity-attraction link, when individuals share on a central aspect of their identity, perceptions of similarity and attraction increase. Greater attraction to other group members constitutes one definition of the concept of cohesiveness (Festinger, Schachter & Back, 1950; Back, 1951). Individuals who are part of a group that is perceived to be important should be seen as more similar and more cohesive as compared to individuals who are part of unimportant groups. While importance is a personal or subjective evaluation of the centrality of the group to the individual's identity, there is reason to assume that overall there will be some consistency (especially among members of similar populations, i.e., college students at the same university) in ratings of importance. A group that is seen as important by a given individual should, in general, also be seen as important by his or her peers.

Although members of important organizations may not "objectively" be closer to one another, there are some data to suggest that being a member of an important

(vs. an unimportant) group should increase identification with the other members because (1) shared group membership leads to greater liking and (2) as group identification increases, in-group favoritism increases. First, we tend to like others with whom we share group membership (Brewer, 1979; Mullen, Brown, & Smith, 1992; Rokeach, 1960; Tajfel & Turner, 1979). Perhaps this is, in part, a result of the belief that those in our own group hold similar attitudes and ideas (Brewer, 1979). In one study, Diehl (1988) split participants into groups on the basis of their tendency to overestimate or underestimate line length, a seemingly arbitrary basis by which to be divided into groups. Participants were then asked to fill out an attitudes questionnaire for themselves, for the other in-group members and for the other participants. Nonetheless, results showed that participants assumed the in-group members to be more similar to themselves across a number of different attitudes. In another study, participants were given information that an in-group member was similar to them, but this information failed to have an effect on attraction, presumably because participants already assumed that the in-group members are similar to them (Chen & Kenrick, 2002). Second, in-group favoritism increases with greater in-group identification (Abrams & Hogg, 1988). The more one identifies with their group, the more one likes and feels similar to the other group members.

Therefore, there is some evidence to suggest that indeed members of important groups are actually more cohesive than members of unimportant groups. However, the present research is primarily concerned with the *perception* of cohesiveness amongst important groups. As with importance, what matters is in the eyes of the beholder, not an objective measure of cohesiveness or importance. To

date, there appears to be no data exploring reactions to important (vs. unimportant) groups, the types of individuals who might be drawn to them or the perceptions of cohesiveness as a result of group importance. The purpose of the present research is to provide such evidence.

Ostracism and Choice of Important Groups

If ostracism threatens the need to belong then individuals who have been excluded are likely to desire a group in which they will be accepted. In other words, a group that is highly cohesive (assuming one can gain admission) should better satisfy the need to belong as compared to a group that is less cohesive. Thus, the present research argues that ostracized individuals will desire important groups to a greater extent than non-important groups because they imply greater cohesiveness of the members, better satisfying the need to belong.

Chapter 4: Social Exclusion and the Choice of Important Groups

To the extent that socially excluded individuals are seeking belonging, they should be more attracted to important groups as important groups are seen as more cohesive. The current study will test two major hypotheses: (1) whether important groups are perceived as more cohesive than unimportant groups (2) whether individuals who have been socially excluded vs. individuals who have been included will want to join important groups to a greater extent.

This study employed a 2 (exclusion/inclusion) X 2 (important/unimportant group) design. Participants were randomly assigned to an exclusion or non-exclusion condition by playing cyberball (Williams & Sommer, 1997; Williams, Cheung, & Choi, 2000). Following this, participants rated six organizations on whether they want to join the group. The groups were pre-tested to be either important or not important by other Maryland students. Participants in the exclusion condition should want to join the groups more than participants in the inclusion group. But this effect should obtain only for the important groups (not the non-important groups).

Methods

Participants

A total of 52 undergraduate students at the University of Maryland agreed to complete the study for course credit. All participants came to the lab to complete the study. Four participants were excluded from the analysis on the basis of their suspicion check (the participants guessed at the purpose of the study when questioned after their participation).

Procedure

Upon arrival at the lab, participants were told that they will be completing two short studies in the allotted time. The first study was described as a study of online interactions in which the researchers are interested in observing how individuals behave in online social situations. As part of this study, participants played cyberball, ostensibly online with two other players. To help maintain the cover story and provide a delay for the manipulation to take effect, participants were asked to reflect on their online experience by answering a number of questions about it. These questions served as a manipulation check on the exclusion manipulation (van Beest & Williams, 2006). The questions were answered on a 7-point scale ranging from do not agree (1) to strongly agree (7). The statements are as follows: Belonging: “When I was playing the game, I felt at one with the other players,” “I had the feeling that I belonged to the group while playing the game,” “During the game, I felt connected with one or more of the players,” “I felt like an outsider during the game (reverse),” “I did not feel accepted by the other players (reverse);” Control: “I had the feeling I could throw as often as I wanted to the other players,” “I felt in control over the game;” Self-esteem: “Playing the game made me feel insecure (reverse),” “I had the feeling that I failed during the game (reverse),” “I had the idea that I had the same value as the other players,” “I was concerned about what the other players thought about me during the game (reverse),” “I had the feeling that the other players didn’t like me (reverse);” Meaningful existence: “I think my participation in the game was useful,” “During the game, I felt as if my presence was not meaningful (reverse).”

In addition, in order to maintain the cover story that the study was about online interactions and to hide the fact that we are asking about belonging, participants were asked to respond to additional questions about online interactions on the same 7-point scale. Statements include: “I felt that I could interact freely with the other players,” “I think the game would have been very different if I had been playing the game in person rather than online,” “The online nature of the game allowed the players to do things they wouldn’t have done if we were playing face to face,” “I felt as connected to the other players online as I would have if we were playing face to face,” “I interact more frequently with my friends online than I do in person,” “Being online has allowed me to keep in touch with people I would otherwise have lost touch with,” “I find it easier to speak to someone in person when I have a really difficult situation or problem,” “I tend to open up to people more online compared to when I see them in person.” All statements were shown in random order but the last four questions always appeared at the end in order to divert attention to the online topic before participants proceed to the second experiment.

Participants were told that the second study involves rating organizations that are trying to recruit college students. Participants viewed six fictitious organizations created to be rated either important or unimportant by Maryland students. The groups were selected from 13 groups that were pre-tested by other Maryland students. The 6 that were selected for inclusion here were the three highest and three lowest rated groups on importance. The groups were: Earth Now, Political Youths, Fitness Club, Gamer’s Club, Teenage Mutant Ninja Turtles’ Club, and Racer’s Club (see Appendix A for descriptions of all groups). Participants were asked to agree or disagree on a 7-

point Likert scale with the same statements on the group's importance and cohesiveness. The statements were as follows: "I would be really excited if this group offered me membership;" "I am not interested in joining this group even if they offered me a place in the group;" "I would definitely join this group if offered the chance to be a member;" "The members of this group think this group is very important to them;" "If I was a member of this group, I would find the group to be personally important;" "The members of this group are very close knit;" "Group members provide support and encouragement to one another;" "Group members are proud of the contribution they make to society at large;" "The members of the group see their membership in the group as a large part of who they are as people;" "The group provides services that make a significant contribution to society."

After reading and answering the questions about each of the 6 organizations, some further questions were asked in order to rule out alternative hypotheses. It may be that participants who are excluded are willing to do *anything* in order to make themselves feel better, having nothing to do with affiliating with others. Therefore, participants were asked about their current desire to "go shopping," "go to a party," "eat ice cream," and "go on vacation." Participants answered along a 7 point scale ranging from "not at all" to "very much." It is hypothesized that responses to these items will not differ based on the manipulation.

Results

Manipulation Check

A manipulation check was run on the feelings of exclusion and, according to the results, included participants felt a greater sense of belonging, self-esteem, control

and meaning. Included participants felt a greater sense of belonging ($M = 4.05$), compared to those who were excluded ($M = 2.99$), $F(1, 46) = 15.71, p < .001$, reported higher self-esteem ($M = 5.15$), compared to excluded participants ($M = 3.96$), $F(1, 46) = 11.51, p < .001$, felt greater control over the game ($M = 4.10$), compared to excluded participants ($M = 1.41$), $F(1, 46) = 47.79, p < .001$, and felt that their presence was significantly more meaningful ($M = 4.00$), compared to excluded participants ($M = 1.93$), $F(1, 46) = 35.18, p < .001$.

Reliabilities and Indexes of dependent variables

Correlations and reliabilities were run on the dependent variables of joining, importance and closeness of the group members. When appropriate, indexes for each of the measures were created. For desire to join, three questions, “I would be really excited if this group offered me membership,” “I would definitely join this group if offered the chance to be a member,” and “I am not interested in joining this group even if they offered me a place in the group” were highly correlated. Chronbach’s alpha was computed for each of the groups (see table 1). For importance, the two questions were highly correlated, “The members of this group think this group is very important to them,” and “If I was a member of this group, I would find the group to be personally important.” These items were combined to create an index of importance (see table 1).

Finally, the two questions on closeness, “The members of this group are very close knit” and “Group members provide support and encouragement to one another,” were also combined to form an index of closeness (see table 1). Chronbach’s alpha was computed for each of the groups (see table 1). Although some of the alpha’s for

importance and closeness were slightly lower, the important variable is the desire to join and alphas for this ranged from .740 to .889.

Table 1
Chronbach's Alpha for Joining, Importance and Closeness for each group

Group Name	Joining	Importance	Closeness
Racers Unlimited	.851	.526	.785
Gaming Club	.864	.529	.594
TMNT	.754	.219	.438
Fitness Club	.740	.706	.643
Earth Now	.889	.395	.862
Political Youths	.834	.657	.790

Hypothesis 1: Importance and cohesiveness

The indexes were used to test whether the groups that were perceived as more important were also perceived as having closer members. As hypothesized, the more important the group, the more cohesive the members, $F(1, 46) = 33.31, p < .001$. The desire to join was not related to the perceptions of importance or cohesion. All participants, whether excluded or not saw the important groups as more cohesive.

Mean differences between the groups were tested on ratings of (a) desire to join these groups, (b) importance and, (c) closeness of members. The six groups that were used were rated the highest three and lowest three on importance, but ratings for the final analysis indicated three groups, very important, moderately important and

not important. The fitness club stood out from the other groups as more important, more attractive to join and more cohesive.

When looking at importance, the fitness club was rated highest amongst the groups ($M = 5.84$), significantly higher than political youths ($M = 5.57$), $t(47) = 1.80$, $p < .1$ and slightly higher, although not statistically significant, than the earth now club ($M = 5.79$). All three of these important groups had higher means on importance as compared to the three unimportant groups, the racers club ($M = 4.98$), the gamers club ($M = 4.41$) and the teenage mutant ninja turtles (TMNT) club ($M = 4.51$). However, amongst the unimportant clubs as well, the racers club was seen as significantly more important than either the gamers club, $t(47) = 3.19$, $p < .003$, or the TMNT club, $t(47) = 4.67$, $p < .001$.

When asked about the desire to join, similar results emerge. The fitness club was significantly more attractive to the participants ($M = 5.03$) as compared to the earth now club ($M = 4.35$), $t(47) = 2.79$, $p < .01$, or the political youths ($M = 4.05$), $t(47) = 4.26$, $p < .001$. All of these means were significantly higher as compared to the desire to join the unimportant groups, the racers club ($M = 2.49$), the gamers club ($M = 2.76$) and the TMNT club ($M = 2.59$). Means for the desire to join did not differ significantly between these three clubs.

Finally, looking at the dependent variable of the closeness of the members for each of the groups, shows similar results with the fitness club being perceived as having the closest members ($M = 5.82$). This is significantly higher than the political youths ($M = 5.11$), $t(47) = 4.89$, $p < .001$ and the earth now ($M = 5.16$), $t(47) = 5.23$,

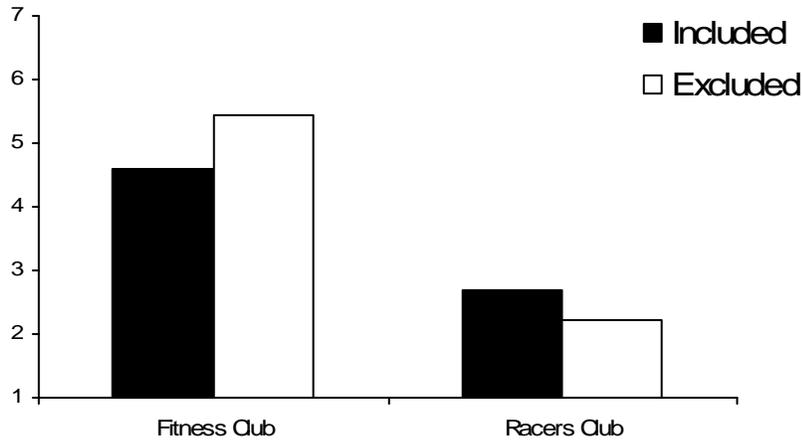
$p < .001$. There were no other differences in closeness between any of the other groups.

Given these differences in ratings, the fitness club is treated in subsequent analysis as the most important club whereas the political youths and earth now are treated as moderately important and the racers, gamers and tmnt are treated as unimportant.

Hypothesis 2: Exclusion and the desire to join important groups

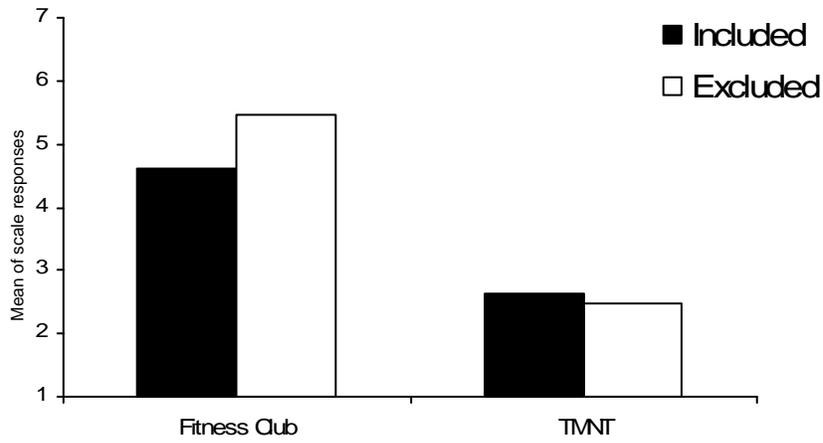
A repeated measures ANOVA was run to test the two-way interaction between exclusion/inclusion and the importance of the group on the participant's desire to join the group. First, we compared the effects of the most important group (fitness club) with each of the non-important groups. Comparing the racer's club to the fitness club we find a significant effect of exclusion and importance. There is a main effect showing that overall, participants want to join the important club (fitness) to a greater extent ($M = 4.99$) than the unimportant club (racers) ($M = 2.48$), $F(1, 46) = 153.74$, $p < .001$. However, this is qualified by a significant two-way interaction with the exclusion/inclusion condition, $F(1, 46) = 10.23$, $p < .01$ (see figure 1). For the fitness club, the participants want to join to a greater extent when they have been excluded ($M = 5.45$) compared to when they have been included ($M = 4.60$). This represents a significant difference, $F(1, 46) = 8.42$, $p < .01$. For the racers club, this trend is actually reversed (although not significantly) and the participants who have been included want to join slightly more ($M = 2.69$) as compared to those who have been excluded ($M = 2.23$), $F(1, 46) = 1.95$, $p = ns$.

Figure 1
Mean responses for included and excluded participants on the desire to join the fitness club versus the racers club



In looking at the fitness club versus the other two unimportant clubs, the same trends emerge. In comparing the fitness club versus the tmnt club, there is a main effect of wanting to join the fitness club ($M = 4.99$) as compared to the tmnt club ($M = 2.55$), $F(1, 46) = 91.06$, $p < .001$. This is qualified by a significant two-way interaction of the exclusion/inclusion condition, $F(1, 46) = 3.68$, $p = .06$ (see figure 2). As we saw for the fitness club, those who had been excluded wanted to join this club to a greater extent as compared to participants who had been included. However, in looking at the tmnt club, there were no significant differences between the inclusion ($M = 2.62$) and exclusion condition ($M = 2.48$). If anything, there is a slight trend in the opposite direction with the club being seen as more attractive by those who had been included, although this difference is not significant.

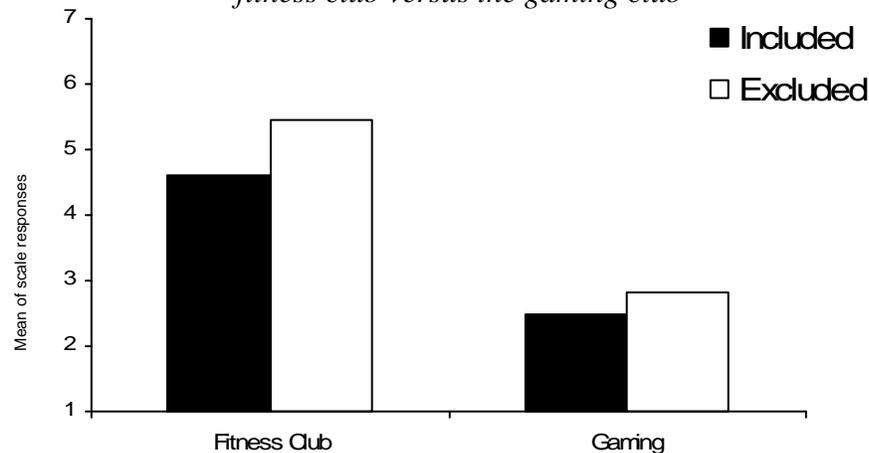
Figure 2
Mean responses for included and excluded participants on the desire to join the fitness club versus the teenage mutant ninja turtles club



Comparing the fitness club with the gaming club shows a similar trend in the results. Again, there is a significant main effect of the desire to join the fitness club ($M = 4.99$) as compared to the gaming club ($M = 2.64$), $F(1, 46) = 123.47$, $p < .001$. Although the two-way interaction was not significant for these two clubs, the trend is very similar to that which was observed for the other unimportant clubs (see figure 3). While the desire to join the fitness club was higher for participants who had been excluded compared to those who had been included, there was no difference in the desire to join the gaming club when participants had been excluded ($M = 2.82$) versus included ($M = 2.48$). This was the only pairing of groups for which there was a significant main effect of exclusion/inclusion condition, $F(1, 46) = 4.67$, $p < .05$. Participants who were excluded desired both clubs to a greater extent as compared to participants who had been included. Although it is unclear why this main effect occurred for only the gaming club, the trend is still in keeping with the results of the other two unimportant groups. When the club is important, excluded individuals want

to join that club to a greater extent than do participants who have been included, but when the club is unimportant, exclusion or inclusion does not have an effect on the desire to join the club.

Figure 3
Mean responses for included and excluded participants on the desire to join the fitness club versus the gaming club



Although participants wanted to join the moderately important groups (political youths and earth now) more than the unimportant groups (racers, tmnt, and gamers), the two-way interactions with exclusion/inclusion were not significant for these groups. Thus, the predicted interaction appears to hold only when the group is perceived as extremely important, not moderately important.

The alternative hypothesis that excluded participants might be interested in doing *anything* in order to make themselves feel better, was ruled out as there were no significant interactions between responses to these activities and participant's inclusion/exclusion condition. Participants who were excluded did show a slightly higher desire to go shopping, $F(1, 46) = 3.27, p = .08$, but this difference was only marginal and it is unlikely that this difference can account for the previous results.

Discussion

The present study demonstrated that groups rated as more important were also perceived as more cohesive (hypothesis 1). These ratings did not interact with the exclusion manipulation, thus, all participants, regardless of exclusion condition, saw the important groups as more cohesive. This novel prediction has not been shown in previous studies and begins to identify factors that create cohesiveness of groups.

The second hypothesis was also supported, showing that after exclusion participants were more interested in joining the important (vs. unimportant) groups. Included and excluded participants showed no difference in their desire to join unimportant groups. Exclusion thus increases the desire to join important groups, presumably because they are seen as more cohesive thus better satisfying the need to belong.

Chapter 5: The Need to Belong and Feelings of Inclusion in an Important Group

The previous study demonstrated that individuals who are socially excluded desire important groups to a greater extent than individuals who have not been socially excluded. One issue with the study is the extent to which one can be confident that such an effect will happen in the real world, beyond the lab, when faced with choices of real groups. Therefore, this study will employ a field design that, coupled, with the previous study, will lend greater confidence to the hypothesis.

Research in social psychology has long shown that individuals are more attracted to members of groups which are demanding. For example, when initiation into a group is highly demanding, liking for the group increases, despite its activities being rated as boring by outsiders (Aronson & Mills, 1959). The present assumption is that when acceptance/initiation to a group is fraught with difficulty, individuals infer liking based on the effort expended in gaining admission. Basing decisions on cues or heuristics is fairly common (Kahneman, 2003; Kruglanski, 1989; Tversky and Kahneman, 1974). The current assumption is that individuals infer information about the importance of the group based on the effort required to gain admission to the group such that when initiation is more difficult, the group is perceived as more important. Thus, in the current study, differences in importance of group membership will be elicited from the participants and will presumably vary based on the severity of the pledge program.

In this type of study, manipulating exclusion would be impossible, as such, the current study measured the participant's need to belong as a proxy for

inclusion/exclusion. Because the participants were in the process of joining fraternities, participants were asked about how much they personally feel a part of the fraternity. The inclusion of others in self scale (Aron, Aron, Tudor, & Nelson, 1991) is often used to measure feelings of inclusion in a group and can identify to what extent participants feel that their own sense of self is connected to the fraternity. Results should replicate those of the lab study by showing that individuals with a higher need to belong feel greater inclusion of self into the group but only when the group is important (i.e., when the pledge program is difficult). Thus, using a different design and different operational variables, the current research will replicate and support the initial lab study findings.

This study predicts that individuals who are high in the need to belong will feel included in the group over time but only when the group is important (hypothesis 1). These results will be replicated using a different measure of the need to belong, rejection sensitivity (hypothesis 2).

Methods

Participants

Four fraternities on campus agreed to participate in this research, Zeta Psi, Alpha Tau Omega, Alpha Epsilon Pi, and Sigma Phi Epsilon. The informed consent was signed first but was unattached to the surveys in order to further reassure the participants that the survey was anonymous. The experimenter stressed to the pledges that there was no way to track down individual answers and encouraged pledges to be open and honest when completing the surveys. In return for participation, the fraternities were given a summary of the research findings which may help them

structure future pledge programs. Individual answers were not identifiable to the fraternities; only aggregate data was reported.

Procedure

Timing of the surveys. The surveys were administered to the pledges during pledge activities. Participants filled out the same packet of questions three times during the semester. The first time occurred during the first week of pledging, the second time was in the midst of pledging and the third time was after being initiated into the fraternity.

The Questionnaires. The first set of questions referred to participant's liking for the other members of the pledge class and the brothers in the fraternity. Participants were asked to rate on a 7-point Likert scale (with appropriate end points) the extent to which they, "feel close to their pledge class right now," "think the members of the fraternity are close to each other," "like the other members of their pledge class," and "like the other brothers in the fraternity." During the third and last administration, participants rated, on the same scale, "the difficulty of their pledge program."

For the next section of the questionnaires, participants agreed or disagreed, on a 7-point Likert scale (from strongly disagree to strongly agree), with a number of statements. Although there is some published research using a scale of the need to belong (Leary, Cottrell, & Phillips, 2001), extensive validation of the scales has not been done (see chapter 2). Therefore, the present study used items from the need to belong Scale as well as items from the Need for Affiliation Scale. From the Need to Belong Scale (Leary, Cottrell, & Phillips, 2001), participants were asked: "I try hard

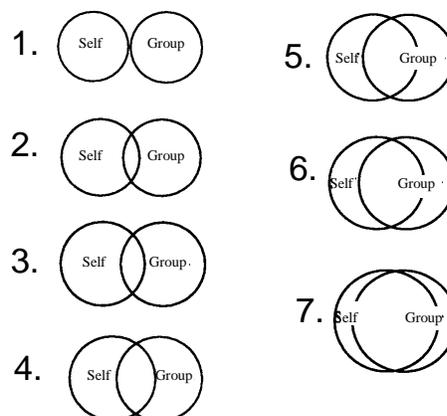
not to do things that will make other people avoid or reject me,” “I seldom worry about whether other people care about me (reverse),” “I need to feel that there are people I can turn to in times of need,” “My feelings are easily hurt when I feel that others do not accept me.” From the Need for Affiliation Scale (Hill, 1987), participants were asked to answer the following items: “One of my greatest sources of comfort when things get rough is being with other people,” “I seem to get satisfaction from being with others more than a lot of other people,” “If I am uncertain about what is expected of me, such as on a task or in a social situation, I usually like to be able to look to certain others for cues,” “I feel like I have really accomplished something valuable when I am able to get close to someone.”

Participants completed 10 questions from the Rejection Sensitivity Questionnaire (Downey & Felman, 1996). The RSQ asks participants to read a scenario (e.g., you ask a girl in your class to borrow her notes) and indicate their concern or anxiety over the outcome of each situation (e.g., how concerned are you that she will let you borrow her notes?) on a 6-point scale from very unconcerned (1) to very concerned (6). They are then asked to indicate the likelihood that the other person would respond in an accepting fashion (e.g., how likely is it that she will let you borrow her notes?) on a 6-point scale ranging from very unlikely (1) to very likely (6). The scores are computed by first reverse scoring the likelihood rating and then multiplying the two rating scales together and computing a mean score for the scale. The scenarios that this study will use are specifically related to concerns over friends and acceptance and include “you ask a girl in your class if you can borrow her notes,” “you ask someone you don’t know well out on a date,” “you approach a close

friend to talk after doing or saying something that seriously upset him,” “you ask a friend to go on vacation with you over spring break,” “you ask a friend if you can borrow something his/hers,” “you ask a friend to do you a big favor,” “you ask your girlfriend/boyfriend if she/he really loves you,” “you go to a party and notice someone on the other side of the room and you ask them to dance,” “you ask your girlfriend/boyfriend to come home to meet your parents,” “you ask someone in one of your classes to coffee.”

Participants then completed the Inclusion of Others in the Self scale (Aron et al., 1991), measuring the extent to which participants feel connected and committed to the fraternity. In the task participants see 7 pictures of concentric circles that range from not touching to almost completely overlapping (see figure 4). Participants are asked to choose the circle that best represents their relationship between the self and the group. The results are coded on a scale ranging from 1, meaning that the group is not part of the self, to 7, meaning the self is almost completely immersed in the group.

Figure 4
Inclusion of Others in the Self Scale (Aron et al., 1991)



Results

A total of 55 participants from the four fraternities completed measures at least once over the course of the semester. Data was collected at three points in the semester, at the start of the pledge program, at the crux of the pledge program (week 5 of a 6 week program) and after students were initiated into the fraternity. Although we stressed to the fraternities the importance of having the same participants complete the survey at each time, this was not always possible. Therefore, within the data we had a number of students who only completed the survey once or twice during the semester, depending on who attended the pledge events on the day the survey was being administered. This was especially a problem for Sigma Phi Epsilon because of their extremely relaxed pledge program and taking new pledges throughout the semester. For example, of the 55 total participants, only 41 completed the survey at time 3, after initiation. Further, we believe that participants either inadvertently or purposely used different participant numbers when completing the survey at different times so that it would be harder to identify them. Although we went to great lengths to assure participants that their data could not be linked to them, there may be some who did not trust that this was true and used different participant numbers each time they completed the survey. Therefore, despite the number of participants who completed the survey, the number of participants whose data could be analyzed, especially when looking across time, is much reduced as compared to the overall sample size. If anything, these small numbers increases the confidence in the results as significance was achieved despite a small sample size. Given more participants, the results should be strengthened.

Reliabilities and Indexes of Independent Variables

A number of scales were used in order to understand individual differences in the need for belonging. Correlations and indexes were computed for each scale used as well as combinations of scales.

The four items from the Need to Belong scale (Leary, Kelly, Cottrell, & Schreindorfer, 2005) formed a reliable scale with $\alpha = .67$. Similarly, the four items from the Need for Affiliation (Hill, 1987) formed a reliable scale, $\alpha = .57$. Given the small number of items on these scales, an index of the Need to Belong and the Need for Affiliation was created, $\alpha = .78$, henceforth referred to as the need to belong. Ten items were included from the Rejection Sensitivity Questionnaire, RSQ, (Downey & Feldman, 1996). Reliability for the scale was high, $\alpha = .76$.

Difficulty of Pledge Programs

The fraternities were selected on the basis of their reputations for having more difficult or easier pledge programs. To confirm that indeed there were differences in the difficulty of the pledge program, means for each fraternity were computed for a number of questions assessing the difficulty of the pledge program. The questions which formed the best scale ($\alpha = .845$) included, "How difficult was your pledge program," "Our pledge master was particularly challenging," "It is necessary to have a pledge program in order to make brothers feel committed to the fraternity," "Initiation will always be an important part of my college experience," "My life at Maryland would be very different had I not pledged a fraternity."

The fraternities ranged in their reported difficulty with SigEp reporting the easiest program ($M = 3.70$), followed by Zeta Psi ($M = 5.10$). This represents a

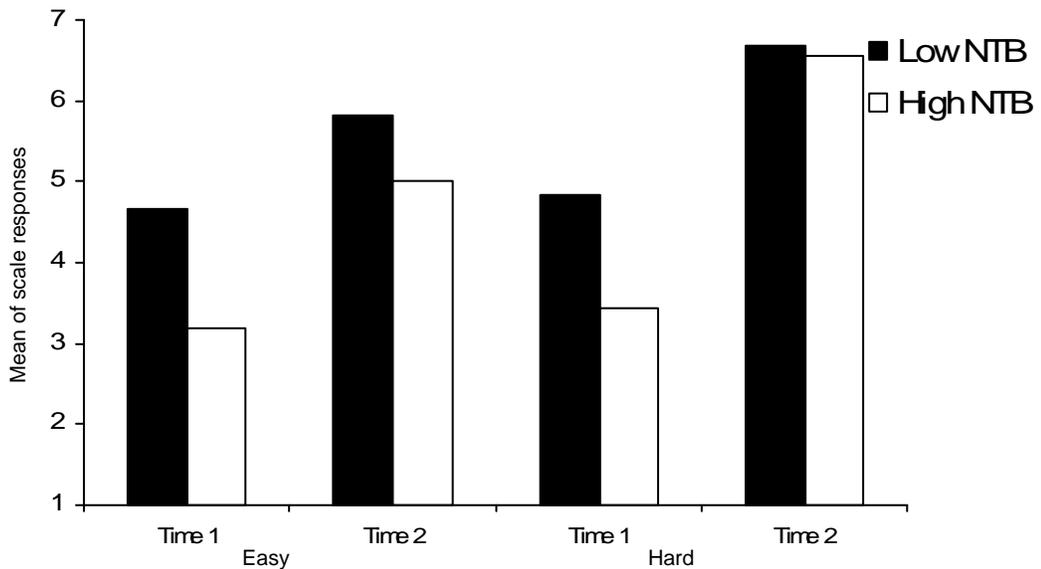
significant difference, $t(11.13) = 3.04, p < .05$. The next most difficult program was ATO ($M = 5.45$), although the difference between Zeta Psi and ATO was not significant, the difference between SigEp and ATO was significant, $t(17.42) = 4.82, p < .001$. Finally, AEPi was rated as the most difficult program ($M = 6.09$) and this program was rated as significantly more difficult than ATO, $t(18.91) = -2.49, p < .05$, Zeta Psi, $t(6.57) = -2.59, p < .05$, and Sig Ep, $t(13.06) = 7.42, p < .001$.

Because of the small numbers of participants for each fraternity and unequal variances, a median split of the index of difficulty was used for further analysis. This created a dichotomous variable of either an easy or hard pledge program.

Need to Belong

A repeated measure ANOVA was run to test the difficulty of pledge program, the need to belong and the dependent variable of the Inclusion of Others in the Self Scale (Aron et al., 1991) over time. This three-way interaction approached significance, $F(1, 8) = 3.10, p = .10$, partial Eta squared = .28 (see figure 5).

Figure 5
Mean responses on the inclusion of others in the self scale before initiation and during the middle of pledging



To help interpret this interaction, the data was split using the dichotomous variable of difficult vs. easy pledge program. When the pledge program was rated as easy, there was a significant main effect of time on the inclusion of others in the self. Across participants, students felt close to their pledge class toward the end of the pledge program ($M = 5.45$) as compared to the beginning of pledging ($M = 4.00$), $F(1, 9) = 9.14, p = .01$. There was also a significant main effect of belonging such that those who were low in the need to belong reported greater inclusion of the self at both times as compared to the high need to belong participants, $F(1, 9) = 5.82, p < .05$. However, there was no significant interaction between the need to belong and feelings of inclusion in the pledge class at the different times, $F(1, 9) = .417, p = ns$ (see figure 5).

When the pledge program was rated as difficult, a different story emerges. Again there was a significant main effect of time such that participants overall felt less included in the pledge class at the beginning of the program ($M = 4.00$) as compared to the end of the program ($M = 6.60$), $F(1, 13) = 97.61, p < .001$. There was also a weak main effect of belonging such that those who were low in the need to belong felt greater inclusion as compared to those who were high in the need to belong, $F(1, 13) = 4.13, p < .06$. However, these main effects are qualified by a significant interaction of time and need to belong on feelings of inclusion, $F(1, 13) = 6.52, p = .02$, partial Eta squared = .33 (see figure 5). At the beginning of pledging, those high in the need to belong felt less included ($M = 3.44$) as compared to those low in the need to belong ($M = 4.83$) but by the middle of the semester, those high in the need to belong felt just as included ($M = 6.56$) as those low in the need to belong

($M = 6.67$). Testing these means further, the difference between the high and low need to belong was almost significant at the start of pledging, $F(1, 14) = 3.90, p = .07$ but not significant toward the end of pledging, $F(1, 13) = .163, p = ns$.

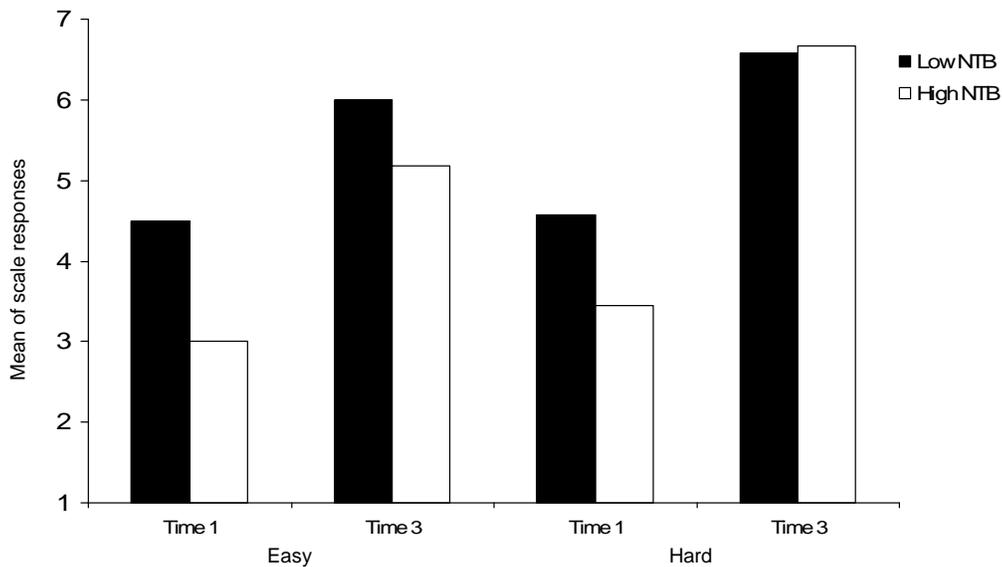
Thus, when the pledge program was easy, the data show that the individuals who are high in the need to belong feel less connected to the fraternity at the beginning of pledging and also in the middle of pledging. It would appear that their concern about belonging actually lead them to feel less connected to others when the pledge program was easy. However, when the pledge program was hard, at the beginning of pledging, those low in the need to belong felt more connected but there was no difference between high and low need to belong by the end of the pledge program. Thus, the high need to belong participants increased their feelings of connection to the fraternity over time but only when they felt that the pledge program was important (i.e., difficult).

Next, the same analysis was conducted comparing results from the beginning of the pledge program with results from after initiation. The three-way interaction for the difficulty of pledge program, the need to belong and the inclusion over time is not significant when comparing between the start of pledging to after initiation, $F(3, 10) = .06, p = ns$. The lack of an effect may be due to the sample size as there was very limited power to detect a three-way interaction. Despite the lack of significance for the main interaction, further analysis reveals interesting findings.

A median split was used to explore the relationship between the easy and difficult pledge programs. When the program was easy, there was a significant main effect of the inclusion of other in the self. Overall, at the beginning of the pledge

program, students felt less connected to their pledge class ($M = 3.86$) and after initiation, students felt significantly more connected ($M = 5.64$), $F(1, 12) = 24.23$, $p < .001$. In addition, there was a significant main effect of the need to belong. Students who were high in the need to belong felt less of a connection to the pledge class both times as compared to the students who were low in the need to belong, $F(1, 12) = 7.27$, $p < .05$ (see figure 6). There was no significant interaction between the need to belong and the feelings of connection to the other members when the pledge program was rated as easy by the participants.

Figure 6
Mean responses on the initiation of others in the self scale from before pledging to after initiation



In looking at the difficult pledge programs, there was a significant interaction between time and belonging. There was a significant main effect of time such that overall, participants felt more a part of their pledge class after initiation ($M = 6.63$) as compared to the start of the pledging ($M = 3.94$), $F(1, 14) = 76.88$, $p < .001$. More importantly, the interaction between the need to belong and the time is significant. At

the start of pledging, the participants who are low in the need to belong feel more included in the pledge class ($M = 4.57$) as compared to those high in the need to belong ($M = 3.44$). This difference disappears after initiation, when students low in the need to belong ($M = 6.57$) report equally strong inclusion into the pledge program as compared to those high in the need to belong ($M = 6.67$). This interaction is significant $F(1, 14) = 4.21, p = .06$, partial Eta squared = .23 (see figure 6). In addition, statistical tests show that the difference between the means at the start of pledging is significantly different, $F(1, 14) = 3.90, p = .07$, whereas the difference between the means after initiation is not significant, $F(1, 14) = .135, p = ns$.

The data support the first hypothesis in showing that the need to belong interacts with the importance of the group such that only when the group was difficult did the participants high in the need to belong feel connected to the fraternity. Although results comparing the beginning of pledging with the middle of pledging show stronger results, the pattern is the same for the post-initiation comparison as well. Individuals who are low in the need to belong feel greater inclusion of others into the self as compared to individuals who are high in the need to belong. However, only when the initiation program is difficult does this difference disappear over the course of pledging. When the pledge program is easy, the low need to belong participants continue to feel greater inclusion into the pledge program. However, when the pledge program is seen as difficult, the difference between high and low need to belong equalizes during the course of pledging. This lends support to the hypothesis that it is important groups that are particularly attractive to high need to belong (or socially isolated) individuals. They continue to feel distant from the

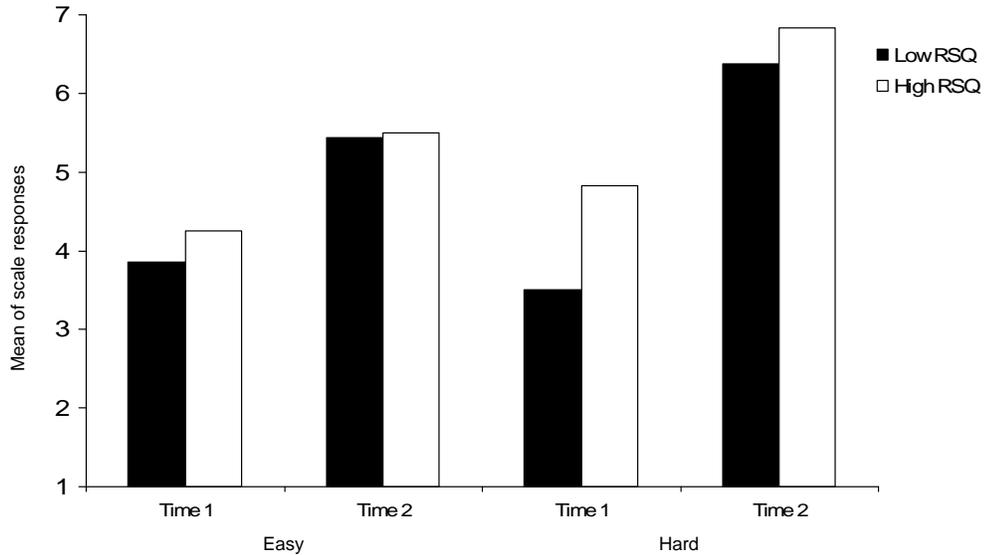
fraternity when the program is less important (i.e., easy) but feel connected when the program is seen as important (i.e., difficult).

Rejection Sensitivity

When using the rejection to sensitivity questionnaire, similar results emerge. There is a significant interaction between rejection sensitivity and time of data collection on how connected they feel towards the fraternity but only when the pledge program is rated at difficult. When comparing the beginning of pledging with the middle of pledging, when the pledge program was rated as easy, there was only a main effect of greater inclusion in the self during the middle of pledging ($M = 5.45$) as compared to the beginning of pledging ($M = 4.00$), $F(1, 9) = 7.45, p = .02$. However, when the pledge program was difficult, there was a marginally significant interaction of time and belonging on the inclusion of others in the self. There was a main effect of time such that during the middle of pledging students felt more connected to the pledge class ($M = 6.57$) compared to the beginning of pledging ($M = 4.07$), $F(1, 12) = 75.95, p < .001$. There was also a main effect of rejection to sensitivity. Students who were high in rejection sensitivity felt closer to the fraternity at both times, $F(1, 12) = 5.95, p < .05$. However, these two main effects were qualified by a marginally significant interaction of time and sensitivity to rejection, $F(1, 12) = 2.45, p = .1$, partial Eta squared = .17 (see figure 7). At the beginning of pledging, students who were high in rejection sensitivity showed greater inclusion of others in the self ($M = 4.83$) as compared to students low in rejection sensitivity ($M = 3.50$). During the middle of pledging, this difference was reduced with high rejection

sensitivity showing similar results ($M = 6.83$) as compared to low rejection sensitivity ($M = 6.38$).

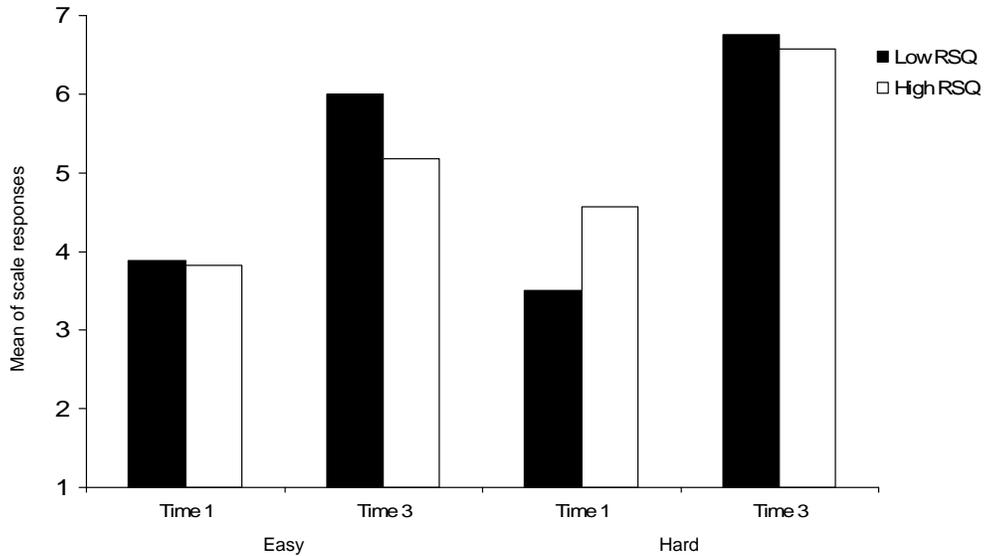
Figure 7
Mean responses on the inclusion of others in the self scale before initiation and during the middle of pledging



The results are slightly stronger when looking at the beginning of pledging as compared to after initiation. Again, the interaction only emerges when the pledge program is rated as difficult, not when the pledge program is rated as easy. When the program is easy, the only significant effect is the main effect of inclusion over time. At the beginning of the pledge program, students felt less connected to their pledge class ($M = 3.86$) as compared to after initiation ($M = 5.64$), $F(1, 12) = 22.16$, $p < .001$. However, when the pledge program is rated as difficult, there is a significant interaction between time and rejection sensitivity. The same overall main effect of time is seen, $F(1, 13) = 68.60$, $p < .001$. This is qualified by the interaction such that at the beginning of pledging, participants high in rejection sensitivity feel greater inclusion of others in the self ($M = 4.57$) as compared to those low in rejection

sensitivity ($M = 3.50$) but this difference disappears after initiation, when means of high and low sensitivity students are virtually identical, $F(1, 13) = 3.89, p = .07$, partial Eta squared = .23 (see figure 8).

Figure 8
Mean responses on the initiation of others in the self scale from before pledging to after initiation



Although the results using sensitivity to rejection are not as strong as the results using the combined scales of need to belong and need for affiliation, they, nevertheless, support the second hypothesis. When the initiation program is perceived as easy, the students who are low in rejection sensitivity feel more connected to the fraternity regardless of how long they have been part of the pledge program. In contrast, when the program is perceived as easy, the students who are low (vs. high) in rejection sensitivity only feel more connected at the start of pledging and by the middle of pledging there is no difference between the high and low rejection sensitivity students.

Discussion

Results of this study supported the hypotheses showing that participants who were high in the need to belong felt included in the fraternity but only when the fraternity was difficult to get into. Using a measure of the need to belong, the data show that when the fraternity program was easy, the high need to belong participants felt less included (compared to the low need to belong participants) over the entire course of the pledge program. However, when the program was difficult, the students high in the need to belong felt included in the fraternity by the middle of the pledge program. Using a different measure of the need to belong, rejection sensitivity, led to the same results. Participants high in the sensitivity to rejection felt included in the fraternity by the middle of the pledge program but only when the program was rated as difficult.

Using a different operationalization of both exclusion and importance, results of this study support the findings of the previous study. In the first study, participants who were excluded wanted to join important groups and in this study, the participants who were high in the need to belong actually felt more included in the fraternity when it was important.

Chapter 6: Conclusion

The results of these two studies indicate that individuals who are socially excluded are more likely to join an important (vs. unimportant) group. The data suggest that this is the result of the perceived cohesiveness of groups that are perceived as important. In the first study, participants who were excluded wanted to join important groups more than included participants. There was no effect of exclusion when participants were asked to join a group they perceived as not important. In addition, the groups that were seen as more important were also seen as more cohesive compared to the groups that were less important. In the second experiment, similar results were found for students pledging a fraternity on campus. Students who were high in the need to belong only felt connected to the fraternity during pledging when the fraternity was important. When the pledge program was perceived as easy (i.e., less important) the high need to belong students continued to feel less included throughout the semester. Thus, social exclusion increases the desire to join important groups and important groups make these individuals feel more connected to the group.

The link between social exclusion and the choice of important groups is a unique and novel prediction. Researchers have not yet explored the types of groups that might be attractive to social isolated individuals. The need for this type of research is increasing in an age when many feel that social connectedness is on the decline and can be blamed for many ills of our society (Twenge, 2000). Given the negative consequences of social exclusion, researchers should be interested in the types of groups that may achieve success if used as an intervention. In addition, the

present research extends the similarity-attraction hypothesis to focus on how this might affect groups. In line with predictions, the important groups were seen by participants as more cohesive, as compared to the less important groups. We argue that this is the result of perceived similarities with other members of the group on an important dimension, leading to greater attraction to other members and a close knit group. Future studies in this area should concentrate on directly testing the link between cohesion and attraction to groups. For example, addressing issues such as whether a group might be important but not cohesive or whether important groups are actually more cohesive or just perceived as such.

Finally, the present work has implications for the rising violence in today's world. If terrorist organizations represent the ultimate in importance, a group for which one is willing to die for, then socially excluded individuals should be attracted to terrorist groups more than other organizations. The terrorism literature emphasizes the importance of belonging which motivates and sustains membership in such organizations. According to Fathali Moghaddam: "comradeship, brotherhood, belonging, and a sense of identity through friendship... these are the basic building blocks, the first steps of young men becoming ensnared in the morality of terrorist organizations" (Moghaddam, 2006, p. 92). Similarly, Marc Sageman (2004) argues that through friendship and kinship, individuals are drawn into the global jihad as the antidote to the social isolation and alienation they experience. Contrary to popular opinion, this phenomena is not new or unique to Al Qaeda. According to della Porta, "block recruitment," small group's of friends who join together, was common in both the Italian Red Brigades and the German Red Army Faction (della Porta, 1992). In

fact, familial and friendship ties have been important in the recruitment of almost every terrorist organization, including the IRA (Toolis, 1995), the ETA (Reinares, 2004), Palestinian organizations (Post, Sprinzak & Denny, 2003) and Columbian groups (Florez-Morris, 2007).

More specifically, in a study of 42 former members of Columbian guerrilla groups, Florez-Morris (2007) found that by their own admission, 19% of the sample said that their decision to join the group was in part due to their desire to gain social acceptance into the group. As Florez-Morris writes, “joining a subversive movement motivated by feelings of being part of a group provided the new members with some sense of security and validation” (p. 622). In his study of recruitment to the ETA, Reinares (2004) finds that, especially amongst the women, social bonds, specifically with boyfriends or husbands, who were already members, were a major reason why most of the women in his sample joined. Amongst Palestinian terrorists, Post, Sprinzak and Denny (2003) find that when fathers were members of the organization, the sons were more likely to join the same organization and usually joined the more militant or armed wing of the organization. Even amongst Muslim extremists in the 1970’s a sense of brotherhood and camaraderie provided much needed support to recent migrants to the city (Ibrahim, 1980). Among a sample of 21 Chechen suicide bombers identified by Gill (2007), fourteen had direct family members that took part in the conflict.

The current research suggests that individuals seeking belonging will be especially attracted to terrorist organizations. The literature in terrorism highlights the characteristics of the group that keeps people motivated or engaged but the current

research suggests that there is a theoretical reason why such individuals are likely to seek belonging in a terrorist organization. This analysis does not imply that terrorist organizations are made up of individuals rejected by society, rather, that social exclusion may be one of the contributing factors (Kruglanski & Fishman, 2006) for involvement with an extremist group.

From a different perspective, recent research in the terrorism literature supports the current hypothesis that importance is related to cohesion. Berman and Laitin (2008) argue that terrorist groups that provide social services to their members (e.g., Hamas, Hizbollah) are more cohesive. In this analysis, the rate of defection is used to indicate cohesion; the fewer the defectors, the more cohesive the group. Not only do groups who use suicide bombings require commitment to the group in the form of sacrifice but they create larger incentives not to leave the group because of the social services they provide. However, providing social services to members can also be an indication that a group is important. Therefore, according to Berman and Laitin, increasing importance leads to increases in cohesion.

Some researchers have implied that social exclusion may be linked to violence through the desire to be aggressive after rejection (Williams, 2007). However terrorism scholars reject the notion that individuals are likely to join such groups because of their desire to for violence. For example, Sageman (2004) argues that terrorism can be blamed on in-group love rather than out-group hatred. Thus, lack of belonging appears a better candidate for why individuals choose to join such organizations, rather than violence, although future work in this area is certainly necessary.

Thus, a tentative link between social exclusion and extremism has been suggested (Twenge, 2000; Williams, 2007), but the prediction that this results from the desire to belong represents a novel contribution. Based on the initial two studies presented here, the link between social exclusion and types of groups is one that should be investigated further, especially as it relates to the types of individuals likely to join terrorist organizations. If the present analysis is correct, then deterring individuals from joining terrorist organizations will require the use of equally important alternative groups, those that equally fulfill the need to belong. This may prove a difficult task as few organizations are perceived as equal in importance to terrorist organizations. However, the rising violence in the world necessitates research in this area.

Appendices

Appendix A

Cricket Club:

The Cricket Club is dedicated to the ancient sport of Cricket. The club provides for individuals of many diverse skills and abilities. The club provides lessons for all ages and skills, working to better the game of each individual player. In addition, members are encouraged to join our cricket teams of all levels and skills. Team members travel to various games and tournaments worldwide in order to compete with other cricket clubs.

Webmasters Unite:

Webmasters Unite is a professional association dedicated to the support of individuals who create and manage web sites. Webmasters Unite sponsors seminars and conferences at which members can present current projects and spark new ideas for the effective management of websites. The seminars and conferences draw individuals from around the world. In addition, members gather at smaller meetings to discuss current issues and trends in the design and maintenance of websites.

Gaming Club**:

The Gaming Club brings together a diverse group of individuals who are all interested in having fun while gaming. The club meets together to play and compete in various online games as well as games on PlayStation and Xbox. The club draws individuals of various backgrounds and skills who are matched to play effectively. In addition, members share tips and tricks with other members and information about upcoming events and new releases.

Reach Out:

Reach Out is a worldwide organization devoted to fighting the causes of poverty throughout the world. Our focus is on poverty prevention through programs in early childhood, youth, education, jobs and economic security. Our members come from diverse backgrounds and help develop and run our programs in their local neighborhood as well as around the world. In addition, we also fund basic survival programs in healthcare, hunger, housing and domestic violence.

Fitness Club**:

The fitness club is dedicated to ensuring good health and fitness for individuals of all ages and abilities. Providing opportunities for individuals to stay healthy together is the key to countering the ever growing obesity problem. Members participate in team walks, runs and other sports activities. Members share tips and techniques that help them stay healthy and fit and such support allows members to stay on track with their fitness goals.

Soup's On:

Soup's On is a club devoted to feeding the poorest in our cities. The members staff a soup kitchen that serves hot food each evening. Members sign up for one evening a week and staff that dinner with other members. In addition, members meet to discuss issues facing the cities poorest citizens and work to

create legislation that helps these individuals. Members plan events that raise money and awareness about poverty and homelessness.

Dog Lovers:

The Dog Lovers Club celebrates both human and animal members for their uniqueness and individuality. Human members share techniques and tips for fostering a supportive environment for their dogs to grow and mature, while our dogs get to socialize and have fun with fellow canine members. The club meets in different locations to expose our dogs to a broad range of recreational sites. Canine members are the focus of all trips and discussions.

Earth Now:**

Earth Now is a club devoted to sustainable energy and a greener environment. Members meet to discuss and implement strategies within their own communities in order to help them become more environmentally friendly. Members are engaged in various projects with other members that can make a small difference for the world. Earth Now members also attend conferences on environmental issues and initiatives and work to propose legislation dedicated to a greener world.

Racers Unlimited:**

Racers Unlimited is a club devoted to all automobile enthusiasts. Members meet to discuss their true passion for cars, sharing advice and tips on everything from acquiring new cars to caring for and refurbishing older cars. All issues related to automobiles are discussed. In addition to meetings, members travel to races, exhibitions and other forums that unite car lovers worldwide. Members with varying degrees of knowledge and education about cars may participate.

Teenage Mutant Ninja Turtles (TMNT):**

The Teenage Mutant Ninja Turtles fan club is devoted to pizza and fighting The Foot. Members meet together to play TMNT video games as well as share collectables and other paraphernalia. Information on the release of the newest movie as well as tips on collectables is shared at the meetings. Members also travel to TMNT movie releases and other events for TMNT enthusiasts. Pizza is served at all meetings and events.

Political Youths:**

Political Youths is a club devoted to encouraging young voters to let their political voices be heard. Many youths are disillusioned with the political process but we are working to ensure that the youth vote represent a significant block of voters. Members meet to discuss strategies for getting out the vote, propose legislation and organize events targeting young voters. We travel to Washington to lobby legislature for initiative that support young voters.

Fight Genocide:**

Fight Genocide is a club devoted to stopping atrocities worldwide. Members meet to discuss factors that may foster the organized killing of nations around the world and what we can do to stop such carnage in the future. Members host and attend forums and seminars on issues of genocide and humanitarian

relief for people affected by bloodshed. In addition, Fight Genocide proposes legislation to governments to stop and root out such evils.

Travel Wise:

Travel Wise is a club which believes in travel to expand and enrich cultural experiences. Members meet to discuss places of travel and trade tips and strategies for effective, efficient and affordable travel. Members come with a variety of travel experiences from those who are only interested in travel to those who are season travelers with years of experience. In addition, Travel Wise organizes small tours for members of similar travel interests.

**These groups were selected for use in study 1.

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