SOCIAL EXCLUSION AND GREEN CONSUMPTION

Iman Naderi, B.S., M.B.A.

Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

August 2013

APPROVED:

Audhesh K. Paswan, Major Professor
Lou E. Pelton, Committee Member
Nancy Spears, Committee Member
Robert Pavur, Committee Member
O. Finley Graves, Dean of the College of Business
Mark Wardell, Dean of the Toulouse Graduate School

Naderi, Iman. Social Exclusion and Green Consumption. Doctor of Philosophy (Marketing), August 2013, 141 pp., 5 tables, 11 figures, references, 144 titles.

Social exclusion has garnered much attention from researchers across the social sciences, especially among social psychologists. However, given the fact that social relationships and consumption are two of the central activities in daily life, there is surprisingly little research on the impact of social connection threats within the realm of consumer behavior. This study examines the effect of social exclusion on proenvironmental behavior and green consumption. More precisely, the objectives of this study are threefold. The first objective is to examine whether the findings in social psychology literature on how excluded individuals respond to exclusion when they are exposed to proenvironmental consumption behavior. The second objective of this research is to find the underlying mechanism and to rule out some of the possible explanations (e.g., mood) for this effect. The final objective of this study is to establish some of the boundary conditions (individual differences and situational factors) for the proposed effect.

The hypotheses of this study were developed based on two main theoretical bases borrowed from social psychology literature: empathy-altruism hypothesis (Batson 1991) and social reconnection hypothesis (Maner et al. 2007). Overall, it was proposed that while social exclusion decreases individuals' inclination to engage in proenvironmental activities, socially excluded people are motivated to use green consumption behaviors to establish new social bonds with others. These propositions were tested and supported across four experiments.

Across these experiments, the findings demonstrated that social exclusion causes people to express lower tendency to engage in proenvironmental behaviors. The findings also consistently suggest that mood does not explain why social rejection leads to negative

environmental outcomes. Additionally, social exclusion appears to cause a temporary absence of empathic concern toward others, which leads to less green behavior with altruistic motivation. Further, the role of emotional empathy as a boundary condition was tested in this study and the findings indicate that experiencing social exclusion does not negatively impact proenvironmental behavior in highly empathetic individuals. Finally, this investigation showed that when a proenvironmental behavior is perceived as an opportunity to reconnect and positive social feedback is expected from peers, socially excluded participants favor products that signal to their peers that they too are concerned about environmental issues.

In addition to its contributions to consumer research and marketing, this work provides several practical implications. For instance, as established in this study, green products by default are not perceived by excluded individuals as tools that facilitate social reconnection. However, when such products are positioned properly, such individuals tend to capitalize on the social acceptability of their behavior to help them fulfill their threatened need for affiliation. The implication here is that marketers should attempt to customize their promotional strategies accordingly and direct the consumer's attention to this covert benefit of green products.

ACKNOWLEDGMENTS

It is really difficult for me to list all the people who sincerely helped me during the past four years. I owe my deepest gratitude to all of them who have made my journey as a doctoral student possible. I would especially like to thank my supervisor, Dr. Audhesh Paswan, for his continued support, advice, and encouragement. Not only did he guide me throughout this dissertation, but he also taught me to think independently, helped me to overcome difficulties, and supported me to develop other skills beyond conducting research. I have been fortunate to have such a great mentor whose enthusiasm for learning set the norm for me in my future career.

I would also like to extend my appreciation to the members of my dissertation committee, Dr. Lou E. Pelton, Dr. Nancy Spears, and Dr. Robert Pavur, for their precious insights, guidance, and suggestions. I am also thankful for the support and mentorship provided by the other members of the Department of Marketing and Logistics at the University of North Texas, especially Dr. Blankson, Dr. Strutton, Dr. Guzman, and Dr. Sager. I will always be indebted to them for their help.

Finally, and most importantly, I would like to thank my amazing family for their unwavering devotion and love. I am especially grateful to my parents for encouraging me in all of my pursuits and inspiring me to follow my dreams. I always knew that you believed in me and wanted the best for me. It was under your watchful eye that I gained so much drive and an ability to tackle challenges in my life. Thank you so much for your unconditional support and encouragement.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS iii

LIST OF TABLES vi

LIST OF FIGURES vii

CHAPTER 1. INTRODUCTION 1

Overview 1

Social Exclusion Conceptualizations 4

Behavioral Responses to Exclusion 5

Green Consumption as Prosocial Behavior 8

Theoretical Perspectives 8

Research Objectives 9

CHAPTER 2. BACKGROUND OF THE STUDY 12

Introduction 12

The Need to Belong 12

Exclusion, Ostracism, and Rejection 14

Social Exclusion 15

Consequences of Social Exclusion 17

Explanations for Divergent Findings 28

The Present Investigation 38

Green Behavior as a Form of Prosocial Behavior 39

Theoretical Framework and Hypothesis Development 41

CHAPTER 3. EMPIRICAL INVESTIGATION 51

Overview 51

Experiment 1 53

Sample and Data Collection 54

Experiment 2 67

Experiment 3 76

Experiment 4 90

CHAPTER 4. GENRERAL DISCUSSION AND IMPLICATIONS 104
General Discussion 104
Theoretical Contributions 106
Practical Implications 109
Limitations and Directions for Future Research 112
Concluding Remarks 115
APPENDIX: INSTRUMENTS USED IN RESEARCH 116
REFERENCE LIST 130

LIST OF TABLES

Page

TABLE 1 EFFECTS, MOTIVES, AND RESPONSES IN SOCIAL EXCLUSION (ABRAMS ET AL. 2005) 18

TABLE 2 DEMOGRAPHIC INFORMATION OF THE PARTICIPANTS IN EXPERIMENT 1 54

TABLE 3 DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 2 68

TABLE 4 DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 3 78

TABLE 5 DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 4 91

LIST OF FIGURES

Page

FIGURE 1 RESEARCH MODEL 50

FIGURE 2 NON-GREEN (LEFT) AND GREEN BACKPACKS (RIGHT) IN EXPERIMENT 1 59

FIGURE 3 COMPARISON OF GREEN BEHAVIORS ACROSS EXPERIMENTAL GROUPS 63

FIGURE 4 NON-GREEN (LEFT) AND GREEN CARS (RIGHT) IN EXPERIMENT 2 71

FIGURE 5 EFFECTS OF EXCLUSION AND EMPATHY ON GREEN PRODUCT PREFERENCE 74

FIGURE 6 DESKTOP/LAPTOP COMPUTER FEATURES IN EXPERIMENT 3 80

FIGURE 7 EFFECTS OF EXCLUSION AND CONSUMPTION VISIBILITY ON PURCHASE INTENTION 86

FIGURE 8 EFFECTS OF EXCLUSION AND BEHAVIOR VISIBILITY ON BEHAVIORAL INTENTION 88

FIGURE 9 SELF-BENEFIT CONDITION IN EXPERIMENT 4 94

FIGURE 10 ENVIRONMENTAL-BENEFIT CONDITION IN EXPERIMENT 4 96

FIGURE 11 EFFECTS OF EXCLUSION AND ACTION BENEFITS ON PURCHASE INTENTION 100

CHAPTER 1

INTRODUCTION

> *I think everyone in the world to a large or small extent has felt rejection. And with rejection comes anger, and with anger some kind of crime in revenge for the rejection, and with crime, guilt—and there is the story of mankind.*
>
> John Steinbeck, East of Eden (1952)

Overview

While Steinbeck's classic exemplifies the potential for sober manifestations of rejection, it similarly reifies the need for human belongingness. The human need for connectedness to others or belonging has received widespread attention in popular media, literature, and social science research. The innate challenge to "connect" with others is a fundamental human need. The native human craving for belonging enables a nuanced conceptualization of social exclusion. Social exclusion simply refers to keeping an individual or group out of social situations (Williams, Wesselmann, and Chen 2007). One coping mechanism for those who experience social exclusion may be self-initiated engagement in prosocial behaviors: acts to help others. Because the altruistic motivation underlying prosocial behaviors has been associated with expectations of reciprocity, individuals may proactively help others to increase the likelihood of receiving some reciprocal act that enhances their sense of belongingness. The overarching mission of the present research is to critically explore the association between this basic human need and self-initiated prosocial behavior.

Exclusion challenges people's fundamental needs to belong to a social unit. It may impact a variety of dysfunctional reactions related to anger, anxiety, cognitive reasoning, depression, self-esteem, and self-defeating perceptions and behaviors. Being excluded also evokes antisocial and aggressive responses, most likely because of the threat it poses to people's

need for control. Other responses are more passive and include withdrawal or self-harm, whereas more constructive responses include trying harder to engage with the majority or conforming more strongly to relevant norms. Under certain conditions, individuals may develop a strong political commitment to a devalued or excluded in-group. Additionally, groups may use exclusion as a means of controlling both the behavior of individual members and the subjective validity of the group's values or norms.

Because of its pervasiveness and substantial implications for physical and psychological well-being, social exclusion has garnered much attention from researchers across the social sciences, especially among social psychologists. On the whole, research on exclusion indicates that the consequences of social exclusion are mixed. Some studies find evidence of antisocial behavior following exclusion whereas others find evidence of prosocial behavior. The literature currently suggests that rejected individuals will act in prosocial ways (e.g., being agreeable) when they foresee future interactions with a partner and in antisocial ways (e.g., being aggressive) if they expect little or no contact with a partner (Maner et al. 2007). An aim of ongoing and future research is to uncover the circumstances under which social exclusion elicits more prosocial than antisocial effects and vice versa.

Given the negative consequences of exclusion, with the notable exception of the studies by Loveland, Smeesters, and Mandel (2010), Mead et al. (2011), and Lee and Shrum (2012), there is surprisingly little research on the impact of social connection threats within the realm of consumer behavior. Social relationships and consumption are two of the central activities in daily life. Therefore, examining such an effect is a worthy topic of investigation.

On the other hand, during the past three decades there has been massive growth in environmental awareness, especially in more developed economies such as the United States and

Western European countries. Over this period, the market for environmentally friendly products (i.e., green products) has begun to extend to nearly every facet of the market. At local stores, consumers now have the ability to purchase household cleaning products, several types of food, and even bottles of water that have, in some way, integrated the green scheme of marketing into products. Overall, all else being equal, green products are associated with inconvenience, lower performance, and higher costs compared to nongreen products (D'Souza et al. 2006; Mainieri et al. 1997; Ottman, Stafford, and Hartman 2006). Therefore, not all individuals are interested in buying green products or acting environmentally friendly despite their positive environmental attitude. Subsequently, numerous scholars and public officials have called for increased urgency in motivating people to engage in proenvironmental behaviors. This study is a response to this call for research. More precisely, the effect of social exclusion on proenvironmental behavior and green consumption is examined in the present investigation.

The social psychology literature concludes with the proposition that the behavioral response to social exclusion depends primarily on the prospect of social acceptance. This proposition, which is only on its early stages of development, is called social reconnection hypothesis (DeWall and Richman 2011; Maner et al. 2007). According to this hypothesis, people's desire for social connection increases when their need to belong has been threatened by exclusion or rejection (Lakin, Chartrand, and Arkin 2008; Maner et al. 2007). Theoretically, as also evidenced in Mead et al's (2011) study, this means that excluded people will treat money and consumption as means to an end (i.e., the goal of affiliation). In contrast, in the absence of a palpable promise of acceptance, socially excluded people should lose their willingness to engage in the same behaviors because doing so will not satisfy their need to belong. Therefore, it is proposed that socially excluded people are motivated to use proenvironmental behaviors and

green consumption, as a form of prosocial behavior, in the service of affiliation. This proposition is tested in four laboratory experiments that are described in details in chapter 3.

Social Exclusion Conceptualizations

There is an extensive tradition in social psychology that having a few positive and lasting relationships enhances well-being. James (1890), Freud (1930), Maslow (1968), Deci and Ryan (1985), and others have argued that belongingness is a crucial aspect of human motivation. In their highly influential article, Baumeister and Leary (1995) proposed that people have a pervasive drive to have positive social connections marked by stability and mutual concern. Across a large number of studies, a lack of social connection influenced emotional and cognitive responses, and negatively impacted health, adjustment, and well-being. More recent evidence supports the need to belong theory by showing a link between a lack of social connection and negative outcomes. In sum, Baumeister and Leary (1995) argued that the motivation to maintain social bonds and seek attachment with others is a fundamental need and thwarting this need should produce goal-directed behavior aimed at satisfying it.

Social psychology literature posits that the need to belong can be threatened by three different forms of rejection: explicit rejection, exclusion, and ostracism. Although these three terms have been used interchangeably in previous research, it is important to explain their similarities and differences. The overarching social phenomenon in this context is rejection, which refers to one's "perceived reduction of social acceptance, group inclusion, or sense of belonging" (Knowles and Gardner 2007, p. 740). Rejection may be active or passive. Active rejection (also known as explicit rejection) occurs when others voice negative views of an individual or tell him or her that his or her presence is not wanted (Knowles and Gardner 2007).

On the other side is passive rejection (also known as ostracism), which occurs when others pay little attention to an individual or completely ignore him or her.

The most common phenomenon in this context, however, is social exclusion. Originated from sociology, social exclusion is defined as "inability to participate effectively in economic, social, political, and cultural life, alienation and distance from the mainstream society" (Duffy 1995, p. 17). Social exclusion differs from ostracism in that ostracism normally involves ignoring or lack of attention in addition to exclusion. And ostracism is distinguishable from rejection in that ostracism involves giving no or little attention to an individual or group whereas rejection involves combining acts of exclusion with verbal or physical abuse. In sum, the three forms of rejection (explicit rejection, ostracism, and exclusion) could be located on a continuum based on the intensity of negative responses that they can induce: the minimum and maximum negative outcomes, respectively, are expected from exclusion and explicit rejection and ostracism lies somewhere in the middle.

Behavioral Responses to Exclusion

As briefly discussed, social psychologists argue that responses to an act of exclusion depend on a number of factors and could range from negative and antisocial actions to positive and prosocial behavior. Several plausible explanations (i.e., competing needs explanation, stages of coping theory, dual response explanation, and individual differences explanation) have been proposed to address these findings (for a full review, see chapter 2).

According to competing needs explanation (Williams 1997, 2001), exclusion can threaten four fundamental human needs: need to belonging, self-esteem, control, and meaningful existence. After experiencing exclusion, excluded individuals respond in ways to regain the lost

needs. According to this explanation, when the first two needs (i.e., belonging and self-esteem) are threatened, excluded individuals are motivated to direct their behavior in a prosocial manner and consequently increase their chances of reinclusion. There are, however, two other needs that exclusion threatens: control and meaningfulness existence. That is, excluded individuals are unable to control the situation and feel a lack of recognition of their existence. In this situation, regaining the needs of control and recognition might not direct excluded individuals to behave in a prosocial manner. Instead, they may be more motivated act antisocially to validate their existence and to exert control over others.

Stages of coping theory (SCT) is another model proposed by Williams (2009) which can be used as a complementary explanation for inconsistent findings in previous research. According to this theory, responses to exclusion go through a three-stage process including reflexive stage, reflective stage, and finally resignation stage. The reflexive stage occurs immediately after exclusion and induces a rapid response. In the reflective stage, in contrast, people gradually recover from the pain they experienced by engaging in responses aimed at revitalizing threatened needs. In the last stage, resignation, social acceptance is unexpected and, thus, excluded individuals may be motivated to demonstrate aggressive rather than prosocial behavior.

Another explanation is derived from the model of dual attitudes (Wilson, Lindsey, and Schooler 2000), according to which it is possible to have contrasting implicit and explicit attitudes toward the same attitude object. After experiencing exclusion, individuals could have implicit responses to retaliate, but explicit responses to ingratiate. Therefore, a possible explanation for divergent findings in literature is that explicit reactions to exclusion had been

examined in studies that found prosocial reactions, whereas those that found antisocial responses had examined behaviors that were implicit.

The final group of explanations is related to individual differences. It is conceivable that there are individual differences in responses to exclusion. One individual characteristic that could affect the response to exclusion is rejection-sensitivity (Downey and Feldman 1996; London et al. 2007; Romero-Canyas and Downey 2013). Overall, rejection-sensitive individuals are more concerned with rejection and expect it more often than other people do. They also tend to read rejection into others' actions and words more often than others do (Kang and Downey 2007). The other individual difference that may affect the response is narcissism. Research shows that high narcissism predisposes people toward aggression and hostility, whereas standard self-esteem shows no effect (Bushman and Baumeister 1998). The last individual difference that may be influential in finding inconsistent reactions to exclusion is empathy (a.k.a. empathic concern), which is defined as an emotional response of compassion and concern caused by witnessing someone else in need (Niezink et al. 2012; Woltin et al. 2011). The role of empathic concern in triggering prosocial actions has been established in social psychology literature and research consistently finds a positive relationship between empathic concern and willingness to help (e.g., Batson 1991; Stocks, Lishner, and Decker 2009). In addition, it has been shown that social exclusion negatively affects empathic concern which in turn leads to decline in prosocial behavior (Twenge et al. 2007). Consequently, trait empathy, as an enduring personal characteristic, may be an important factor affecting how people respond to exclusion when they are to decide whether or not demonstrate prosocial behavior.

Green Consumption as Prosocial Behavior

Prosocial behavior is broadly defined as a voluntary behavior intended to benefit another (Eisenberg, Fabes, and Spinrad 2007). As discussed in literature, prosocial behavior can be performed for a variety of reasons, ranging from selfish and manipulative reasons to moral and other-oriented reasons. Accordingly, proenvironmental behavior can be defined as voluntary actions intended to benefit the environment.

Three primary motives are offered regarding why consumers might engage in proenvironmental behaviors: (1) environmental concern perspective (Schwepker and Cornwell 1991) which is in line with altruistic motives for acting prosocially; (2) rational economic perspective (Santopietro 1995) which is congruent with the idea that selfish motives sometimes drive prosocial behaviors; and (3) socially-oriented perspective (Van Vugt 2009), according to which seemingly altruistic acts could directly or indirectly benefit the altruist (Smith and Bird 2000), is compatible with the presence of selfish motives in prosocial actions.

Overall, this research takes the stance that proenvironmental behavior is a form of prosocial behavior because (1) it is voluntary; (2) its key benefits are directed toward the environment rather than the self; and (3) it could be resulted from both self- and other-oriented motives.

Theoretical Perspectives

Two main hypotheses borrowed from social psychology literature (empathy-altruism hypothesis and social reconnection hypothesis), together with the Funder's (1995, 1999) realistic accuracy model, are integrated into a theoretical framework based on which the hypotheses of this study are developed to investigate research questions. The first theoretical base is the

empathy-altruism hypothesis. The hypothesis states that feelings of empathy for another person lead to an altruistic motivation to increase that person's welfare (Batson 1991). Overall, this hypothesis has been supported in a large number of studies aimed at investigating why people help or fail to help. The other theoretical perspective that is employed in this research is the social reconnection hypothesis (Maner et al. 2007). This hypothesis is based on the premise that when a human need is threatened people look for new ways to satisfy it. According to this hypothesis, experiencing social exclusion is a serious threat to one of the fundamental human needs (i.e., need to belong). Consequently, excluded individuals may feel strong desire and motivation to form new social bonds with other people in order to satisfy that need (Maner et al. 2007). Although this hypothesis is on its early stages of development, it has been supported in previous studies (e.g., Gardner, Pickett, and Brewer 2000; Maner et al. 2007; Williams, Cheung, and Choi 2000; Williams and Sommer 1997). These studies provide evidence that exclusion can lead people to turn hopefully toward others as sources of renewed social connection.

Finally, the realistic accuracy model is applied to develop research hypotheses. This model posits that accurate personality judgment is the result of a four-stage, social-cognitive process in which the target person first emits a behavior that is *relevant* to the trait to be judged in a setting where this information is *available* to the perceiver, who must then *detect* and correctly *utilize* the information on the way to an accurate judgment. These criteria are used to examine the boundary conditions in this research.

Research Objectives

As noted earlier, the purpose of this research is to investigate how social exclusion affects proenvironmental behavior and green consumption as a form of prosocial behavior. In fact, the

first objective is to examine whether the findings in social psychology literature on how excluded individuals respond to exclusion when they are exposed to prosocial decisions can be extended to proenvironmental behavior. The second objective of this research is to find the underlying mechanism and to rule out some of the possible explanations (e.g., mood) for the proposed effect. The final objective of this study is to establish some of the important boundary conditions (individual differences and situational factors) for the proposed effect.

To achieve these goals, this dissertation is organized as follows. In chapter 2, a review of the literature on social exclusion and prosocial behavior is presented and some plausible explanations for divergent findings in previous research are offered. Then this proposition is scrutinized that proenvironmental behavior can be regarded as a form of prosocial behavior when a number of criteria is met. This section is then followed by a theoretical framework that is used in this investigation. More specifically, two main theories applied in this research are empathy-altruism hypotheses (Batson 1991) and social reconnection hypothesis (Maner et al. 2007). Based on this theoretical framework, eight hypotheses are developed to investigate the research questions of this study.

Then in chapter 3, the four experiments that are conducted to test the hypotheses are described in details. More precisely, Experiment 1 investigates the main effect of social exclusion on proenvironmental behavior as well as the mediating role of the state empathic concern. Then the moderating effect of trait empathy on the relationship between social exclusion and proenvironmental behavior is tested in Experiment 2. Experiment 3 is designed to test one of the boundary conditions for the proposed effect of social exclusion on proenvironmental behavior. Specifically, the hypothesis that socially excluded and socially accepted individuals differ in preferences for green products when visibility is high is tested.

Finally, Experiment 4 investigates another boundary condition for the hypothesized effect; that is, the moderating effect of the beneficiary of the proenvironmental action is tested.

CHAPTER 2

BACKGROUND OF THE STUDY

We can never get a re-creation of community and heal our society without giving our citizens a sense of belonging.

Patch Adams

Introduction

Social exclusion (i.e., keeping an individual out of social situations) is a complex concept that encompasses a variety of interconnected processes and problems. It has far-reaching consequences for individuals and groups and has been linked to a host of negative outcomes such as poor health and well-being (e.g., Twenge, Catanese, and Baumeister 2002) as well as antisocial and criminal behavior (e.g., Twenge et al. 2007). Recent years have witnessed a dramatic increase in social psychological research on both the causes and consequences of social exclusion (e.g., Baumeister et al. 2005; Tai, Zheng, and Narayanan 2011; Wyer 2008). Researchers have often attempted to delineate meaningful distinctions between various different types of exclusion experiences, but it remains unclear whether these result in different types of outcomes for the individuals. In this chapter social exclusion refers to being excluded, rejected, or ignored from desired relationships or groups and the construct is studied from an individual-level.

The Need to Belong

After primary needs such as food and shelter are satisfied, the need to belong is among the strongest of human motivations. People go to extraordinary lengths to affiliate with others, be liked by others, and belong to groups (Baumeister and Leary 1995). These needs might have arisen from evolutionary pressures; our ancestors who were excluded from social groups often

died because hunting, gathering, and self-defense were difficult they were alone. Apparently, people excluded from groups were also unable to reproduce themselves.

The thesis that people are motivated to form and maintain interpersonal bonds is not new. Indeed, previous research suggests that human beings have a pervasive drive to form and maintain at least a number of lasting, positive, and significant interpersonal relationships. This proposition, derived from an extensive review of the literature on the individual's need to belong by Baumeister and Leary (Baumeister and Leary 1995), is called the belongingness hypothesis. In their review, Baumeister and Leary (Baumeister and Leary 1995, p. 499) proposed that "a need to belong, that is, a need to form and maintain at least a minimum quantity of interpersonal relationships, is innately prepared (and hence nearly universal) among human beings." They further concluded that the need to belong should be found to some degree in all humans across cultures, although one would expect there to be individual variations in how people express and satisfy this need.

According to their seminal article, satisfying this drive involves two criteria: First, there is a fundamental need for frequent, affectively pleasant interactions with a few other people, and, second, these interactions must take place in the context of a relatively stable and enduring framework of emotional concern for each other's welfare (Baumeister and Leary 1995). A lack of belongingness should constitute severe deprivation and cause a variety of ill effects. Furthermore, a great deal of human behavior, emotion, and thought is caused by this fundamental interpersonal motive.

In psychology, the need for interpersonal contact was asserted in several ways by Freud (1930), although he tended to see the motive as derived mainly from the sex drive. Maslow (1968), on the other hand, ranked "love and belongingness needs" in the middle of his

motivational hierarchy; that is, belongingness needs do not emerge until food, hunger, safety, and other basic needs are satisfied, but they take precedence over esteem, and self-actualization.

Exclusion, Ostracism, and Rejection

As noted earlier, the motivation to maintain a sense of social connection and seek attachment with others is a fundamental need (Baumeister and Leary 1995). Similarly, developmental theorists have argued that people have a basic need to form attachments with others in order to feel secure (i.e., attachment theory; Bowlby 1969; 1973). This fundamental need which has received widespread research attention in the social psychology literature may be threatened by three different forms of rejection: (1) explicit rejection, (2) social exclusion, and (3) ostracism. As posited by social psychologists, explicit rejection, exclusion, and ostracism are different kinds of rejection that can occur in interpersonal relationships within groups or dyadic relationships.

Defined broadly, social rejection refers to one's "perceived reduction of social acceptance, group inclusion, or sense of belonging" (Knowles and Gardner 2007, p. 740). Rejection typically produces negative immediate effects and leads to either antisocial or prosocial behavior, depending on the context of subsequent interactions. Rejection may be active or passive and involve physical or psychological distancing or exclusion. For instance, individuals may be actively rejected when others express negative views of them or tell them that their presence is not welcome or wanted (i.e., explicit rejection; Knowles and Gardner 2007).

In comparison, individuals may be passively rejected when others pay little attention to them or ignore them altogether. This type of rejection is referred to as ostracism, which is defined as the act of ignoring and excluding individuals (Williams and Carter-Sowell 2007). It is

differentiated from social exclusion in that ostracism generally requires ignoring or lack of attention in addition to social exclusion. It also is distinguishable from overt acts of rejection and bullying because rather than combining acts of exclusion with verbal or physical abuse, ostracism involves giving no or little attention to the individual or group.

Explicit rejection and ostracism are both common phenomena in different societies. The most common type of rejection, however, is social exclusion. Social exclusion refers to keeping an individual or group out of social situations. This phenomenon typically occurs in the context that the individual or group is believed to possess undesirable characteristics or characteristics deemed unworthy of attention. Acts of social exclusion are observed in human and other social animals. Researchers agree that social exclusion serves a specific function for those who employ it, and that it is unpleasant and painful for those who are denied inclusion and there is a potential for cognitive impairment (Baumeister et al. 2005; Baumeister, Twenge, and Nuss 2002).

Social Exclusion

The notion of social exclusion is a relatively new concept and is embedded in the economic, political, and cultural/social structures of society. Several definitions have been offered for this frequent social phenomenon. For instance, Duffy (1995, p. 17) defined social exclusion as "inability to participate effectively in economic, social, political, and cultural life, alienation and distance from the mainstream society." Social exclusion is a complex and multi-dimensional process which "involves the lack or denial of resources, rights, goods, and services, and the inability to participate in the normal relationships and activities, available to the majority of people in society, whether in economic, social, cultural, or political arenas" (Levitas et al. 2007, p. 9). An individual is excluded if: (1) he or she is geographically resident in a society (or

is a member of a group), but (2) for reasons beyond his or her control, he or she cannot participate in the normal activities of the citizens in that society (or other members in that group) and (3) he or she would like to participate (Burchardt, Le Grand, and Piachaud 1999).

As summarized in the *Encyclopedia of Social Psychology* (Williams et al. 2007), four main functions for social exclusion can be found in previous research: (1) to enforce social rules; (2) distribution of resources; (3) group identity; and (4) to increase group cohesiveness. The first function is as a way of enforcing social rules. Societies and groups regularly operate on rules that apply to various situations. If members violate these rules, they are often excluded from group and social activities. For instance, individuals who break criminal laws are often excluded from society or children who perpetually ignore the rules of the game are subsequently excluded from future games.

The second function of social exclusion is for distribution of resources to group members and individuals within a society. Most resources are in limited supply and thus the group must decide which members receive these resources. If a member is judged by the majority to be unfit for social exchange, then the majority (i.e., the group) may decide to exclude that member from social interactions. This often occurs on a societal level when enacted laws hinder fringe groups from benefitting from governmental programs.

The third function involves group identity, often resulting in justification for discrimination (Williams et al. 2007). Because the need for belonging is an important basic human need, group identity is often a way of fulfilling this need. Group identity can be categorized based on several factors such as biological factors (e.g., ethnicity and gender), socially-constructed factors (e.g., social class), and personal beliefs and opinions (e.g., religion and politics). These categorizations often lead to an “us versus them” mentality, serving as a way

of solidifying group identity, and keeping dissimilar groups on society's fringes (Williams et al. 2007). For instance, young children tend to socially avoid members of the opposite sex, but play with same-sex members. Exclusion can be the first step toward discrimination, which can lead to large-scale isolation and aggression.

The fourth function, as argued by Williams et al. (2007), is to increase the strength or cohesiveness of the excluding group. Social exclusion is used to reduce vulnerability or weakness in the group. In social animals, the member who is weak or puts the group at risk is often excluded, resulting in a stronger group. The act of excluding can strengthen the perceived cohesiveness and power of the group. Acts of exclusion, under some circumstances, provide and immediate sense of power, control, and cohesiveness among group members.

Consequences of Social Exclusion

As discussed earlier, social exclusion, a painful yet common part of life, thwarts the fundamental need to belong and has striking consequences for people's psychological and physiological functioning (DeWall and Baumeister 2006; Twenge et al. 2001; Twenge et al. 2002). The question to ask is: How do people react to social exclusion and rejection? Research conducted to answer this question, mainly by social psychologists, has concentrated on two main areas: (1) psychological and emotional responses to social exclusion and (2) behavioral responses to social exclusion. Table 1, borrowed from Abrams, Hogg, and Marques (2005), lists some of the central conclusions and themes to emerge from previous research in social psychology. Presented in this table are the psychological effects of exclusion, the motives likely to be invoked by exclusion, and the likely reactions or responses to being in an exclusionary relationship.

Almost without exception, the consequences of social exclusion for targeted individuals and groups are negative, whether conceived in broad terms such as the loss of important parts of the self, or in more specific terms such as the particular negative emotions or defensive reactions that follow. Of course the exception is when someone is excluded from an undesirable relationship or group.

From a social standpoint, social exclusion increases aggressive behavior (see Leary, Twenge, and Quinlivan 2006 for a review), impairs self-regulation (Baumeister et al. 2005), hampers logical reasoning (Baumeister et al. 2002), distorts time perception (Twenge, Catanese, and Baumeister 2003), and decreases prosocial behavior (Twenge et al. 2007).

TABLE 1

EFFECTS, MOTIVES, AND RESPONSES IN SOCIAL EXCLUSION (ABRAMS ET AL. 2005)

Psychological Effects	Motives	Response to Exclusion
Contraction of self	Evolutionary	Attempt reinclusion
Self-concept threat	Need to belong	Find alternative bases of inclusion in same or different relationship
Lowered self-esteem	Need for meaningful existence, validity, certainty	Find alternative sources of validation
Anger	Need for optimal distinctiveness	Reassert boundaries to clarify who included in each category
Frustration	Need for positive self-concept (via evaluation of self, group, etc.)	Express hostility toward source and others (e.g., prejudice, unhelpfulness)
Emotional denial	Potential self-efficacy	Find alternative basis for control and efficacy
Cognitive impairment	Reputation management	Reappraise situation or cause of exclusion (e.g., define it as illegitimate by attributing to prejudice)
	Gain versus losses	System justification/rejection
	Avoidance of threat or discomfort	Avoidance—withdraw, hide basis of exclusion or regulate exposure to source, engage in self-defeating behavior

Several studies have also shown that physiological mechanisms implicated in physical pain may also be involved in social pain caused by exclusion (DeWall and Baumeister 2006; MacDonald and Leary 2005). For example, threat of exclusion stimulates brain regions designed to detect and regulate pain (Eisenberger, Lieberman, and Williams 2003). Social rejection is also linked to increased blood pressure and cortisol (Stroud et al. 2000).

Psychological Responses to Social Exclusion

Several studies have shown that people who are excluded from desired interpersonal or group relationships feel a range of negative emotions, including sadness, disappointment, jealousy, anger, and shame (e.g., Leary 1990). Social exclusion also makes people more anxious and reduces their life satisfaction, sense of meaningful existence, and hope (e.g., Baumeister and Tice 1990). Moreover, when people are excluded from a group, they lose all the psychological and material benefits associated with membership – e.g., social networks, social and informational support, access to resources. Therefore, it is not surprising that experiencing exclusion often causes people to feel a reduction in self-efficacy (ability to complete tasks and reach goals). Reduced self-efficacy can in turn undermine perceptions of control, which itself has been shown to correlate with a range of negative emotions, including anxiety, frustration, and anger (Abramson, Seligman, and Teasdale 1978; Dweck and Leggett 1988).

Another stream of research in this area suggests that people's sense of belonging may be reduced following social exclusion and individuals with a lowered sense of belonging are more likely to experience a range of ill effects, including depression, negative affect, and low self-esteem and psychological well-being (Baumeister and Leary 1995; Baumeister and Tice 1990). Additionally, a considerable amount of research has reported reductions in self-esteem as a result

of social exclusion or rejection experiences (Leary 1990). When people feel disliked by others, they often internalize these feelings and come to feel dislike for themselves. It is suggested that self-esteem acts as a "sociometer" that measures a person's prospects for belongingness (Leary et al. 1995). High self-esteem means that one is the sort of person with whom others will want to affiliate, and low self-esteem means that one is the sort of person who may be neglected or even shunned by others. When feelings of exclusion persist over extended periods of time, excluded individuals are likely to feel depressed, have low self-esteem, and experience more negative affect than those who expect to be accepted. Such individuals may lack the confidence and motivation to seek out new social relationships and may attribute their marginal status to their own perceived deficiencies.

Behavioral Responses to Social Exclusion

As noted in previous section, extant literature suggests that the effects of social exclusion on the health and well-being of targeted individuals are almost wholly negative. In contrast, behavioral responses are surprisingly more varied. More precisely, theory and empirical evidence suggest that social exclusion could cause either increased or decreased prosocial behavior. That is, some studies suggest that social exclusion causes antisocial, aggressive, and self-defeating behaviors, whereas other research has provided evidence of prosocial response to exclusion and rejection experiences. A brief review of the studies investigating behavioral responses to social exclusion is provided in the following sections.

Passive Responses to Social Exclusion

Some people react more passively to social exclusion than others do. Such individuals

tend to respond by distancing themselves from the group from which they have been excluded. Others withdraw completely from situations and relationships where the potential for exclusion exists. Although withdrawal can often provide a temporary reprieve from the immediately aversive consequences of being rejected or excluded, the longer term prospects for those involved are far from positive (Hutchinson, Abrams, and Christian 2007). Previous evidence suggests that individuals who respond passively to exclusion are more likely to experience health problems than those who respond actively (Krieger 1990). Moreover, withdrawal is harmful especially when participation is important to long-term success, such as performance at school or work (Buhs, Ladd, and Herald 2006).

Social exclusion has also been found to correlate with instances of suicide and suicide ideation (Hutchinson et al. 2007). Recent research corroborates these feelings; a feeling of not belonging or of being disconnected from others, a sense of isolation, alienation, abandonment, rejection, and lack of support networks have all been shown to correlate with suicide rates in different societies (see Gratz 2003 for a review). Similar trends emerge in research on self-harm and self-defeating behavior (Twenge et al. 2002).

Antisocial Response to Social Exclusion

On the other hand, individuals who are socially excluded may seek revenge, criticize the group from which they are excluded, and even harm it (Hutchinson et al. 2007). Laboratory experiments suggest that socially excluded human participants, compared to their included counterparts, are more aggressive towards other people (Twenge et al. 2001), are less willing to assist or cooperate with others (Twenge et al. 2007), and are more likely to engage in risky, unhealthy, and self-defeating behaviors (Twenge et al. 2002). Similar trends appear in wider

society. For example, children who are rejected by their peers engage in less prosocial and more antisocial behaviors than those who are accepted (Mize and Ladd 1988).

This tendency for socially excluded individuals to show aggressive or antisocial behavior may be a result of threats to their needs for control (Williams 2001). Indeed, empirical evidence suggest that the more that exclusion diminishes sense of control in individuals, the more likely that person will demonstrate aggressive response (e.g., Leary et al. 2006). In a series of laboratory experiments conducted by Warburton, Williams, and Cairns (2006), participants were either included or excluded in an initial group task and then exposed to aversive stimuli, the onset of which they either could or could not control. The findings of this experiment indicated that excluded individuals without control were more aggressive than others to strangers on a subsequent task, whereas excluded participants with control were no more aggressive than those who were initially included. This suggests that acts of aggression may provide a sense of control for those who feel a lack of control due to their excluded or marginalized status.

Most conceptions of virtue and socially desirable behavior promote prosocial actions that go against the individual's own wishes and desires. Given that in many cases, doing what is prosocial and right for the group conflicts with self-interest, socially excluded individuals might feel that following social rules is no longer necessary. They also might feel that there is no point in continuing to make any such efforts or sacrifices. For example, children must be socialized into helping others. It emerges as a capacity to thwart instinctual or selfish interests in order to pursue actions that are valued by the group. Without the socializing context provided by social inclusion, the psychological restraints that support prosocial behavior may be diminished, and the prosocial impulse might be extinguished.

Prior research also suggests that there is a negative correlation between social exclusion and prosocial behavior. Correlational studies have found that compared to children who are accepted by their peers, rejected children act less prosocially (e.g., Mize and Ladd 1988). Other empirical studies have also found that prosocial actions are more highly correlated with social acceptance than antisocial actions are (Parkhurst and Asher 1992). However, these findings are correlational; hence, it is unclear if social exclusion causes less prosocial behavior or vice versa (Twenge and Baumeister 2005).

Twenge et al. (2007) conducted a series of experimental studies to determine if social exclusion causes more or less prosocial behavior. In their first experiment, they used the future outcomes manipulation: future alone participants heard that they were likely to be alone later in life, compared to three control groups (future belonging, misfortune control, and a pure control group hearing no future prediction). After using this manipulation, the experimenter gave each participant two dollars in quarters. She then mentioned that the laboratory was taking up a collection for the Student Emergency Fund. The amount of money donated by each participant served as the measure of prosocial behavior. The results showed that future alone participants donated less than those in the other three conditions. Only 37% of the future alone participants made any donation at all, whereas every single participant (%100) in the other three conditions gave at least something. These results were not mediated by either self-reported emotion or by state self-esteem.

In their second experiment, Twenge et al. (2007) manipulated social exclusion via acceptance or rejection by peers. The experimenter said that the participant could not complete the regular part of the experiment, so he or she could either leave or could help the experimenters by doing between one and three short studies for the remainder of the hour. The experimenter

explained that the experimental credit would be the same either way. The results of this experiment again showed that excluded participants were markedly less helpful. Rejected participants volunteered less compared to accepted participants. Only 20% of rejected people volunteered to help at all, whereas 90% of accepted people volunteered to help with at least one study.

These experiments both measured prosocial behavior that involved the sacrifice of self-interest: participants were asked to give up a scarce resource (either money or time). In their third experiment, Twenge et al. (2007) used a different measure of prosocial behavior that did not involve a noticeable sacrifice. They first manipulated social exclusion and then participants completed an emotion measure. The experimenter then reached toward a shelf and knocked over a can of pencils. The measure of helping was the number of pencils the participant helped pick up from the floor: Even though this form of helping did not involve a sacrifice, socially excluded participants were still considerably less helpful compared to the people in the other groups. Only 15% of the future alone participants helped pick up any pencils at all, compared to the 64% who helped in the other three conditions. These effects were not mediated by mood, and self-esteem was not a significant moderator variable. Thus, again, socially excluded people were less helpful than others.

In the next three experiments, they measured prosocial behavior in a mixed-motive game. After receiving the prediction of different future outcomes, participants played the Prisoner's Dilemma game with a computer program (they believed they were playing with another participant). In this game, participants choose to either cooperate or compete on each turn; a point matrix rewards players when both cooperate, takes points off when both compete, and awards more points to the competitor when one player competes and the other cooperates.

Overall, cooperating results in a higher point total at the end of the game. In two experiments, the computer was programmed to begin by competing and then play a tit-for-tat strategy; in the other, it was programmed to cooperate on the first turn before playing tit-for-tat. All three experiments produced the same results: future alone participants chose to cooperate significantly less often than the other groups. This occurred even though cooperating would have given the greatest return to the self in yielding a higher point total and thus more money. In the last experiment, the experimenter was blind to condition and the social exclusion feedback was delivered on paper, yet those who received the prediction of a life alone still cooperated on fewer turns.

Finally, in their last experiment examining the mediating effect of interpersonal empathic concern, they found that social exclusion reduced empathic concern for another's misfortune, which in turn led to smaller and fewer donations as a measure of prosocial behavior. Most important, empathic concern fully mediated the link between social exclusion and prosocial helping behavior.

Eight different possible mediating variables across these seven experiments were measured: mood, state self-esteem, ego shock, belongingness, trust, control, state self-awareness, and empathic concern. Except for empathic concern, none mediated the effect. Nevertheless, the results of the experiments conducted by Twenge et al. (2007) are quite consistent and striking: social exclusion causes people to become less helpful in general. They are less helpful toward a specific person who asks for help or toward a vaguely defined category of needy comrades. They are also less helpful toward a peer and toward a high status person. They are less helpful regardless of whether helping others would cost them something, cost them nothing, or even plausibly benefit them.

Prosocial Responses to Social Exclusion

Prosocial behavior, by definition, is performed to benefit others, rather than to benefit the self (Eisenberg et al. 2007). It often entails risk or cost to the self, such as when one gives resources to others or risks his or her life in battles. Prosocial behavior depends on believing that one is part of the community in which people mutually seek to aid, to support, and, occasionally, to love each other. Therefore, when people feel excluded, their inclination to perform such behaviors should be reduced or eliminated. This prediction is confirmed as the empirical evidence suggests that a feeling of being excluded or of not being belonged may lead those involved to behave in ways that will increase their excluded status, whether intentionally or not.

However, the opposite prediction that social exclusion could reduce prosocial behavior is also plausible and is supported in previous research. Although it has been found that social exclusion may cause aggressive behavior, excluded individuals could act in prosocial ways under certain circumstances, especially when they are given the explicit opportunity to do so. Several studies have shown that people often try to change or alleviate their exclusion by behaving in prosocial or conciliatory ways. If people are strongly motivated to form and maintain social bonds, then the loss of social connection frustrates this basic human need (Maner et al. 2007). This should motivate people to desire new connections (DeWall and Richman 2011). Helping others and cooperating with them is an opportunity for excluded individuals to presumably prove their social value to others; in this way they could induce others to like and depend on them. Accordingly, it seems rational to expect that a socially excluded person would try harder to get along with others, and an increase in prosocial behavior seems a promising way to accomplish this.

Empirical evidence supporting this idea exists. For example, prosocial behavior might involve working harder for the group or conforming to the opinions of others (Hutchinson et al. 2007). Along these lines, research showed that individuals who had been excluded from a task worked harder on a subsequent task in which the contributions of individual groups members were combined to form a group total than on a task in which individual contributions were not combined (Williams and Sommer 1997). Research has also shown that targets of exclusion, compared to their included counterparts, were more likely to conform to the unanimous but incorrect opinions of others (Williams et al. 2000). Other research suggests that group members may respond to the threat of exclusion by emphasizing their representativeness and fit to the group's core values and norms (i.e., prototypicality). Empirical evidence suggests that prototypical in-group members are generally more popular in the group than non-prototypical members (Turner 1991). Consequently, individuals may feel threatened by incidents that suggest they have a marginal status within the group. A potential reaction from such individuals may be to emphasize their credentials for inclusion. This might involve aligning themselves closer to the group prototype rejecting other people who are not a good match to the prototype, or discriminating against out-group members. For example, Schmitt and Branscombe (2001) found that males who were told that they were not typical of their gender group expressed more negative feelings towards other atypical males than did those who believed that they were typical males. Similarly, previous research revealed that social exclusion causes highly identified university students to perceive greater homogeneity among their fellow university students (Pickett and Brewer 2001). This finding could be interpreted as their attempt to feel more included.

Some evidence shows that individuals whose in-group inclusion is threatened derogate out-groups more strongly. For example, Noel, Wann, and Branscombe (1995) manipulated membership status in a desirable in-group using bogus feedback that placed participants either at the core or periphery of an attractive, socially skilled personality category. They found that peripheral group members were more likely than core members to describe members of a different personality group more negatively and to endorse coercive out-group strategies, but only when their responses were to be made public. The explanation suggested by Noel et al. (1995) was that by publicly derogating an out-group category, individuals whose inclusion is threatened demonstrate that they are "true" group members, thereby increasing their prospects for inclusions. Overall, these studies consistently suggest that people whose membership in a group is questionable try to advertise and show their commitment to group norms in an attempt to enhance their prospects for inclusion (Hutchinson et al. 2007).

Explanations for Divergent Findings

Studies that show evidence of prosocial or ingratiating responses following exclusion are primarily based on the thesis that individuals will attempt to behave in affiliative ways if they fear their inclusionary status is threatened. On the other hand, studies that found aggression following exclusion or rejection either lack any explanation for the effect (Twenge et al. 2001) or point to various forms of negative affect such as frustration, anger, hurt feelings that might cause individuals to negatively respond. Such negative responses could be either in the form retaliation or in the form of displaced aggression toward neutral others (Leary et al. 2003).

Three plausible explanations were suggested for these apparent contradictions. The one, guided by the framework of William's (1997) model of social ostracism, suggests that two sets

of needs that are threatened by ostracism can result in oppositional reactions. The second one is that individual's primal, automatic responses are retaliatory, but their strategic and controlled reactions are to be seen as good and attractive, so that they can be reincluded. The third is related to individual differences that can affect the way people response to exclusion. These explanations are discussed in more details.

Competing Needs Explanation

Williams' (1997, 2001) model of ostracism may help us understand the opposing reactions to exclusion. The core of this model is that exclusion is suggested to uniquely threaten four fundamental human needs: belonging, self-esteem, control, and meaningful existence. After experiencing and incident of exclusion, the target will react in ways to regain the lost needs. Apart from being intuitively appealing, this model provides a plausible explanation for such contradictory findings in literature.

First, reacting in an ingratiating way to exclusion is consistent with Williams' model of ostracism (Williams 1997, 2001). Based on the reasoning put forth by Baumeister and Leary (1995) regarding social exclusion and the need to belong, Williams' model could be used to explains why prosocial responses are anticipated following exclusion. According to this model, most pertinent to the ingratiating response are the needs for belonging and self-esteem. As argued by Baumeister and Leary (1995), the need to belong is a fundamental motivation and to keep this need satisfied, individuals avoid rejection. One could avoid rejection by steering clear of situations in which rejection is likely, or, by repairing one's behavior in order to get reaccepted by the excluding group, or to be accepted by new groups. Threats to self-esteem ought to follow the same course (Leary et al. 1995). Indeed, Leary et al. (1995) posit that self-

esteem acts as a "sociometer" that provides feedback to an individual about his or her inclusionary status. Thus, self-esteem, like belonging, should direct the individual to behave in a prosocial manner to increase the chances of reinclusion.

There are, according to Williams' (1997, 2001) model, two other needs that exclusion threatens: control and meaningfulness existence. When ignored and excluded, individuals are unable to control the social situation. No matter what is said or done, the sources of exclusion appear to be unaffected. Exclusion also communicates to individuals a lack of recognition of their existence. In contrast to the needs of self-esteem and belongingness, regaining the needs of control and meaningful existence might not lead excluded individuals to behave in a prosocial manner. Instead, they may be more motivated to provoke reactions in order to validate their existence and to exert control over others.

At present, most studies have found that exclusion reduces participants' self-reported levels of all four needs (i.e., belongingness, control, self-esteem, and meaningful existence). Thus, it is difficult to tease apart the possibility that the belonging/self-esteem needs are competing with the control/meaningful existence needs. However, a more recent study by Lee and Shrum (2012) provided empirical evidence for this explanations. They found that different types of social exclusion threaten different needs, which in turn produce distinct outcomes (i.e., differential needs hypothesis). In their experiments, social exclusion in the form of being implicitly ignored increased self-focused and attention-getting responses, whereas being explicitly rejected increased helping and donation behavior (prosocial responses).

Stages of Coping Theory (SCT)

Stages of coping theory (Williams 2009) is a theory that can be used to explain

inconsistent and somewhat contradictory responses to social exclusion. This theory is a temporal model that describes and predicts processes and responses at three stages of reactions to ostracism: (1) reflexive, (2) reflective, and (3) resignation. According to this model, the reflexive stage occurs immediately following social exclusion and produces a rapid response similar to pain. Blood pressure rises, brain activation patterns resemble responses to physical pain, and people report more threatened needs (see Williams 2009 for a review). Reflexive responses to social exclusion are crude and do not depend on appraisals of the social exclusion experience (DeWall and Richman 2011). For example, experiencing social exclusion from a computer produces a similar response as experiencing exclusion from a person (Zadro, Williams, and Richardson 2004) and intentional exclusion activates similar brain regions as accidental exclusion (Eisenberger et al. 2003).

The reflective stage occurs after people have had time to think about and appraise their recent rejection experience. In this stage of reaction to exclusion, people begin to recover from the pain they experienced in the reflexive stage by engaging in responses aimed at fortifying threatened needs. As previously argued, responses to social exclusion in this stage depend on what type of need (i.e., belonging, self-esteem, control, or meaningful existence) has been threatened (Williams 1997, 2001). That is, socially excluded people should behave prosocially when doing so can strengthen their needs for belonging or self-esteem. In contrast, socially excluded people should engage in aggressive or antisocial behavior when these responses can fulfill their needs for having a meaningful existence or control.

The final stage (i.e., resignation) suggests that the resources necessary for fortifying threatened needs become, over time, depleted. This stage, consequently, involves arriving at the conclusion that one's value to others is quite low and one's presence is a burden. This distressing

mindset will occur for one of two reasons. First, attempts to reinforce one's threatened needs during the reflective stage are consistently unsuccessful. Second, social exclusion occurs so frequently that people begin to accept their threatened needs of alienation, depression, learned helpfulness, or unworthiness. Because acceptance is not forthcoming among people in the resignation stage, they may lose their motivation to engage in prosocial behavior and may experience an increased motivation to engage in aggressive behavior.

Dual Response Explanation

Another plausible explanation for divergent findings in previous research is grounded in Wilson, Lindsey, and Schooler's (2000) model of dual attitudes. According to this model, it is possible to have disparate implicit and explicit attitudes toward the same attitude object. The authors further suggest that the implicit attitude is the default, whereas the explicit attitude only overrides the implicit attitude if the individual has the cognitive capacity available to do so. Similarly, it is suggested that individuals have dual responses to events (Williams and Govan 2005). That is, individuals may represent their responses one way when measured explicitly, but another way when measured implicitly. Thus, after an exclusion incident, individuals may have implicit responses to retaliate, but explicit responses to ingratiate (Williams and Govan 2005).

As argued by Williams and Govan (2005), excluded individuals are angry that they have been ignored, and if there were no consequences, they would likely demonstrate their anger. But, they realize that an angry response would leave them in a position where further exclusion would be anticipated. As a result, the excluded individual acts in a way that will hopefully get them reincluded. According to Wilson et al. (Wilson et al. 2000), the implicit attitude comes to the surface when (1) participants are responding under time pressure, (2) participants are cognitively

busy when responding, or (3) the measure is an implicit measure (e.g., Implicit Association Test [IAT], Thematic Apperception Test [TAT], etc.).

It could be argued that studies that show prosocial reactions are examining behaviors or self-reports under conditions that promote explicit reactions (Williams et al. 2000; Williams and Sommer 1997). In contrast, studies that find antisocial responses to exclusion are examining behaviors that are perceived to be less indicative of an individual's motives, and therefore, are implicit (e.g., Twenge et al. 2001). This possibility was investigated in three experiments by Williams and Govan (2005). Their findings show that at an explicit level, excluded participants want to appear inclusive, tolerant, and socially acceptable, thus they portray themselves as egalitarian and non-prejudiced. However, at the implicit level, they are hurt and angry and will vent their anger on the most accessible targets. Therefore, both prosocial and antisocial responses reside within the same person. Which set of responses emerge depends on the method of assessment: implicit measures elicit implicit responses whereas explicit measures elicit explicit responses.

Individual Differences Explanation

As discussed earlier, previous studies have shown that social exclusion has strong and consistent effects on people, causing increased aggression, decreased prosocial behavior, more self-defeating behavior, and diminished cognitive performance. However, it seems plausible that there are individual differences in responses to exclusion. In particular, some people may be more aggressive than others after experiencing rejection by peers. A number of important individual characteristics that can affect these results are described in the following sections.

Rejection Sensitivity

As discussed earlier, and according to need to belong hypothesis, everyone desires acceptance and dislikes rejection from people who are important to them. Some people, however, are more concerned with rejection, a quality known as rejection sensitivity (Kang and Downey 2007). Thus, rejection sensitivity refers to a trait that makes some people different from others. Rejection-sensitive people (unlike, or more than, other people) feel anxious and expect rejection when they come into new situations. They also perceive rejection in situations more often than others do, tending to read rejection into others' actions and words. Rejection sensitivity also shows itself in how a person reacts to a rejection. Rejection-sensitive people often react to rejection with strong hostility and aggression or severe anxiety and withdrawal.

The rejection sensitivity model (Kang et al. 2009) was developed to explain all of the aforementioned elements – expectation of rejection, perception of rejection, and reaction to rejection. Research has documented support for the various links of the rejection sensitivity model. In general, rejection sensitivity is correlated with low self-esteem. However, it involves insecurity about relationships with others more than about the doubt about one's worth as an individual.

Narcissism

Another individual personality trait that may affect responses to social exclusion is narcissism, which is simply defined as a persistent manifested pattern of grandiosity, self-focus and self-importance (American Psychiatric Association 1994). Twenge and Campbell (Twenge and Campbell 2003) tested the hypothesis that individuals high in narcissism might react to rejection with higher levels of anger and aggression. In a first study, they asked participants to

recall a time when they had felt rejected, and to respond to a series of emotion words describing how they felt during this real-life experience. After controlling for passive negative emotions such as sadness, there was a significant correlation between trait narcissism and feelings of anger after rejection. Trait self-esteem was not correlated with anger. In their second experiment, they found that narcissism was significantly correlated with feelings of anger after rejection, but not feelings of anger after acceptance. In another study, they examined behavioral aggression. They used a noise-blasting game previously employed in the aggression studies: participants believe they are playing a computer game against another person, and they can choose the level and duration of noise they blast against their opponent. In this study, participants experienced a rejection by their peers and were then told that they would play the game with someone from their group (i.e., someone who had rejected them). Individuals high in narcissism, compared to those low in narcissism, were significantly more aggressive toward someone who had rejected them. As in the other two experiments, self-esteem was unrelated to aggressive responding. These results are consistent with other findings indicating that high narcissism predisposes people toward aggression and hostility, whereas standard self-esteem measures show no effect (Bushman and Baumeister 1998). Social exclusion apparently brings out the hostile tendencies of narcissists.

Finally, and in their last study, Twenge and Campbell (2003) found that narcissism was correlated with aggression even when participants believed they were blasting noise against a new person – someone who had arrived late at the laboratory and thus not a member of the group who had issued the rejection. They also included a control group of accepted individuals in this study; there was no correlation between narcissism and aggression when participants were socially accepted.

Emotional Empathy

Empathy has many different definitions, some with multiple parts. However, most definitions share the idea of one person's response to his or her perceptions of another person's current experience (Hodges and Myers 2007). Its origins are traced to the German word *Einfühlung*, which translate literally as "feeling into" (as in projecting oneself into something else). Consumer research has drawn from the traditional definition of the empathy response as an involuntary and unself-conscious merging with another's feelings. Empathy refers to a person's capacity to feel within or in another person's feelings (Langfeld 1967), and most researchers now consider it "an emotional response that stems from another's emotional state or condition and that is congruent with the other's emotional state or situation" (Eisenberg and Strayer 1987, p. 5). Briefly, an empathic response is a person's absorption in the feelings of another.

Although there is a subtle distinction between *empathy* and *sympathy*, the two terms are often used interchangeably. In social psychology, sympathy involves the experience of being moved by, or responding in tune with, another person. In consumer research, sympathy refers to a person's awareness of the feelings of another, but not absorption in the feelings themselves (Deighton and Hoch 1993; Stern 1994). To sum up, whereas sympathy stems from the perspective of an observer who is conscious of another's feelings, empathy stems from that of a participant who vicariously merges with another's feelings. In sympathy, rather than one's feelings being merged in the object, they run parallel with the object (Langfeld 1967).

Within social psychology, empathy may refer to an emotional or cognitive response or both. Cognitive empathy refers to the extent to which we perceive or have evidence that we have successfully guessed someone else's thoughts and feelings (Hodges and Myers 2007). The spectrum of cognitive empathy includes very simple tasks such as visual perspective taking and

extends up to very complex mental challenges, such as imagining another person's guess about what a third person believes. Cognitive empathy, in contrast to emotional empathy, generally does not include any reference to caring about the other person.

On the emotional side, there are three commonly studied components of empathy (Hodges and Myers 2007). The first is feeling the same emotion as another person (sometimes attributed to emotional contagion, e.g., unconsciously "catching" someone else's tears and feeling sad oneself). The second component, personal distress, refers to one's own feelings of distress in response to perceiving another's plight. This distress may or may not mirror the emotion that the other person is actually feeling. For example, one may feel distress, but not actual pain, when one sees someone fall. The third component, feeling compassion for another person, is the one most frequently associated with the study of empathy in psychology. It is often called *empathic concern*. Empathic concern is thought to emerge later developmentally and to require more self-control than either emotional contagion or personal distress, although these earlier components (along with the ability to imitate) probably lay the groundwork for later, more sophisticated forms of empathy (Hodges and Myers 2007).

Empathic concern merits special attention for its role in triggering prosocial and helping behaviors. Research consistently finds a positive correlation between how much empathic concern individuals feel for another person (or group of people) and their willingness to help those people, even when helping requires some sacrifice (e.g., time, effort, or money). However, research on empathic helping has prompted an ongoing debate about whether empathic helping is truly altruistic or whether it is motivated by selfish rewards. Prosocial behavior that is not performed for material or social rewards (e.g., rewards, approval), but is based on concern for another or moral values, is usually labeled "altruism." Although people sometimes assist others

when they receive no social or material benefit, some psychologists argue that there is always a selfish reason underlying altruistic motives. For instance, they argue that people actually help because of the psychological merging of the self with another, the desire to elevate one's own mood or to avoid negative feelings or a negative self-evaluation (for not helping). People sometimes help others to alleviate their own feelings or distress when dealing with someone else in distress or need, or primarily because of personal ties to needy others.

The Present Investigation

As previously discussed, social psychology literature suggests that both prosocial and antisocial behaviors are expected as responses to social exclusion. A number of possible explanations have also been offered for these inconsistent and seemingly contradictory findings. However, it is not clear that if the findings are applicable to proenvironmental behavior. More precisely, the purpose of this study is to investigate how socially excluded individuals will respond when they are exposed to decision making situations that involve proenvironmental behaviors. In doing so, two main theories are borrowed from social psychology to explain prosocial behavior – empathy-altruism hypothesis and social reconnection hypothesis. Before explaining these theories and applying them to investigate the research question, however, it is important to examine whether, and under what circumstances, proenvironmental behavior can be regarded as a form of prosocial behavior. If proenvironmental behavior is a subcategory of prosocial behavior, then it is possible to generalize the findings related to prosocial behavior to this broad category of behaviors.

Green Behavior as a Form of Prosocial Behavior

The issue that is addressed in this section is whether proenvironmental behavior can be regarded as a form of prosocial behavior. According to social psychology literature, prosocial behavior is voluntary behavior intended to benefit another. Thus, it includes behaviors such as helping, sharing, or providing comfort to another (Eisenberg et al. 2007). As discussed earlier, prosocial behavior can be performed for a variety of reasons, ranging from selfish and manipulative reasons (e.g., helping in the hope of getting something in return) to moral and other-oriented reasons (e.g., helping because of moral principles or sympathy for another's difficulty).

Closely derived from the definition offered for prosocial behavior, proenvironmental behavior can be simply defined as voluntary behavior intended to benefit the environment. While green options are becoming more widely available, many barriers to change remain. Indeed, despite their presumed "friendliness" to current and future environmental welfare, ceteris paribus, green products are associated with greater inconvenience, higher cost, and lower performance than non-green products; hence, green purchases often demand consumer sacrifice (D'Souza et al. 2006; Mainieri et al. 1997; Ottman et al. 2006; Shrum, McCarty, and Lowrey 1995). Therefore, similar to prosocial behavior, the benefits associated with proenvironmental behaviors are directed toward the environment (other) rather than the self.

Finally, similar to prosocial behavior, one can argue that proenvironmental behaviors could result from both egoistic and altruistic motivations. Indeed, three primary motives are generally offered regarding why consumers might engage in or refrain from proenvironmental behaviors. First, the environmental concern perspective suggests consumers are usually motivated to engage in proenvironmental behaviors because they inherently care about the

environment and its current or future occupants (Schwepker and Cornwell 1991). This perspective is closely consistent with the idea of altruistic motives for prosocial behavior. Second, the rational economic perspective suggests consumers might purchase green products based on economic reasons (Santopietro 1995). This perspective (acting proenvironmentally in order to maximize self-benefit) is highly compatible with the argument that selfish motives sometimes drive prosocial behaviors. However, the explanatory power of this motive is limited to green products that deliver direct benefits to the focal person (self-benefits) such as hybrid cars or high efficiency light bulbs. Finally, recent research shows that socially oriented motives may influence consumers' tendencies to act in environmentally beneficial ways and that such motives may be even more powerful than the former two motives (Goldstein, Cialdini, and Griskevicius 2008; Van Vugt 2009). Lee (2008) found that concern for social influence and self-image significantly impacts green behaviors among young consumers and Griskevicius, Tybur, and Van den Bergh's (2010) study revealed that an altruistic act that is performed in public (e.g. buying green products) can be associated with signaling status. Likewise, altruistic behavior serves to signal other features, such as kindness, strength of character, trustworthiness, or even intelligence. Therefore, proenvironmental behavior directly or indirectly can benefit altruistic actors (Smith and Bird 2000).

In sum, preceding argument leads to the conclusion that proenvironmental behavior can be regarded as a form of prosocial behavior because: (1) it is voluntary; (2) it will eventually benefit society as society exists within the broader environment; (3) its focal benefits are seemingly directed toward the other (environment in this case) rather than the self; and (4) it can be derived from both egoistic and altruistic motives.

Theoretical Framework and Hypothesis Development

As mentioned earlier, two main hypotheses (empathy-altruism hypothesis and social reconnection hypothesis) are borrowed from social psychology to investigate the research questions. These two theories, combined in a theoretical framework, are explained in detail in the following sections.

Empathy-Altruism Hypothesis

A topic of attention in the social psychological literature is whether true altruism (i.e., a motivational state in which the goal is to increase another person's welfare as an end in itself) exists (Lishner and Stocks 2007). Although there is little doubt that *egoism* (i.e., a motivational state in which the goal is to increase one's own welfare as an end in itself) can be a powerful motivator of helping behavior (Batson et al. 1988), Batson (1991) has provided evidence that people often assist for other-oriented sympathy, and there is likely at least some selfless motivation for some types of prosocial actions.

The empathy-altruism hypothesis states that feelings of empathy for another person produce an altruistic motivation to increase that person's welfare (Batson 1991). According to this hypothesis, the term *empathy* refers to interpersonal feelings such as compassion, sympathy, and tenderness. Additionally, the definition of altruism in this context is different from the typical usage of the term, which is usually defined to mean an act of helping that involves considerable personal costs to the helper. Overall, the empathy-altruism hypothesis has generated a large body of research that answers important questions about why people help and fail to help, and offers insights into the roles played by different types of motives underlying human social behavior.

Social Reconnection Hypothesis

The social reconnection hypothesis follows from theory pertaining to the links between motivation, deprivation, and goal attainment. When the satisfaction of an important drive is thwarted, humans often seek alternative means of satisfying that drive. The experience of social exclusion may serve as a signal that one's need for social connection is not being satisfied (Baumeister and Leary 1995). As a consequence, excluded individuals may feel an especially strong desire to form bonds with other people, so as to satisfy that need (Maner et al. 2007).

Although various theorists have suggested forms of this reconnection hypothesis (e.g., Baumeister and Leary 1995), there is surprisingly little empirical support for this hypothesis. Several recent findings, however, lend credibility to this hypothesis. Williams and Sommer (1997), for example, found that women responded to exclusion by increasing their efforts on a subsequent group task, indicating that they were trying to make themselves appear desirable to their group. Similarly, Williams et al. (2000) observed that excluded individuals were more likely to conform to the opinions of other people. This increased conformity was interpreted as a strategic attempt to make friends by increasing apparent similarity. In another study, Gardner et al. (2000) found empirical evidence for how social exclusion influences memory for social events. They had participants read personal diaries of others and found that social excluded participants recalled more events related to affiliation—both positively tinged events denoting social acceptance and negatively tinged ones denoting rejection. This could imply that rejected people were motivated to learn about social acceptance. In a more recent study, Maner et al. (2007) conducted a series of experiments and found that a link exists between prosocial behavior following exclusion and the prospect of acceptance. More precisely, their findings suggest that the experience of social exclusion elicits a desire to renew affiliative bonds with other people;

that is, recalling or experiencing some form of social exclusion causes people to express more interest in meeting others, to prefer to work with others rather than alone, to shift toward a more optimistic impression of other people as nice and friendly, and to allocate more positive evaluations and cash rewards to new partners (Maner et al. 2007). Similarly, Mead et al. (2011) found that excluded participants, relative to controls, were more likely to buy a product symbolic of group membership, to tailor their spending preferences to the preferences of an interaction partner, to spend money on an unappealing food item favored by a peer, and to report being willing to try an illegal drug, but only when doing so boosted their chances of commencing social connections. These studies together provide direct evidence that exclusion can lead people to turn hopefully toward others as sources of renewed social connection

In sum, there are empirical reasons for suggesting that social exclusion stimulates a desire to affiliate and reconnect with others, at least to the extent that those others are perceived as providing realistic sources of renewed affiliation (Maner et al. 2007). Findings of previous research, as reviewed, provide important confirmation that the need to belong operates like many other motivations, at least in the sense that when it is threatened, people look for new ways to satisfy it.

Social Exclusion and Green Consumption

As the social reconnection hypothesis asserts, responses to social exclusion depend largely on the desire and opportunity for social connection. Antisocial responses (e.g., aggression) tend to occur when the possibility of satisfying the need to belong is absent, whereas prosocial responses (e.g., proenvironmental behavior) tend to occur when there is some possibility of gaining immediate or future acceptance. Twenge et al. (Twenge et al. 2007) found

that prosocial behavior drops off sharply when people think they may be socially excluded from a desired relationship. Social reconnection hypothesis can explain their highly consistent and convergent findings. According to this hypothesis, as behavioral response to social exclusion depends primarily on the prospect of social acceptance, when such prospect does not exist (e.g., no future interaction is expected), individuals are not motivated to act prosocially. The same rationale can be offered to explain the effect of social exclusion on proenvironmental behavior; that is, social exclusion decreases proenvironmental behavior when such a behavior cannot possibly be regarded as an opportunity to affiliate with, and reconnect to, others. Therefore, it is hypothesized that:

> H1: Social exclusion negatively affects the individuals' tendency to engage in green behavior.

State Empathy as a Mediator

According to empathy-altruism hypothesis (Batson 1991; Lishner and Stocks 2007), adoption of another's perspective is a necessary precondition to altruistic helping. The positive effect of empathic concern on prosocial behavior has been extensively supported in previous research (e.g., Einolf 2008; Fisher, Vandenbosch, and Antia 2008; Oswald 1996; Twenge et al. 2007). On the other hand, recent laboratory work with human participants suggests that excluded people are less empathic toward a confederate who bemoaned either a recent romantic breakup or a physical injury (DeWall and Baumeister 2006). As argued by Twenge et al. (2007), the shutting down of the emotional system may enable the excluded individual to avoid feeling terrible but it simultaneously can constitute a kind of temporary social handicap. Apparently, as empathy-altruism hypothesis suggests, because people need their emotions to understand others, prosocial behavior could be impaired after exclusion. As empathy requires one person to

reproduce or simulate another person's emotions, the excluded person will be emotionally numb with low levels of empathy. Consequently, since prosocial behavior is driven by empathic concern for others, excluded individuals cease to act prosocially. This prediction was empirically supported in Twenge et al.'s (2007) study. Their findings revealed a vital connection among exclusion, state empathic concern, and prosocial behavior; that is, empathic concern fully mediated the negative effect of exclusion on prosocial behavior. Applying the same line of reasoning to proenvironmental behavior, it is hypothesized that:

> H2: State empathic concern mediates the negative effect of social exclusion on green behavior such that social exclusion reduces state empathic concern which in turn decreases green behavior.

The first two hypotheses are empirically tested in Experiment 1.

The Role of Trait Empathy

Experiment 2 investigates the moderating role of emotional empathy trait in the effect of social exclusion on proenvironmental behavior. As previously argued, feelings of empathy for an individual could cause prosocial behavior. Additionally, research provides evidence for the idea that social exclusion can diminish an individual's state empathic concern as a temporary coping mechanism (Twenge et al. 2007). On the other hand, emotional empathy can also be regarded as an enduring and reasonably stable capacity in individuals (i.e., trait emotional empathy). Several self-report measures have been developed to measure trait empathy as an individual characteristic (e.g., Davis 1983; Hogan 1969; Mehrabian and Epstein 1972). In such measures, people subjectively rate the extent to which they think they have traits or feelings related to empathy. As empathy-altruism hypothesis suggests, trait empathy could lead to prosocial and proenvironmental behavior. The rationale is that, overall, individuals high in this capacity

express higher feeling for others' and thus their willingness to help those people, even when helping requires sacrifice, is higher. Therefore, it is hypothesized:

> H3: Emotional empathy positively affects individuals' tendency to engage in green behavior.

The other side of the coin, as proposed earlier, is that experience of social exclusion negatively affects state empathic concern, which in turn leads to lower tendency to act proenvironmentally. When an individual is inherently high in trait of empathy, in case of exclusion, although he or she is likely to experience reduction in this feeling, the amount of reduction, compared to an excluded individual who is intrinsically low in empathic-related feelings, is expected to be smaller. In other words, individuals with this enduring capacity (trait empathy) are expected to be less sensitive to situational effects such as incidents of exclusion. Therefore, it is hypothesized that:

> H4: Emotional empathy moderates the effect of social exclusion on green behavior such that emotional empathy increases green behavior in socially excluded individuals whi*le it does not change green behavior in socially accepted individuals.*

These hypotheses are experimentally tested in Experiment 2.

Visibility of Green Behavior

According to social reconnection hypothesis, prosocial behavior, in general, and proenvironmental behavior, in particular may serve as a means to forge social bonds with new sources of potential affiliation. However, in order for this reconnection hypothesis to be held, some certain criteria must be met. As argued in previous research (e.g., Griskevicius et al. 2010; Uusitalo and Oksanen 2004), green consumption is a form of symbolic consumption, serving as a means of communication (i.e., signal) between an individual and others. On the other hand, by definition, symbolic behaviors must be socially, or publicly, visible. If socially excluded

individuals display green behavior (purchasing and consumption of green products) as a means to facilitate reconnection while such a behavior is not relevant to their actual beliefs and attitude toward the environment, then apparently visibility of the behavior is a precondition. The realistic accuracy model (RAM; Funder 1987; Funder 1995, 1999) also provides support for this prediction as it posits that accurate personality judgment can occur only in a setting where the information is available to the perceiver. Therefore, proenvironmental behavior in the hope of establishing new relationships, and consequently satisfying the threatened need to belong, is expected to occur only when observable cue differences in a given situation (i.e., the product purchase, usage, or consumption) are publicly available. This incentive could lead socially excluded people to engage in proenvironmental behavior when they are explicitly given the opportunity to do so. Therefore, it is hypothesized that visibility acts as a moderator for the negative effect of social exclusion on green behavior such that:

> H5: Socially excluded individuals' tendency to engage in green behavior is higher when visibility is high rather than low.
>
> H6: Socially accepted individuals' tendency to engage in green behavior does not differ when visibility is high or low.
>
> These hypotheses are empirically tested in Experiment 3.

Self- versus Environmental-Benefits

As hypothesized in this study, proenvironmental behavior could be a form of symbolic behavior intended to act as a reconnection facilitator. If a product is to serve as a symbolic communicative device, it must achieve social recognition, and the meaning associated with the product must be clearly established and understood by society (Grubb and Harrison 1967). The

first requirement, visibility of the action, is tested in Experiment 3. The other criterion involves the way the society evaluates the symbolic behavior and accordingly reacts to it.

Prosocial behavior involves a tradeoff between the positive and negative consequences (DeWall and Richman 2011). In one side, being helpful is linked to a variety of positive outcomes. For instance, people who donate large amounts of their money earn reputations as being generous. Helping others is also associated with a better mood (Dunn, Aknin, and Norton 2008). On the other side, there are considerable costs to helping others, which include expending one's time, material resources, and energy (DeWall and Richman 2011). Given the benefits and costs of helping, socially excluded people should behave prosocially when doing so can earn them acceptance, but they should behave selfishly when it cannot. This argument could also be applied to proenvironmental behavior as proenvironmental behavior usually benefits the environment and society at large rather than the self. However, the challenge here stems from the fact that prosocial behavior, in general, and proenvironmental behavior, in particular, may benefit the self and others at the same time. In fact, research in social psychology literature concludes that determining whether prosocial behavior (e.g., helping behavior) is selfless or selfish is extremely complicated due to the fact that self-interest and benefits to others sometimes overlap. This is the case for a large group of proenvironmental actions in which self-benefits and environmental benefits could be experienced simultaneously. For instance, although high-efficiency light bulbs are more expensive compared to regular ones (i.e., self-sacrifice), energy saving (social benefit) and consequently lower electricity bill (self-benefit) are very compelling factors in purchasing decision. Or, fuel efficient cars can deliver three main benefits at the same time: (1) reserving natural resources (completely environmental benefit), (2) less pollution (both environmental and self-benefit), and (3) saving money (completely self-benefit).

In this research, it is argued that if a proenvironmental behavior is motivated by gaining social acceptance, its direct and observable benefits should be directed toward others rather than the self. In addition, as RAM suggests, the symbolic message (i.e., proenvironmental behavior as in indicator of caring for others and the environment) should be detected and utilized properly by the society; that is, the society should be able to clearly decode such symbolic meaning. In the absence of such prospects, socially excluded people should lose their willingness to engage in proenvironmental behavior because doing so will not help them reconnect to others and satisfy their need to belong. In a similar vein, when the direct benefits associated with a proenvironmental action (e.g., purchasing a fuel-efficient car) are oriented toward the self (e.g., saving money) and the society is also likely to attribute such a behavior to egoistic motives (rather than altruistic motives), prospect for social acceptance will decrease. In contrast, when the benefits are oriented toward the environment or society (e.g., less pollution), and the society is very likely to attribute the behavior to altruistic motives, chance of acceptance by the society will increase. Therefore, socially excluded individuals are motivated to act proenvironmentally as a means to forge new social bonds when such prospect is high. Based on this argument, behavioral benefits (self- vs. environment-directed) moderate the effect of social exclusion on green behavior such that:

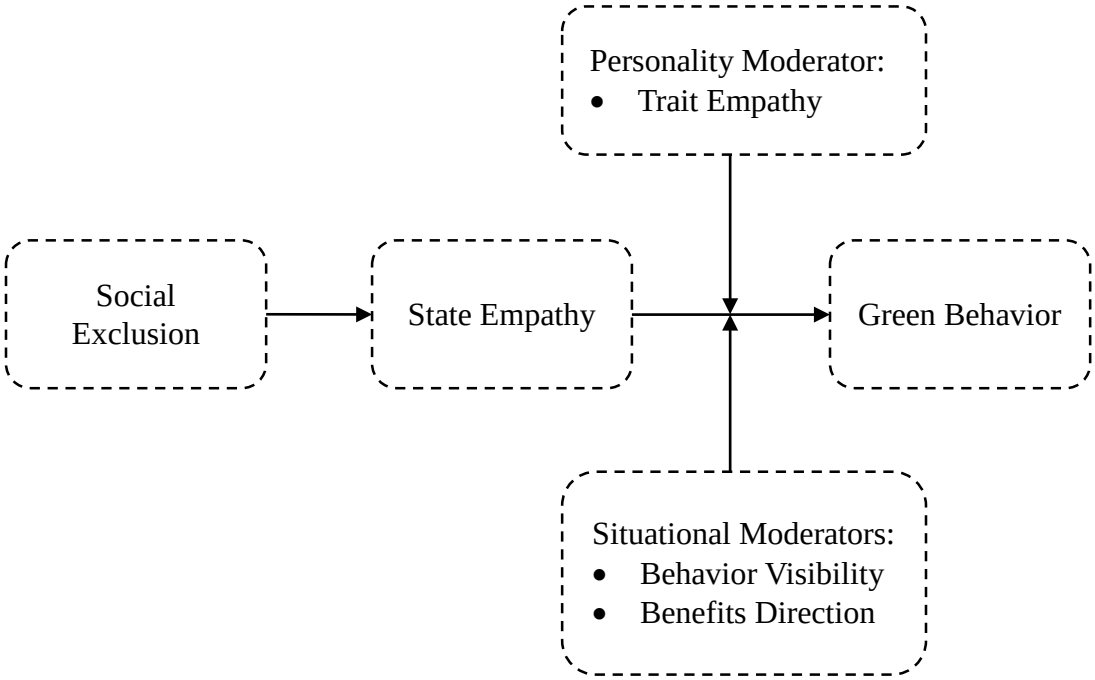
> H7: Socially excluded individuals' tendency to engage in green behavior is higher when the benefit is directed toward the environment rather than the self.
>
> H8: Socially belonged individuals' tendency to engage in green behavior is higher when the benefit is directed toward the self rather than the environment.

Four experiments were designed to investigate these hypotheses. More precisely, the first two hypotheses (H1 and H2) are tested in Experiment 1. H3 and H4, examining the role of trait empathy are tested in Experiment 2. Experiments 3 and 4 are designed to investigate the two

boundary conditions. Specifically, H5 and H6 regarding behavior visibility and H7 and H8 regarding the benefits are tested in two separate experiments. These studies are described in details in chapter 3.

FIGURE 1

RESEARCH MODEL



CHAPTER 3

EMPIRICAL INVESTIGATION

Overview

Four experiments were designed to test the proposed hypotheses of this research. The purpose of the first experiment was to establish the main effect of exclusion on proenvironmental behavior, to investigate the mediating role of interpersonal empathic concern as an underlying mechanism for this hypothesized effect, and to rule out the potential effect of mood as an alternative explanation. Then Experiment 2 examined the moderating effect of trait empathy (as an individual characteristic) on the relationship between social exclusion and proenvironmental behavior. The next two experiments were designed to establish two boundary conditions for the proposed effect of social exclusion on proenvironmental behavior. More precisely, Experiment 3 aimed to test the hypothesis that socially excluded individuals' tendency to engage in proenvironmental activities differs when their action is socially and publicly visible. Finally, Experiment 4 investigated the moderating effect proenvironmental action beneficiary (egoistic vs. altruistic) as another boundary condition for the hypothesized effect.

Experimental approach is the most appropriate research design when the goal of the research is to establish cause-effect relationships while controlling extraneous and confounding effects. Despite its inherent limitations in generalizability of the findings (low external validity), this approach ensures high levels of internal validity, and consequently, is the dominant research design in psychology (both clinical and social) and consumer research.

Data for these four experiments were collected during a three-month period from February to April 2013. A total of 385 undergraduate students from the University of North Texas participated in this experiment in exchange for partial course credit, extra course credit,

and/or a chance to win a $50 American Express gift card. From this sample, six participants were discarded, resulting in a final sample of 379 respondents across four experiments. Participants in this series of experiments were mainly recruited from College of Business (i.e., marketing, management, information systems, and accounting majors). Other participants were from College of Arts and Sciences and College of Merchandising, Hospitality and Tourism.

The use of a student sample was deemed appropriate for this investigation because, as Calder, Phillips, and Tybout (1981) argued, when the goal of research is to test a theory, employing a homogeneous sample (e.g., students sample) permits more accurate theoretical predictions than heterogeneous samples. Indeed, using homogenous samples in theory application studies reduces the error variance and thus the chance of making false conclusions about the presence (or absence) of relationship between the variables (i.e., Type II error) is lower. Overall, homogeneous samples provide a stronger test of the theory and are preferable in theory application studies. Further, care was taken to use products and contexts that were relevant for this sample in order to reduce/eliminate the confounding effects of non-relevant products and contexts.

All four experiments were conducted in a behavioral laboratory located in College of Business. Upon arrival at the lab, participants sat down at the computer and provided informed consent. The experimenter then explained the tasks. Since the context of this study, sustainability, is socially desirable, all computers were isolated by three-sided desktop carrels and were located away from the experimenter to ensure privacy.

A cover story was used in all experiments to minimize experimenter demand effects (EDE). Experimenter demand effects refer to changes in behavior by experimental subjects due to cues about what constitutes appropriate behavior (or behavior ‘demanded’ from them). The

experimenter told participants that they would participate in unrelated studies. To bolster this cover story, these studies were completed in separate short sessions. Additionally, participants completed some irrelevant tasks (e.g., filling out a battery of filler items) which were inconsequential to the experiments and were used only to maintain the cover stories. Moreover, separate, different questionnaires (i.e., different cover pages, different fonts, different formatting) were used and the tasks were arbitrarily completed on a computer (online questionnaires) or on paper questionnaires.

The experimenter in some cases was not blind to conditions or to the hypotheses of the study. To reduce experimenter bias, the experimenter adhered to a strict verbal script to create consistency across all conditions. He never engaged in unnecessary conversation with participants while instructing them during the sessions. By being consistent across all sessions, the experimenter hoped to reduce any unconscious non-verbal or verbal behaviors that might create bias. The experimenter always sat down in the same place while participant were completing the tasks.

After finishing each session in each of the present studies, care was taken to ensure that excluded participants did not suffer any distress as a result of the manipulation. In doing so, participants were told that the social feedback they received was a bogus feedback randomly assigned to them in order to elicit feelings of exclusion. They were also informed that the feedback was completely unrelated to their actual responses and personality score.

Experiment 1

The first study was designed to examine the first two hypotheses of this research. More specifically, the main effect of social exclusion on proenvironmental behavior is examined.

Additionally, the mediating role of empathic concern as a transitory affective response in this relationship is investigated in this experiment. A between subjects, full factorial experimental design with three scenarios, manipulating social exclusion, social acceptance, and control condition, was followed. The following research hypotheses are tested in this study:

H1: Social exclusion negatively affects the individuals' tendency to engage in green behavior.

H2: State empathic concern mediates the negative effect of social exclusion on green behavior such that social exclusion reduces state empathic concern which in turn decreases green behavior.

Sample and Data Collection

Ninety-two college students (48 males, 44 females) from a large public university in the United States participated in this experiment for partial course credit. Participants ranged in age from 19 to 46 years (M = 23.196, SD = 4.686). The majority of participants were white (62.0%) and never married (83.7%). Demographic distribution of this sample is presented in Table 2**.**

TABLE 2

DEMOGRAPHIC INFORMATION OF THE PARTICIPANTS IN EXPERIMENT 1

Demographics	**Frequency**	**Percentage**
Gender		
Male	48	52.2%
Female	44	47.8%
Marital Status		
Married	5	5.4%
Married with kids	2	2.2%
Not married	77	83.7%
Divorced/Separated	1	1.1%
Living together	7	7.6%
Ethnicity		
Asian	7	7.6%
Black or African American	16	17.4%
Hispanic	11	12.0%
Mixed Race	1	1.1%

White	57	62.0%
Family Annual Income		
Less than $25,000	18	19.6%
$25,000 to $50,999	15	16.3%
$50,001 to $75,000	12	13.0%
$75,001 to $100,000	14	15.2%
$100,001 to $200,000	20	21.7%
More than $200,000	13	14.1%

Design and Procedure

Data for this experiment were collected in the behavioral lab. A cover story was used to minimize potential suspicious. More precisely, when participants arrived at the laboratory, they were told that they would be participating in three ostensibly unrelated studies: the first investigating personality, the second to develop counseling techniques for college students, and the third a decision making task. To bolster this cover story, these studies were completed in three separate, consecutive sessions. As noted earlier, these tactics were used in other reported experiments to reduce suspicion that the exclusion manipulation was related to the proenvironmental task.

Participants first completed a brief demographic questionnaire as well as the Need to Belong Scale (Leary et al. 2012) with 10 items ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). To manipulate social exclusion, several procedures have been used in previous research. In this experiment, the procedure developed by Twenge et al. (2001) was followed. Participants completed the Big Five Inventory (BFI; John and Srivastava 1999) and then received feedback regarding the implication of their score for their personality. To bolster the credibility of the method, participants were given accurate feedback regarding their scores on five personality dimensions as well as their total personality score. Correct feedback about whether their total score was low (44-132), medium (133-221), or high (222-308) on this scale was also provided.

Then, and in order to manipulate social exclusion, participants were given bogus feedback regarding the implication of their personality score for their future social relationships. Specifically, they were randomly assigned to one of the three feedback conditions: future alone (socially excluded group), future belonging (socially included group), and misfortune control (control group). This last condition is intended to describe a negative outcome that is not connected with relationships or social exclusion. The feedback was delivered on a sheet of paper, so the experimenter was blind to the experimental condition and was therefore unable to influence the results (wittingly or unwittingly) throughout the experiment. Future-alone (social exclusion) feedback read:

> You're the type who will end up alone later in life. You may have friends and relationships now, but most of these will have drifted away. You may even marry or have several marriages, but these are likely to be short-lived and not continue into your later years. Relationships don't last, and when you're past the age where people are constantly forming new relationships, the odds are you'll end up being alone more and more.

In contrast, participants assigned to the future-belonging condition (social belonging) read:

> You're the type who will have rewarding relationships throughout life. You're likely to have a long and stable marriage and have friendships that will last into your later years. The odds are that you'll always have friends and people who care about you.

Last, participants in misfortune-control condition read:

> You're likely to be accident prone later in life—you might break an arm or a leg a few times, or maybe be injured in car accidents. Even if you haven't been accident prone before, these things will show up later in life, and the odds are you will have a lot of accidents.

After receiving their personality description, participants were instructed to complete the next study whose purpose was ostensibly to develop counseling techniques for college students in conjunction with the University of North Texas Counseling Center. In this part of the experiment, and in order to check whether the manipulation of

social exclusion was successful, participants completed a three-item, seven-point Likert scale measuring feelings of belongingness (Twenge et al. 2007).

Participants then completed the 20-item Positive and Negative Affect Schedule (PANAS; Watson, Clark, and Tellegen 1988). The PANAS is a widely used measure of affect that provides distinct indices of positive affect (e.g., "enthusiastic") and negative affect (e.g., "distressed"). Participants indicated the extent to which they were experiencing each emotion in the current moment on a scale from 1 (*not at all*) to 7 (*extremely*). The purpose was to evaluate whether the effect of manipulation of social exclusion on proenvironmental behavior is the result of changes in participants' affective state.

After completing these tasks, participants read and responded to a brief essay about a personal experience in order to measure their temporary empathic concern. More specifically, participants were handed a handwritten essay (in a man's or a woman's handwriting, corresponding to the participant's own gender) and a short questionnaire. The content of the essay was adapted from Batson et al.'s (1995) study. The essay, ostensibly written by a UNT student, described the very recent breakup of a treasured romantic relationship and the writer's difficulty getting over this. The essay read:

> I'm supposed to write about something interesting that's happened to me lately. Well, I don't know if this will be interesting to anybody else, but the only thing I can think of is that two days ago I broke up with my boyfriend (girlfriend). We've been going together since our junior year in high school and have been really close, and it's been great being at UNT together. I thought he (she) felt the same, but things have changed. Now, he (she) wants to date other people. He (she) says he (she) still cares a lot about me, but he (she) doesn't want to be tied down to just one person. I've been real down. It's all I think about. My friends all tell me that I'll meet other guys (girls) and they say that all I need is for something good to happen to cheer me up. I guess they're right, but so far that hasn't happened.

After reading the note and thinking about it for a minute or two, participants completed an emotional response (distress-empathy) questionnaire to indicate how they felt toward the

author of the essay on seven-point scales (1 = *not at all*, 7 = *extremely*). Embedded among the 14 adjectives (e.g., upset) were six that have been used in previous research to measure momentary empathic concern (see Batson 1991; Batson et al. 1995): *sympathetic*, *warm*, *compassionate*, *softhearted*, *tender*, and *moved*. When participants finished reading and responding to the essay, they returned the questionnaire with the completed materials.

After finishing the so-called Study 2, participants were instructed to participate in the final study (again ostensibly unrelated to the previous studies). They were told that the goal in this study was to investigate decision-making styles and processes. To create a situation similar to what consumers might experience when evaluating products (Griskevicius et al. 2010), subjects were simultaneously presented with two options (i.e., non-green and green product) available in different colors and featuring the same price ($60) and brand (JanSport). More specifically, participants read the following scenario:

> JanSport is ready to launch two newly designed backpacks (Ultra-Strength and Eco-Design), but before the launch, the company wants to pilot-test college students' preferences. Imagine that you are going to buy one of these models which will be shortly introduced to the market.

Backpack was selected because it is highly relevant to the subject population. Descriptions of four key featured attributes were offered for each option (see Figure 2). The non-green product option was described as superior on luxury and performance dimensions. On the other hand, the green option was deemed superior on proenvironmental dimensions and only environmental benefits were described for the green backpack.

These products and focal features/attributes were specifically developed for this study's purposes. The product options were pre-tested on a sample of 29 students from the same sampling frame. In the pre-test participants were asked to compare the environmentally friendliness as well as the performance of the two product options labeled as PRODUCT A (non-

green) and PRODUCT B (green). More precisely, they answered two questions: “Which of these two products is more environmentally friendly?” and “Which of these two products should yield higher performance?” on bipolar scales of 1 (*definitely product A*) to 7 (*definitely product B*). The results of one-sample *t*-tests (with test value of 4, indicating similar products) revealed that the green backpack was deemed as more environmentally friendly (M = 6.241; $t(28) = 16.323$, $p < .001$) but lower in performance (M = 2.414; $t(28) = -7.427$, $p < .001$), when compared to its non-green counterpart.

FIGURE 2

NON-GREEN (LEFT) AND GREEN BACKPACKS (RIGHT) IN EXPERIMENT 1

After reading the scenario, subjects were asked to indicate relative attractiveness of the products as well as their product choice. More precisely, the following questions were asked on bipolar scales ranging from 1 (*definitely product A*) to 7 (*definitely product B*): "Which of these two products is more attractive to you?" and "Which of these two products are you more likely to buy?" To control for counterbalancing, green and non-green products were randomly labeled as PRODUCT A and PRODUCT B and presented on the left or right side of the screen and scales (Griskevicius et al. 2010).

To examine whether manipulation of the green (i.e., superior proenvironmental benefits) versus non-green product (i.e., superior performance) was successful, participants indicated environmental friendliness and performance of the alternatives on seven-point bipolar scales, similar to what was asked in pre-test, ranging from 1 (*definitely product A*) to 7 (*definitely product B*). Performance functions to indirectly measure self-benefit. Presumably, directly asking about self-benefits associated with the non-green option may confound responses.

The other two dependent variables of this study were adapted from the willingness-to-sacrifice dimension of the environmentalism scale developed by Stern et al. (1999). These scales, willingness to sacrifice to protect the environment (WTPE) and willingness to sacrifice to benefit the society (WTPS), each consisted of three seven-point Likert-type items (1 = *strongly disagree*, 7 = *strongly agree*), and were used to measure the participants' willingness to sacrifice their benefits or resources for the benefit of the environment or society.

Participants then completed two scales, measuring their overall attitude toward JanSport brand and JanSport backpack (Spears and Singh 2004). Finally, a hypothesis-guessing check question showed that none of the participants harbored suspicious regarding a connection between the studies. Participants were then debriefed, thanked, and dismissed.

Analysis and Results

Scores of the items within each scale were averaged to form composite scores for the constructs. In addition, ratings of the dependent measures as well as the manipulation checks were transformed so that higher scores corresponded to the green model.

Manipulation Check

Before analyzing the data, manipulation of the social exclusion was examined. In doing so, participants' scores on feelings of belongingness scale (Cronbach's alpha = .875) were compared across the three manipulation conditions (i.e., social exclusion, social inclusion, and control) using a one-way ANOVA. The result of the ANOVA test showed significant (F (2, 89) = 7.454, p = .001) differences among the groups. Post-hoc analysis using Tukey's honestly significant difference (HSD) revealed that, as expected, socially excluded individuals scored significantly lower on belongingness scale (M = 4.796) compared to both socially accepted (M = 5.753, p = .001) and accident prone (M = 5.567, p = .012) individuals. Additionally, there was no significant difference between the socially accepted and accident prone groups ($p > .10$).

The other manipulation that needed to be checked was the one related to environmental friendliness and performance of the product options (i.e., green and non-green). Before conducting this manipulation check, ratings for the two dependent measures as well as the two manipulation questions (measuring environmentally friendliness and performance) were transformed such that higher scores were assigned to green option. One-sample t-tests with test values of 4 (i.e., middle scale point indicating identical products) were run. The results showed that the green option was perceived more environmentally friendly (M = 6.739; t(91) = 30.451, p

< .001) while it was lower on perceived performance (M = 2.098; $t(91)$ = – 12.758, p < .001). Overall, these results revealed that all manipulations were successful.

Dependent Variables

Green product preference score (Cronbach's alpha = .942) was calculated by averaging its two corresponding items (i.e., attractiveness and willingness to purchase). An ANCOVA – with need to belong (Cronbach's alpha = .799), attitude toward the product (Cronbach's alpha = .960), and attitude toward the brand (Cronbach's alpha = .942) as covariates – was run to examine the first hypothesis of the study for this dependent variable. Accordingly, no significant covariate was found (all ps > .10). Therefore, all covariates were removed and analysis was rerun.

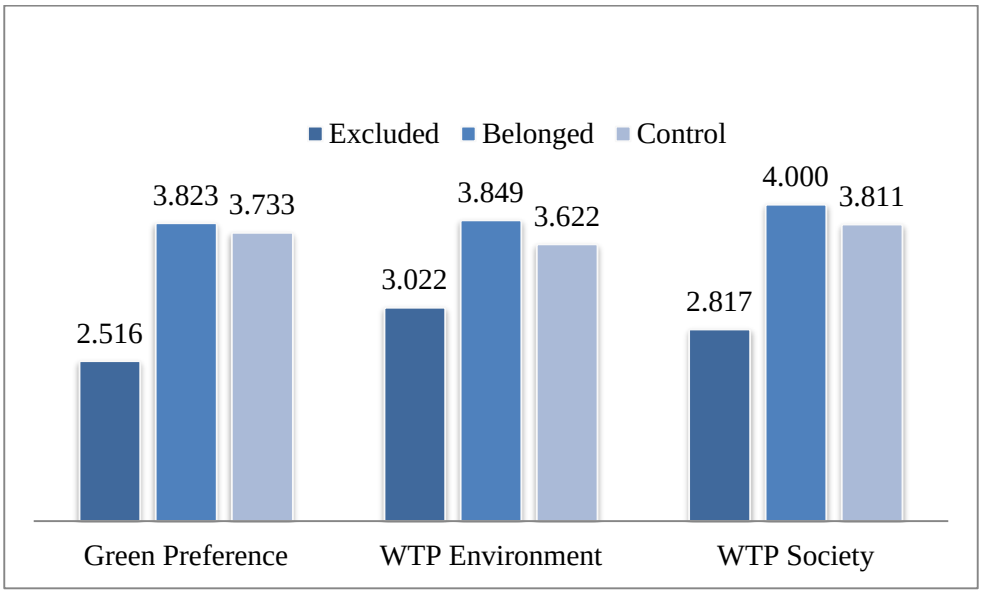
The results of the ANOVA revealed that manipulation condition was a significant predictor of green product preference ($F(2, 89)$ = 4.256, p = .017). More specifically, as expected, post-hoc analysis using Tukey's HSD revealed that preference for the green product was lower in socially excluded group (M = 2.516) than both socially belonged (M = 3.823; p = .028) and misfortune control groups (M = 3.733; p = .046). In contrast, confirming expectations, there was no significant difference between socially belonged and misfortune control groups (p > .10).

A MANCOVA with all potential covariates was run for the other two dependent variables: WTPE (Cronbach's alpha = .903) and WTPS (Cronbach's alpha = .936). Similar to ANCOVA, no covariate was significant and thus a MANOVA was run with no covariates. The multivariate test for the feedback condition was significant (Wilks' Lambda = .031). Test of between-subjects effects indicated that feedback condition was a marginally significant predictor

of WTPE ($F(2, 89) = 2.687$, $p = .074$) and a significant predictor of WTPS ($F(2, 89) = 5.569$, $p = .005$). Post-hoc analyses for WTPE using Tukey's HSD showed that the socially excluded group ($M = 3.022$) scored marginally lower than the socially belonged group ($M = 3.849$, $p = .069$). Additionally, although WTPE score was lower in socially excluded group than in misfortune control group ($M = 3.622$), this difference was not significant ($p > .10$). Moreover, socially excluded group ($M = 2.817$) scored significantly lower in WTPS than both socially belonged ($M = 4.000$, $p = .007$) and misfortune control groups ($M = 3.811$, $p = .030$). Finally, as expected, no significant differences were found between socially belonged and control groups in their scores in WTPE and WTPS (all ps $> .10$). Overall, these results, demonstrated in Figure 3, confirm H1.

FIGURE 3

COMPARISON OF GREEN BEHAVIORS ACROSS EXPERIMENTAL GROUPS



Mediating Role of Empathic Concern

In order to check the hypothesized mediating effect of empathic response, the four-step procedure recommended by Baron and Kenny (1986) was followed for all three dependent

variables. In doing so, as there was no significant difference between the socially belonged and misfortune-control groups, the variable indicating feedback condition was recoded to 1 (socially excluded) and 2 (the other two conditions) for the purpose of simplicity. The analysis was conducted for each dependent variable separately.

The analysis showed that the effect of social exclusion on empathic response ($b = -.927$, $t(90) = -3.087$, $p = .003$) and green product preference ($b = -1.263$, $t(90) = -2.928$, $p = .004$) was negative and significant. However, the effect of empathic response on green product preference was not significant ($b = .212$, $t(90) = 1.424$, $p > .10$). Therefore, mediating effect of empathic response was not supported for green product preference.

Similar procedure was followed for WTPE as the dependent variable. The analysis revealed that the effect of social exclusion on WTPE was negative and significant ($b = -.716$, $t(90) = -2.244$, $p = .027$). In addition, the effect of empathic response on WTPE was positive and significant ($b = .315$, $t(90) = 3.020$, $p = .003$). Finally, when both social exclusion and empathic response were included as predictors of WTPE, the effect of social exclusion became insignificant ($b = -.469$, $t(90) = -1.436$, $p > .10$). The result of the Sobel's (1982) was significant ($Z = -1.920$, $p = .054$), supporting a full mediating effect.

The analysis was conducted for WTPS as the third dependent variable of this experiment. The results showed that social exclusion was a significant predictor of WTPS ($b = -1.090$, $t(90) = -3.315$, $p = .001$). The effect of empathic response on WTPS was also positive and significant ($b = .441$, $t(90) = 4.138$, $p < .001$). Finally, in the presence of empathic response as a predictor, the negative effect of social exclusion became less strong ($b = -.753$) but still significant ($t(90) = -2.296$, $p = .024$). Sobel's (1982) test of mediation was significant ($Z = -2.255$, $p = .024$),

indicating a partial mediating effect for empathic response. Overall, these results support H2 for WTPE and WTPS but not for green product preference.

Mood as an Alternative Explanation

The effect of mood (both positive and negative) was examined as an alternative explanation for the negative effect of social exclusion on proenvironmental behavior. The results of two one-way ANOVAs, testing variations among the three groups in terms of positive or negative mood, showed that neither positive (Cronbach's alpha = .890) nor negative mood (Cronbach's alpha = .887) was significantly affected by the manipulation (all *p*s > .10). Additionally, bivariate correlation analysis indicated that positive and negative affective states were not significantly correlated with any of the three dependent variables in this experiment (all *p*s > .10). Therefore, the potential role of mood was not supported.

Discussion of Findings

Two main hypotheses were empirically tested and supported in an experimental laboratory setting. More specifically, the hypothesis that social exclusion decreases proenvironmental behavior was supported using three different measures of green behavior. In fact, socially excluded participants reported lower intention to engage in proenvironmental behaviors compared to both socially belonged and control groups.

The other hypothesis examined in this experiment was the mediating role of interpersonal empathic concern in the relationships between social exclusion and green behavior. More precisely, theory and extant literature in social psychology research suggests that social exclusion would cause a temporary absence of emotion, rendering the person relatively numb to

both physical pain and emotion, which in turn would alter behavior. This rationale was empirically supported in laboratory settings and the current experiment revealed a vital connection among exclusion, empathic concern, and behavior that fills in a crucial part of the picture of how rejected people feel and act.

Empathy was significantly reduced by social exclusion. More important, the reduction in empathic concern succeeded in mediating the drop in two measures of green behavior. The strongest mediating effect was found for the second dependent variable (i.e., willingness to sacrifice to protect the environment). Additionally, interpersonal empathic concern partially mediated the effect of social exclusion on individuals' willingness to sacrifice to benefit the society.

Surprisingly, the mediating role of interpersonal empathy was not supported for green product preference. In fact, although exclusion resulted in lower levels of empathic response as well as green product preference, lack of empathy did not affect the way excluded individuals make purchase decisions. In other words, lack of empathy could not be regarded as an underlying mechanism for the hypothesized effect of exclusion on green product preference. One plausible explanation could be that for some individuals (undergraduate students in this case), preferring and buying a green versus non-green backpack could not decisively be regarded as a proenvironmental decision. Indeed, backpack is a product that students use in their day-to-day life and the options presented in manipulation were exceedingly similar in price, look, design, shape, and even available colors. Therefore, some excluded individuals did not directly notice how their decision (i.e., green product preference) would affect the society, from which they had been excluded and that is possibly why lack of emotional response in such individuals did not co-vary with their preference for the green backpack. Despite this explanation, it is

acknowledged that there could be other types of emotional responses that act as mediators and elicit egoistic motivation.

The findings also indicated that mood failed to operate as the underlying mechanism in the hypothesized relationship between exclusion and green behavior. More precisely, the decrease in proenvironmental behavior was not simply because the participant heard unpleasant news. Indeed, the prediction of future misfortunes was at least as unpleasant as the prediction of future aloneness (and apparently more so), but only the prediction of aloneness led to the reduction in green behavior. In addition, those who received social acceptance feedback were not any more or any less green than were those in the control misfortune control group. These results, overall, rules out the possibility that excluded people engage in proenvironmental behavior to improve their negative mood. In other words, differences in green behavior as a function of social exclusion cannot be attributed to mood.

Experiment 2

Experiment 2 was designed to check the moderating effect of individual differences as a boundary condition on the relationship between social exclusion and proenvironmental behavior. More precisely, while the mediating effect of transitory empathic concern (as the underlying mechanism for the negative effect of social exclusion on green behavior) was tested in previous experiment, the moderating role of trait empathy (i.e., emotional empathy), as an internal trait and enduring personal characteristic, was tested in this study. The following hypotheses were tested:

> H3: Emotional empathy positively affects individuals' tendency to engage in green behavior.

H4: Emotional empathy moderates the effect of social exclusion on green behavior such that emotional empathy increases green behavior in socially excluded individuals while it does not change green behavior in socially accepted individuals.

Sample and Data Collection

Participants in this experiment were 87 undergraduate students from a large public university in the United States. Two participants were discarded because of suspicion, resulting in a final sample of 85 students (48 males, 37 females). They ranged in age from 19 to 35 years (M = 24.024, SD = 3.632). As shown in Table 3, the majority of participants were white (48.2%) and never married (76.5%).

TABLE 3

DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 2

Demographics	**Frequency**	**Percentage**
Gender		
Male	48	56.5%
Female	37	43.5%
Marital Status		
Married	4	4.7%
Married with kids	3	3.5%
Not married	65	76.5%
Divorced/Separated	3	3.5%
Living together	10	11.8%
Ethnicity		
Asian	8	9.4%
Black or African American	13	15.3%
Hispanic	19	22.4%
Mixed Race	3	3.5%
Native Hawaiian and Other Pacific Islander	1	1.2%
White	41	48.2%
Family Annual Income		
Less than $25,000	13	15.3%
$25,000 to $50,999	24	28.2%
$50,001 to $75,000	18	21.2%
$75,001 to $100,000	12	14.1%
$100,001 to $200,000	12	14.1%
More than $200,000	6	7.1%

Design and Procedure

Data for this study were collected in a lab experiment with a 2 (social rejection vs. social acceptance) × 2 (emotional empathy: low vs. high) between subjects full factorial design. Participants were randomly assigned to one of the social exclusion or social acceptance conditions and emotional empathy was measured. As in Experiment 1, a cover story was used and participants were told that they would be participating in three ostensibly unrelated studies: the first investigating personality, the second to develop counseling techniques for college students, and the third a decision making task.

Since the purpose of this study was to check the moderating effect of emotional empathy as an internal trait, and in order to eliminate a possible confounding effect of exclusion manipulation on this trait, the study started with measurement of emotional empathy embedded in a battery of personality items. A 30-item Likert scale for emotional empathy (Caruso and Mayer 1998), ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) was used. Sample items include, “If someone is upset I get upset, too” and “It hurts to see another person in pain.”

After finishing the first task (i.e., personality test), participants were instructed to complete the second task, ostensibly a study by the UNT Counseling Center, aimed at developing counseling techniques for college students. The genuine purpose of this part of the experiment, however, was to manipulate social exclusion. In order to examine the robustness of the findings in Experiment 1, a different manipulation technique was followed in this study. More specifically, a visualization/essay approach (Maner et al. 2007) was implemented. Participants were randomly assigned to one of two essay conditions: social exclusion or social acceptance. In each, participants were asked to relive in their minds and write about a previous

experience from their life. More precisely, participants in the exclusion condition were asked to write an essay about a time when they felt rejected or excluded by others:

> Think and write about a time in which you felt intensely rejected or excluded in some way… It must be a time that you were clearly excluded—when you were told you were not accepted because you were not wanted or liked. Please provide some additional details about who was responsible for the exclusion and how many people were involved.

Participants in the social acceptance condition, in contrast, were asked to write about a time when they felt accepted by others:

> Think and write about a time in which you felt intensely belonged… It must be a time that you were clearly accepted by others—when you evidently felt that you were wanted and liked. Please provide some additional details about this experience and how many people were involved.

Prior studies have shown that visualizing a previously experienced instance of rejection or exclusion evokes responses similar to those found when using interpersonal methods for creating rejection (Gardner et al. 2000; Pickett, Gardner, and Knowles 2004). To check whether the manipulation of social exclusion was successful, after completing the essay-writing task, they were asked to indicate their feelings on a four-item scale (*ignored*, *rejected*, *alone*, and *excluded*) anchored by 1 (*not at all*) and 7 (*extremely*). Similar to Experiment 1, participants also completed the mood measure (PANAS).

The final part of the experiment (consumer decision making task) was intended to measure proenvironmental behavior as dependent variable. Car was used as the product category and participants read the following scenario:

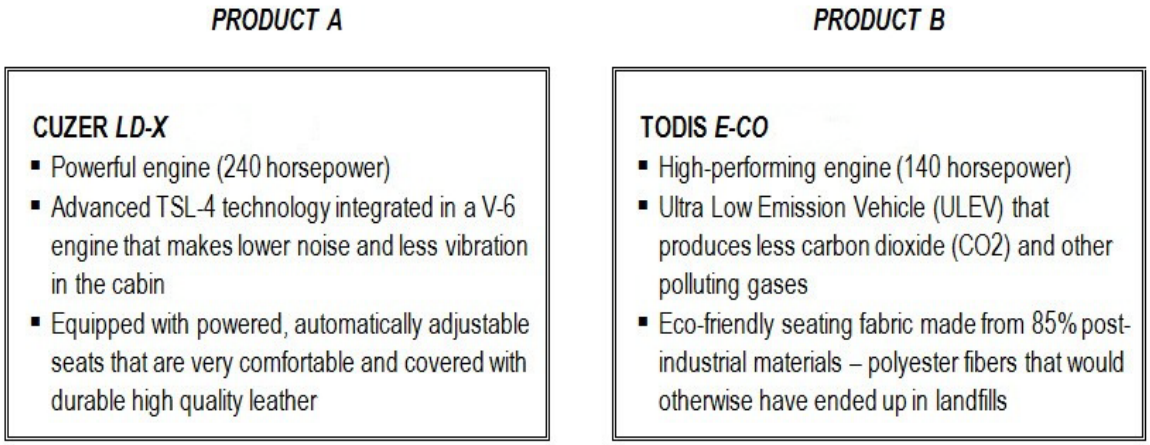
> XYZ Company (anonymized), an automobile (car) manufacturer, is ready to launch the following all new, similarly designed cars (Cuzer LD-X and Todis E-CO), but before the launch, the company wants to pilot-test market preferences. Imagine that you are going to buy one of these models which will be shortly introduced to the market, featuring similar final price.

Similar to Experiment 1, green and non-green options were presented on the computer screen at the same time, each accompanied by three attributes (see Figure 4). The two models,

borrowed from Naderi and Strutton's (in press) study, were randomly labeled as PRODUCT A and PRODUCT B and presented on the left or right side of the scales. To eliminate possible confounding effects of familiarity, knowledge, and experience, both fictitious models were described as future market entrants. No product attribute related to self-benefits (e.g., less fuel consumption) was presented for the non-green option and both models featured a highly similar final price. In a pilot test on 27 subjects from the same sampling frame, questions similar to those in Experiment 1 were asked in order to compare the environmental friendliness and perceived performance of the two models. As results revealed, on the scales from 1 (*definitely product A*) to 7 (*definitely product B*), the green model was perceived as significantly more environmentally friendly (M = 5.815; $t(26) = 9.417$, $p < .001$) and lower in performance (M = 2.407; $t(26) = -8.522$, $p < .001$).

FIGURE 4

NON-GREEN (LEFT) AND GREEN CARS (RIGHT) IN EXPERIMENT 2



Participants' preferences for green product, as dependent variables, were measured with three items (which one is most appealing to you, attractive to you, would you be more likely to buy) using a seven-point scale (1 = *definitely product A*, 7 = *definitely product B*). Similar to

Experiment 1, manipulation check questions were then asked. Finally, participants provided demographic information and were asked to provide their thoughts on the study's purpose. Two participants correctly guessed the research purpose and were removed from the analyses. Participants were then thanked and fully debriefed.

Analysis and Results

Before analyzing the data, the item scores within each scale were averaged to create composite scores for the constructs. Again, ratings were transformed such that higher scores corresponded with the green option.

Manipulation Check

A one-way ANOVA was run to confirm the manipulation of social exclusion. More specifically, the average scores on feelings of exclusion scale (Cronbach's alpha = .941) were compared across the socially excluded and socially accepted groups. As expected, socially excluded participants (M = 3.392) had significantly higher scores on this scale compared to their socially accepted counterparts (M = 1.744; $F(1, 83) = 20.054$, $p < .001$), indicating that the manipulation of social exclusion was successful.

Perceived environmental friendliness and perceived performance of the green and non-green options were also checked using two one-sample t-tests with test values of 4 (as the two options are perceived to be identical). Similar to the results of the pilot test, participants perceived the green option higher in environmental benefits (M = 6.859, $t(84) = 40.091$, $p < .001$) and lower in performance (M = 2.223, $t(84) = – 8.773$, $p < .001$), compared to the non-green model. These results indicated that all manipulations were successful.

Green Product Preference as Dependent Variable

Participants' score on emotional empathy (Cronbach's alpha = .849) was formed by averaging the items within the scale. A multiple regression procedure recommended by Aiken and West (1991) was followed to examine the hypotheses of this experiment. More specifically, a regression model was run, with the continuous measure of emotional empathy (mean-centered to reduce multicollinearity), social exclusion (contrast-coded), and their two-way interaction as predictors of green product preference (Cronbach's alpha = .974).

The analysis revealed that the main effect of social exclusion on green product preference was negative and significant (b = – 1.175, t(81) = – 2.656, p = .010), supporting the findings of Experiment 1. In addition, as expected, the main effect of emotional empathy (trait) on green product preference was positive and significant (b = .997, t(81) = 2.716, p = .008), providing support for H3.

More important, the two-way interaction term in this model was marginally significant (b = 1.257, t(81) = 1.712, p = .091). This analysis was then followed by slope analysis as recommended by Aiken and West (1991) in order to further explicate and interpret the interaction term. For this analysis, emotional empathy was re-centered at one standard deviation above and below the mean and a new interaction term for each group was created. Two separate regression analyses were conducted for low- and high-empathic groups and the effects of social exclusion on green product preference were compared across the groups (slope comparison). The analysis showed that the effect of social exclusion on green product preference was negative and significant for individuals with low emotional empathy (b = – 1.937, t(81) = – 3.079, p = .003). More precisely, low empathic group scored higher on green product preference when they were accepted (M = 3.827) rather than excluded (M = 1.890). In contrast, this effect was not

significant for individuals with high emotional empathy (b = – .413, t(81) = – .659, p > .10) and there was no significant difference whether they were accepted (M = 4.274) or excluded (M = 3.861).

Further analysis also revealed that the effect of emotional empathy on green product preference was positive and significant only for socially excluded individuals (b = 1.626, t(42) = 3.622, p = .001) and not for socially accepted individuals (b = .369, t(39) = .625, p > .10). These results, illustrated in Figure 5, provide support for H4.

FIGURE 5

EFFECTS OF EXCLUSION AND EMPATHY ON GREEN PRODUCT PREFERENCE

Effect of Mood

Similar to Experiment 1, possible mediating effects of both positive (Cronbach's alpha = .915) and negative mood (Cronbach's alpha = .844) were tested as alternative explanations for the effect of social exclusion on green product preference. As expected, mood failed to mediate. More specifically, neither positive nor negative mood was influenced by social exclusion

manipulation (all *p*s > .10). Additionally, participants' positive ($r = -.085$, $p > .10$) and negative mood ($r = .009$, $p > .10$) were not significantly correlated with their preference for the green option. Therefore, the negative effect of exclusion on green behavior was not due to change in participants' mood.

Discussion of Findings

The current experiment, conducted in laboratory settings, provided strong, empirical supports for the two hypotheses examined. As in Experiment 1, social exclusion led to a large decrease in proenvironmental behavior and participants assigned to the exclusion prime reported lower green product preference compared to the control group (social acceptance). This finding provides robust support for the hypothesis that social exclusion causes people to avoid proenvironmental behavior.

Second, this experiment revealed that emotional empathy increases individuals' tendency to engage in green behavior. This finding provides empirical evidence for the empathy-altruism hypothesis stating that feelings of empathy for another person lead to an altruistic behavior to increase that person's interests (Batson 1991). In the case of proenvironmental behavior, individuals with higher levels of emotional empathy feel more obligated to act in a way that minimizes their harmful impact on the environment and consequently its inhabitants. This proposition is also in line with the environmental concern perspective suggesting that inherent care about the environment and its current or future occupants is one of the main motivations for green behavior (Bamberg 2003; Schwepker and Cornwell 1991; Van Liere and Dunlap 1980).

Finally, and more important, the findings revealed emotional empathy as an important boundary condition for the hypothesized effect of social exclusion on proenvironmental

behavior. More specifically, the moderating role of this individual characteristic implied by the logic underlying empathy-altruism hypothesis was supported in this experiment; that is, empathy led to an increase in proenvironmental behaviors only in socially excluded individuals and did not change such behaviors in socially accepted individuals. Emotional empathy is a strong intrinsic factor influencing individuals' motivation to behave in a proenvironmental manner. Trait empathy, indeed, overrides social exclusion (as its main effect is also stronger) and high levels of empathy could nullify the undesirable effect of exclusion on green behavior.

Finally, as in previous experiment, mood failed to mediate; mood was not significantly changed by social exclusion nor did it influence green behavior. Therefore, mood did not play a central role in this process and the reduction in proenvironmental behavior as a result of exclusion could not be attributed to mood.

Experiment 3

The purpose of this study was to test another boundary condition for the effect of social exclusion on proenvironmental behavior. Specifically, and according to social reconnection hypothesis, if excluded individuals' goal is to use proenvironmental behaviors as an opportunity to establish new connections, those behaviors must be socially, or publicly, visible (Chao and Schor 1998). This could be the case when observable cue differences present in a given consumption situation (i.e., product purchase, usage, or consumption) are publicly visible. Such incentives may lead socially excluded people to demonstrate insincere green behaviors. Therefore, the proposition that socially excluded and socially accepted individuals differ in their preferences for green (versus non-green) products when product visibility is high (as opposed to

low) was investigated in this study. More precisely, behavior visibility moderates the effect of social exclusion on green behavior such that:

> H5: Socially excluded individuals' tendency to engage in green behavior is higher when visibility is high rather than low.
>
> H6: Socially accepted individuals' tendency to engage in green behavior does not differ when visibility is high or low.

Sample and Data Collection

One hundred undergraduate students (49 males, 51 females) from a large public university in the United States participated in this study in exchange for partial course credit. Participants ranged in age from 19 to 49 years (M = 22.830, SD = 4.038). As in experiments 1 and 2, the majority of participants were white (55.0%) and never married (83.0%). Demographic distribution of the sample is presented in Table 4.

Design and Procedure

The study had a 2 (social exclusion vs. social belonging) × 2 (visibility: low vs. high) between-subjects, full factorial design. To alleviate potential bias and suspicion about the purpose of the study, a cover story was featured, along with various non-relevant items. Upon arrival at the behavioral lab, participants were told they would be participating in a series of unrelated studies.

The first study, ostensibly investigating personality and interpersonal processes, represented the manipulation of social exclusion and was a modified version of the manipulation used in Experiment 1. Specifically, participants completed a battery of personality items in which the Big Five Inventory (John and Srivastava 1999), along with other unrelated items, was

embedded. Additionally, since visibility was a focal variable in this experiment, self-monitoring, which is defined as individuals' tendency to align their behavior and attitudes to the immediate social situation (Snyder 1987; Snyder and Gangestad 1986), was also measured as a potential covariate. Sample items are "I have trouble changing my behavior to suit different people and different situations" (reverse-scored) and "In different situations and with different people, I often act like very different persons." For each item of the scale, participants responded by indicating "true" or "false."

TABLE 4

DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 3

Demographics	**Frequency**	**Percentage**
Gender		
Male	49	49.0%
Female	51	51.0%
Marital Status		
Married	7	7.0%
Married with kids	2	2.0%
Not married	83	83.0%
Living together	8	8.0%
Ethnicity		
Asian	10	10.0%
Black or African American	15	15.0%
Hispanic	18	18.0%
Mixed Race	2	2.0%
White	55	55.0%
Family Annual Income		
Less than $25,000	19	19.0%
$25,000 to $50,999	21	21.0%
$50,001 to $75,000	15	15.0%
$75,001 to $100,000	19	19.0%
$100,001 to $200,000	19	19.0%
More than $200,000	7	7.0%

After completion of the personality test, participants' accurate scores on two personality dimensions (i.e., extraversion and agreeableness) as well as their total personality scores (simple

summated scores) were shown on the computer screen in order to further boost the credibility of this method. Feedback about whether their total score was low (33-99), medium (100-166), or high (167-231) was also provided. Participants were then randomly assigned to one of the two experimental conditions manipulating social exclusion versus social belonging. More specifically, socially excluded individuals were handed the following false note regarding their future social relationships:

> You're the type who will end up alone later in life. You may have friends and relationships now, but most of these will have drifted away. You may even marry or have several marriages, but these are likely to be short-lived and not continue into your later years. Relationships don't last, and when you're past the age where people are constantly forming new relationships, the odds are you'll end up being alone more and more.

In contrast, socially belonged individuals were given the following bogus feedback:

> You're the type who will have rewarding relationships throughout life. You're likely to have a long and stable marriage and have friendships that will last into your later years. The odds are that you'll always have friends and people who care about you.

After this manipulation, in a follow-up questionnaire, participants were asked to report their personality score and the prediction they had received for the future to check whether they were paying attention to instructions. Then, their feeling of exclusion was measured on a four-item scale ranging from 1 (*not at all*) to 7 (*extremely*). A sample item is "I feel very close and connected to other people." These questions served as the manipulation check for the social exclusion manipulation. Finally, as in previous experiments, positive and negative mood were measured on PANAS scales.

When participants finished reading and responding to the questions, they handed the experimenter the completed questionnaire. Participants were then instructed to complete the second part of the experiment (fictitiously called Study 2), supposedly investigating purchasing and decision-making styles. More specifically, participants were randomly assigned to one of the two conditions designed to manipulate product visibility. The products and scenarios were

adapted from Naderi and Strutton's (in press) study and were modified for the purpose of this experiment. The scenario for low-visibility condition read:

> XYZ Company (anonymized), a well-known manufacturer of electronic products, is ready to launch the following newly designed desktop computer (please see below); but before the launch, the company wants to pilot-test college students' preferences. Imagine that you have saved enough money to purchase a new desktop computer and your plan is to use it only at home for your personal and regular use.

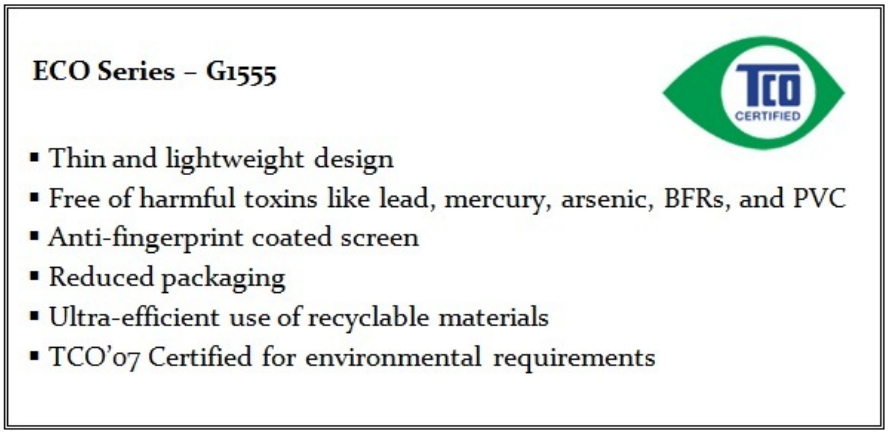
In contrast, participants assigned to the high-visibility scenario read:

> XYZ Company (anonymized), a well-known manufacturer of electronic products, is ready to launch the following newly designed laptop computer (please see below); but before the launch, the company wants to pilot-test college students' preferences. Imagine that you have saved enough money to purchase a new laptop computer and your plan is to use it only at school for coursework and group projects with your classmates.

Each scenario was followed by a fictitious model of the product (desktop or laptop) featuring the same name and similar product attributes. To bolster believability of this scenario, six product features were presented, four of which were proenvironmental benefits (see Figure 6). These two products were selected because they are highly relevant to the subject population and belong to the same industry (i.e., computers), hence reducing confounding effects due to different product categories.

FIGURE 6

DESKTOP/LAPTOP COMPUTER FEATURES IN EXPERIMENT 3



These two scenarios and their corresponding products were pre-tested on a sample of 39 students from the same sampling frame. In the pilot test, the participants were randomly assigned to each condition (laptop: $n = 20$; desktop: $n = 19$) and were asked to rate the visibility of the products on two items: "If you buy this desktop (laptop) computer and ordinarily use it at home (school), how visible will it be to others?" (1 = *not at all visible*; 7 = *highly visible*) and "If you buy this desktop (laptop) computer, how frequently will you use it in social settings where it is visible to others?" (1 = *never*; 7 = *always*). Two additional questions were also asked: "How would you rate environmental friendliness of this desktop (laptop) computer?" (1 = *not at all environmentally friendly*; 7 = *very environmentally friendly*) and "If you buy this desktop (laptop) computer, how likely are other people to recognize this purchase as a proenvironmental action?" (1 = *very unlikely*; 7 = *very likely*). The latter was intended to measure the extent to which respondents believed their audience would be able to recognize and decode this signaling behavior.

The two items measuring visibility were averaged to form a composite score (Cronbach's alpha = .915). The analysis showed that the product was perceived as more publicly visible in the laptop ($M = 5.421$) than in the desktop scenario ($M = 4.050$; $F(1, 37) = 19.884$, $p < .001$). In addition, participants indicated that purchasing the laptop ($M = 4.842$), rather than the desktop computer ($M = 3.300$), would be more likely to be recognized and appreciated as a proenvironmental action by other people ($F(1, 37) = 29.845$, $p < .001$). Further, the results of two one-sample *t*-tests (with test values of 4) revealed that both laptop ($M = 6.053$; $t(18) = 9.818$, $p < .001$) and desktop computer ($M = 5.950$; $t(19) = 8.305$, $p < .001$) were perceived to be very environmentally friendly. Finally, as expected, no significant difference was found between the laptop and the desktop with regard to their environmental friendliness ($F(1, 37) = .106$, $p > .10$).

These results, overall, showed that the scenarios and their accompanying products were appropriate for the purpose of this experiment.

To measure the first dependent variable of this study, participants were asked to indicate their intention to purchase the product after reading the scenario on a three-item, Likert-type scale (anchored by *strongly disagree* and *strongly agree*), adapted from Sweeny, Soutar, and Johnson's (1999) study. To examine whether the manipulation of product visibility was successful, participants evaluated the products on four items similar to those used in the pre-test. In addition, participants were asked to rate the symbolic status of the products on a seven-item scale adapted from Wright's (2005) Product Symbolic Status (PSS) scale. Ranging from 1 (*not at all*) to 7 (*very much*), sample items include, "How much will this desktop (laptop) computer influence others' positive impressions of you?" and "How much will this desktop (laptop) computer enhance your social status?" Two different products were used in this experiment and therefore participants' involvement in the products was measured on seven-point semantic differential items of the Personal Involvement Inventory (Zaichkowsky 1994) to control for its possible confounding effect.

After completing the consumer decision making task, participants were given the second decision making task. In this part, they first read the description of a real UNT student organization whose activities and goals are shaped around environmental sustainability. More specifically, participants read:

> North Texas Energy & Environment Club (NTEEC) is a student-led group at the University of North Texas, whose mission is to help promote events and activities to increase university education in energy and environmental sustainability. In the North Texas region, this group acts to increase community education by providing a network of knowledge and market enrichment in climate change, energy development, and natural resource sustainability. NTEEC organizes activities and events throughout the year to encourage students to think about their daily energy habits and environmental impacts.

After reading this description, participants were asked to report if they were a member of this student organization. No one identified themselves as a member. Participants were then randomly assigned to one of the two conditions designed to manipulate visibility of proenvironmental behavior. More precisely, participants in low-visibility condition reported their intention to anonymously donate money to the organization whereas those in high-visibility condition were asked to indicate their intention to voluntarily work for the organization. In order to control two important confounding factors for students (i.e., time and money), participants read: "Assuming money (time) is not an issue, based on the information you just read, your anonymous donation to (volunteer work for) the North Texas Energy & Environment Club (NTEEC) would be..." Behavioral intention was rated on the nine-item, seven point bipolar adjective scale (Fishbein and Ajzen 2010) as the dependent variable.

The experiment concluded by demographic questions. Participants were then probed for suspicion. No one correctly guessed the research purpose. Participants were then carefully and thoroughly debriefed, thanked, and dismissed. Careful debriefings included telling participants about the other condition and emphasizing that the social exclusion feedback was randomly assigned.

Analysis and results

As in other experiments, the items for each construct were averaged to form their composite scores. The only exception was Self-Monitoring Scale in which the statements were evaluated using the scale's key such that if the answer matches the key's answer, 1 point was given for that item. Otherwise, no point was given and the points for all 18 items were added up to create the self-monitoring score from a minimum of 0 to a maximum of 18.

Manipulation Check

Before analyzing the data, validity of the manipulations was examined. Participants' memory for their predicted future and their feelings of exclusion served as a manipulation check for social exclusion. All participants correctly recalled their prediction for the future. A one-way ANOVA was run to compare the feelings of exclusion (Cronbach's alpha = .954) across the socially excluded and socially belonged groups. As expected, individuals in the socially excluded condition (M = 3.279) reported higher scores compared to their socially belonged counterparts (M = 1.832; $F(1, 98) = 21.902$, $p < .001$). Therefore, exclusion was manipulated successfully.

The other manipulation was social visibility of the green consumption, similar to the findings of the pre-test, one-way ANOVA revealed that visibility (Cronbach's alpha = .851) was manipulated successfully and the laptop was perceived to be more visible (M = 5.400) than the desktop computer (M = 4.100; $F(1, 98) = 16.629$, $p < .001$). Additionally, as indicated by participants, purchasing the laptop (M = 4.860), rather than the desktop computer (M = 3.500), would be more likely to be recognized by other people as a proenvironmental action ($F(1, 98) = 12.569$, $p = .001$). Further, symbolic status of the products (Cronbach's alpha = .946) were compared and the laptop (M = 3.929) was perceived to have significantly higher symbolic status than the desktop (M = 3.251; $F(1, 98) = 4.427$, $p < .05$).

Environmental friendliness of the products was also examined. Results of two one-sample t-tests (with test values of 4 as the middle point of the scale) showed that both desktop (M = 5.920; $t(49) = 12.971$, $p < .001$) and laptop (M = 6.140 $t(49) = 15.286$, $p < .001$) were perceived to be very environmentally friendly. Finally, there was no significant difference between the laptop and the desktop with regard to their environmental friendliness ($F(1, 98) = 1.166$, $p > .10$).

For the other dependent variable (behavioral intention), manipulation of the behavior visibility was not directly controlled by asking obvious questions. Anonymous donation, by definition, is not publicly visible whereas volunteer work for such a student organization, as also emphasized in the scenario, does not normally occur in vacuum and requires interacting with others. A one-way ANOVA revealed no significant difference between the participants' intention to anonymously donate money (M = 4.224) and intention to voluntarily work for the organization (M = 4.411; $F(1, 98) = .340$, $p > .10$). These results, overall, indicated that all manipulations of this experiment were successful.

Purchase Intention as Dependent Variable

A 2 (social exclusion vs. social belonging) × 2 (consumption visibility: low vs. high) ANCOVA was used to test the main hypotheses of this study. In this analysis, purchase intention (Cronbach's alpha = .937) was the dependent variable and self-monitoring (Cronbach's alpha = .736) as well as product involvement (Cronbach's alpha = .951) were included in the model as covariates to control their confounding effects. The initial analysis showed that neither involvement ($F(1, 94) = .306$, $p > .50$) nor self-monitoring ($F(1, 94) = .004$, $p > .50$) was significant predictors of the green product purchase. Therefore, they were removed from the model and a two-way ANOVA was run.

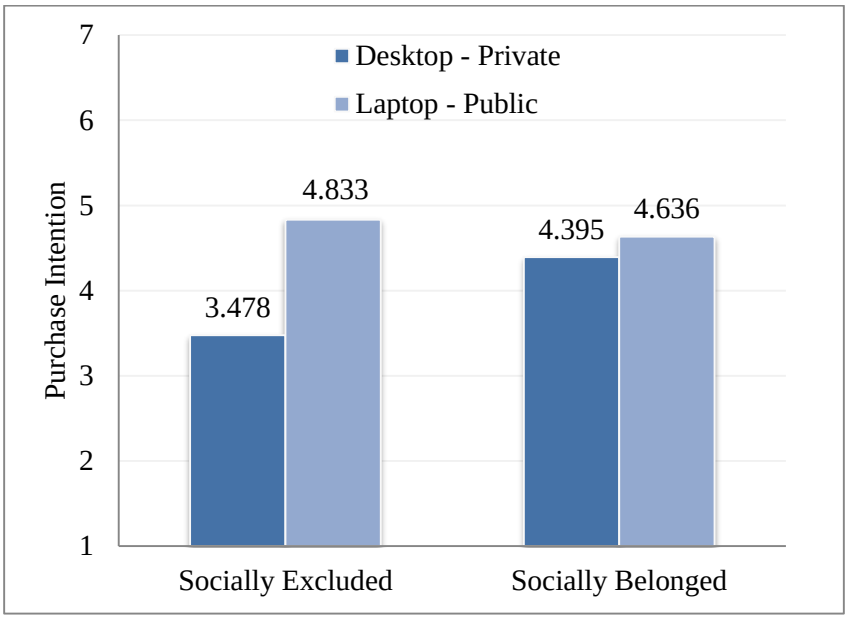
The results showed that the main effect of product visibility was significant ($F(1, 96) = 7.727$, $p = .007$). More specifically, regardless of the exclusion/belonging condition, purchase intention was higher for the green laptop (M = 4.735) than the green desktop (M = 3.937). This result is partly attributable to the fact that proenvironmental behaviors are socially desirable and thus people are motivated to "go green" in publicly visible conditions.

Further analysis indicated that the main effect of social exclusion on green product purchase was not significant ($F(1, 96) = 1.571$, $p > .10$). More specifically, although socially excluded participants ($M = 4.156$) reported lower green purchase intention compared to those in socially belonged condition ($M = 4.516$), this difference was not significant.

Finally, the effect of the two-way interaction term on purchase intention was marginally significant in this model ($F(1, 96) = 3.761$, $p = .055$). Pair-wise comparison of the groups revealed that for socially excluded individuals, purchase intention was significantly higher when product visibility was high ($M = 4.833$) rather than low ($M = 3.478$; $t(49) = 2.885$, $p = .006$). These results provide support for H5. In contrast, no significant difference was found between participants' purchase intention in high- ($M = 4.636$) and low-visible conditions ($M = 4.395$; $t(47) = .748$, $p > .10$), supporting H6. These findings are shown in Figure 7.

FIGURE 7

EFFECTS OF EXCLUSION AND CONSUMPTION VISIBILITY ON PURCHASE INTENTION



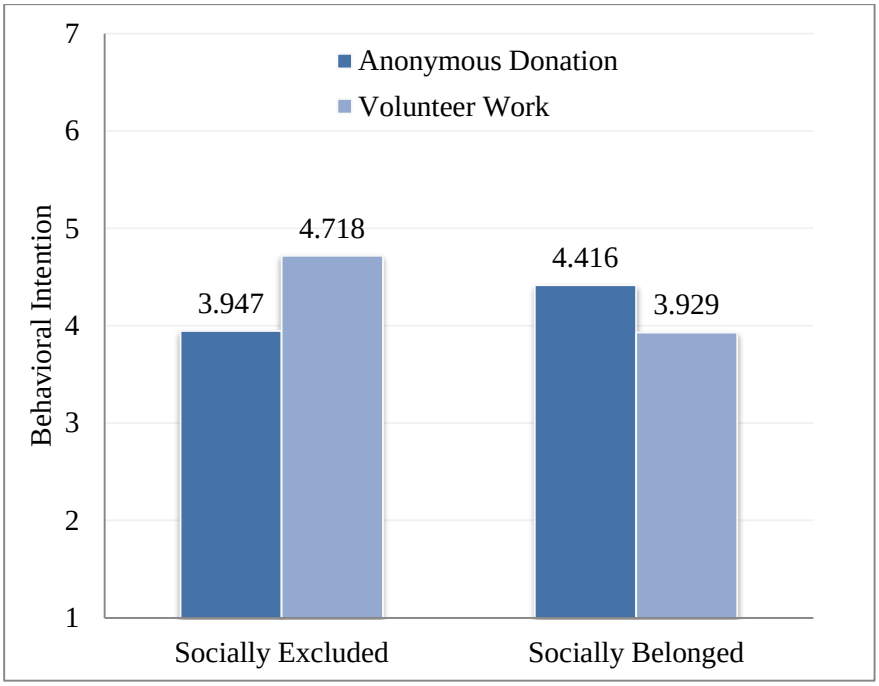
Behavioral Intention as Dependent Variable

A separate 2 (social exclusion vs. social belonging) × 2 (behavior visibility: low vs. high) ANCOVA was used with self-monitoring as covariate and intention to engage in proenvironmental behavior (Cronbach's alpha = .966) as the dependent variable. Similar to the analysis for purchase intention, initial results indicated that self-monitoring was not a significant covariate ($F(1, 95) = .034$, $p > .50$) and thus was removed from the model. The two-way ANOVA revealed no significant main effect for social exclusion ($F(1, 96) = .259$, $p > .10$) and visibility ($F(1, 96) = .205$, $p > .10$). Further analysis showed that participants' behavioral intention did not differ in social exclusion ($M = 4.333$) and social belonging conditions ($M = 4.172$), nor did it differ between high- ($M = 4.324$) and low-visibility ($M = 4.181$) scenarios.

However, the effect of interaction between exclusion and action visibility on intention to engage in proenvironmental behavior was significant ($F(1, 96) = 3.991$, $p < .05$). This interaction was decomposed to further examine the hypotheses of this study. Confirming H5, pair-wise comparison of the groups indicated that socially excluded individuals' behavioral intention was marginally higher ($t(49) = 1.751$, $p = .086$) when their proenvironmental action was public (i.e., volunteer work; $M = 4.718$) rather than private (i.e., anonymous donation; $M = 3.947$). Interestingly, this pattern was reversed for socially belonged individuals such that behavioral intention was higher in private ($M = 4.416$) rather than public settings ($M = 3.929$). This difference, however, was not significant ($t(47) = 1.081$, $p > .10$), providing support for H6. These results are shown in Figure 8.

FIGURE 8

EFFECTS OF EXCLUSION AND BEHAVIOR VISIBILITY ON BEHAVIORAL INTENTION



Effect of Mood

Potential effect of change in participants' mood (both positive and negative) as a result of exclusion was also investigated in this study. In this experiment, both positive (Cronbach's alpha = .926) and negative emotions (Cronbach's alpha = .931) were affected by the manipulation of social exclusion. While positive mood was higher in socially belonged individuals (M = 5.416) than their socially excluded counterparts (M = 4.180; $F(1, 98) = 32.466$, $p < .001$), socially excluded individuals reported higher levels of negative mood (M = 3.033) compared to those in socially belonged condition (M = 1.880, $F(1, 98) = 24.340$, $p < .001$). Further analysis, however, showed that neither positive nor negative mood was significantly correlated with the dependent variables of this experiment. Therefore, although social exclusion affected participants' affective state, change in participants' green behavior could not be attributed to mood.

Discussion of Findings

Green behavior, overall, is regarded as a socially desirable action (Kollmuss and Agyeman 2002) and thus one might behave differently when his or her actions in such a context (e.g., green product purchases, green consumption, etc.) are publicly visible. This notion was supported in this experiment for green product preference and participants indicated more preferences for the green laptop (being used in public) rather than the green desktop computer (being used in private) due to higher symbolic status associated with the green laptop. This thesis, however, was only directionally supported for behavioral intention. Although best effort was made to eliminate the role of time constraint in decision making, students might have their own presumptions of the time required for their volunteer work. Therefore, devoting time appears to be a more demanding activity compared to anonymous donation (with no minimum) for such a sample and thus the finding is partly attributable to this difference.

Additionally, this study established the role of visibility (i.e., product visibility and behavior visibility) as a conceptually important boundary condition for the hypothesized effect of exclusion on green behavior. The logic on which the social reconnection hypothesis is based implies that excluded people support proenvironmental actions only to the extent that those actions are perceived as providing realistic sources of renewed social connection. Therefore, when green behavior is publicly visible (public product usage or public activities), it could be perceived as a viable option to establish new social connections and subsequently fulfill the threatened need to belong in excluded individuals. Such a strong external motivation is not expected to exist in people who have fruitful relationships and strong social bonds. Visibility of proenvironmental action, therefore, has little (due to social desirability) or no effect on their decisions.

Interestingly, in the case of proenvironmental action (donation vs. volunteering), socially belonged individuals reported lower intention to voluntarily work for the proenvironmentalist organization than to anonymously donate money to this group. Although this difference was not significant, one plausible explanation is that such individuals led to believe that their fundamental need to belong would not be threatened in future and they would always have rewarding relationships throughout their lives. As a result, they would not likely join such an organization in order to make new friends and extend their currently prosperous social network.

Finally, this experiment revealed slightly different results regarding the role of mood. Contrary to the findings of the first two experiments, participants' mood was affected by the manipulation of exclusion but this change did not translate into a reduction in proenvironmental behavior. Therefore, as in the other experiments, mood failed to mediate and thus could not be regarded as an influential factor in this process.

Experiment 4

The final experiment was designed to investigate another boundary condition for the hypothesized effect of social exclusion on proenvironmental behavior. In this study, specifically, the moderating effect of the beneficiary of the proenvironmental action was tested. As discussed earlier, for a socially excluded individual, proenvironmental behavior could be intended to act as a means to establish new relationships with others, helping the excluded person satisfy their need to belong and cope with negative emotions resulting from exclusion. In this situation (when green behavior is a signaling behavior), the beneficiary of the green action is expected to be the society and environment rather than the self. In other words, by engaging in proenvironmental actions that benefit society at large (as opposed to self), socially excluded individuals aim to

convey the message that they care about other people in hope of receiving positive feedback from individuals other than those in their social network. This prediction was tested in this study and a moderating effect was proposed for action beneficiary. The hypotheses tested in this experiment were:

> H7: Socially excluded individuals' tendency to engage in green behavior is higher when the benefit is directed toward the environment rather than the self.
>
> H8: Socially belonged individuals' tendency to engage in green behavior is higher when the benefit is directed toward the self rather than the environment.

Sample and Data Collection

One hundred six undergraduate students from a large public university in the United States participated in this experiment in exchange for partial course credit. From this sample, four participants failed to provide valid responses to manipulation check questions and thus were eliminated from the sample, resulting in a final sample of 102 participants (48 males, 54 females). Participants ranged in age from 18 to 48 years (M = 24.892, SD = 5.600). Demographic information of this sample is presented in Table 5.

TABLE 5

DEMOGRAPHIC INFORMATION OF PARTICIPANTS IN EXPERIMENT 4

Demographics	Frequency	Percentage
Gender		
Male	48	47.1%
Female	54	52.9%
Marital Status		
Married	9	8.8%
Married with kids	5	4.9%
Not married	77	75.5%
Divorced/Separated	2	2.0%
Living together	9	8.8%
Ethnicity		
Asian	15	14.7%

Black or African American	16	15.7%
Hispanic	12	11.8%
Mixed Race	11	10.8%
White	48	47.1%
Family Annual Income		
Less than $25,000	17	16.7%
$25,000 to $50,999	22	21.6%
$50,001 to $75,000	22	21.6%
$75,001 to $100,000	15	14.7%
$100,001 to $200,000	20	19.6%
More than $200,000	6	5.9%

Design and Procedure

The hypotheses of this study were tested in a lab experiment with a 2 (social exclusion vs. social belonging) × 2 (self-benefit vs. environmental-benefit) between-subjects, full factorial design. As in other experiments, participants arrived at the behavioral lab and provided informed consent. A cover story was used and the experimenter told participants that they would be participating in three separate and unrelated tasks. The first task, ostensibly aimed to develop counseling techniques for college students, genuinely intended to manipulate social exclusion. The second part, manipulating self- versus environmental-benefit, was presented as a market research and consumer decision making task. Finally, the last part of the experiment was ostensibly about personality and individual differences.

Participants were given the first questionnaire titled “Study 1: Counseling Techniques for College Students.” In order to increase the believability of the cover story, participants read on the cover page of this questionnaire that the study was conducted in conjunction with the psychology department. Participants were randomly given one of the versions of the questionnaire designed to manipulate social exclusion. As in Experiment 2, a visualization/essay approach (Maner et al. 2007) was followed; participants were asked to write about a previous

experience from their life when they felt rejected or excluded (social exclusion condition) or accepted by others (social acceptance condition). Specifically, participants in social exclusion condition read:

> Think and write about a time when you experienced rejection or exclusion by others – i.e., when you felt that others did not want to be in your company and when you did not feel a strong sense of belongingness with another person or group. Please provide additional details about who made you felt excluded and how many people were involved.

In contrast, participants in social acceptance condition read:

> Think and write about a time when you experienced social acceptance from others – i.e., when you felt that others wanted to be in your company and when you felt a strong sense of belongingness with another person or group. Please provide some additional details about who made you felt accepted and how many people were involved.

After writing about their personal experience, participants' mood was measured using the Brief Mood Introspection Scale (BMIS; Mayer and Gaschke 1988). Four additional adjectives (i.e., lonely, rejected, belonged, and excluded) were added to the initial 16 adjectives of the BMIS (e.g., happy, gloomy, calm, nervous) and randomly presented on scales from 1 (*definitely do not feel*) to 7 (*definitely feel*). These four items served as the manipulation check for the social exclusion manipulation.

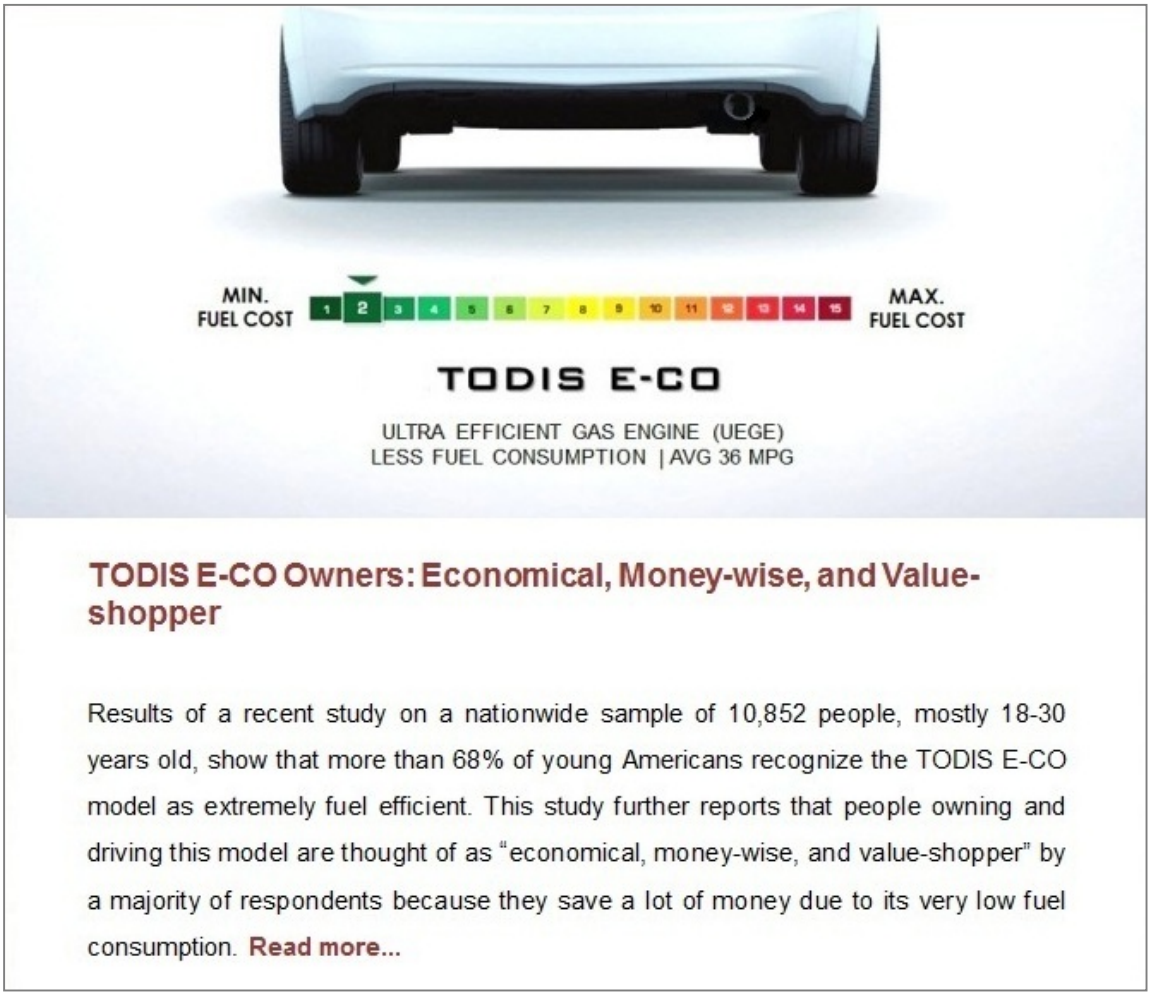
After finishing the first task, so-called Study 1, participants were instructed to complete the second task ostensibly investigating consumer decision making. In this study, presented as "Study 2: Market Research and Decision Making," participants were told that the study's purpose was to evaluate customers' opinion about a real new product. More precisely, they read:

> XYZ Company (anonymized), an automobile manufacturer, is ready to launch their all new Todis E-CO model but before the final launch, the company pilot-tested market preferences on a nationwide sample of US consumers. The result of this study, conducted by a well-known market research firm (IBISWorld), is attached. (Please see the attached report.)

In order to boost credibility of this part, a real market research firm that conducts and publishes U.S. industry research was chosen and the attached report was presented as a screenshot of their website (dated January 2013). The website contained an ad followed by a report snapshot supposedly excerpted from a full market research report published by IBISWorld. Two comparable versions of the screenshot were prepared for this study, manipulating self- versus environmental-benefits of the product. Participants who were randomly assigned to the self-benefit condition were presented with the ad and information in the website screenshot as shown in Figure 9.

FIGURE 9

SELF-BENEFIT CONDITION IN EXPERIMENT 4

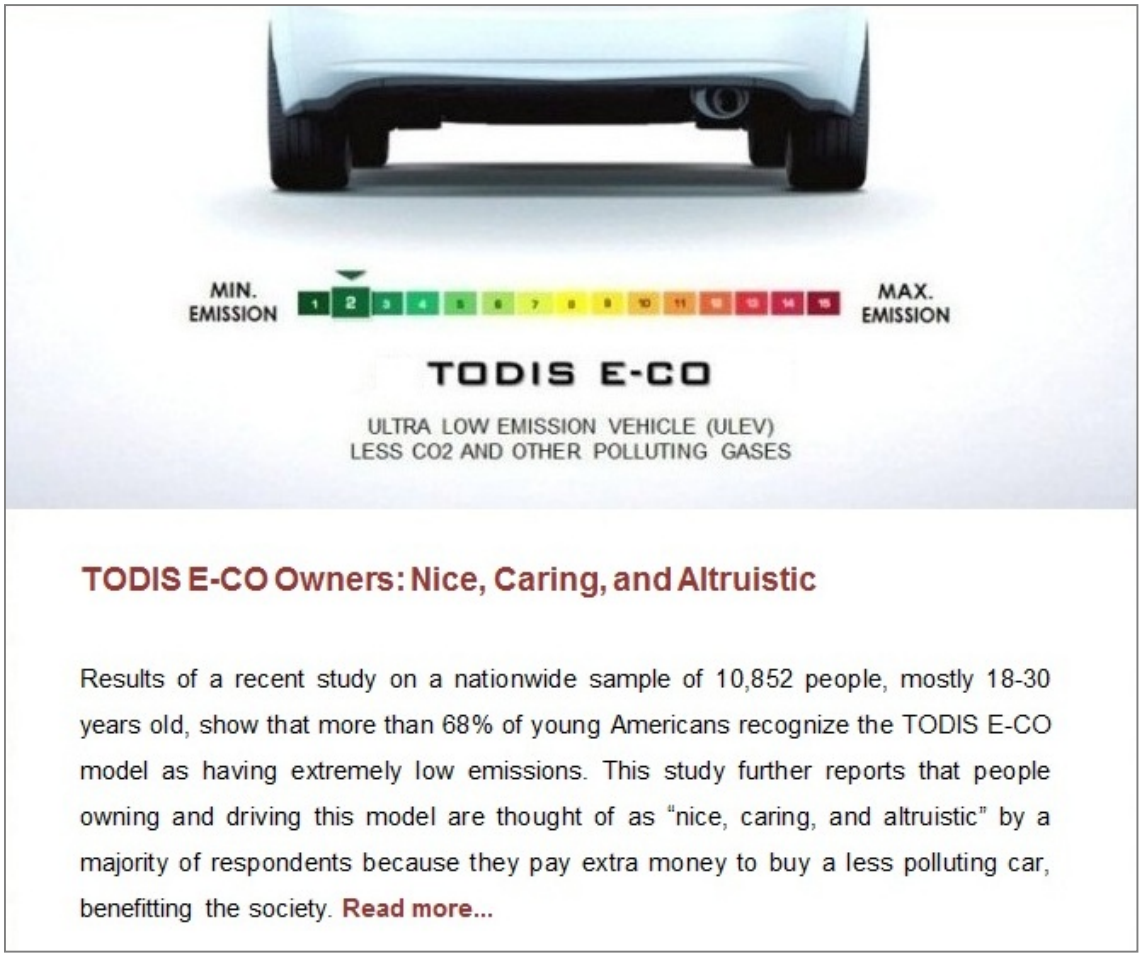


The fictitious TODIS E-CO model was presented as a highly fuel efficient car (average 36 MPG) with an Ultra Efficient Gas Engine (UEGE). In order to further emphasize the self-benefit aspect of this model, the car was rated 2 on a scale from 1 (*minimum fuel cost*) to 15 (*maximum fuel cost*). The information provided was intended to led participants to believe that this model would likely to be regarded as a self-benefiting product whose owners would be thought of as "economical, money-wise, and value-shopper" individuals who could save their money. In sum, the car was intended to be perceived similarly as a self-benefiting product by both participants and its potential audience.

In contrast, in the environmental-benefit condition, the car (the same fictitious model) was presented as a low emission model as shown in Figure 10. The web page was designed and formatted similarly and the information was adjusted for this manipulation. These two scenarios and products were pre-tested on a sample of 30 undergraduate students from the same sampling frame (i.e., 15 participants per condition). Two questions were asked to examine whether the manipulation of the self- versus environment-oriented benefits of the products was successful. One question measured participants' perceptions of the product's benefits: "How do you evaluate the benefits of TODIS E-CO model?" Likewise, the other question was intended to measure whether participants would expect others to make similar attributions: "How would the society evaluate the benefits of TODIS E-CO model?" The items were scaled from 1 (*definitely self-benefits*) to 7 (*definitely environmental benefits*) and the order was balanced to eliminate possible order effect.

FIGURE 10

ENVIRONMENTAL-BENEFIT CONDITION IN EXPERIMENT 4



The results of the pre-test revealed that both scenarios successfully served the manipulation purposes. More specifically, a one-way ANOVA showed that participants, as expected, rated the environment-benefiting model higher in environmental benefits (M = 5.867) than self-benefits (M = 4.267; $F(1, 28) = 17.530$, $p < .001$). Similarly, participants expected the society to perceive the environment-benefiting option to be higher in environmental benefits (M = 5.933) as opposed to self-benefits (M = 4.067; $F(1, 28) = 40.955$, $p < .001$). Finally, two paired-samples t-tests showed that in both environmental benefit ($t(14) = .323$, $p > .10$) and self-benefit conditions ($t(14) = .899$, $p > .10$), participants and society perceived the products

similarly. These results indicated that both scenarios were appropriate for the purpose of this experiment.

After reading the scenario, two questions were asked to ascertain that participants had carefully read and understood the information provided. To examine their attention to the advertisement, participants first indicated how the TODIS E-CO was rated in the ad on a scale from 1 (*minimum fuel cost* or *minimum emission*) to 15 (*maximum fuel cost* or *maximum emission*), depending on the scenario to which they were assigned. Additionally, in order to control whether they had read the entire information, participants were asked to report the percentage of young Americans who recognized the car as an extremely fuel efficient (low emission) vehicle.

Dependent variable in this experiment was purchase intention. More specifically, participants were asked to imagine that they had saved enough money and could afford the car. They, then, indicated their purchase intention on a three-item scale, anchored by 1 (*strongly disagree*) to 7 (*strongly agree*), adapted from Sweeny et al. (1999). Finally, two questions similar to those used in pre-test were asked to examine whether the manipulation of the self- versus environment-oriented benefits of the products was successful. Presentation order was balanced to control for a potential order effect.

After completing the decision making task, participants completed a battery of personality items in which the GREEN scale (Haws, Winterich, and Naylor 2010) was embedded. Since the motivation behind green purchasing behavior was the focus of this experiment, this scale, measuring participants' fundamental proenvironmental attitudes, was included in order to control for its confounding effects as a potential covariate. Sample items include, "I consider the potential environmental impact of my actions when making decisions"

and “I am concerned about wasting the resources of our planet.” Demographic information was also collected. The experiment concluded with a hypothesis-guessing question. No one expressed suspicion about the true purpose of the experiment. Participants were then thoroughly debriefed, thanked, and dismissed.

Analysis and Results

Manipulation Check

Similar to other experiments, the average of the items within each construct was calculated, forming its composite score. The next step was manipulation check. To examine whether the manipulation of social exclusion was successful, average scores of the four-item scale measuring feelings of exclusion (Cronbach’s alpha = .938) were compared across the socially excluded and socially accepted groups using a one-way ANOVA. As expected, socially excluded individuals reported more feelings of exclusion (M = 3.939) compared to their socially accepted counterparts (M = 2.202; $F(1, 100) = 23.506$, $p < .001$).

As noted earlier, four participants failed to provide valid responses to the two control questions (i.e., products rating in the advertisements and percentage of young Americans noted in the report) and thus removed from the sample. Additionally, a one-way ANOVA was run to compare how participants perceived the benefits associated with each product. As expected, participants rated the product in the environmental-benefit condition significantly higher in environmental benefits (M = 5.840) as opposed to self-benefits (M = 4.442; $F(1, 100) = 18.895$, $p < .001$). Similarly, the society was expected to perceive the environment-benefiting option to be higher in environmental benefits (M = 5.880) than self-benefits (M = 4.404; $F(1, 100) = 19.572$, $p < .001$). Finally, similar to the procedure followed in the pre-test, paired-samples t-tests were

used to compare environmental benefits as well as self-benefits perceived by participants and society. Analysis revealed that in both environmental-benefit ($t(49) = .211$, $p > .10$) and self-benefit conditions ($t(51) = .155$, $p > .10$), the products were perceived similarly by participants and society. These results, overall, indicated that all manipulations of this experiment were successful.

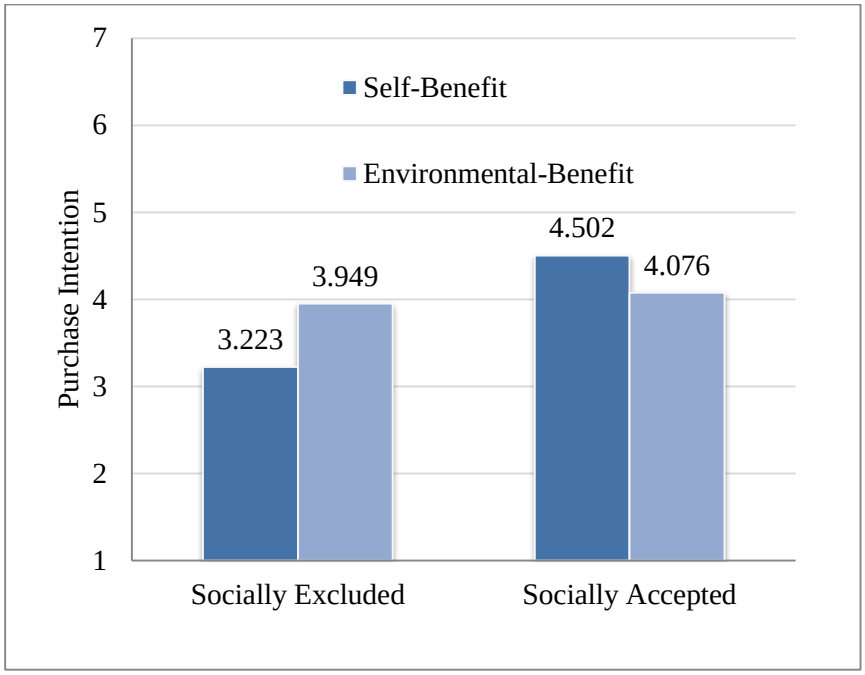
Purchase Intention as Dependent Variable

For the main analysis, a 2 (social exclusion vs. social belonging) × 2 (self-benefit vs. environmental-benefit) ANCOVA, in which proenvironmental attitudes (Cronbach's alpha = .933) was included as covariate, was run on purchase intention (Cronbach's alpha = .929). The results of the analysis showed that participants' intrinsic proenvironmental attitude was a significant covariate in this model ($F(1, 97) = 19.112$, $p < .001$). With this significant covariate in the model, the analysis also revealed a significant main effect for social exclusion ($F(1, 97) = 6.156$, $p = .015$). That is, after controlling for the effects of the covariate, socially excluded individuals, overall and regardless of the benefit conditions, reported significantly lower intention to purchase the green product ($M = 3.586$) compared to their socially accepted counterparts ($M = 4.289$). In addition, the main effect of the benefit condition was not significant ($F(1, 97) = .306$, $p > .10$); that is, there was no significant difference between purchase intention of those in self-benefit condition ($M = 3.863$) compared to those in environmental-benefit condition ($M = 4.012$). Finally, after controlling for the confound (i.e., inherent proenvironmental attitudes), results showed that the effect of two-way interaction on purchase intention is significant ($F(1, 97) = 4.380$, $p = .039$). More specifically, when the effect of the covariate was controlled, socially accepted individuals reported higher intention to purchase the green product

when the benefit was directed toward the self (*M* = 4.502) rather than the environment (*M* = 4.076). In contrast, socially excluded individuals indicated higher purchase intention when the car was positioned as an environment-benefiting (*M* = 3.949) rather than a self-benefiting product (*M* = 3.223). This significant effect of the interaction term after controlling for confounding effects of participants' intrinsic attitudes toward the environment, and the pair-wise comparison of the groups, together, provide support for the hypotheses of this study (H7 and H8). These findings are illustrated in Figure 11.

FIGURE 11

EFFECTS OF EXCLUSION AND ACTION BENEFITS ON PURCHASE INTENTION



Effect of Mood

As in other experiments, the potential effect of mood was also investigated. In this experiment, a different measure of mood (i.e., BMIS) was used. As recommended by Mayer and Gaschke (1988), participants' responses to BMIS items after receiving the treatment (i.e.,

exclusion/acceptance manipulation) was transformed to a single mood score on Pleasant-Unpleasant Scale. In this scale, the adjectives added were *active*, *calm*, *caring*, *content*, *happy*, *lively*, and *peppy*; those subtracted were *drowsy*, *fed up*, *gloomy*, *grouchy*, *jittery*, *nervous*, *sad*, and *tired*. Mood scores could range from – 48 (extremely negative mood) to + 48 (extremely positive mood) on this scale.

A one-way ANOVA comparing mood across socially excluded and socially accepted groups revealed that participants' mood significantly changed as a result of the exclusion manipulation. In fact, remembering and writing about a pleasant experience such as social acceptance put participants in a better mood (M = 19.088) compared to those who remembered and wrote about a rejection or exclusion. Experience (M = 5.689; $F(1, 100) = 15.304$, $p < .001$).

Further analysis, however, showed that participants' mood did not affect their intention to purchase the green product as the bivariate correlation between the mood and purchase intention was not significant ($r = .007$, $p > .50$). In sum, although mood was affected by exclusion manipulation, it did not change participants' behavioral intention. In other words, the mediating role of mood was not supported in this experiment and thus mood could not be regarded as an underlying mechanism for the negative effect of social exclusion on green behavior.

Discussion of Findings

This experiment was designed to examine another boundary condition for the effect of social exclusion on green behavior; that is, direct beneficiary of proenvironmental behavior. Although, by definition, all proenvironmental behaviors result in long-term benefits to the environment and indirectly benefit all human beings, they might bring some direct benefits to individuals who engage in such behaviors. For example, driving a fuel efficient car or use of high

efficiency light bulbs, despite their higher initial costs, causes direct benefit (lower ongoing cost).

This experiment provided empirical support for the social reconnection hypothesis in a laboratory setting. According to the reconnection hypothesis, reactions to social exclusion depend on the perceived possibility of future connection. In other words, excluded people might be motivated to engage in proenvironmental behavior as an affiliative response to exclusion when such actions increase the chance of making new connections. One circumstance under which this chance increases is when green behavior is only associated with long-term, environmental benefits. When green behavior could only be attributed to altruistic motives (absence of egoistic motives), general audience (potential source of reconnection) is likely to make dispositional attribution by attributing the excluded individuals' behavior directly to their personality rather than considering their hidden, genuine motives. This error in attribution increases the likelihood of receiving positive social feedback and consequently forming new social bonds for excluded people.

In contrast, for socially accepted individuals, preference for green products is higher when such products, in addition to obvious environmental benefits, bring direct benefits to them. This finding is in line with the rational economic perspective suggesting that consumers might support sustainability, or purchase green products, based on an economic rationale which reflects self-interest and perceived costs and benefits (Peattie 2010; Schaefer and Crane 2005; Stern et al. 1999). Overall, this experiment provides robust, empirical support for the social reconnection hypothesis.

Finally, no empirical evidence was found for the role of participants' mood in this process. Although a different measure of mood (BMIS) was used, the result was similar to that in

Experiment 3. While mood could be affected by exclusion and negative mood could be experienced, this variation in mood does not lead to any significant change in individuals' decision in a sustainability context. Therefore, mood is not a key factor in the proposed relationship.

CHAPTER 4

GENRERAL DISCUSSION AND IMPLICATIONS

General Discussion

Four experiments demonstrated that the experience of social exclusion has very important consequences for people's consumption decisions and intention to engage in various forms of proenvironmental activities in the laboratory. Recalling or experiencing social exclusion caused people to express lower preference for green products, to report less willingness to sacrifice in order to benefit society and the environment, and to indicate lower intention to purchase green products. These findings, together, provide robust support for the thesis that exclusion decreases proenvironmental behavior.

Across these experiments, and using different measures of mood, the findings consistently suggest that mood does not explain why social exclusion leads to negative environmental outcomes. Emotion (interpersonal empathy), however, turned out to be important. Derived from empathy-altruism hypothesis, the thesis that excluded individuals' reduced ability to empathize with others undercuts their intention to engage in proenvironmental behavior was supported in this research. Under normal circumstances, people use their emotions to simulate the other person's inner states, causing them to care about the person. Social exclusion appears to cause a temporary absence of emotional responsiveness, which may enable the excluded person to avoid feeling terrible (Twenge et al. 2007). As a result, this lack of empathic concern toward others, as empathy-altruism predicts, leads to less green behavior with altruistic motivation.

Although lack of motivation to 'go green' among excluded people is the main finding of this work, several important boundary conditions that connect this research with other studies revealing positive social responses to exclusion were also identified. The first boundary

condition involved an individual-difference factor that appeared to reduce socially excluded individuals' negative environmental response: trait empathy. Participants who had lower levels of emotional empathy reacted to exclusion with responses suggesting further lack of interest in environmental activities and products. Participants with higher emotional empathy, in contrast, reacted in a very different fashion. These participants did not exhibit similar signs of reduced inclination to support sustainable consumption. Indeed, among highly empathetic individuals, feelings of empathy toward others overwhelmed the negative outcomes of exclusion. Experiencing social exclusion, therefore, does not negatively impact proenvironmental behavior in individuals for whom empathy is a highly salient emotion.

Whereas this research, together with an extant stream of research on exclusion (e.g., Twenge and Baumeister 2005; Twenge et al. 2007; Twenge et al. 2001), predicts that excluded consumers should respond negatively, it also reveals that belongingness threats elicit a desire to renew affiliative bonds with other people. Indeed, although excluded individuals seem unwilling to make sacrifices and do good deeds for people in general, they explore specific and promising possibilities for new social connections. A recently excluded person could be characterized as emotionally numb but needy, and these feelings may push him or her in opposite directions. Excluded individuals apparently experience the loss of emotional responsiveness, but they also desire new social relationships. In this research, when a proenvironmental behavior was presented as an opportunity to reconnect (i.e., the use of a green laptop in presence of peers, volunteering for a student organization promoting proenvironmental activities, or driving an environmentally friendly car whose owners were perceived as caring and nice), excluded participants indicated higher behavioral intentions. In other words, excluded consumers prefer to blend in rather than to stand out and try to affiliate with others by using green consumption.

Particularly, when positive social feedback was expected from peers, socially excluded participants favored products that signaled to their peers that they too were concerned about environmental issues. This sensitivity to situational consumption norms is in line with a stream of research suggesting that purchase decisions are highly dependent on the prevailing social environment (Argo, Dahl, and Manchanda 2005; Argo, White, and Dahl 2006; Mead et al. 2011).

Theoretical Contributions

Existing literature on social exclusion has evidently established that exclusion results in a number of different outcomes. While exclusion has shown to increase helping and prosocial behavior in some studies (Maner et al. 2007; Mead et al. 2011), it has shown to reduce such behaviors in others (Twenge et al. 2007; Twenge et al. 2001). However, research on the underlying processes through which such divergent effects occur is not conclusive. In this research, a comprehensive framework was developed, based on which a number of hypotheses were proposed and empirically tested in order to elucidate these incongruent results regarding the effects of social exclusion on two important constructs in consumer research, green consumption and proenvironmental behavior.

This research contributes to marketing and consumer research in several ways. First, this study is one of the few empirical studies that investigated social exclusion and its consequences within the realm of consumer behavior. Although exclusion has garnered widespread attention in social psychology research during the past two decades, it was only recently linked to consumer research. Indeed, recent research in consumer behavior domain has shown that social exclusion can lead to attempts at social reconnection through means such as purchase of nostalgic products that help strengthen reconnection with the past (Loveland et al. 2010), affiliative spending (Mead

et al. 2011), conspicuous consumption, and charitable behavior (Lee and Shrum 2012). This study adds to these fine contributions by investigating social exclusion effects in consumer behavior domain and provides some important qualifications. Indeed, "given the centrality of social relationships and consumption in daily life" (Mead et al. 2011, p. 903), consumer behavior may be an ideal context for investigating social exclusion effects (Lee and Shrum 2012) and the present study responses to the call for further research in this area.

Second, this research is the first laboratory study with human participants, which illuminates the causal impact of social exclusion on proenvironmental behaviors, in general, and green consumption, in particular. Proenvironmental behavior and green consumption are well represented and widely investigated topics in consumer research and numerous scholars have continued to investigate the underlying motives for consumer sustainable behaviors. Yet, the underlying processes and true motivations behind such behaviors are not conclusively understood. This investigation proposed and empirically tested the thesis that exclusion impairs the capacity for empathic concern, which in turn decreases green and proenvironmental behavior. Additionally, this research uncovers an insincere motivation that underlies green behavior in excluded people: strong drive to reconnect with others.

Closely related, research on green consumption has overemphasized objective factors related to attitudes, beliefs, knowledge, and economic rationality, whereas in practice, intuitive and emotional factors are more important in shaping behavioral change (Carrus, Passafaro, and Bonnes 2008). Although emotional responses (such as fear, anger, guilt, shame, or pride) potentially influence consumer behavior (Han, Lerner, and Keltner 2007), there is surprisingly little research on the role of emotions in green consumption beyond responses to advertising appeals (e.g., Obermiller 1995), revealing a potential avenue for future research.

Third, this study proposed and tested a comprehensive framework to explain why socially excluded people would be unwilling to engage in proenvironmental behaviors; and then, what situational and trait factors could undermine this unwanted outcome. In doing so, two novel theories from social psychology literature (i.e., empathy-altruism hypothesis and social reconnection hypothesis) were combined together. The empathy-altruism hypothesis correctly predicts that lack of interpersonal empathy as a result of exclusion decreases altruistic behaviors such as helping, charitable behavior, and proenvironmental activities. Additionally, social reconnection hypothesis was used to explain the circumstances under which this adverse effect could be bounded and green behavior could function as a means to fulfill the desire for affiliation and social relationships.

Fourth, the work presented contributes to consumer research by providing a credible conceptual explanation for some contradictory findings in social exclusion research. As noted earlier, both prosocial and antisocial behaviors have been found as responses to laboratory manipulations of exclusion. The explanation presented and tested here suggests that the dominant response to exclusion may be a function of the person (trait) or the situation (social environment), and thus, investigating both aspects as well as their interactions may be necessary to completely understand the main variables motivating green behaviors. In this case, as suggested in the Stages of Coping Theory (Williams 2009), while a negative reaction could be anticipated as the reflexive, retaliatory response to exclusion, strong desire for reconnection stimulates reflective, affiliative responses, leading excluded people to adeptly conceal their negative reaction and strategically respond in a positive way.

A fifth contribution of this research is demonstrating the dual role of empathy as the underlying mechanism as well as a boundary condition for the effect of social exclusion on green

consumption. While emotions in human being could appear as short-term, transient responses to external stimuli, research has shown that individual differences (Kuppens and Tong 2010; Winter and Kuiper 1997), cultural differences (Markus and Kitayama 1991; Uchida et al. 2009), gender (Chentsova-Dutton and Tsai 2007; Simon and Nath 2004), and age (Gross et al. 1997) could impact people's level of emotional responsiveness. Therefore, the dual role of empathy as a trait as well as a transient response was conceptually proposed and empirically established in this research. A potential direction for future research could be to investigate the moderating role of other relevant individual differences such as rejection sensitivity and narcissism to determine other critical variables in this context.

The final contribution of this study to consumer research is to develop several operationalizations and measurements for green consumption and proenvironmental behavior. Overall, eight different measures of green behavior were used across four experiments (i.e., three measures in Experiment 1, one measure in Experiment 2, three measures in Experiment 3, and one measure in Experiment 4). Additionally, since previous research in environmental issues suggests that the link between reported attitude and actual behavior in this context is not very strong, behavioral measures were mostly used. The use of different measures bolsters the credibility of the findings and enhances the external validity of this research.

Practical Implications

In addition to its contributions to consumer research and marketing, this work provides several implications for green marketers, social marketers, and public policy makers. While environmental awareness has increased over the past two decades, the actual preservation of the planet has not. Indeed, the presence of an "attitude-behavior gap," reflecting the fact that

environmental knowledge and strongly held proenvironmental values, attitudes, and intentions frequently fail to translate into green purchasing (Pickett-Baker and Ozaki 2008; Vermeir and Verbeke 2006), has been widely acknowledged. Given that, an increased urgency in motivating people to engage in proenvironmental behaviors is advised by both policy makers and researchers. Green consumption (a.k.a. environmental consumerism or green buying) clearly is an important form of proenvironmental behavior and this work responds to this call by investigating more practical, emotional factors in shaping green consumption.

At a practical level, the findings of this study help marketers of green products and services (i.e., products and services with minimal impact on the environment; Mainieri et al. 1997) better understand different consumer segments in this market. More precisely, the results show that individuals who are somehow isolated from society constitute a sizable segment that, by default, is hard-to-target because such individuals lack any altruistic motivation which leads them to buy green products and services. In addition, experiencing exclusion is a common incident even for normal population and could influence purchase decisions. The findings of this work provide marketers with a better understanding of these potential consumers and the emotional factors that underlie their decision making process. The results also provide insights into the factors motivating such individuals to purchase green products. As shown, both intrinsic and extrinsic motivations can be essential when making purchase decisions.

As discussed, having a good understanding of this group's characteristics is the first step for green marketers to design and develop marketing programs to capture these consumers and this appears to be necessary because marketers cannot afford to disregard this substantial segment. As established in this study, green products by default are not perceived as tools facilitating social reconnection by excluded individuals. However, when such products are

positioned properly, individuals tend to capitalize on the social acceptability of their behavior to help them fulfill their threatened need for affiliation. The implication here is that green marketers should attempt to customize their promotional strategies accordingly and direct the consumer's attention to this potential benefit of green products. This can be achieved by emphasizing the symbolic status of green products and by positioning green consumption as a socially desirable behavior that is greatly praised and admired by mainstream society. This group of consumers should be directly informed that green consumption is a way to fit in rather than to stand out.

The present investigation established that green consumption can successfully be utilized as a reconnection tool only when its benefits are directed toward the environment and no apparent self-benefit exists. Self-directed benefits of green products decrease the clarity and quality of the message (i.e., inherent concern about environmental issues and society). This noise, in turn, may cause the audience to perceive green consumption as a self-maximizing behavior and thus no positive response is expected from the audience. The implication for marketers of green products is that they should be extremely cautious and avoid overemphasizing self-benefits of green products when they intend to persuade excluded individuals to purchase environmentally friendly products. Although self-maximization (social reconnection in this case) is the actual motivation for such individuals to buy green products, this information should not be openly available to general population. Additionally, marketers should clearly spell out highly expected positive feedback from the audience in their promotional campaigns, exactly similar to the report used in Experiment 4. Apparently, such strategies are more effective for publicly visible products and a consequential obstacle for marketers is to promote green products that are mainly used and consumed in private settings.

Finally, the main contribution of this work for social marketers and policy makers is that it helps them understand how to turn a threat (social exclusion and its harmful consequences to society and the environment) into an opportunity (green consumption). The key here is empathy; that is, ability to reproduce or simulate another person's emotions. The findings showed that empathic response is a function of both personal and situational factors. Policy makers and social marketers should start to focus their efforts on designing and implementing long-term policies and programs aimed at increasing empathic concerns toward the environment and society. This goal can be achieved by educating and convincing people to regard environmental issues similar to the way they see their own problems and to take altruistic actions in order to solve them.

Limitations and Directions for Future Research

Despite the theoretical contributions and practical implications, this study is subject to certain limitations. First, a convenient sample of undergraduate students in the Southwestern United States was chosen for this study. Undergraduate students are obviously not representative of the general population and thus generalizability of the findings is limited. The main factors distinguishing this sample from a general sample of consumers are age, income, education, and family status, all of which could influence proenvironmental decisions. Although extensive analysis of demographics showed no significant variations among the groups, future research could replicate this work using more general samples from other geographic areas and examine the generalizability of these findings. Apparently, the other side of that coin is that employing a homogeneous sample in a confirmatory study is advantageous since it reduces the chance of making false conclusions about the presence of relationship between the variables (Type II error) and allows for more accurate theoretical predictions (Calder et al. 1981).

Several different procedures have been developed and used in social psychology research to manipulate social exclusion and to induce feelings of exclusion in participants. These techniques include manipulating exclusion by providing a bogus feedback on a personality test and telling participants they are destined to end up alone in life, by having participants recall and write about a personal exclusion experience, by having participants imagine an exclusion experience, by excluding participants in a three-way ball toss, by telling participants that no one picked them to be a part of their group, by telling participants that their partner was unwilling to meet them after watching the video they had made, and by creating an exclusion experience through online chat room interactions. Only the first two manipulations were used in the present work and the results should not be generalized uncritically to all manner of social exclusions and rejections, although it seems reasonable to assume that the similarities will generally outnumber the differences. Future research could use other manipulations (preferably interactive, interpersonal techniques) to test the robustness of the findings across other exclusion conditions.

Another concern is the mere use of laboratory manipulation of social exclusion. It is intuitively plausible to argue that right after the manipulation, the participant's social world is essentially unchanged, and the person has only been confronted with the possibility that his or her desired social relationships may be refused at some point in future (Twenge et al. 2007). This stimulation (either related to the past or future), however, causes people to consciously think about such a prospect, and this cognitive processing activates their feelings of exclusion, as was shown in manipulation check. In sum, although the manipulations used in this study might arguably be described as merely threatening, compared with actual harm or loss, they are appropriate for general purposes of this work.

The data for this work were collected in a behavioral lab. Experimental research design was implemented in order to maximize internal validity in a controlled experimental setting, while sacrificing some degree of external validity. This type of design allows for establishing clear causal relationships among variables. Additionally, the use of lab experiments, as opposed to field experiments, seems inevitable since administering exclusion manipulations with important relationships (e.g., randomly assigning couples to divorce) would be neither ethical nor practical (Twenge et al. 2007). A full understanding, however, can be reached by combining experimental evidences with correlational findings about green behavior among people who are socially excluded in their lives. Thus, a potential avenue for future research could be to measure general feelings of belongingness (e.g., General Belongingness Scale; Malone, Pillow, and Osman 2012) as an invert indicator of social exclusion and then compare the findings. Similarly, a fruitful area for future research would be to examine and identify other potential boundary conditions such as individual differences (e.g., rejection sensitivity) and situational factors (e.g., audience intimacy).

Finally, desirability bias and experimenter demand effect could also be regarded as limitations of this study. Proenvironmental behavior and green consumption are socially desirable activities and, despite the full assurance of anonymity and confidentiality in this study, desirability bias may influence participants' responses. Indeed, previous research shows that environmental attitudes do not necessarily lead to actual behaviors and one conceivable explanation for these findings is desirability bias. On the other hand, experimenter demand effects (i.e., changes in participants' behavior due to cues about what constitutes appropriate behavior), could distort the findings. Although the best effort was made to minimize these two sources of response bias, their potential presence is acknowledged.

Concluding Remarks

This investigation has identified some behavioral consequences of social exclusion, supporting the hypothesis that green consumption and proenvironmental behavior are strategically used by excluded people as means to facilitate their inclusion. This work thus adds to a small but growing body of evidence suggesting that social motivations such as social status (Griskevicius et al. 2010) and social norms (Goldstein et al. 2008) could guide green consumption decisions. As Mead et al. (2011) argued, people sometimes use observable cues such as clothing, style of talking, product preferences, or the contents of a shopping basket to form their opinions about others. Supporting this argument, the present work demonstrated that excluded individuals skillfully take advantage of this opportunity and capitalize on the symbolic nature of green consumption to help them forge new social bonds.

APPENDIX

INSTRUMENTS USED IN RESEARCH

Need to Belong Scale: Experiment 1

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

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

Big Five Inventory (BFI): Experiment 1 and Experiment 3

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

I see myself as someone who …….

1. is talkative.
2. tends to find fault with others.
3. does a thorough job.
4. is depressed, blue.
5. is original, comes up with new ideas.
6. is reserved.

7. is helpful and unselfish with others.
8. can be somewhat careless.
9. is relaxed, handles stress well.
10. is curious about many different things.
11. is full of energy.
12. starts quarrels with others.
13. is a reliable worker.
14. can be tense.
15. is ingenious, a deep thinker.
16. generates a lot of enthusiasm.
17. has a forgiving nature.
18. tends to be disorganized.
19. worries a lot.
20. has an active imagination.
21. tends to be quiet.
22. is generally trusting.
23. tends to be lazy.
24. is emotionally stable, not easily upset.
25. is inventive.
26. has an assertive personality.
27. can be cold and aloof.
28. perseveres until the task is finished.
29. can be moody.

30. values artistic, aesthetic experiences.

31. is sometimes shy, inhibited.

32. is considerate and kind to almost everyone.

33. does things efficiently.

34. remains calm in tense situations.

35. prefers work that is routine.

36. is outgoing, sociable.

37. is sometimes rude to others.

38. makes plans and follows through with them.

39. gets nervous easily.

40. likes to reflect, play with ideas.

41. has few artistic interests.

42. likes to cooperate with others.

43. is easily distracted.

44. is sophisticated in art, music, or literature.

Feelings of Belongingness: Experiment 1

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

1. There are many people who care about me.
2. I feel very close and connected to other people right now.
3. I feel very alone right now. (r)

Positive and Negative Affect Scale (PANAS): Experiment 1

Range: 1 (*not at all*) to 7 (*extremely*)

Positive	Negative Mood
1. Interested	2. Irritable
3. Active	4. Nervous
5. Excited	6. Ashamed
7. Attentive	8. Jittery
9. Strong	10. Upset
11. Inspired	12. Guilty
13. Determined	14. Scared
15. Alert	16. Hostile
17. Enthusiastic	18. Distressed
19. Proud	20. Afraid

Distress-Empathy Scale: Experiment 1

Range: 1 (*not at all*) to 7 (*extremely*)

1. Alarmed	2. Disturbed
3. Sympathetic	4. Tender
5. Grieved	6. Perturbed
7. Moved	8. Warm
9. Upset	10. Distressed

11. Worried
12. Softhearted
13. Compassionate
14. Troubled

Willingness to Pay for the Environment: Experiment 1

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

1. I would be willing to pay much higher taxes in order to protect the environment.
2. I would be willing to accept cuts in my standard of living to protect the environment.
3. I would be willing to pay much higher prices in order to protect the environment.

Willingness to Pay for the Society: Experiment 1

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

1. I would be willing to pay much higher taxes in order to benefit the society.
2. I would be willing to accept cuts in my standard of living to benefit the society.
3. I would be willing to pay much higher prices in order to benefit the society.

Attitude toward Brand/Product: Experiment 1

Range: 1 to 7 (bipolar)

1. Unappealing/Appealing
2. Bad/Good
3. Unpleasant/Pleasant
4. Unfavorable/Favorable

5. Unlikable/Likable

Emotional Empathy Scale: Experiment 2

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

1. I cry easily when watching a sad movie.
2. Certain pieces of music can really move me.
3. Seeing a hurt animal by the side of the road is very upsetting.
4. I don't give others' feelings much thought. (r)
5. It makes me happy when I see people being nice to each other.
6. The suffering of others deeply disturbs me.
7. I always try to tune in to the feelings of those around me.
8. I get very upset when I see a young child who is being treated meanly.
9. Too much is made of the suffering of pets or animals. (r)
10. If someone is upset I get upset, too.
11. When I'm with other people who are laughing I join in.
12. It makes me mad to see someone treated unjustly.
13. I rarely take notice when people treat each other warmly. (r)
14. I feel happy when I see people laughing and enjoying themselves.
15. It's easy for me to get carried away by other people's emotions.
16. My feelings are my own and don't reflect how others feel. (r)
17. If a crowd gets excited about something so do I.
18. I feel good when I help someone out or do something nice for someone.

19. I feel deeply for others.

20. I don’t cry easily. (r)

21. I feel other people’s pain.

22. Seeing other people smile makes me smile.

23. Being around happy people makes me feel happy, too.

24. TV or news stories about injured or sick children greatly upset me.

25. I cry at sad parts of the books I read.

26. Being around people who are depressed brings my mood down.

27. I find it annoying when people cry in public. (r)

28. It hurts to see another person in pain.

29. I get a warm feeling for someone if I see them helping another person.

30. I feel other people’s joy.

Self-Monitoring Scale: Experiment 3

Range: 0 (*false*) to 1 (*true*)

1. I find it hard to imitate the behavior of other people. (r)
2. At parties and social gatherings, I don’t attempt to do or say things that others will like. (r)
3. I can argue only for ideas that I already believe. (r)
4. I can make impromptu speeches even on topics about which I have almost no information.
5. I guess I put on a show to impress or entertain others.

6. I would probably make a good actor.
7. In a group of people, I am rarely the center of attention. (r)
8. In different situations and with different people, I often act like very different persons.
9. I am not particularly good at making other people like me. (r)
10. I'm not always the person I appear to be.
11. I would not change my opinions (or the way I do things) in order to please someone or win his or her favor. (r)
12. I have considered being an entertainer.
13. I have been good at games such as charades and improvisational acting.
14. I have trouble changing my behavior to suit different people and different situations. (r)
15. At a party I let others keep the jokes and stories going. (r)
16. I feel a bit awkward in company and do not come across quite as well as I should. (r)
17. I can look anyone in the eye and tell a lie with a straight face (if for the right end).
18. I may deceive people by being friendly when I really dislike them.

Feelings of Exclusion: Experiment 3

Range: 1 (*not at all*) to 7 (*extremely*)

1. I feel there will be many people who care about me. (r)
2. I feel very close and connected to other people. (r)
3. I feel I will be alone.
4. I feel I will be excluded.

Purchase Intention: Experiment 3 and Experiment 4

Range: 1(*strongly disagree*) to 7 (*strongly agree*)

1. I would consider buying this …….. .
2. I will purchase this …….. .
3. There is a strong likelihood that I will buy this …….. .

Product Symbolic Status Scale: Experiment 3

Range: 1 (*not at all*) to 7 (*very much*)

1. How much will owning this …… improve your self-image?
2. How much will this …… influence others' positive impressions of you?
3. How much information will this …… reveal about your lifestyle?
4. How much will this …… enhance your social status?
5. How much will this …… reflect your personal taste?
6. How much will you feel proud to use this ……?
7. How much will this …… enhance others' opinions of your success?

Personal Involvement Inventory (PII): Experiment 3

Range: 1 to 7 (bipolar)

1. Important/Unimportant (r)

2. Boring/Interesting
3. Relevant/Irrelevant (r)
4. Exciting/Unexciting (r)
5. Means nothing to me/Means a lot to me
6. Appealing/Unappealing (r)
7. Fascinating/Mundane (r)
8. Worthless/Valuable
9. Involving/Uninvolving (r)
10. Not needed/Needed

Behavioral Intention Scale: Experiment 3

Range: 1 to 7 (bipolar)

1. Unlikely/Likely
2. Non-existent/Existent
3. Improbable/Probable
4. Impossible/Possible
5. Uncertain/Certain
6. Definitely yes/Definitely no (r)
7. Not at all/Very frequent
8. No chance/Certain chance
9. Probably/Probably not (r)

Brief Mood Introspection Scale (BMIS): Experiment 4

Range: 1 (*definitely do not feel*) to 7 (*definitely feel*)

Positive	Negative Mood
1. Lively	9. Drowsy
2. Happy	10. Grouchy
3. Calm	11. Jittery
4. Active	12. Nervous
5. Caring	13. Sad
6. Content	14. Gloomy
7. Loving	15. Fed up
8. Peppy	16. Tired

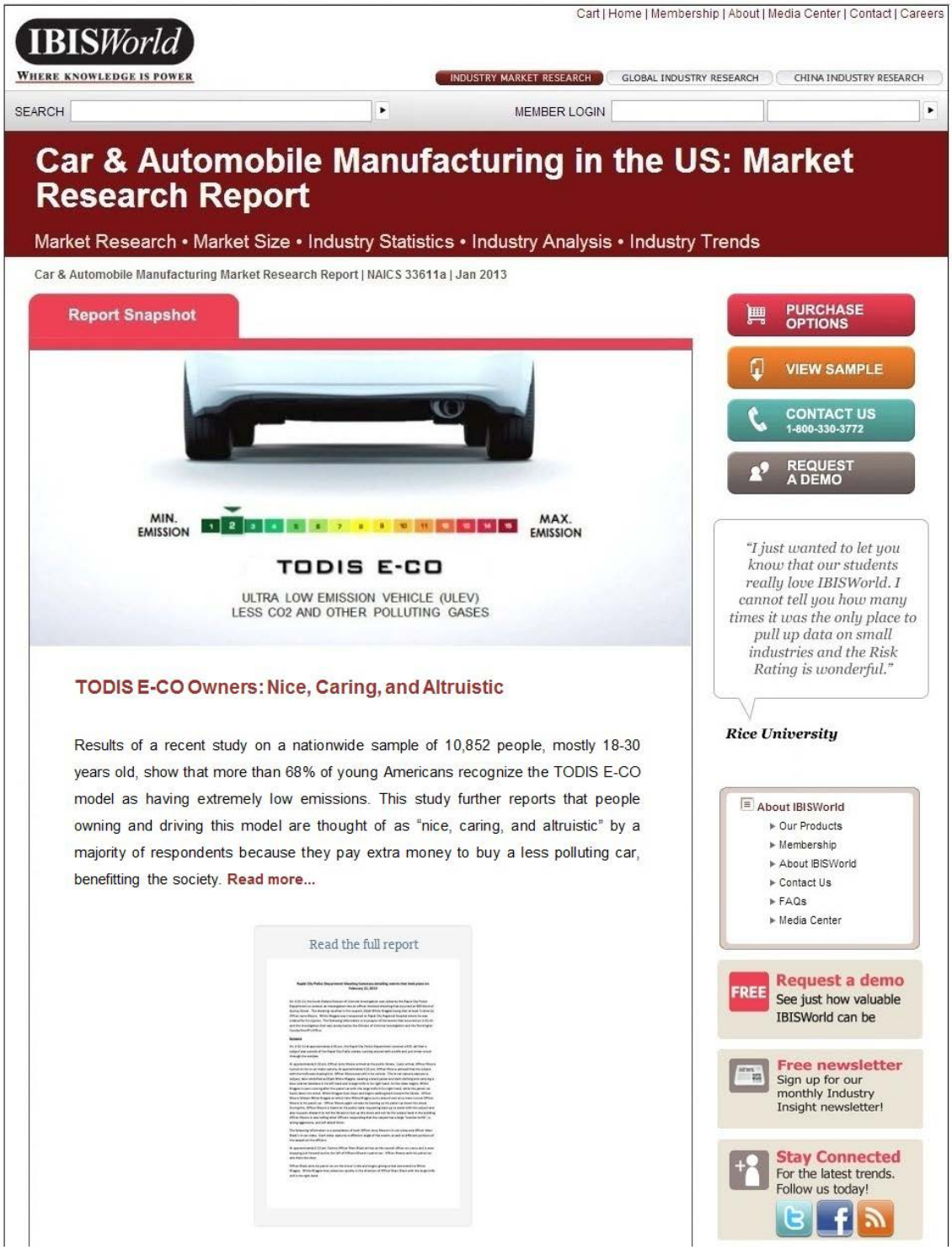
GREEN Scale: Experiment 4

Range: 1 (*strongly disagree*) to 7 (*strongly agree*)

1. It is important to me that the products I use do not harm the environment.
2. I consider the potential environmental impact of my actions when making many of my decisions.
3. My purchase habits are affected by my concern for our environment.
4. I am concerned about wasting the resources of our planet.
5. I would describe myself as environmentally responsible.
6. I am willing to be inconvenienced in order to take actions that are more environmentally friendly.

Screenshot for Self-benefit Condition in Experiment 4

Screenshot for Environmental-benefit Condition in Experiment 4



REFERENCE LIST

Abrams, Dominic, Michael A. Hogg, and Jose Marques (2005), "A Social Psychological Framework for Understanding Social Inclusion and Exclusion," in *The Social Psychology of Inclusion and Exclusion*, ed. Dominic Abrams, Michael A. Hogg and Jose Marques, UK: Psychology Press, 1-26.

Abramson, Lyn Y., Martin E. Seligman, and John D. Teasdale (1978), "Learned Helplessness in Humans: Critique and Reformulation," *Journal of Abnormal Psychology*, 87 (1), 49-74.

Aiken, Leona S. and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: Sage.

American Psychiatric Association (1994), *Diagnostic and Statistical Manual of Mental Disorders*, Washington, DC: American Psychiatric Association.

Argo, Jennifer J., Darren W. Dahl, and Rajesh V. Manchanda (2005), "The Influence of a Mere Social Presence in a Retail Context," *Journal of Consumer Research*, 32 (2), 207-12.

Argo, Jennifer J., Katherine White, and Darren W. Dahl (2006), "Social Comparison Theory and Deception in the Interpersonal Exchange of Consumption Information," *Journal of Consumer Research*, 33 (1), 99-108.

Bamberg, Sebastian (2003), "How Does Environmental Concern Influence Specific Environmentally Related Behaviors? A New Answer to an Old Question," *Journal of Environmental Psychology*, 23 (1), 21-32.

Baron, Reuben M. and David A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173-82.

Batson, C. Daniel (1991), *The Altruism Question: Toward a Social-Psychological Answer*, Hillsdale, NJ: Erlbaum.

Batson, C. Daniel, Janine L. Dyck, J. Randall Brandt, Judy G. Batson, Anne L. Powell, M. Rosalie McMaster, and Cari Griffitt (1988), "Five Studies Testing Two New Egoistic Alternatives to the Empathy-Altruism Hypothesis," *Journal of Personality and Social Psychology*, 55 (1), 52-77.

Batson, C. Daniel, Tricia R. Klein, Lori Highberger, and Laura L. Shaw (1995), "Immorality from Empathy-Induced Altruism: When Compassion and Justice Conflict," *Journal of Personality and Social Psychology*, 68 (6), 1042-54.

Baumeister, Roy F., C. Nathan DeWall, Natalie J. Ciarocco, and Jean M. Twenge (2005), "Social Exclusion Impairs Self-Regulation," *Journal of Personality and Social Psychology*, 88 (4), 589-604.

Baumeister, Roy F. and Mark R. Leary (1995), "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation," *Psychological Bulletin*, 117 (3), 497-529.

Baumeister, Roy F. and Dianne M. Tice (1990), "Point-Counterpoints: Anxiety and Social Exclusion," *Journal of Social and Clinical Psychology*, 9 (2), 165-95.

Baumeister, Roy F., Jean M. Twenge, and Christopher K. Nuss (2002), "Effects of Social Exclusion on Cognitive Processes: Anticipated Aloneness Reduces Intelligent Thought," *Journal of Personality and Social Psychology*, 83 (4), 817-27.

Bowlby, John (1969), *Attachment and Loss, Vol. 1: Attachment*, Vol. 1, New York, NY: Basic Books.

---------- (1973), *Attachment and Loss, Vol. 2: Separation*, Vol. 2, New York, NY: Basic Books.

Buhs, Eric S., Gary W. Ladd, and Sarah L. Herald (2006), "Peer Exclusion and Victimization: Processes That Mediate the Relation between Peer Group Rejection and Children's Classroom Engagement and Achievement?," *Journal of Educational Psychology*, 98 (1), 1-13.

Burchardt, Tania, Julian Le Grand, and David Piachaud (1999), "Social Exclusion in Britain 1991—1995," *Social Policy & Administration*, 33 (3), 227-44.

Bushman, Brad J. and Roy F. Baumeister (1998), "Threatened Egotism, Narcissism, Self-Esteem, and Direct and Displaced Aggression: Does Self-Love or Self-Hate Lead to Violence?," *Journal of Personality and Social Psychology*, 75 (1), 219-29.

Calder, Bobby J., Lynn W. Phillips, and Alice M. Tybout (1981), "Designing Research for Application," *Journal of Consumer Research*, 8 (2), 197-207.

Carrus, Giuseppe, Paola Passafaro, and Mirilia Bonnes (2008), "Emotions, Habits and Rational Choices in Ecological Behaviours: The Case of Recycling and Use of Public Transportation," *Journal of Environmental Psychology*, 28 (1), 51-62.

Caruso, David R. and John D. Mayer (1998), "A Measure of Emotional Empathy for Adolescents and Adults," *Unpublished Manuscript*: University of New Hampshire.

Chao, Angela and Juliet B. Schor (1998), "Empirical Tests of Status Consumption: Evidence from Women's Cosmetics," *Journal of Economic Psychology*, 19 (1), 107-31.

Chentsova-Dutton, Yulia E. and Jeanne L. Tsai (2007), "Gender Differences in Emotional Response among European Americans and Hmong Americans," *Cognition & Emotion*, 21 (1), 162-81.

D'Souza, Clare, Mehdi Taghian, Peter Lamb, and Roman Peretiatkos (2006), "Green Products and Corporate Strategy: An Empirical Investigation," *Society and Business Review*, 1 (2), 144-57.

Davis, Mark H. (1983), "Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach," *Journal of Personality and Social Psychology*, 44 (1), 113-26.

Deci, Edward L. and Richard M. Ryan (1985), *Intrinsic Motivation and Self-Determination in Human Behavior*, New York, NY: Plenum.

Deighton, John and Stephen J. Hoch (1993), "Teaching Emotion with Drama Advertising," in *Advertising Exposure, Memory, and Choice*, ed. Andrew A. Mitchell, Hillsdale, NJ: Lawrence Erlbaum Associates, 261-82.

DeWall, C. Nathan and Roy F. Baumeister (2006), "Alone but Feeling No Pain: Effects of Social Exclusion on Physical Pain Tolerance and Pain Threshold, Affective Forecasting, and Interpersonal Empathy," *Journal of Personality and Social Psychology*, 91 (1), 1-15.

DeWall, C. Nathan and Stephanie B. Richman (2011), "Social Exclusion and the Desire to Reconnect," *Social and Personality Psychology Compass*, 5 (11), 919-32.

Downey, Geraldine and Scott I. Feldman (1996), "Implications of Rejection Sensitivity for Intimate Relationships," *Journal of Personality and Social Psychology*, 70 (6), 1327-43.

Duffy, Katherine (1995), "Social Exclusion and Human Dignity in Europe," Strasbourg: Council of Europe.

Dunn, Elizabeth W., Lara B. Aknin, and Michael I. Norton (2008), "Spending Money on Others Promotes Happiness," *Science*, 319 (5870), 1687-88.

Dweck, Carol S. and Ellen L. Leggett (1988), "A Social-Cognitive Approach to Motivation and Personality," *Psychological Review*, 95 (2), 256-73.

Einolf, Christopher J. (2008), "Empathic Concern and Prosocial Behaviors: A Test of Experimental Results Using Survey Data," *Social Science Research*, 37 (4), 1267-79.

Eisenberg, Nancy, Richard A. Fabes, and Tracy L. Spinrad (2007), "Prosocial Development," in *Handbook of Child Psychology*, ed. Richard M. Lerner and William Damon: John Wiley & Sons, Inc.

Eisenberg, Nancy and Janet Strayer (1987), "Critical Issues in the Study of Empathy," in *Empathy and Its Development*, ed. Nancy Eisenberg and Janet Strayer, Cambridge: Cambridge University Press, 3-16.

Eisenberger, Naomi I., Matthew D. Lieberman, and Kipling D. Williams (2003), "Does Rejection Hurt? An Fmri Study of Social Exclusion," *Science*, 302 (5643), 290-92.

Fishbein, Martin and Icek Ajzen (2010), *Predicting and Changing Behavior*, New York, NY: Psychology Press.

Fisher, Robert J., Mark Vandenbosch, and Kersi D. Antia (2008), "An Empathy-Helping Perspective on Consumers' Responses to Fund-Raising Appeals," *Journal of Consumer Research*, 35 (3), 519-31.

Freud, Sigmund (1930), *Civilization and Its Discontents*, New York, NY: Jonathan Cape & Harrison Smith, Inc.

Funder, David C. (1987), "Errors and Mistakes: Evaluating the Accuracy of Social Judgment," *Psychological Bulletin*, 101 (1), 75-90.

---------- (1995), "On the Accuracy of Personality Judgment: A Realistic Approach," *Psychological Review*, 102 (4), 652-70.

---------- (1999), *Personality Judgment: A Realistic Approach to Person Perception*, San Diego, CA: Academic Press.

Gardner, Wendi L., Cynthia L. Pickett, and Marilynn B. Brewer (2000), "Social Exclusion and Selective Memory: How the Need to Belong Influences Memory for Social Events," *Personality and Social Psychology Bulletin*, 26 (4), 486-96.

Goldstein, Noah J., Robert B. Cialdini, and Vladas Griskevicius (2008), "A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels," *Journal of Consumer Research*, 35 (3), 472-82.

Gratz, Kim L. (2003), "Risk Factors for and Functions of Deliberate Self-Harm: An Empirical and Conceptual Review," *Clinical Psychology: Science and Practice*, 10 (2), 192-205.

Griskevicius, Vladas, Joshua M. Tybur, and Bram Van den Bergh (2010), "Going Green to Be Seen: Status, Reputation, and Conspicuous Conservation," *Journal of Personality and Social Psychology*, 98 (3), 392-404.

Gross, James J., Laura L. Carstensen, Monisha Pasupathi, Jeanne Tsai, Carina Götestam Skorpen, and Angie Y. C. Hsu (1997), "Emotion and Aging: Experience, Expression, and Control," *Psychology and Aging*, 12 (4), 590-99.

Grubb, Edward L. and L. Grathwohl Harrison (1967), "Consumer Self-Concept, Symbolism and Market Behavior: A Theoretical Approach," *The Journal of Marketing*, 31 (4), 22-27.

Han, Seunghee, Jennifer S. Lerner, and Dacher Keltner (2007), "Feelings and Consumer Decision Making: The Appraisal-Tendency Framework," *Journal of Consumer Psychology*, 17 (3), 158-68.

Haws, Kelly L., Karen P. Winterich, and Rebecca W. Naylor (2010), "Seeing the World through Green-Tinted Glasses: Motivated Reasoning and Consumer Response to Environmentally Friendly Products," *Working Paper*, College Station, TX: Texas A&M University.

Hodges, Sara D. and Michael W. Myers (2007), "Empathy," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 296-98.

Hogan, Robert (1969), "Development of an Empathy Scale," *Journal of Consulting and Clinical Psychology*, 33 (3), 307-16.

Hutchinson, Paul, Dominic Abrams, and Julie Christian (2007), "The Social Psychology of Exclusion," in *Multidisciplinary Handbook of Social Exclusion Research*, ed. Dominic Abrams, Julie Christian and David Gordon, West Sussex, UK: John Wiley & Sons.

James, William (1890), *Principles of Psychology*, Cambridge, MA: Harvard University Press.

John, Oliver P. and Sanjay Srivastava (1999), "The Big-Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives," in *Handbook of Personality: Theory and Research*, Vol. 2, ed. Lawrence A. Pervin and Oliver P. John, New York, NY: Guilford Press, 102-38.

Kang, Jan and Geraldine Downey (2007), "Rejection Sensitivity," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 741-43.

Kang, N. Jan, Geraldine Downey, Masumi Iida, and Monica Rodriguez (2009), "Rejection Sensitivity: A Model of How Individual Difference Factors Affect the Experience of Hurt Feelings in Conflict and Support," in *Feeling Hurt in Close Relationships*, ed. Anita L. Vangelisti, New York, NY: Cambridge University Press, 73-91.

Knowles, Megan L. and Wendi L. Gardner (2007), "Rejection," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 738-40.

Kollmuss, Anja and Julian Agyeman (2002), "Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-Environmental Behavior?," *Environmental Education Research*, 8 (3), 239-60.

Krieger, Nancy (1990), "Racial and Gender Discrimination: Risk Factors for High Blood Pressure?," *Social Science and Medicine*, 30 (12), 1273-81.

Kuppens, Peter and Eddie M. W. Tong (2010), "An Appraisal Account of Individual Differences in Emotional Experience," *Social and Personality Psychology Compass*, 4 (12), 1138-50.

Lakin, Jessica L., Tanya L. Chartrand, and Robert M. Arkin (2008), "I Am Too Just Like You: Nonconscious Mimicry as an Automatic Behavioral Response to Social Exclusion," *Psychological Science*, 19 (8), 816-22.

Langfeld, Herbert S. (1967), *The Aesthetic Attitude*, Port Washington, NY: Kennikat.

Leary, Mark R. (1990), "Responses to Social Exclusion: Social Anxiety, Jealousy, Loneliness, Depression, and Low Self-Esteem," *Journal of Social and Clinical Psychology*, 9 (2), 221-29.

Leary, Mark R., Kristine M. Kelly, Catherine A. Cottrell, and Lisa S. Schreindorfer (2012), "Individual Differences in the Need to Belong: Mapping the Nomological Network," *Unpublished Manuscript*: Duke University.

Leary, Mark R., Robin M. Kowalski, Laura Smith, and Stephen Phillips (2003), "Teasing, Rejection, and Violence: Case Studies of the School Shootings," *Aggressive Behavior*, 29 (3), 202-14.

Leary, Mark R., Ellen S. Tambor, Sonja K. Terdal, and Deborah L. Downs (1995), "Self-Esteem as an Interpersonal Monitor: The Sociometer Hypothesis," *Journal of Personality and Social Psychology*, 68 (3), 518-30.

Leary, Mark R., Jean M. Twenge, and Erin Quinlivan (2006), "Interpersonal Rejection as a Determinant of Anger and Aggression," *Personality and Social Psychology Review*, 10 (2), 111-32.

Lee, Jaehoon and L. J. Shrum (2012), "Conspicuous Consumption Versus Charitable Behavior in Response to Social Exclusion: A Differential Needs Explanation," *Journal of Consumer Research*, 39 (3), 530-44.

Lee, Kaman (2008), "Opportunities for Green Marketing: Young Consumers," *Marketing Intelligence & Planning*, 26 (6), 573-86.

Levitas, Ruth, Christina Pantazis, Eldin Fahmy, David Gordon, Eva Lloyd, and Demi Patsios (2007), "The Multi-Dimensional Analysis of Social Exclusion," Bristol: Department of Sociology and School for Social Policy, University of Bristol.

Lishner, David A. and Eric L. Stocks (2007), "Empathy–Altruism Hypothesis," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 299-300.

London, Bonita, Geraldine Downey, Cheryl Bonica, and Iris Paltin (2007), "Social Causes and Consequences of Rejection Sensitivity," *Journal of Research on Adolescence*, 17 (3), 481-506.

Loveland, Katherine E. , Dirk Smeesters, and Naomi Mandel (2010), "Still Preoccupied with 1995: The Need to Belong and Preference for Nostalgic Products," *Journal of Consumer Research*, 37 (3), 393-408.

MacDonald, Geoff and Mark R. Leary (2005), "Why Does Social Exclusion Hurt? The Relationship between Social and Physical Pain," *Psychological Bulletin*, 131 (2), 202-23.

Mainieri, Tina, Elaine G. Barnett, Trisha R. Valdero, John B. Unipan, and Stuart Oskamp (1997), "Green Buying: The Influence of Environmental Concern on Consumer Behavior," *Journal of Social Psychology*, 137 (2), 189-204.

Malone, Glenn P., David R. Pillow, and Augustine Osman (2012), "The General Belongingness Scale (Gbs): Assessing Achieved Belongingness," *Personality and Individual Differences*, 52 (3), 311-16.

Maner, Jon K., C. Nathan DeWall, Roy F. Baumeister, and Mark Schaller (2007), "Does Social Exclusion Motivate Interpersonal Reconnection? Resolving the 'Porcupine Problem.'," *Journal of Personality and Social Psychology*, 92 (1), 42-55.

Markus, Hazel R. and Shinobu Kitayama (1991), "Culture and the Self: Implications for Cognition, Emotion, and Motivation," *Psychological Review*, 98 (2), 224-53.

Maslow, Abraham H. (1968), *Toward a Psychology of Being*, New York, NY: Van Nostrand Co.

Mayer, John D. and Yvonne N. Gaschke (1988), "The Experience and Meta-Experience of Mood," *Journal of Personality and Social Psychology*, 55 (1), 102-11.

Mead, Nicole L., Roy F. Baumeister, Tyler F. Stillman, Catherine D. Rawn, and Kathleen D. Vohs (2011), "Social Exclusion Causes People to Spend and Consume Strategically in the Service of Affiliation," *Journal of Consumer Research*, 37 (5), 902-19.

Mehrabian, Albert and Norman Epstein (1972), "A Measure of Emotional Empathy," *Journal of Personality*, 40 (4), 525-43.

Mize, Jacquelyn and Gary W. Ladd (1988), "Predicting Preschoolers' Peer Behavior and Status from Their Interpersonal Strategies: A Comparison of Verbal and Enactive Responses to Hypothetical Social Dilemmas," *Developmental Psychology*, 24 (6), 782-88.

Naderi, Iman and David Strutton (in press), "Can Normal Narcissism Be Managed to Promote Green Product Purchases? Investigating a Counterintuitive Proposition," *Journal of Applied Social Psychology*.

Niezink, LidewijW, FransW Siero, Pieternel Dijkstra, AbrahamP Buunk, and DickP H. Barelds (2012), "Empathic Concern: Distinguishing between Tenderness and Sympathy," *Motivation and Emotion*, 36 (4), 544-49.

Noel, Jeffrey G., Daniel L. Wann, and Nyla R. Branscombe (1995), "Peripheral Ingroup Membership Status and Public Negativity toward Outgroups," *Journal of Personality and Social Psychology*, 68 (1), 127-37.

Obermiller, Carl (1995), "The Baby Is Sick/the Baby Is Well: A Test of Environmental Communication Appeals," *Journal of Advertising*, 24 (2), 55-70.

Oswald, Patricia A. (1996), "The Effects of Cognitive and Affective Perspective Taking on Empathic Concern and Cltruistic Helping," *Journal of Social Psychology*, 136 (5), 613-23.

Ottman, Jacquelyn A., Edwin R. Stafford, and Cathy L. Hartman (2006), "Avoiding Green Marketing Myopia: Ways to Improve Consumer Appeal for Environmentally Preferable Products," *Environment*, 48 (5), 22-36.

Parkhurst, Jennifer T. and Steven R. Asher (1992), "Peer Rejection in Middle School: Subgroup Differences in Behavior, Loneliness, and Interpersonal Concerns," *Developmental Psychology*, 28 (2), 231-41.

Peattie, Ken (2010), "Green Consumption: Behavior and Norms," *Annual Review of Environment and Resources*, 35 (1), 195-228.

Pickett-Baker, Josephine and Ritsuko Ozaki (2008), "Pro-Environmental Products: Marketing Influence on Consumer Purchase Decision," *Journal of Consumer Marketing*, 25 (5), 281-93.

Pickett, Cynthia L. and Marilynn B. Brewer (2001), "Assimilation and Differentiation Needs as Motivational Determinants of Perceived in-Group and out-Group Homogeneity," *Journal of Experimental Social Psychology*, 37 (4), 341-48.

Pickett, Cynthia L., Wendi L. Gardner, and Megan Knowles (2004), "Getting a Cue: The Need to Belong and Enhanced Sensitivity to Social Cues," *Personality and Social Psychology Bulletin*, 30 (9), 1095-107.

Romero-Canyas, Rainer and Geraldine Downey (2013), "What I See When I Think It's About Me: People Low in Rejection-Sensitivity Downplay Cues of Rejection in Self-Relevant Interpersonal Situations," *Emotion*, 13 (1), 104-17.

Santopietro, George D. (1995), "Raising Environmental Consciousness Versus Creating Economic Incentives as Alternative Policies for Environmental Protection," *Journal of Economic Issues*, 29 (2), 517-24.

Schaefer, Anja and Andrew Crane (2005), "Addressing Sustainability and Consumption," *Journal of Macromarketing*, 25 (1), 76-92.

Schmitt, Michael T. and Nyla R. Branscombe (2001), "The Good, the Bad, and the Manly: Threats to One's Prototypicality and Evaluations of Fellow in-Group Members," *Journal of Experimental Social Psychology*, 37 (6), 510-17.

Schwepker, Charles H. Jr. and T. Bettina Cornwell (1991), "An Examination of Ecologically Concerned Consumers and Their Intention to Purchase Ecologically Packaged Products," *Journal of Public Policy & Marketing*, 10 (2), 77-101.

Shrum, L. J., John A. McCarty, and Tina M. Lowrey (1995), "Buyer Characteristics of the Green Consumer and Their Implications for Advertising Strategy," *Journal of Advertising*, 24 (2), 71-82.

Simon, Robin W. and Leda E. Nath (2004), "Gender and Emotion in the United States: Do Men and Women Differ in Self-Reports of Feelings and Expressive Behavior?," *American Journal of Sociology*, 109 (5), 1137-76.

Smith, Eric Alden and Rebecca L. Bliege Bird (2000), "Turtle Hunting and Tombstone Opening: Public Generosity as Costly Signaling," *Evolution and Human Behavior*, 21 (4), 245-61.

Snyder, Mark (1987), *Public Appearances, Private Realities: The Psychology of Self-Monitoring.*, New York, NY: Freeman.

Snyder, Mark and Steve Gangestad (1986), "On the Nature of Self-Monitoring: Matters of Assessment, Matters of Validity," *Journal of Personality and Social Psychology*, 51 (1), 125-39.

Sobel, Michael E. (1982), "Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models," in *Sociological Methodology*, ed. Samuel Leinhardt, Washington, DC: American Sociological Association, 290-312.

Spears, Nancy and Surendra N. Singh (2004), "Measuring Attitude toward the Brand and Purchase Intentions," *Journal of Current Issues & Research in Advertising*, 26 (2), 53-66.

Stern, Barbara B. (1994), "Classical and Vignette Television Advertising Dramas: Structural Models, Formal Analysis, and Consumer Effects," *Journal of Consumer Research*, 20 (4), 601-15.

Stern, Paul C., Thomas Dietz, Troy Abel, Gregory A. Guagnano, and Linda Kalof (1999), "A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism," *Human Ecology Review*, 6 (2), 81-97.

Stocks, Eric L., David A. Lishner, and Stephanie K. Decker (2009), "Altruism or Psychological Escape: Why Does Empathy Promote Prosocial Behavior?," *European Journal of Social Psychology*, 39 (5), 649-65.

Stroud, LauraR, Marian Tanofsky-Kraff, DeniseE Wilfley, and Peter Salovey (2000), "The Yale Interpersonal Stressor (Yips): Affective, Physiological, and Behavioral Responses to a Novel Interpersonal Rejection Paradigm," *Annals of Behavioral Medicine*, 22 (3), 204-13.

Sweeney, Jillian C., Geoffrey N. Soutar, and Lester W. Johnson (1999), "The Role of Perceived Risk in the Quality-Value Relationship: A Study in a Retail Environment," *Journal of Retailing*, 75 (1), 77-105.

Tai, Kenneth, Xue Zheng, and Jayanth Narayanan (2011), "Touching a Teddy Bear Mitigates Negative Effects of Social Exclusion to Increase Prosocial Behavior," *Social Psychological and Personality Science*, 2 (6), 618-26.

Turner, John C. (1991), *Social Influence*, Bristol, PA: Open University Press.

Twenge, Jean M. and Roy F. Baumeister (2005), "Social Exclusion Increases Aggression and Self-Defeating Behavior While Reducing Intelligent Thought and Prosocial Behavior," in *The Social Psychology of Inclusion and Exclusion*, ed. D. Abrams, M. A. Hogg and J. M. Marques, New York, NY, US: Psychology Press, 27-46.

Twenge, Jean M., Roy F. Baumeister, C. Nathan DeWall, Natalie J. Ciarocco, and J. Michael Bartels (2007), "Social Exclusion Decreases Prosocial Behavior," *Journal of Personality and Social Psychology*, 92 (1), 56-66.

Twenge, Jean M., Roy F. Baumeister, Dianne M. Tice, and Tanja S. Stucke (2001), "If You Can't Join Them, Beat Them: Effects of Social Exclusion on Aggressive Behavior," *Journal of Personality and Social Psychology*, 81 (6), 1058-69.

Twenge, Jean M. and W. Keith Campbell (2003), "'Isn't It Fun to Get the Respect That We're Going to Deserve?' Narcissism, Social Rejection, and Aggression," *Personality & Social Psychology Bulletin*, 29 (2), 261-72.

Twenge, Jean M., Kathleen R. Catanese, and Roy F. Baumeister (2002), "Social Exclusion Causes Self-Defeating Behavior," *Journal of Personality and Social Psychology*, 83 (3), 606-15.

---------- (2003), "Social Exclusion and the Deconstructed State: Time Perception, Meaninglessness, Lethargy, Lack of Emotion, and Self-Awareness," *Journal of Personality and Social Psychology*, 85 (3), 409-23.

Uchida, Yukiko, Sarah S. M. Townsend, Hazel Rose Markus, and Hilary B. Bergsieker (2009), "Emotions as within or between People? Cultural Variation in Lay Theories of Emotion Expression and Inference," *Personality and Social Psychology Bulletin*, 35 (11), 1427-39.

Uusitalo, Outi and Reetta Oksanen (2004), "Ethical Consumerism: A View from Finland," *International Journal of Consumer Studies*, 28 (3), 214-21.

Van Liere, Kent D. and Riley E. Dunlap (1980), "The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence," *The Public Opinion Quarterly*, 44 (2), 181-97.

Van Vugt, Mark (2009), "Averting the Tragedy of the Commons: Using Social Psychological Science to Protect the Environment," *Current Directions in Psychological Science*, 18 (3), 169-73.

Vermeir, Iris and Wim Verbeke (2006), "Sustainable Food Consumption: Exploring the Consumer "Attitude – Behavioral Intention" Gap," *Journal of Agricultural and Environmental Ethics*, 19 (2), 169-94.

Warburton, Wayne A., Kipling D. Williams, and David R. Cairns (2006), "When Ostracism Leads to Aggression: The Moderating Effects of Control Deprivation," *Journal of Experimental Social Psychology*, 42 (2), 213-20.

Watson, David, Lee A. Clark, and Auke Tellegen (1988), "Development and Validation of Brief Measures of Positive and Negative Affect: The Panas Scales," *Journal of Personality and Social Psychology*, 54 (6), 1063-70.

Williams, Kipling D. (1997), "Social Ostracism," in *Aversive Interpersonal Behaviors*, ed. Robin M. Kowalski, New York, NY: Plenum, 133-70.

---------- (2001), *Ostracism: The Power of Silence*, New York, NY: Guilford.

---------- (2009), "Ostracism: A Temporal Need-Threat Model," in *Advances in Experimental Social Psychology*, Vol. 41, ed. Mark P. Zanna, New York, NY: Academic Press, 279-314.

Williams, Kipling D. and Adrienne R. Carter-Sowell (2007), "Ostracism," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 641-43.

Williams, Kipling D., Christopher K. T. Cheung, and Wilma Choi (2000), "Cyberostracism: Effects of Being Ignored over the Internet," *Journal of Personality and Social Psychology*, 79 (5), 748-62.

Williams, Kipling D. and Cassandra L. Govan (2005), "Reacting to Ostracism: Retaliation or Reconciliation?," in *The Social Psychology of Inclusion and Exclusion*, ed. Dominic Abrams, Michael A. Hogg and Jose M. Marques, New York, NY, US: Psychology Press, 47-62.

Williams, Kipling D. and Kristin L. Sommer (1997), "Social Ostracism by Coworkers: Does Rejection Lead to Loafing or Compensation?," *Personality and Social Psychology Bulletin*, 23 (7), 693-706.

Williams, Kipling D., Eric D. Wesselmann, and Zhansheng Chen (2007), "Social Exclusion," in *Encyclopedia of Social Psychology*, ed. Roy F. Baumeister and Kathleen D. Vohs, Thousand Oaks, CA: Sage, 897-98.

Wilson, Timothy D., Samuel Lindsey, and Tonya Y. Schooler (2000), "A Model of Dual Attitudes," *Psychological Review*, 107 (1), 101-26.

Winter, Kathy A. and Nicholas A. Kuiper (1997), "Individual Differences in the Experience of Emotions," *Clinical Psychology Review*, 17 (7), 791-821.

Woltin, Karl-Andrew, Olivier Corneille, Vincent Y. Yzerbyt, and Jens Förster (2011), "Narrowing Down to Open up for Other People's Concerns: Empathic Concern Can Be Enhanced by Inducing Detailed Processing," *Journal of Experimental Social Psychology*, 47 (2), 418-24.

Wright, James A. (2005), "Product Symbolic Status: Development of a Scale to Assess Different Product Types," Doctoral Dissertation, Department of Psychology, Texas A & M University, College Station, TX.

Wyer, Natalie A. (2008), "Cognitive Consequences of Perceiving Social Exclusion," *Journal of Experimental Social Psychology*, 44 (4), 1003-12.

Zadro, Lisa, Kipling D. Williams, and Rick Richardson (2004), "How Low Can You Go? Ostracism by a Computer Is Sufficient to Lower Self-Reported Levels of Belonging, Control, Self-Esteem, and Meaningful Existence," *Journal of Experimental Social Psychology*, 40 (4), 560-67.

Zaichkowsky, Judith L. (1994), "The Personal Involvement Inventory: Reduction, Revision, and Application to Advertising," *Journal of Advertising*, 23 (4), 59-70.