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"Now Imagine You're One of Them": Using Serious Games to Induce Identification with Out-Groups

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"NOW IMAGINE YOU'RE ONE OF THEM": USING SERIOUS GAMES TO INDUCE
IDENTIFICATION WITH OUT-GROUPS

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"NOW IMAGINE YOU'RE ONE OF THEM": USING SERIOUS GAMES TO INDUCE IDENTIFICATION WITH OUT-GROUPS

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I dedicate this thesis to my parents, Ganer and Paulette Newman, who are the greatest examples of compassion and integrity I have ever known. Also, I would like to thank my partner Carrie, without whom my life and this work would not be complete.

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The purpose of this study was to expand our understanding of the utility of identification in the reduction of out-group derogation. Specifically, this research examined the extent to which individuals can be persuaded to identify with members of a perceived out-group, particularly through the use of online games. *Spent* is an online, point-and-click game that places users in the role of the working poor. *Spent* was used to test the potential of serious or prosocial games to increase players' identification with a group of people who are often on the fringes of social acceptance. Specifically, this research (a) developed a new measurement of cause identification, the Identification with Perceived Out-Group Scale (IPOGS), (b) tested the validity and reliability of the IPOGS, and (c) examined the change in identification with America's poor after playing the online game *Spent*.

Following a pilot test of the Identification with Perceived Out-Group Scale, 55 young adults (ages 18-35) were recruited to participate in a quasi-experiment. Initially, participants completed the IPOGS and then played the online game *Spent*. Upon completion of the game, participants took the IPOGS again. Participants were also asked questions about their game play experience and basic demographic information.

Results indicate that individuals who had lower levels of identification with America's poor had significantly higher levels of identification after playing the online

game. The increase in identification was evidenced in a greater perception of common interests and values, greater affective attachment, and greater willingness to interact with the working poor after playing *Spent*. These findings suggest that nonprofit organizations may find online gaming beneficial when trying to cultivate identification with their causes, particularly among young adults.

Key words: identification, online gaming, serious or prosocial games, working poor, nonprofit, out-groups

CHAPTER ONE

INTRODUCTION

Over 14 million Americans are unemployed. Now imagine you're one of them. Your

savings are gone. You've lost your house. You're a single parent. And you're down to

your last $1000. Can you make it through the month?

So begins *Spent*, an online game designed to educate and encourage donations for

the nonprofit organization Urban Ministries of Durham by placing the user in the

metaphorical shoes of a working poor American. The game seeks to subvert negative

assumptions about homelessness by allowing gamers to virtually experience everyday

challenges faced by low-income individuals.

Spent represents one voice in the growing dialogue about class in America. The

recent recession, which began in 2007 and continues at the time of this writing, has

resulted in a burgeoning class of unemployed Americans, highlighting income disparities

between the rich and poor. The bleakness of the global economy has spawned protest

movements worldwide ranging from Occupy Wall Street to the Tea Party. In addition, the

fallout of the 2007 recession has had a tremendous impact on the nonprofit sector, forcing

managers to think creatively in order to bolster fund raising efforts (Salamon, Geller, &

Spence, 2009). During difficult economic times, it is all the more critical for nonprofit

organizations to gain and maintain a strong, committed donor base. In an effort to adapt

to recessionary shifts in donor trends, some nonprofits have turned to the online gaming

industry to galvanize support for their causes.

Communication scholarship has suggested that one method of achieving desired

organizational outcomes is through the establishment of identification of organizational members (Cheney, 1983; Scott et al., 1999). In a nonprofit context, donors and volunteers are among the most important organizational members. Extant research has found that the more individuals identify with a nonprofit, the more likely they are to give of their time and resources (e.g., Arnett, German, & Hunt, 2003; Bhattacharya, Rao, & Glynn, 1995; Tidwell, 2005). However, donor and volunteer mobilization efforts may be improved with a better understanding of the underlying dimensions of identification.

While organizational identification is certainly important, nonprofits may still find it difficult to attract and maintain support. Volunteer trends suggest that episodic or short-term volunteerism is on the rise (Macduff, 2005). In contrast to many traditional volunteer programs, episodic volunteers desire service opportunities that are shorter in length (Handy, Brodeur, & Cnaan, 2006). Years ago, Gaskin (1998) foretold that gaining young volunteers, a traditionally underrepresented group would require accommodating them, rather than forcing them to fit the mold of a traditional volunteer. Hankinson and Rochester (2005) note that young volunteers are underrepresented in part because they perceive volunteering as being boring and involve older people who do not appreciate their particular skills.

One means of reaching younger supporters may be through the use of online interactive elements. The most successful nonprofits in the world today are those that take strategic advantage of the interconnectivity and sense of global consciousness of the modern-day, socially networked society (Levinson, Adkins, & Forbes, 2010). Young people may be more inclined to serve as sounding boards for organizations, choosing

nonprofits that reflect their self concept, "liking" them, and sharing nonprofit causes within their social networks. Surprisingly, many nonprofit organizations do not seem to be capitalizing on available technology to reach potential supporters among younger generations. After examining 275 nonprofit organizations, Water, Burnett, Lamm, and Lucas (2009) discovered that nonprofits are not taking full advantage of Facebook and other social networking sites in their efforts to cultivate relationships. Social games, for example, are widely popular on Facebook and could serve as a groundbreaking tool for volunteer and donor recruitment.

The following research project sought to understand how emerging technologies, like online games, can be utilized by nonprofit organizations to foster greater identification and consequently, engender financial support and encourage volunteerism for their causes. This research contributes to our understanding of identification with the kinds of social groups who often benefit from nonprofit services. Consequently, this study illuminates potential ways in which nonprofits can seek growth in less-than-favorable economic conditions, as well as times of prosperity.

This study is presented in five chapters. This chapter has provided a brief introduction and rationale for the study. Chapter 2 reviews the available literature concerning social identity theory, identification and its current application in nonprofit contexts, existing measures of identification, and the utility of social games. Chapter 3 explains the methods for both the pilot test of a new scale created to measure the phenomenon, as well as the methods for the quasi-experiment. Next, Chapter 4 presents the results of the quasi-experiment. Finally, Chapter 5 concludes with a discussion of the

results, as well as implications of this research and suggestions for future examinations

CHAPTER TWO

LITERATURE REVIEW

The following literature review is organized into five parts. Initially, the theoretical underpinnings of social identification are discussed, as well as literature surrounding identification with out-groups. Then, literature concerning identification in nonprofit contexts is followed by a discussion of the various means of measuring identification in communication and sociological contexts. Finally, literature examining the utility of prosocial and serious games in nonprofit contexts is reviewed.

Social Identity Theory

Originally studied as a sociological and psychological understanding of intergroup prejudice, Social Identity Theory (SIT) posits that the human self-concept is in part defined by the various social groups with which one affiliates (Hogg & Terry, 2000). Social identities are the amalgamation of these various affiliations. More specifically, recent inquiry has suggested that cognitive, evaluative, and emotional components contribute to one's social identity (Bergami & Bagozzi, 2000).

Initially, the cognitive component of social identity indicates that individuals must recognize that they are indeed a member of a particular social group (Stets & Burke, 2000). When individuals state that they "are" a Christian or they "are" a Democrat, they are using their affiliation with a group as a descriptor of the self. This attribute of social identity is best understood through a related theory known as Self-Categorization Theory (SCT), which suggests that humans have an innate tendency to categorize themselves and others (Hogg & Terry, 2000). When individuals self-categorize, they create prototypes or

representations of the collective attributes of the group such as the group's values, attitudes, and behaviors. Since group members are generally sociologically congruent or are otherwise similarly minded, they are said to have a shared prototype. Prototypes are strengthened by the presence and salience of an out-group. A group can more clearly define what it is with increased awareness of what it is not. This categorization process involves the creation of stereotypes and the outlining of group-normative behaviors to strengthen the boundaries between in-groups and out-groups (Hogg, Terry, & White, 1995). When an individual's membership in a group is salient, s/he will self-regulate and engage in behaviors considered normative for that group. This self-categorization defines one's social identity but diminishes one's individual identity in a process known as depersonalization (Turner, 1985).

The evaluative component of social identity refers to the positive and negative value distinctions that surround group affiliation. When individuals consider themselves members of an in-group, they will generally evaluate that group more positively and view relevant out-groups negatively. SCT posits that the process of categorization accentuates the similarities among in-group members and the differences among out-group members (Stets & Burke, 2000). For example, a Democrat who believes Republicans are apathetic to working class Americans will highlight or exaggerate this perceived apathy and see all Republicans as more apathetic to this group than all Democrats. They will universalize the compassion that Democrats have for working class Americans and the apathy that Republicans have for this group. The tendency to view the out-group as homogenous aids in the process of evaluating others and sorting them into salient categories (Ostrom &

Sedikides, 1992).

It is important to note that these evaluative distinctions do not have to be robust, meaningful, or even accurate as Tajfel's (1974) Minimal Group Paradigm (MGP) indicated that even the most arbitrary categorical distinctions trigger in-group favoritism. Simply the act of placing an individual into a category elicits an in-group bias. For example, very little distinguishes one college fraternity from the next; however, each fraternity highlights the minuscule distinctions that separate it from others, forming a lynchpin for galvanizing the in-group. Tajfel and Turner (1986) argued that these biases are driven by competition for limited resources and by the desire to enhance self-esteem. During financial crises, for example, various socioeconomic groups rally against their counterparts. Low-income citizens may claim that the recession was caused by corporate greed, while wealthier individuals may argue that welfare benefits for the poor are what lead to the economic decline. Class divisions may be made more visible in difficult financial times largely because as resources become increasingly scarce, in-group biases are triggered.

Interestingly, according to Hertel and Kerr (2001), group evaluations can be altered, even directed. Experimenters placed participants into arbitrary groups labeled "shape dependent" or "shape independent." After being categorized, participants' self-esteem and mood were measured. Following this initial measurement, participants were primed for either "loyalty" or "equality." Then each of the primed groups was given a post-experimental questionnaire that measured how strongly the participants agreed with their assigned group categorization, as well as their level of identification with the group. The

results indicated that a priming of *loyalty* resulted in a significantly larger increase in in-group favoritism than a priming of *equality*. The results also indicated that in-group favoritism was associated with enhanced self-esteem in the *loyalty* priming condition and decreased self-esteem for the *equality*-primed participants. These findings are significant for persuaders seeking to curb out-group derogation as they suggest that individuals can be guided away from prescribed in-group biases.

The emotional component that contributes to one's social identity is often referred to as the emotional involvement or affective attachment to a group (Ellemers, Kortekaas, & Ouwerkerk, 1999). Typically, individuals self-select group memberships that strengthen their self-esteem (Bergami & Bagozzi, 2010). As a result, identification scholars have long argued that displaying group status is important to strengthening identification (e.g., Ellemers, de Gilder, & Haslam, 2004). In contrast, research has also found that individuals may demonstrate high identification with low status groups, such as an individual working as an exotic dancer or butcher or in a garbage dump or coal mine or some other occupation considered degrading or disgusting (e.g., Ashforth & Kreiner, 1999).

However, identification with low status groups may be reserved for only self-selected group memberships. When individuals believe that an unfavorable group membership has been unjustly or illegitimately imposed upon them, they are less likely to identify with the group (Ellemers, Wilke, & Van Knippenberg, 1993). In fact, the recognition of illegitimate group placement is the impetus for a politicized collective identity (Lalonde & Silverman, 1994), that is, a form of collective identity that underlies

group members' explicit motivation to engage in societal power struggles (Simon &
Klandermans, 2001). More specifically, social comparisons may reveal seemingly
illegitimate inequities between an individual's in-group and a relevant out-group, such as
East Germans recognizing their significantly poorer quality of life than West Germans
despite sharing a common nationality. Upon this initial recognition of illegitimate
placement, the in-group attributes the inequality to an adversary, which politicizes the
group. This adversary can be as specific as a particular authority figure or as ambiguous
as "the system" (Simon & Klandermans, 2001, p. 325).

Extant research raises questions about how economic status factors into one's social
identity. It seems unlikely that most individuals cognitively recognize their economic
status as a group membership, even though economic status likely contributes to other
salient identities (e.g. wealthy entrepreneurs forming a local TEA party). Perhaps
individuals do not cognitively self-categorize into economic in-groups so much as they
categorize others into salient out-groups. For example, a low-income individual may not
directly identify himself as a member of a low-income group, yet still blame the rich for
controlling the unjust class structure. Perhaps this lack of cognitive recognition of class as
a group membership could make class identification more susceptible to persuasive
interventions. Past research also points to intriguing questions about the extent to which
individuals can recognize, or be persuaded to recognize through technologies such as
online games, unjust or illegitimate social grouping of others. If online games could
encourage the recognition of illegitimate placement, they could potentially encourage
volunteerism or strengthen donor relationships with nonprofit organizations serving those

often considered as social out-groups.

Identification and Related Dimensions

Identification is understood by most as being a multi-dimensional concept (Ashmore, Deaux, & McLaughlin-Volpe, 2004). However, there is little, if any, clear consensus as to the exact dimensions. This operational confusion is likely a result of identification having been examined from numerous theoretical perspectives, ranging from sociological to philosophical to organizational (Ratcliffe, 2005). Based on numerous definitions found throughout the literature, the concept of identification seems to encompass at least four key dimensions: consubstantiality, perspective taking, affective attachment, and behavioral attachment.

Consubstantiality. Identification, in its broadest sense, is widely understood as the perception of oneness or belongingness to a social group (Ashforth & Mael, 1989; Bhattacharya & Sen, 2003). "Oneness" may be a product of what Cheney (1983) described as the Burkean notion of consubstantiality, that is, "a product or a state of identification" (p. 146). When an individual claims to "identify" with a character in a narrative or with co-workers in an organizational context or with their cab driver or a panhandler on the street, there is a degree of "consubstantiality" or perceived shared substance between that individual and an otherwise distinguished group. It is important to note that for one to be consubstantial with another, s/he need not be identical but merely joined by shared interest. In his early explication of Burkean identification, Rosenfeld (1969) argued that the perception of consubstantiality is malleable through persuasion, noting that an individual may identify himself with another "even when their interests are

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not joined, if he assumes they are, or is persuaded to believe so" (p. 176). Gossett (2002) also noted that when identifying bonds lead to consubstantiality, they foster more meaningful communication and a sense of common purpose.

Perspective taking. Another dimension related to identification is perspective taking or "the active contemplation of another's psychological experiences" (Todd, Galisky, & Bodenhausen, 2012, p. 95). Cheney (1983) noted that the recognition of shared substance "leads an individual to see things from the 'perspective' of a target" (p. 146). In other words, when one sees himself as similar to the other (i.e., identifies), he is more likely to be able to adopt the other's viewpoint. This ability to "walk in the soles of another's shoes" is critical to the reduction of out-group derogation (Laurent & Myers, 2011). That is, perspective taking encourages greater valuing of the other and reduces the stereotyping of target groups. When individuals take on the perspective of another, they are more likely to perceive overlap between themselves and the target, encouraging an alteration of their self-concept and increasing their identification with the other.

Perspective taking as a construct has been explored by several scholars. For example, Davis (1980) operationalized perspective taking as a construct of empathy in the Interpersonal Reactivity Index. The perspective-taking dimension of the scale measures the reported tendency to spontaneously adopt the psychological point of view of others in daily circumstances.

Yang, Yang, and Chiou (2010) also examined perspective taking, specifically the differences when participants were encouraged to feel either guilt or shame. Compared to participants with a neutral mood, those who experienced guilt were better able to take the

perspective of others to make judgments about how they thought. The participants who were encouraged to feel shame were less likely to engage in perspective taking. The authors explained that shame discourages perspective taking because shame leads people to seek self-enhancement to salvage one's self-esteem. In contrast, guilt effects "are more likely to emphasize sharing, cooperation, and sacrifice that requires highly affiliated interpersonal relations" (Yang, Yang, & Chiou, 2010, p. 606). The researchers found that guilt encourages individuals to adopt an other-oriented stance. Their research indicated that an individual's desire to take on the perspective of another is manipulatable. However, no research to date has operationalized perspective taking as a means of persuasion, and while "see[ing] things from the 'perspective' of a target" (Cheney, 1983, p, 146) appears to be central to the concept of identification, perspective taking is not employed in any known identification research.

   Behavioral attachment. The third dimension related to identification is behavioral attachment. Stoner, Perrewe, and Hofacker (2011) noted that behavioral attachment refers to an individual's inclination to engage in actions based upon their level of identification with a group. In other words, behavioral attachment is an expression of one's identity. Cheney and Tompkins (1987) argued that one such behavioral expression of identification is commitment. The authors noted that there are blurred theoretical boundaries between identification and commitment. While identification is a *process* of developing and maintaining identity, it is also a *product* denoted by particular decisions, behaviors, and commitments (Cheney & Tompkins, 1987). In other words, identification references the substance of an individual's relationship with a group, while commitment

represents the form (Cheney & Tompkins, 1987) or strength of identification (Mowday, Steers, & Porter, 1979).

In an organizational context, commitment is characterized as "a willingness to exert considerable effort on behalf of the organization" (Finegan, 2000, p. 150). As individuals increasingly identify with a group, they will likely engage in group-supportive behaviors (Scott, 1997), suggesting that identification may be a motive for commitment (Becker, Billings, Eveleth, & Gilbert, 1996). In short, if behavior is indicative of commitment (Finegan, 2000) and commitment is a consequence of identification (Cheney & Tompkins, 1987), it stands to reason that behavioral attachment may conceptually and operationally converge with the concept of identification.

Affective attachment. The fourth dimension involved in identification is affective attachment, which refers to individuals' emotional evaluation of a group and their sense of interdependence with said group. Stoner, Perrewe, and Hofacker (2011) argued that "affective attachment refers to how positive an individual feels about a group, how important that group is to the person's overall sense of well-being, and the degree to which an individual feels that his or her fate is intertwined with the group" (p. 1635). This mutual fate is defined as "the perception of the commonalities in the way group members are *treated* in society" (Gurin & Townsend, 1986, p. 140). Similarly, Ashmore, Deaux, and McLaughlin-Volpe (2004) argued that once an individual perceives him or herself to be a member of a group, he or she is inclined to view his or her fate as intertwined with the fate of other group members ignoring individual differences. Gurin and Townsend (1986) operationalized the perception of common fate with questions like,

"Do you think what happens to women generally in this country will have something to do with what happens in your life?" This definition mirrors some definitions of identification. For example, Ashforth and Mael (1989) pointed out identifications as sources of self-esteem and posit social or group identification as "personally experiencing the successes *and* failures of the group" (p. 21).

Brewer and Silver (2000) argued that affective transformations associated with group identification are central to collective action because they lead to greater loyalty and trust. They noted that this identity-based loyalty or trust is important to collective action because social identities are depersonalized and as a result, are absent of prior history of reciprocal benefits. For example, protest marchers at a rally may know nothing of the personalities of fellow marchers but are simply bound by their identification as fellow members of a singular group. When affective ties are transformed through group identification, the willingness to trust the intentions of fellow group members increases.

Identification in Nonprofit Contexts

Many of the identification outcomes found in for-profit settings, such as "act[ing] in the organization's best interests" (Scott, 1997, p. 494), are also desirable in nonprofit organizations (NPOs). Consequently, recent scholarly efforts have applied corporate identification understandings to nonprofit contexts. For example, Tidwell (2005) examined the relationship between organizational identification and prosocial behaviors among volunteers at community service oriented nonprofits. To measure identification, participants were asked questions like, "When someone criticizes [organization's name], it feels like a personal insult" (Tidwell, 2005, p. 457). The two prosocial behaviors

assessed were volunteerism and financial contributions to the organization. He found that highly identified volunteers exhibited higher levels of prosocial behaviors.

Increased patterns of giving and volunteering among those most identified with a nonprofit organization are not surprising since identification is "a feeling of mutuality that enables individuals to share the emotions, values, and decisions that allow them to act together" (Gossett, 2002, p. 386). Sharing the emotion of others is critical to understanding donors' behavior as they contribute to charity appeals. In fact, Sargeant (1999) explained that individuals are more likely to donate to causes that help individuals who are perceived as being similar to themselves. Sargeant's research reflects Cheney's (1983) explication of consubstantiality as a perception of shared substance.

Empathy, in particular, has been shown to impact donor behaviors (Basil, Ridgway, & Basil, 2008). Basil et al. (2008) defined empathy as "viewing another person's situation from the perspective of that person, and understanding how the situation appears to that person and how that person is reacting cognitively and emotionally to the situation" (p. 4). The researchers discovered that appeals to guilt, common in nonprofit charity appeals, are contingent upon the establishment of empathy. The authors encouraged future research into the mechanisms that serve to elicit empathy.

Although empathy has been studied as a psychological concept, from a communication perspective, empathy and identification with out-groups appear to be theoretically related. Each of the previously described dimensions of identification with an out-group are reflected in Basil et al.'s study. Consubstantiality (i.e., the cognitive recognition), perspective taking, and affective attachment are all overtly referenced in the

definition of empathy, and behavioral attachment is the resultant expression of this identification through increased donor support. As such, the strategies employed by nonprofit organizations to increase identification among employees and volunteers may be useful in engendering both empathy and consubstantiality between a potential donor base and a nonprofit's cause.

Although understanding how and why donors and volunteers identify with nonprofit organizations is important, research by Tidwell (2005) and others did not consider that one's identification with the cause itself may have mediated identification with the NPO. In other words, the available literature on identification with nonprofit organizations does not delineate between the salience of the nonprofit and the salience of the cause the nonprofit supports. Unlike research in for-profit contexts that has explored various targets of identification such as job, workgroup, department, organization, and profession (see Scott, Corman, & Cheney, 1998), present nonprofit identification scholarship primarily foregrounds the organization. It stands to reason, however, that individuals may identify more closely with a social cause than with the organization itself.

In other words, nonprofit organizations may serve as a medium through which individuals identify with a particular cause and thus engage in prosocial behaviors, such as giving and volunteering, to support that cause. For example, an individual may participate in the "Race for the Cure" because they highly identify with those diagnosed with cancer, yet have little or no awareness of the Susan G. Komen Foundation. That example is not to suggest that identification with the nonprofit organization is not

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important. Rather, because "identification in organizations is neither stable nor fixed" (as cited in Tidwell, 2005, p. 460), the identification between potential stakeholders and causes is also worthy of scholarly attention. After all, it could be beneficial for nonprofits to establish identification between potential donors and volunteers and the social group the organization benefits, not simply the organization itself. Hustinx and Lammertyn (2003) suggested that individuals' willingness to volunteer is becoming more contingent on personal interests and needs than on a sense of altruism. If so, identification with the beneficiary group might have more longevity for the philanthropic sector as a whole, particularly as younger generations are more mobile and perhaps less likely to commit to one nonprofit organization.

Measures of Identification

There is little, if any, consensus on the appropriate means of measuring identification. One measurement is the six-item scale used by Mael and Ashforth (1992) to examine identification with an organization. Among communication scholars, perhaps the most popular scale to measure identification in organizational contexts is Cheney's (1982) unidimensional Organizational Identification Questionnaire (OIQ), along with the modified version used by Scott et al. (1997). However, the OIQ has been widely criticized. In a longitudinal investigation of the OIQ, Miller, Allen, Casey, and Johnson (2000) discovered that the scale fails to provide information that distinguishes it from existing organizational commitment scales. Miller and colleagues called for a complete moratorium on the OIQ. To avoid criticism and to better separate the constructs, Scott and Stephens (2009) utilized only four items of the OIQ to explore various targets of

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identification among performing arts volunteers.

In contrast, Stoner et al. (2011) developed a Multidimensional Identification Scale (MDIS) that could be applied beyond organizational contexts. The MDIS is intended to be adaptable to multiple identity bases including family and social bases. However, no existing scale captures the underlying dimensions of identification with a particular out-group. This is problematic when attempting to determine potential donors' identification with a nonprofit cause, particularly since many nonprofit organizations benefit members of perceived social out-groups, such as the homeless or AIDS patients.

Serious Games and Prosocial Behavior

Technology is increasingly important as nonprofit organizations try to connect with and cultivate relationships with younger populations of potential volunteers and donors. Video games, in particular, may hold tremendous potential for nonprofits seeking to induce identification between potential stakeholders and their causes. Over 72 million American households play computer or video games, and in 2010 alone, consumer spending in the gaming industry reached over $25 billion dollars (Entertainment Software Association, 2011).

Serious games, or games designed with intended purposes beyond user entertainment, are a newly emerging medium for social change. Serious games create an immersive psychological reality for the user that allows for "new situated understandings to be developed through embodied experiences in complex domains that are otherwise inaccessible" (Wideman, Owston, Brown, Kushniruk, Ho, & Pitts, 2007, p. 3). Essentially, serious games virtualize real world events occurring outside the scope of user

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awareness and place those users in the shoes of marginalized others. For example, the

game *Spent* is an online, point-and-click game that places users in the role of the working

poor. The game was developed by the advertising agency McKinney for the nonprofit

organization Urban Ministries of Durham (UMD). UMD's mission is "to provide food,

clothing, shelter, and supportive services" to homeless and indigent individuals living in

Durham, North Carolina. The organization accepts "clients with mental illnesses, active

addictions, and those seeking outside employment" (Urban Ministries of Durham, 2012).

The game was designed to help UMD "engage an entirely new pool of volunteers and

donors" by encouraging players to experience the challenges facing the working poor

"first hand in a gaming environment" with the hopes that it "will lead to a new

understanding for how difficult and painful it is to be 'spent'" (McKinney, n.d.).

Once users enter the *Spent* website, they are told that they have lost their savings

and their house and that they must make it through the month with only $1000. The game

then presents typical life occurrences and situations that any person might experience.

Every day of the month, the user faces a series of challenges and is forced to make

decisions, ranging from choosing a place to live to deciding whether or not to take a day

off of work to watch his/her child in the school play. Each decision has direct or indirect

financial repercussions. In general, the most positive moral decisions are also the most

costly, encouraging users to experience the dissonance associated with difficult choices.

When users face certain decisions, one option is to "ask a friend" which links users to

their Facebook accounts and posts the request on a friend's wall. At the game's

conclusion, despite whether or not the user "survived" the month, s/he is asked to either

"Donate to UMD," "Get Involved," or "Play Again." The "Donate to UMD" option takes users to a PayPal page, while clicking "Get Involved" directs the user to the UMD website.

The educational potential for serious games has only recently attracted scholarly attention (Gee, 2004). Ritterfeld et al. (2009) found that although games intended to educate individuals may be limited to shallow learning, the interactivity of a gaming format does contribute to educational outcomes.

Given these findings, serious games have been designed to modify health behavior (Thompson et al., 2010) and have even been shown to influence users' engagement in prosocial behaviors, such as charitable giving (Van Lange, Bekkers, Schuyt & Van Vugt, 2007). Gentile et al., (2009) surveyed Singaporean secondary school children from various ethnic and cultural backgrounds and discovered that across cultures, individuals who played prosocial video games, whether habitually or only short-term casually, predicted later increases in prosocial behaviors. Moreover, Peng et al. (2010) applied these findings to cause-related serious games and their effectiveness at eliciting role-taking, empathy, and help among participants who played them. Peng and colleauges examined the game *Darfur is Dying*, a serious game in which users assume the role of a Darfurian refugee. The intent of the game is to raise awareness of the conditions in Darfur by placing users in a simulated environment, having them forage for water, and showing players messages about the fate of Darfurian refugees when they fail to "hide" from the military junta. The authors found that individuals who played the game exhibited a greater willingness to help the Darfurian people than those who watched the

game being played or those who simply read the game's persuasive texts. These findings indicate that serious games have vast potential to both raise awareness and encourage support for social causes beyond traditional persuasive efforts. Serious games may also be an ideal medium for reaching young adults age 18-35, a population that Hustinx and Lammertyn (2003) describe as an underrepresented age group in volunteering. However, no research to date has explored the degree to which serious games may induce identification between users and the causes the games were created to support.

In summary, numerous scholars have explored identification with organizations, some of which have been nonprofit organizations (e.g., Bullis & Tompkins, 1989; Cheney, 1983; Cheney & Tompkins; Tidwell, 2005). While organizational identification has been found to increase volunteer and donor support (Bhattacharya et al., 1995), the role identification plays beyond the target of the nonprofit organization is still relatively underexplored. More specifically for this study, an understanding of identification with a particular social cause and its influence on an individual's decision to support that cause remains surprisingly absent in communication scholarship. The increasing popularity of social games and their ability to educate users about social causes provides a new and emerging context in which to explore the potential for nonprofit organizations to cultivate cause identification among a population. Understanding potential ways to foster cause identification could be important not only to nonprofit organizations, but also to the future growth of the philanthropic sector as a whole. Therefore, this study seeks to answer the following research questions:

RQ1: To what extent is the Identification with Perceived Out-Group Scale (IPOGS) a

reliable and valid measure?

RQ 2: How does an online game (or simulation) exposing players to the challenges faced

by America's poor impact one's identification with this group?

RQ 3: Does player perception of the difficulty of the online game impact their levels of

identification with the group?

CHAPTER THREE

METHODOLOGY

This chapter discusses the methods and procedures employed to answer the research questions of interest. First, it reviews the methods and results of the pilot test used to develop the new cause identification scale entitled the Identification with Perceived Out-Group Scale (IPOGS). Second, it describes the procedures of a quasi-experiment designed to assess the change in cause identification following individuals' completion of the game *Spent* in which they were exposed to typical challenges of the working poor. Finally, the chapter explains how data were analyzed.

Participants were recruited to a study about game play and beliefs about social groups. A scale was administered to measure their initial attitudes toward America's poor. After the initial questionnaire, participants played the game *Spent* and the same scale was administered a second time to measure change in attitudes. The following sections describe the participants, measures, procedures, and data analysis used in answering the research questions.

Pilot Test

Scale Development. The Identification with Perceived Out-Group Scale was developed and pilot tested. Based on the literature, four constructs became pertinent to operationalizing the concept of identification: consubstantiality, perspective taking, behavioral attachment and affective attachment. Existing scales do not collectively take into account these constructs as contributing to identification with a perceived out-group. Therefore, the IPOGS was constructed by creating items that reflected these four

dimensions. Select items were adapted from Stoner et al.'s (2011) Multi-Dimensional

Identification Scale (MDIS) to serve as items for the Consubstantiality and Affective

Attachment factors. For the Perspective Taking dimension, items were adapted from

Davis' (1980) (see Appendix C for item-specific citation). Interpersonal Reactivity Index,

which demonstrated adequate reliability (Cronbach Alpha = .73). The researcher based

upon extant literature created other items.

The original IPOGS scale was composed of 32 items using a five-point Likert-style

response format (see Appendix C). Items were written as statements such as, "I believe I

share common values with (out-group)." The response scale ranges from *Strongly*

Disagree (1) to *Strongly Agree* (5). The anchor "*Neither Agree nor Disagree*" (3) was

included to determine whether or not respondents could be persuaded from a neutral or

apathetic position to a more active one. Higher scores indicate higher levels of

identification with a particular out-group, in this case, America's poor. Lower scores

indicate lower levels of identification.

Participants. To answer the first research question regarding the reliability and

validity of the IPOGS, 159 participants were recruited to pilot test the scale to establish

the psychometric properties and reliability of the measure prior to use in the latter pre-

post test. This sample size was deemed appropriate for the factor analysis given the ratio

of variables to factors. According to Mundfrom, Shaw, and Ke (2005), a sample size

between 110-180 can be used where there is a ratio of 4 factors with 28 or more

variables. After completing the informed consent document approved by the Institutional

Review Board (see Appendix A), the scale was administered by paper and pencil, and

participants were instructed to answer each item as it related to their perceptions of the homeless.

Participants were students from a southern university enrolled in various communication and psychology courses. Participants were between the ages of 18 and 35 to reflect what Hustinx and Lammertyn (2003) describe as an underrepresented age group in volunteering. Of the participants who reported the age, ages ranged from 18 to 44 with a median age of 20. Thirteen participants did not report their age. Of the participants who reported their gender, 47 (29.56 %) were male and 100 (62.89 %) were female. The remaining 12 (7.55 %) participants chose not to report their gender.

Fourteen participants (8.81 %) reported a working class/ low-income socio-economic status (SES), 60 (37.74 %) reported a middle-class SES, 21 (13.21 %) reported an upper middle-class SES, and 3 (1.89 %) participants reported an upper-class socio-economic background. Sixty-one (38.36 %) participants chose not to report their socioeconomic status.

Analysis and Results. The dimensionality of the 32 items were analyzed using principle components factor analysis, as the primary purpose was to identify and compute composite scores for the dimensions of the IPOGS. To examine the sampling adequacy, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .88, indicating that there were strong enough correlations for factors to emerge. The Bartlett's test of Sphericity, which tests whether the correlation matrix is an identity matrix, indicating that the factor model is appropriate, was significant ($p < .05$). Finally, the communalities were all above .3, further confirming

that each item shared some common variance with other items. Given these indicators, factor analysis was conducted with all 32 items.

The factor analysis extracted 7 factors, which accounted for 63.37% of the variance. The initial Eigenvalue showed that the first factor explained 32% of the variance, the second factor 9% of the variance. The third factor explained 6% of the variance, and the fourth factor explained 5%. The fifth and sixth factors each explained 4% of the variance, while the seventh factor explained 3% of the variance. Varimax rotation was used to achieve the best fit. Using a 60/40 loading criteria, 6 factors (21 items) loaded strongly enough to be retained (see Table 1).

Based on analysis of the rotated structure, a total of ten items were eliminated because they did not contribute to a simple factor structure and failed to meet a minimum criterion of having a primary factor loading of .4 or above. The item, "I try to understand homeless individuals better by imagining how things look from their perspective," also did not meet the minimum factor loading criteria of .4. In an effort to further develop the scale and improve reliability in the second phase of the study, a new item was constructed, modifying the language to read "I can imagine how things look from the perspective of America's poor." In addition, the items "I believe I may share common values with the homeless" and "I would give time to support the homeless" were left in the final scale despite the fact that they did not load strongly enough based upon the 60/40 loading criteria. Given that this study is utilizing exploratory rather than confirmatory analysis, these items were included in the final scale in order to continue testing their utility. The reliability of these items were tested again during the second

phase of this study.

   After the creation of the six factors that loaded strongly enough to be retained, Cronbach's alpha reliabilities were calculated on the six factors. The Common Interest factor, which indicates the initial recognition of shared interests and commonalities with the out-group, had an alpha reliability of .81 ($M = 13.64$; $SD = 3.32$). The Common Values factor, which indicates the recognition of similar values and ethics, had an alpha reliability of .75 ($M = 10.64$; $SD = 2.34$). The Behavioral Attachment factor, which refers to a disposition to engage in behaviors that support the out-group such as donation and other forms of assistance, had an alpha reliability of .85 ($M = 14.48$; $SD = 2.96$). The Affective Attachment factor refers to a personal, emotional connection to the out-group and an inclination to share that attachment within the participants' own in-group. This dimension had an alpha reliability of .81 ($M = 15.15$; $SD = 3.59$). The Willingness to Interact factor, which indicates comfortability sharing proximity and personally interacting with the out-group, had an alpha reliability of .77 ($M = 11.03$; $SD = 2.27$). Finally, the Perspective Taking factor, which indicates the ability to cognitively envision another's psychological experiences, had an alpha reliability of .62 ($M = 8.78$; $SD = 2.29$).

   Since the Identification with Perceived Out-Group Scale was a new scale, a series of validity tests were conducted to ensure the scale truly measures the intended construct. The two validity tests employed were construct validity and predictive validity. In an effort to establish construct validity, the three items from Basil, Ridgway, and Basil's (2008) Empathy scale were included (see Appendix C). Although Basil et al. reported acceptable reliabilities (Cronbach's alpha = .84), the pilot test showed less certain results.

The alpha reliability on the Empathy scale was only .66. Pearson correlations showed that empathy significantly correlated; however, it was a weak relationship. Nevertheless, Pearson correlations were calculated between each dimension of the IPOGS and the Empathy scale revealing significant moderate and weak relationships between the measures (see Table 2).

Empathy and Common Interests had a significant but weak correlation, $r = .24$, $p < .01$. Common values also had a significant but weak correlation, $r = .32$, $p < .01$. Behavioral Attachment had a moderate significant correlation, $r = .46$, $p < .01$. Empathy and Affective Attachment had a significant, moderate correlation, $r = .50$, $p < .01$. Empathy and Willingness to Interact also had a significant, moderate relationship, $r = .47$, $p < .01$. Finally, Empathy and Perspective Taking had a moderate significant correlation with the Empathy scale, $r = .60$, $p < .01$. Further investigation is needed to establish construct validity (see Table 2).

To establish predictive validity, six behavioral items were included that asked participants questions concerning whether or not they had previously given money, volunteered time, attended events, or engaged in social media benefiting the homeless in a yes/ no answer format (see Appendix C). Pearson correlations demonstrated varying results for each dimension of the IPOGS scale (see Table 3).

There were significant positive relationships; however, they were mostly weak. The Behavioral Attachment, Affective Attachment, and Willingness to Interact dimensions revealed low but significant correlations with participants reporting that they had given to someone they thought to be homeless in the last year ($r = .31$, $p < .01$; $r = .32$, $p < .01$; r

= .25, *p* < .01 respectively) or given money to an organization supporting the homeless (*r*

= .26, *p* < .01; *r* = .23, *p* < .01; *r* = .26, *p* < .01 respectively). The Behavioral Attachment,

Affective Attachment, and Willingness to Interact dimensions also had low but significant

correlations with the participants self- reporting that in the last year they utilized social

media to raise awareness about the homeless (*r* = .16, *p* < .05; *r* = .22, *p* < .01; *r* = .21, *p*

< .01 respectively). A slight, though significant, correlation was found between the

Behavioral Attachment dimension and participants reporting that they had participated in

an event designed to raise awareness about the homeless (r = .18, p < .05). Finally, a

slight, though significant, correlation was found between Affective Attachment and

participants reporting that they had given to a church drive supporting the homeless in the

last year (r = .17, p < .05).

Therefore, despite having significant relationships, the construct and predictive

validity of the IPOGS scale could not be determined. However, the results of the pilot test

indicated a strong factor structure. Use of the scale in the quasi-experimental study

allowed for further assessment of reliability and validity initially examined in RQ1.

Quasi-Experiment

Participants. Following the pilot test of the IPOGS, 55 young adults were recruited

to participate in the quasi-experiment. An additional 10 individuals participated in the

study but were excluded from the analysis because they failed to complete the post-test

information. Based on Cohen's (1992) recommendations for determining an appropriate

sample size based on moderate effect size (.50) at the p < .05 level, a minimum sample

size of 51 per group was deemed adequate for a pre/post analysis.

Snowball sampling and convenience sampling were employed to recruit participants between 18 and 35 years old, as this is an underrepresented age group in volunteering (Hustinx & Lammertyn, 2003). Some participants were recruited from undergraduate and graduate communication courses in a southern university. Students were asked to bring a friend to participate in the study. Other participants were gathered by asking subject recruits to volunteer subjects from their acquaintances.

The sample consisted of 33 (60 %) males and 22 (40 %) females. Only subjects between the ages of 18 and 35 were recruited for the study because literature suggests that this age demographic is the hardest to reach population for nonprofits (Hustinx & Lammertyn, 2003). Participants ranged in age from 18 to 36. The mean age of the sample was 23.4.

Participants were also asked to indicate their socioeconomic background. Ten participants (18.2 %) reported being from a working class/low-income background. Twenty-seven participants (49.1 %) reported they were from a middle-class background. Seventeen participants (30.9 %) reported they were from an upper middle-class socioeconomic background, while only 1 participant (1.8%) reported s/he was from an upper class socioeconomic background.

Experimental Apparatus. The quasi-experiment employed a within-subjects pre-post test design. Participants were given the Identification with Perceived Out-Group Scale (IPOGS) to measure their initial attitudes toward working poor Americans. Following the initial questionnaire, they were given a short break before being instructed to play the online game *Spent*. After participants completed the game, they again

completed the IPOGS, as well as responded to additional questions related to their

perceived level of difficulty in playing the game and basic demographic information.

The experimental intervention was a game entitled *Spent.* The game was designed

by McKinney, in partnership with Urban Ministries of Durham, and can be found at

http://playspent.org/. *Spent* was designed to give players information about issues facing

working poor Americans by presenting the player with a series of challenges. Each

challenge forces the player to make a financial decision. These decisions range from

whether or not to pay your car insurance note to whether or not you will leave work early

to attend your child's play. Factual information about working poor Americans appears

after each challenge. The goal of the game is to "survive" 30 days without reaching a $0

balance.

Though not required, the game utilizes sound effects, music, and other cinematic

elements to create tension for the user, so the computer had a pair of headphones attached

and participants taking the study online were instructed to use headphones. A sound

check was performed by the researcher prior to the arrival of the participants to ensure

the sound was set at a comfortable volume. To play the game, participants were instructed

to click the link that says "Prove It." Then users viewed a brief cinematic before being

given instructions to click and make simulated financial decisions to see if they could

survive the month on $1000. The window was maximized so that the game filled the

entire screen. Time of game play varied but a successful play-through took approximately

15 minutes.

Procedures. First, participants were provided a link to an online study created on

the university's Qualtrics System. Participants were instructed to carefully read the informed consent document approved by the Institutional Review Board (see Appendix B) and were told that completing and returning the survey online implied consent to participate. The next screen encouraged participants to answer the questions to the best of their ability and avoid leaving any responses blank. Next, the participants completed the IPOGS to measure their initial attitudes toward a perceived out-group, in this case, America's working poor. Once the pre-test was completed, participants were given instructions to insert their headphones and were provided the link to the game *Spent*.

Upon completion of the game, participants were directed to the post-test which asked if the participant completed the game, how many days the participant "survived," and their perception of the level of difficulty of the game (see Appendix D). Then the participant completed the IPOGS again. Participants were also asked demographic questions related to gender, education, and economic background (see Appendix D). Finally, participants were debriefed on the intentions of the study and thanked for their participation.

CHAPTER FOUR

RESULTS

The first goal of this study was to test the newly designed Identification with Perceived Out-Group Scale's (IPOGS) reliability and validity (RQ1). Therefore, Cronbach's alphas were calculated and analyzed for each dimension of the IPOGS using data from the pre- and post-test (see Table 1 in Appendix E). All of the dimensions on the IPOGS showed adequate to strong reliabilities with the exception of perspective taking. The alpha reliabilities for the Common Values dimension on the pre- and post-test were .73 ($M = 3.76$, $SD = 0.10$) and .74 ($M = 3.87$, $SD = 0.06$). The alpha reliabilities found for the Affective Attachment dimension on the pre- and post-test were .79 ($M = 3.28$, $SD = 0.28$) and .84 ($M = 3.36$, $SD = 0.30$). The alpha reliabilities found for the Willingness to Interact dimension on the pre- and pos-ttest were .71 ($M = 3.73$, $SD = 0.28$) and .72 ($M = 3.80$, $SD = 0.19$). The alpha reliabilities found for the Common Interests dimension on the pre- and post-test were .75 ($M = 3.98$, $SD = 0.31$) and .86 ($M = 4.0$, $SD = 0.11$). The alpha reliabilities found for the Behavioral Attachment dimension on the pre- and post-test were .73 ($M = 3.85$, $SD = 0.17$) and .82 ($M = 3.79$, $SD = 0.12$).

The alpha reliability found for the Perspective Taking dimension on the pre-test was .70 ($M = 3.29$, $SD = 0.24$). However, the alpha reliability on the post-test did not demonstrate adequate internal consistency at .66 ($M = 3.39$, $SD = 0.29$). Given this and the dimension's poor showing on the pilot test, the Perspective taking dimension was removed from the Identification with Perceived Out-Group Scale and was eliminated from the present analysis. With the Perspective Taking dimension removed, pre- and

post-test composite scores were created for the remaining dimensions.

Second, in an effort to establish predictive validity, four behavioral items were included that asked participants questions concerning whether or not they would donate money or time to Urban Ministries of Durham, or some other organization supporting the working poor, as well as whether or not they would share the game on Facebook or tell others about the game (see Appendix D). Pearson correlations confirmed multiple significant relationships at moderate levels (see Table 4 in Appendix E).

The Affective Attachment dimension was moderately though significantly correlated with participants' willingness to donate time or money to other organizations supporting the working poor ($r = .50, p < .001$). This dimension also yielded a moderate though significant negative correlation with the participants' willingness to share the game with others on Facebook ($r = -.43, p < .001$). The Willingness to Interact dimension showed significant, moderately positive correlation with participants' decision to donate money or time to Urban Ministries of Durham ($r = .64, p < .001$) and to donate time or money to other organizations supporting the working poor ($r = .64, p < .001$). The Behavioral Attachment dimension yielded moderate, significant positive correlations with the participants' decision to donate money or time to Urban Ministries of Durham ($.r = 46, p < .001$) or to donate time or money to other organizations supporting the working poor ($r . = 58, p < .001$). Like other dimensions, Behavioral Attachment also yielded a significant negative correlation with participants' willingness to share the game on Facebook ($r = -.29, p = .03$).

Research question 2 asked if an online game exposing a player to the challenges

faced by America's poor impacted that player's identification with that group. The results of a preliminary paired samples *t* test indicated that overall, participants did not demonstrate increased levels of identification with America's poor after exposure to the game's simulations. The mean score on the Common Values measure after playing the game was 3.87 (*SD* = .66), whereas before playing the game the mean score was 3.76 (*SD* = .79). There was not a significant difference between the groups (*t*(54) = -1.60, *p* = .115). Affective Attachment scores were not significantly higher after participants played the game (*M* = 3.36, *SD* = .68), compared with scores before participants played the game (*M* = 3.28, *SD* = .76; *t*(54) = -1.74, *p* = .088). The mean score on the Willingness to Interact measure after playing the game was 3.81 (SD = .63), whereas before playing the game the mean score was 3.73 (SD = .68). There was no significant difference between the groups (*t*(54) = -1.59, *p* = *.118*). Common Interests scores were not significantly higher after participants played the game (*M* = 4.00, *SD* = .58), compared with participants pre-intervention scores (*M* = 3.98, *SD* =.56; *t*(54) = -.40, *p* = .693). Finally, Behavioral Attachment scores were not significantly higher after participants were exposed to the intervention (*M* = 3.79, *SD* = .69) than before playing the game (*M* = 3.85, *SD* = .65; *t*(54) = 1.65, *p* = .104).

Given that the study did not create control groups based on levels of identification with the working poor prior to completing the online simulation, additional analysis was conducted to parse out potential differences. Median scores on each of the dimensions of the IPOGS pre-test were used to categorize participants into high and low identification groups. This delineation allowed for analysis of differences within the groups on the

post-test to determine if the online simulation affected identification scores. The sample was dichotomized based upon participants' pre-test scores creating categories of high (> median) and low (< median) scores on Common Values (*Mdn* = 4.00), Affective Attachment (*Mdn* = 3.20), Willingness to Interact (*Mdn* = 3.67), Common Interests (*Mdn* = 4.00), and Behavioral Attachment (*Mdn* = 4.00). Participants scoring above the median of each dimension on the pre-test were classified as High Identifiers and participants scoring below the median of each dimension on the pre-test were classified as Low Identifiers (see Table 5 in Appendix E).

The results of paired samples *t*-tests indicated that for Low Identifiers, exposure to challenges faced by America's poor did result in higher levels of identification with the group on all of the dimensions except Behavioral Attachment. Common Values scores for 41 low identifying participants were significantly higher after participants played the game (*M* = 3.67, *SD* = .56), compared with scores before participants played the game (*M* = 3.45, *SD* = .67; *t*(40) = -3.15, *p* = .003). Affective Attachment scores were significantly higher after low identifying participants played the game (*M* = 2.86, *SD* = .47), compared with scores before participants played the game (*M* = 2.69, *SD* = .52; *t*(27) = -2.35, *p* = .026). Willingness to Interact scores were significantly higher after low identifying participants played the game (*M* = 3.43, *SD* = .62), compared with scores before participants played the game (*M* = 3.20, *SD* = .49; *t*(27) = -2.88, *p* = .008).

Common Interests scores were also significantly higher after low identifying participants played the game (*M* = 3.73, *SD* = .54), compared with this groups' pre-intervention scores (*M* = 3.61, *SD* =.08; *t*(31) = -2.14, *p* = .040). Finally, Behavioral

Attachment scores were not significantly higher after low identifying participant were exposed to the intervention ($M = 3.47$, $SD = .59$) than before playing the game ($M = 3.51$, $SD = .09$; $t(35) = 1.07$, $p = .292$). The only significant difference found for high identifiers was a significant decrease in perception of common interests after playing the game ($M = 4.47$, $SD = .41$), compared to scores before playing the game ($M = 4.50$, $SD = .21$; $t(22) = 2.08$, $p = .049$). In sum, for participants exhibiting low levels of identification on the pre-test, exposure to the game intervention significantly increased their levels of identification for each dimension with the exception of Behavioral Attachment.

Finally, research question 3 asked how participants' perceptions of the difficulty of the online game impacted their levels of identification with the group. To determine this, a Pearson correlation was calculated to check for relationships between perceived level of difficulty of the game and each of the dimensions of the IPOGS. There was a significant, low positive correlation between the Common Values dimension and perceived level of difficulty of the game ($r = .266$, $p = .05$) and moderate correlations between Affective Attachment ($r = .495$, $p < .01$), Willingness to Interact ($r = .640$, $p < .01$), and Behavioral Attachment ($r = .584$, $p < .01$) dimensions and perceived level of difficulty of the game. Common Interests did not have a significant association with perceived level of difficulty of the game.

CHAPTER FIVE

DISCUSSION

The following discussion section is organized into five parts. Initially, a brief summary of findings is presented, followed by more detailed explications of IPOGS and the results of the study in light of previous research. Next, implications and areas of future research are discussed. Finally, limitations of the study are addressed.

Summary of Findings

The first research question asked if the Identification with Perceived Out-Group Scale was a reliable and valid measure. Therefore, one of the purposes of this study was to report on the creation and validation of the IPOGS, which is adaptable to different out-groups. Overall, the exploratory factor analysis supported the dimensions that emerged from the pilot study. However, the Perspective Taking dimension demonstrated weak internal consistency on the post-test and was removed. Following exploratory scale development procedures of principle component factor analysis of the pre- and post-test data, a five dimension, 19- item measure was developed to measure identification with a perceived out-group (see Appendix F). The results of this study indicate that the revised Identification with Perceived Out-Group Scale is a reliable and at least partially valid measurement for determining one's level of identification with a group. The dimensions of Common Values, Affective Attachment, Willingness to Interact, Common Interests, and Behavioral Attachment all had factors that were well defined and internally consistent.

The second research question asked whether or not an online game exposing

players to challenges faced by America's poor impacted that player's identification with that group. Once the sample was split into "low" and "high" identifiers, the results indicated that participants who had low levels of identification with America's poor before playing the game had significantly higher levels of identification after playing the game on four of the five dimensions. Low identifying participants were significantly more likely to believe they shared common values and common interests with poor Americans after playing the game. Moreover, low identifiers were significantly more likely to have an affective attachment with the group after playing the game. Participants also indicated that they were significantly more willing to interact with America's poor.

The third research question asked whether individuals' perceptions of the difficulty of the online game impacted their levels of identification with the group. Results indicated that there were weak, though significant, associations with perceived level of difficulty and the perception that the participants shared Common Values. There were moderately positive relationships between the participants' perceptions of the level of difficulty of the game and Affective and Behavioral Attachment, as well as their Willingness to Interact with the out-group.

Trends of IPOGS in Light of Previous Research

The results of the test of predictive validity indicated that Common Values showed positive correlations with participants' intentions to donate time or money to Urban Ministries or Durham or some other organization that supports the working poor. This seems consistent with Gossett's (2002) explication that identifying bonds form a sense of common purpose. Perhaps for the participants, recognizing that they shared the same

values and ethics as the working poor made them more inclined to act upon the newly formed common purpose or collective identity. Moreover, Willingness to Interact also positively associated with participants' intentions to donate to this organization or another organization supporting the working poor. Perhaps a willingness to interact with an organization's beneficiaries is a step toward engagement, either financially or by giving of one's time, with the organization itself.

Next, Affective Attachment positively correlated with the participants' reported desires to donate money or time to other organizations that support the working poor. Brewer and Silver (2000) argued that affective transformations lead to collective action, as they are associated with greater loyalty and trust--elements of group identification. The current study's findings indicate support for their argument as it pertains to collective action. When participants had an affective attachment to the working poor, they were more likely to engage in actions to support them.

Interestingly, there was a significant, negative association between the Affective Attachment, Willingness to Interact, Common Interests, Behavioral Attachment dimensions of identification and a willingness to share the game with others on Facebook. These results are particularly intriguing when considering Zhao, Grasmuch, and Martin's (2008) findings regarding identity construction on Facebook. They discovered that individuals on the site tend to project only identities that represent "highly socially desirable identities" (p. 1830). In other words, individuals tend to say they enjoy playing intramural sports on their profile without ever actually playing intramural sports in their day-to-day lives. The results of the present study might suggest

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that publicly expressing one's identification with the working poor is not perceived as a "highly socially desirable" activity. Given this, perhaps one of the new challenges for today's nonprofits is making involvement or support of nonprofit activities more socially desirable.

Identification Transformation in Light of Previous Research

The current study found that there were no significant changes for those who were already highly identified with the working poor. The lack of effect on this particular group could suggest that these participants already self-categorize as being members of the group. If this is the case, perhaps the participants perceive themselves as sharing a positive prototype with the group (Hogg & Terry, 2000). One could speculate that despite reporting being from a variety of socio-economic backgrounds, the participants recognize that in an unstable economic climate, their own financial security is not guaranteed. In this way, participants already had positive evaluations of the group, so the intervention had no significant effect.

However, what is more interesting is the effect the game had on those who self-reported having low identification with America's poor. Specifically, there were increases in the perception of Common Values and Common Interests, Affective Attachment, and Willingness to Interact after low identifiers played *Spent*. One possible explanation for this phenomenon is that the game reminds players of the "shared substance" between all Americans (Cheney, 1983, p. 146). The game may have encouraged the recognition of shared substance that led the low identifying participants "to see things from the perception of the target" (Cheney, 1983, p. 146). Once this process took place, the

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previously low identifying participants recognized that they do indeed share the same values and interests as working poor Americans.

One could speculate that once participants recognized these commonalities, they were more likely to express a willingness to interact. Essentially, the game may encourage players to alter their prototype of working poor Americans. In this sense, *Spent* reverses the self-categorization process by de-accentuating the differences among the out-group (see Stets & Burke, 2000). The game alters, or at the very least, blurs the players' perceptions of group boundaries as it deconstructs preconceived stereotypes of the poor. While the user may never fully embrace a new group identity of the poor, they may be more willing to interact with the group once perceived as an out-group.

One possible explanation for the increase in Affective Attachment after playing the game is a triggering of in-group favoritism consistent with Tajfel's (1974) notion of the Minimal Group Paradigm. He argued that simply the act of placing an individual into a group elicits in-group biases. When players begin the game, they are told to imagine they are "one of them." In this case, "them" references the 14 million unemployed Americans. Perhaps this simple act of taking on the perspective of the out-group triggers in-group biases. The game encourages more positive evaluations of the working poor, so players may feel more personally concerned about the fate of the group.

The game seems to function as a priming tool, similar to the priming utilized in Hertel and Kerr's (2000) experiment. Researchers placed participants into arbitrary groups and primed them for either *loyalty* or *equality*. The results of their study indicated that a priming of loyalty resulted in a significant increase in in-group favoritism versus a

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priming of equality. In this case, *Spent* is also a primer but appears to operate in an inverse fashion; the game primes users away from loyalty, or prescribed in-group biases, and toward equality, or a more empathic view.

There was a small increase in behavioral attachment for low identifiers; however, these finding were not significant. Initially, it seems puzzling that all other measures of identification significantly increased for low identifiers after playing the game except for the construct that measured participants' actual behavioral intentions. However, in light of pre-existing literature, the lack of significance could contribute to our understanding of the often-blurred distinctions between identification and commitment. These findings seem to support Cheney and Tompkins' (1987) view of identification as the substance of an individual's relationship with a group and commitment as the strength of that identification. While *Spent* may have encouraged higher levels of identification, the game intervention alone may not be enough to compel the user to action.

Implications and Future Research

Prior to this study, no known scale existed to capture the underlying dimensions of identification with a particular out-group. The lack of such a measure made it difficult to determine the efficacy of persuasive interventions, like social games, on a potential donor's identification with a non-profit cause benefiting members of social out-groups. The results of exploratory factor analysis show promise for the Identification with Perceived Out-Groups Scale's ability to reliably measure this phenomenon, expanding our understanding of identification as a construct and creating new opportunities for future research.

One potential use of the IPOGS is in determining the efficacy of campaigns and interventions aimed at encouraging identification between a potential donor population and a group generally considered a social out-group. Future research should explore the utility of the scale with interventions, social games and otherwise, that may trigger out-group derogation. In their most recent study of discrimination in the United States, the Pew Forum on Religion & Public Life (2009) found that Muslims, Hispanics, gays, and lesbians are seen as facing more discrimination inside the U.S. than any other group. Nonprofits that support these groups such as the Council on American-Islamic Relations, the National Council of La Raza, and the Human Rights Campaign may use IPOGS as a post-intervention barometer of donor and volunteer identification. It would also be interesting to see how the scale could be used to measure the impact of interventions on the levels of identification between specific groups, particularly groups with high in-group biases, such as conservative Christians and atheists or between Israelis and Palestinians.

The IPOGS not only has potential utility for measuring the efficacy of campaigns and other interventions, such as *Spent*, but it could also prove useful in determining the identification levels of employees following a merger or in other cases where intra-organizational cooperation is jeopardized. Rousseau (1998) argued that a sense of continuity was important in order to maintain employee identification following a merger. However, as van Knippenberg, van Knippenberg, Monden, and de Lima (2002) suggested, though ideal, a sense of continuity is not always possible; therefore, the merging organization often feels threatened. Consequently, group biases may be triggered

as a result of threat-induced competition and a desire to bolster the self-esteem of the threatened groups (Tajfel and Turner, 1986). However, such conflicts are not limited to mergers and acquisitions. The perception of out-groups may exist between upper management and lower-level employees, union and non-union employees, even departments within the same organization may perceive the "other" as a threat. Such divisions within an organization may impede workplace synergy and productivity. Therefore, organizations engage in efforts to reestablish this continuity in order to bolster identification among employees in the newly formed collective boundaries. The IPOGS could serve as a valuable tool in parsing out where groups within an organization identify and where they do not in order to direct these improvements.

This study also points to implications regarding the efficacy of social games as interventions. For participants who were categorized as low identifiers, playing the game *Spent* was associated with increased levels of identification with America's poor. Pairing interactive challenges with persuasive messages about the daily obstacles facing working poor Americans, the game encourages the user to view the world from the out-group's perspective. The current research indicates that such an intervention diminishes out-group derogation and yields increased levels of identification. However, the game did not, to any significant degree, encourage participants to engage in behaviors that would exhibit such increases in identification. Perhaps interventions like *Spent* should be viewed as one component in the process of identification building with out-groups. Still, future non-profits could benefit from the ability of serious games to virtualize the experience of a social out-group, allowing a user to see the world from a different perspective.

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Participants seemed to indicate a reluctance to share *Spent* on their personal Facebook pages, despite having high levels of identification with the group the game supports. These findings are particularly pertinent in an age where "Liking" and "Sharing" via social media are important, low-cost promotional options for NPOs. With a growing number of nonprofits using social marketing tactics to increase donor support and encourage volunteerism (Levinson, Adkins, & Forbes, 2010), future scholarship should seek to understand individuals' reluctance to share promotional materials in spite of strong identifying bonds.

The low to moderate associations between the perceived level of difficulty of the game and the level of identification with America's poor offers an intriguing implication regarding the utility of serious games as identification inducement interventions. This research suggests that games which simulate the plight of others are more likely to encourage identification if the user finds the simulation challenging. The game was created to simulate the challenges facing America's poor. If the game were easy, the message would be sent to the user that the challenges faced by the poor were also, in a sense, easy. Perhaps if the game were easier, users would be less likely to identify with the group's plight, as well as less likely to exhibit a willingness to help. However, if the challenges were too difficult, the game may seem un-winnable and users would be less inclined to identify with the group. Given the very limited amount of research on social games, future research regarding game interventions should seek to explore this balancing act between game challenges that seem impossibly difficult and challenges that seem too easy to reach the intended effect.

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Limitations

While the implications of the IPOGS and *Spent* as an identification inducement are intriguing, there are limitations to this research. Initially, despite the methodological and theoretical contributions of the IPOGS, given that this research only utilized exploratory analysis, further applications should be performed with caution until more confirmatory scale analysis is conducted. Additionally, the scale was designed to measure identification with various out-groups. However, the present analysis only examined identification with two particular out-groups, homeless Americans in the pilot test and America's poor in the quasi-experiment. The scale should be tested with a greater variety of out-group populations to determine if it is consistent across various out-groups. Future research should also seek to further test the validity of the scale since this research had more mixed results on validity than the overall reliability of the scale.

Furthermore, limitations existed in the design of the research. As previously discussed, taken as a whole, there were not significant differences in the pre- and post-test scores; therefore, the sample was divided using a median-split approach. This approach impacted the usable size of the sample. Perhaps a different experimental design could have provided more control in the experiment. For example, pre-testing participants and isolating the groups prior to introducing the intervention may have yielded different degrees of change in identification. Future research into identification with out-groups should account for levels of identification before ceasing data collection to ensure an adequate sample of low-identifiers is obtained.

Additionally, the absence of a manipulation check was another limitation in the

research design. Without a manipulation check, it is difficult to determine what elements of the game contributed to the change in levels of identification. Future scholarship could remedy this by measuring the efficacy and persuasiveness of the intervention itself, in this case, measuring the persuasiveness of the messages found in *Spent*, as well as the amount of information about the working poor that was retained by players.

Moreover, the limitation of using a predominately undergraduate and relatively young sample must also be considered. While the target population was appropriate for the current study, given that it is the hardest to reach population for nonprofits (Hustinx & Lammertyn, 2003) and the age group most likely to play interactive games (Entertainment Software Association, 2011), utilizing such a young sample may have skewed the results. It seems that older populations would have more experiences that contribute to their construction of out-group prototypes. Further, the age of the population may alter the effectiveness of identification inducing interventions because of historical influences. For example, older populations are more likely to have more experiences with the economy, such as living through a depression or recession. Given that personal beliefs and historical experiences may alter a populations' susceptibility to interventions, future studies should seek to analyze the impact of identification inducing interventions on levels of identification across different age groups.

Conclusion

In summary, the scale developed here has great potential in measuring levels of identification with out-groups. Additionally, it appears that exposure to challenges faced by working poor Americans can have a positive influence on an individual's level of

identification with that group. Social identities are both powerful and dangerous

components on the human self-concept. They can lead organizations to prosper and can

lead to their demise. They can form strong unifying bonds among in-group members but

can also divide groups leading to negative stereotyping and out-group derogation. They

can unite a nation and lead it to war. This research suggests that the divisive effects of

social identities can be reversed or redirected and that commonalities can be recognized

by placing one individual in the shoes another. Social games, such as *Spent*, are but one

means of breaking down perceived differences. It is up to future research to discover

other persuasive interventions and their potential to induce identification with out-groups.

APPENDIX A

Pilot Test Approval Letter

![WKU logo]

A LEADING AMERICAN UNIVERSITY WITH INTERNATIONAL REACH
OFFICE OF COMPLIANCE

DATE: April 11, 2012

TO: Ganer Newman, BA
FROM: Western Kentucky University (WKU) IRB

PROJECT TITLE: [322700-1] Social Identification with Out-group Members
REFERENCE #:   IRB12-276
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: April 11, 2012

REVIEW TYPE: Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt from Full Board Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by an *implied* consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or paul.mooney@wku.edu. Please include your project title and reference number in all correspondence with this committee.

APPENDIX B

Pilot Test Informed Consent

INFORMED CONSENT DOCUMENT

Project Title: Identification with Members of a Perceived Out-Group

Investigator: Ganer Newman, Department of Communication, 309-310-3659

You are being asked to participate in a project conducted through Western Kentucky University.   The University requires that you give your agreement to participate in this project. If you are not at least 18 years of age, please stop here.

Below are the details regarding the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. A basic explanation of the project is written below. Please read this explanation and email the researcher any questions you might have.

1. Nature and Purpose of the Project: The goal of this study is to develop a scale that measures individuals' identification with members of a perceived out-group.

2. Explanation of Procedures: It is my understanding that the researcher will conduct a survey, approximately 15 minutes to complete, during which I will be asked about my perceptions of social groups different than my own, as well as to provide some general information about my demographics.

3. Discomfort and Risks: It is my understanding that this study places me at little to no risk. The probability of harm anticipated is no greater than I would encounter in everyday life.

4. Benefits: It is my understanding that my instructor may provide me with extra credit points for participating. I will also have an opportunity to give my opinions and experiences which will help generate knowledge about how people identify with members of a perceived out-group.

5. Confidentiality: It is my understanding that my responses will be kept strictly confidential. My name will not appear on any answer sheet. In the event of publication of this research, only group data will be reported. No personally identifying information will be disclosed. Records will be viewed, stored, and maintained in private, secure files only accessible by the researcher and faculty sponsor for three years following the study, after which time they will be destroyed.

6. Refusal/Withdrawal:
   It is my understanding that refusal to participate in this study will have no effect on any future services I may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

By completing this survey online, you have given your consent to have your anonymous answers be used as data for Ganer Newman's thesis project.

Your continued cooperation with the survey implies your consent.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-4652

APPENDIX C

Quasi Experiment Approval Letter

WKU
A LEADING AMERICAN UNIVERSITY WITH INTERNATIONAL REACH
OFFICE OF COMPLIANCE

DATE:	May 18, 2012
TO:	Ganer Newman, BA
FROM:	Western Kentucky University (WKU) IRB
PROJECT TITLE:	[340895-1] Interventions as a Means of Inducing Identification with Out-Groups
REFERENCE #:	IRB12-295
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	May 18, 2012
REVIEW TYPE:	Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt from Full Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by an *implied* consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or paul.mooney@wku.edu. Please include your project title and reference number in all correspondence with this committee.

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APPENDIX D

Quasi-Experiment Informed Consent

INFORMED CONSENT DOCUMENT

Project Title: Identification with Members of a Perceived Out-Group

Investigator: Ganer Newman, Department of Communication, 309-310-3659

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your agreement to participate in this project. If you are not at least 18 years of age, please stop here.

Below are the details regarding the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. A basic explanation of the project is written below. Please read this explanation and email the researcher any questions you might have.

1. Nature and Purpose of the Project: The goal of this study is to determine the extent to which an online game may influence individuals' identification with members of a perceived out-group.

2. Explanation of Procedures: It is my understanding that the researcher will conduct a survey, approximately 5-10 minutes to complete, during which I will be asked about my perceptions of social groups different than my own. It is also my understanding that I will then play an online game, which will take 10 minutes to complete. It is also my understanding that I will then complete another survey as well as to provide some general information about my demographics, which will take 5-10 minutes.

3. Discomfort and Risks: It is my understanding that this study places me at little to no risk. The probability of harm anticipated is no greater than I would encounter in everyday life.

4. Benefits: It is my understanding that, if applicable, my instructor may provide me with extra credit points for participating. It is also my understanding that my name will be entered in a drawing for a reward ($25 restaurant gift certificate) as compensation for my participation in this study. I will also have an opportunity to give my opinions and experiences which will help generate knowledge about how people identify with members of a perceived out-group.

5. Confidentiality: It is my understanding that my responses will be kept strictly confidential. My name will not appear on any answer sheet. In the event of publication of this research, only group data will be reported. No personally identifying information will be disclosed. Records will be viewed, stored, and maintained in private, secure files only accessible by the researcher and faculty sponsor for three years following the study, after which time they will be destroyed.

6. Refusal/Withdrawal: It is my understanding that refusal to participate in this study will have no effect on any future services I may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

By completing and returning this survey online, you have given your consent to have your anonymous answers be used as data for Ganer Newman's thesis project.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-4652

APPENDIX E

Items Used for Pilot Test of the Identification with Perceived Out-Group Scale

Factor: Consubstantiality- "*Perceived* shared substance" or the initial recognition of commonality.

      1. I recognize that I have some things in common with homeless individuals.
      2. I believe that I share some interests with homeless individuals.
      3. I believe that I have nothing in common with homeless individuals. REVERSE SCORED
      4. I think that in some ways I might be like homeless individuals. Adapted from MDIS (Stoner et al., 2011).
      5. I believe that homeless individuals do not share my interest. REVERSE SCORED
      6. I believe I may share common values with homeless individuals.
      7. I do not share the values of the homeless. REVERSE SCORED
      8. I do not share the same ethics as the homeless.

Factor: Perspective Taking

      9. I sometimes find it difficult to see things from the homeless' point of view. REVERSE SCORED. Adapted from IRI (Davis, 1980).
      10. I try to understand homeless individuals better by imagining how things look from their perspective. Adapted from IRI (Davis, 1980).
      11. I feel like I can take a walk in homeless individuals' shoes.
      12. I try to look at everyone's side of a disagreement before I make a decision. Adapted from IRI (Davis, 1980).
      13. If I'm sure I'm right about something, I don't wast time listening to arguments about the homeless. REVERSE SCORED. Adapted from IRI (Davis, 1980).
      14. I believe there are two sides to situations concerning the homeless and I try to look at them both. Adapted from IRI (Davis, 1980).
      15. Before I criticize homeless individuals I wonder what I would be like if I was homeless. Adapted from IRI, (Davis, 1980)
      16. I don't find it necessary to consider the homeless' perspective. REVERSE SCORED

Factor: Behavioral Attachment- I am actually willing to change my behavior toward group.

      17. I would give time to support the homeless.
      18. I would not give time to support the homeless. REVERSE SCORED
      19. If asked to sign a petition supporting the homeless I would definitely sign it
      20. I would give money to support the homeless.

21. I would tell friends that I support the homeless.
22. I talk with my friends about the problems experienced by the homeless.
23. I persuade others to consider helping the homeless.
24. I would wear a t-shirt that illustrates my support for the homeless.
25. If a homeless individual asked for my assistance I would help.

Factor: Affective Attachment- Positive feelings toward the group.

26. I feel happy when I interact with the homeless.
27. When something bad happens to the homeless, I feel personally hurt. Adapted from MDIS (Stoner et al., 2011).
28. When the homeless are in pain, I sympathize.
29. I feel good talking about the homeless among friends.
30. I do not enjoy interacting with the homeless. REVERSE SCORED
31. I am personally concerned about what happens to the homeless Adapted from MDIS (Stoner et al., 2011).
32. I share a common destiny with the homeless.

Empathy Scale Used to Test Construct Validity (Adapted from Basil et al., 2008).
1. I can imagine what it would feel like to be homeless.
2. When seeing an advertisement about advertisement about the homeless I put myself in the shoes of a homeless individual.
3. After seeing an advertisement about the homeless, I empathized.

Behavioral Items Used to Test Predictive Validity
1. In the last year I have given money to someone I thought to be homeless. Y/ N
2. In the last year, I have volunteered for an organization, such as the Salvation Army or Habitat for Humanity, which helps the homeless. Y/ N
3. In the last year, I have utilized social media outlets, such as Facebook, to raise awareness about the homeless. Y/ N
4. In the last year I have given money to support a homeless organization such as the Salvation Army Christmas charity, Habitat for Humanity, or other group. Y/ N
5. In the last year, I have participated in an event, such as Shanty town on WKU's campus, designed to raise awareness about the homeless. Y/ N
6. I have given money to a church drive to support the homeless. Y/ N

Items Used for Quasi-experiment using the IPOGS

Common Values

     1. I believe I may share common values with America's poor.

     2. I do not share values with America's poor

     3. I do not share the same ethics as America's poor.

Common Interests

     4. I recognize that I have some things in common with America's poor.

     5. I believe that I have nothing in common with America's poor.

     6. I believe I share some interests with America's poor.

     7. I think that in some ways I might be like America's poor.

Affective Attachment

     8. I persuade others to consider helping America's poor.

     9. I am personally concerned about what happens to America's poor.

     10. I feel good talking about America's poor.

     11. I talk to my friends about the problems experienced by America's poor.

     12. When something bad happens to America's poor, I feel personally hurt.

Behavioral Attachment

     13. I would tell friends that I support America's poor.

     14. If asked to sign a petition to support America's poor, I would definitely sign it.

     15. I would give money to support America's poor.

     16. If a poor American individual asked for my assistance I would help.

Willingness to Interact

     17. I do not enjoy interacting with America's poor.

     18. I would not give time to support America's poor.

     19. I would give time to support America's poor.

Perspective Taking

     20. I feel like I can take a walk in the shoes of America's poor.

     21. I can imagine how things look from the perspective of America's poor.

     22. I sometimes find it difficult to see things from the point of view of America's poor.

Post-Game Questions

Did you make it to the end of the month? Y/N

If no, on what day did you run out of money?

Please rate the difficulty of the game:
A. Extremely Difficult **B.** Moderately Difficult **C.** Somewhat Difficult **D.** Neutral **E.** Somewhat Easy **F.** Moderately Easy **G.** Extremely Easy

Would you donate money or time to Urban Ministries of Durham? Strongly agree means you would definitely donate, strongly disagree means you would definitely not donate.
A. Strongly Disagree **B.** Disagree **C.** Neither Agree nor Disagree **D.** Agree **E.** Strongly Agree

Would you donate money or time to other organizations supporting the working poor?
A. Strongly Disagree **B.** Disagree **C.** Neither Agree nor Disagree **D.** Agree **E.** Strongly Agree

Would you share this game with other on Facebook? Y/N

Would you tell others about this game? Y/N

Demographic Questions

Please indicate your gender. M/F/

Please indicate your level in college.
1.   Freshman
2.   Sophomore
3.   Junior
4. Senior
5. Graduate Student
6. College Graduate
7. High School Diploma/ G.E.D.

Please provide your age.

Please provide your major.

Please indicate your socioeconomic background. That is, how would you describe the socioeconomic status of the home of your upbringing?
   1. Working Class/ Low-Income
   2. Middle-Class
   3. Upper Middle-Class
   4. Upper Class

Table 1

Factor Loading for Identification with Perceived Out-Group Scale

Items	1	2	3	4	5	6
Dimension1: Common Interests						
1. I recognize that I have some things in common with homeless individuals.	0.79					
2. I believe that I share some interests with homeless individuals.	0.78					
3. I believe that I have nothing in common with homeless individuals.	0.69					
4. I think that in some ways I might be like homeless individuals.	0.69					
Dimension 2: Common Values						
1. I believe I may share common values with the homeless.		0.54				
2. I do not share values with the homeless.		0.79				
3. I do not share the same ethics as the homeless.		0.7				
Dimension 3: Behavioral Attachment						
4. If asked to sign a petition to support the homeless I would definitely sign it.			**0.79**			
5. I would give money to support the homeless.			**0.67**			
6. I would tell friends that I support the homeless.			**0.72**			
7. If a homeless individual asked for my assistance I would help.			**0.67**			
Dimension 4: Affective Attachment						
8. When something bad happens to the homeless, I feel personally hurt.				0.62		
9. I feel good talking about the homeless.				0.62		

10. I talk to my friends about the problems experience by the homeless.	0.74				
11. I persuade others to consider helping the homeless.	0.62				
12. I am personally concerned about what happens to the homeless.	0.65				
Dimension 5: Willingness to Interact					
I would give time to support the homeless.		0.57			
I would not give time to support the homeless.		0.72			
I do not enjoy interacting with the homeless.		0.66			
Perspective taking					
I sometimes find it difficult to see things from the homeless' point of view			0.8		
I try to understand homeless individuals better by imagining how things look from their perspective. (This factor was replaced).			0.36		
I feel like I can take a walk in homeless individuals' shoes.			0.71		

Proportion of Variance =	13.54	11.17	10.27	9.18	8.93	5.62

Table 2

Construct Validity Test Correlations between IPOGS and Basil, Ridgway, & Basil's (2008) Empathy Scale

Empathy	Common Interests	Common Values	Behavioral Attachment	Affective Attachment	Willingness to Interact	Perspective Taking
Pearson Correlation	0.24**	0.32**	0.46**	0.5**	0.47**	0.6**
Sig (2-tailed)	0.002	0.000	0.000	0.000	0.000	0.000

* p < .05 ** p < .01

Table 3

Predictive Validity Test Correlations between IPOGS and Behavioral Items

Items	Common Interests	Common Values	Behavior. Attach.	Affective Attach.	Willing. to Interact	Perspective Taking
Given money to homeless	-0.04	0.04	0.31**	0.32**	0.25**	0.13
Volunteered for organization	0.01	-0.02	0.11	0.15	0.14	-0.02
Used social media	-0.02	0.12	0.16*	0.22**	0.21**	0.12
Given money to organization	0.01	-0.05	0.26**	0.23**	0.26**	0.16
Participated in an event	0.11	0.11	0.18*	0.13	0.15	0.13
Given money to church drive	-0.08	-0.01	0.12	0.17*	0.14	0.01

* p < .05 ** p < .01

Table 4

Correlations of Main Study Scale Dimensions and Behavioral Questions

Factor	Common Values	Affective Attachment	Willingness to Interact	Common Interests	Behavioral Attachment
Donate to UMD?	0.33*	0.27	0.64**	0.26	0.46**
Donate to other org?	0.27*	0.5**	0.64**	0.25	0.58**
Share on Facebook?	-0.22	-0.43**	-0.39**	-0.35**	-0.29*
Tell others about game?	-0.07	-0.36**	-0.29*	-0.14	-0.18

*$p < .05$ ** $p < .01$

Table 5

Number and Percentages of Low and High Identifiers after Median Split

	Common Val.	Affect. Attach.	Will. to Interact	Common Int.	Behav. Attach.
Low Identifiers	41 (75.55 %)	28 (50.91 %)	28 (50.91 %)	32 (58.18 %)	36 (65.45 %)
High Identifiers	14 (25.45 %)	27 (49.09 %)	27 (49.09 %)	23 (41.82 %)	19 (34.55 %)

Note. The number outside of the parenthesis represents the number of participants that

fell into each group. The percentage in each category are within the parenthesis.

APPENDIX H

Final 19-Item Identification with Perceived Out-Group Scale

Common Values

    1. I believe I may share common values with (out-group).

    2. I do not share values with (out-group).

    3. I do not share the same ethics as (out-group).

Common Interests

    4. I recognize that I have some things in common with (out-group).

    5. I believe that I have nothing in common with (out-group).

    6. I believe I share some interests with (out-group).

    7. I think that in some ways I might be like (out-group).

Affective Attachment

    8. I persuade others to consider helping (out-group).

    9. I am personally concerned about what happens to (out-group).

    10. I feel good talking about (out-group).

    11. I talk to my friends about the problems experienced by (out-group).

    12. When something bad happens to (out-group), I feel personally hurt.

Behavioral Attachment

    13. I would tell friends that I support (out-group).

    14. If asked to sign a petition to support (out-group), I would definitely sign it.

    15. I would give money to support (out-group).

    16. If a (member of out-group) asked for my assistance I would help.

Willingness to Interact

    17. I do not enjoy interacting with (out-group).

    18. I would not give time to support (out-group).

    19. I would give time to support (out-group).

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