The Need to Belong and Motivated Gratitude: Social Exclusion Increases Gratitude Among People Low in a Sense of Psychological Entitlement

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THE NEED TO BELONG AND MOTIVATED GRATITUDE: SOCIAL EXCLUSION INCREASES GRATITUDE AMONG PEOPLE LOW IN A SENSE OF PSYCHOLOGICAL ENTITLEMENT

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ABSTRACT

Recent research has demonstrated that social exclusion can increase the motivation to develop new affiliative bonds with others. The primary goal of the paper was to examine the effect that social exclusion would have on gratitude toward a novel person. An additional goal was to test how social acceptance would influence gratitude toward a novel other. Across two studies, social exclusion increased self-reported gratitude for a small gift among people low in a sense of entitlement compared to those in a control condition. Social exclusion also increased perception of the benefactor’s interpersonal warmth among less entitled participants. Perception of the benefactor’s warmth mediated the increase in gratitude among low entitlement participants in both studies. Additionally, socially excluded low entitlement participants were perceived as being more grateful in hand written thank-you notes compared to nonexcluded participants (Study 2). These findings suggest that, upon feeling socially excluded, people low in entitlement had a heightened motivation for social affiliation that led them to overperceive warm intentions in the benefactor. The overperception of warmth is what caused gratitude to increase among socially excluded low entitlement people. Social acceptance increased gratitude compared to control conditions and was not moderated by psychological entitlement. Unexpectedly, social acceptance also increased the perceived value of the benefit. The heightened perception of gift value was found to mediate the increase in gratitude in both studies.
CHAPTER 1
INTRODUCTION

Humans are an inherently social species who crave meaningful and lasting relationships and acceptance from others. The desire for positive social relationships is among the most universal and fundamental of human motivations (Baumeister & Leary, 1995; Deci & Ryan, 2000; Kenrick, Griskevicius, Neuberg, & Schaller, 2010; Maslow, 1968). This powerful and pervasive motivation to form and maintain positive, lasting relationships with others has been shaped by evolutionary history in which group membership afforded shared benefits (Buss, 1990; DeWall & Bushman, 2011; MacDonald & Leary, 2005). Thus, the need to belong goes back deep into evolutionary history and is still a powerful force on modern human psychology. When this need is thwarted or otherwise not satisfied, negative outcomes typically ensue (e.g., Baumeister & Tice, 1990; Leary, 1990).

Thwarting the need to belong can initiate an array of different psychological processes. Threatened belonging has been found to lead to dysfunctional and antisocial behavior, such as increased aggression (Leary, Twenge, & Quinlivan, 2006; Twenge, Baumeister, Tice, & Stucke, 2001), increased dishonesty (Poon, Chen, & DeWall, 2013), decreased prosocial behavior (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007), and impaired self-regulation (Baumeister, DeWall, Ciarocco, & Twenge, 2005). Other research has found that individuals can react in socially affiliative and adaptive ways to threatened belonging. Prior research on the effects of social exclusion appears to show some contradictory effects—sometimes people respond antisocially, but sometimes respond in a prosocial or affiliative manner. One factor that may guide explicit behaviors or judgments is the degree to which people believe prosociality will gain them social acceptance (DeWall & Bushman, 2011; DeWall, Deckman, Pond, & Bonser, 2011). Studies by Maner, DeWall, Baumeister, and Schaller (2007) supported this idea. One study found that excluded participants gave more money to a novel partner they expected to meet compared to nonexcluded participants. A similar follow up study found that when there was no expectation of actually meeting the partner, socially excluded participants gave less money to the partner than nonexcluded participants.

Having positive and lasting relationships with others conferred great advantages to human ancestors. Early humans survived and reproduced in harsh conditions by cooperating with
each other in groups. Such group living allowed for the sharing of resources between members and thus increased the likelihood of survival and reproduction compared to living in isolation from others. Because of the potentially dire consequences of social exclusion in human’s evolutionary past, recent research has started to explore how people might respond to belonging threats in a way that promotes social acceptance. The research examining the affiliative effects of social exclusion has found that a threatened sense of belongingness can lead to an increased desire to work with others (Maner et al., 2007), increased religiosity (Aydin, Fischer, & Frey, 2010), perceiving others as physically closer (Pitts, Wilson, & Hugenberg, 2013), increased mimicry of smiling faces (Kawamoto, Nittono, & Ura, 2014), increased acuity in detecting real smiles (Bernstein, Young, Brown, Sacco, & Claypool, 2008), spending money to feel socially accepted (Mead, Baumeister, Stillman, Rawn, & Vohs, 2011), and pro-affiliation biases in attention, categorical perception, and memory (e.g., DeWall, Maner, & Rouby, 2009; Gardner, Pickett, & Brewer, 2000; Sacco, Wirth, Hugenberg, Chen, & Williams, 2011). Thus, social exclusion can affect psychological processes in a functional way to increase the likelihood of re-establishing social connections.

Despite the recent surge of research on the affiliation-seeking effects of social exclusion, little empirical attention has been devoted to understanding how social exclusion may influence discrete social or moral emotions (e.g., guilt, disgust, gratitude, grief, jealousy, embarrassment). Gratitude is an emotion of particular interest in this context. From an evolutionary and socio-functional perspective, feeling the emotion of gratitude motivates prosocial behavior, strengthens or helps form positive social relationships, and facilitates cooperation (e.g., Algoe, 2012; Bartlett & DeSteno, 2006; Fredrickson, 2004; Gordon, Oveis, Impett, Kogan, & Keltner, 2012; Grant & Gino, 2010; McCullough, Kimeldorf, & Cohen, 2008; Nowak & Roch, 2007; Trivers, 1971). Hence, there are good reasons to believe it would be beneficial for a recently excluded individual to be especially grateful toward a benefactor because this would increase the likelihood of establishing (or strengthening) a social bond. The purpose of the present research was to examine the relationship between social exclusion and gratitude within a functionalist evolutionary framework. Specifically, the present studies were designed to test the hypothesis that a heightened need to belong increases gratitude. Additional but subsidiary goals were to assess relevant individual difference boundary conditions and to examine how feeling socially accepted influences gratitude.
The Social Reconnection Hypothesis

The social reconnection hypothesis (Maner et al., 2007) posits that social exclusion stimulates a desire to affiliate and connect with others who are perceived as promising social partners. The core premise underlying this idea is that humans have a fundamental need to belong. When that need is threatened one’s goals, motivations, and cognition (and perhaps discrete emotions) can shift in a way to facilitate social reconnection and thus satisfy the need to some extent. There is converging evidence showing that threats of exclusion initiate adaptive acceptance-seeking responses at both basic early stage perception and complex down-stream cognition and behavior. Research examining basic perceptual processes found that participants underestimated the distance to a potential social partner (thus making him or her seem physically closer) if their need to belong was threatened (Pitts et al., 2013). A study by DeWall et al. (2009) found that the threat of exclusion increased selective attention to signs of social acceptance such as smiling faces.

Other research has found that threats to belongingness can influence complex judgments, attitudes, and behaviors in the service of affiliation. Multiple studies by Maner et al. (2007) discovered that threats to social belonging increased the desire to make new friends, the desire to work with others, and positive impressions of novel others compared to control conditions. Mead and colleagues (2011) found that participants who were socially excluded (compared to control conditions) were more likely to spend money on products symbolizing group membership and shifted personal spending preferences toward the preferences of their peers. Thus, previous research has found that threats to the need to belong trigger an array of psychological processes to help reestablish social connections. However, some important and pervasive psychological processes that remain largely unexplored in relation to social exclusion are distinct emotions and particularly gratitude.

From an evolutionary perspective, emotions are believed to serve particular functions that enhance one’s ability to successfully deal with environmental challenges and opportunities and thus ultimately increase reproductive success (e.g., Keltner, Haidt, & Shiota, 2006; Nesse, 1990; Tooby & Cosmides, 1990, 2008). Many discrete emotions are interpersonal in nature (e.g., love, guilt, gratitude) and exist to ultimately help one maintain or achieve social acceptance. Previous research has found that social exclusion can lead to a numbing of general mood (Blackhart, Nelson, Knowles, & Baumeister, 2010). But such research has generally neglected how
inclusionary status influences specific emotions brought on while in a threatened belonging state (and not merely the result of being or feeling excluded such as anger or sadness).

We argue that social emotions likely play an important role in helping one deal with threats to belongingness. This paper focuses on gratitude as an emotion that may increase in the face of social exclusion as a way to regain social acceptance.

**The Prosocial Nature of Gratitude: Theory and Evidence**

The current project focuses on benefit-triggered gratitude, defined as a positive emotion that results from the perception that one has benefited from the intentional action of another person. The distinct emotional state of gratitude is a feeling that also engenders a prosocial motivational state. Gratitude has been described as one of the mechanisms that facilitate reciprocal exchange of benefits between people (Trivers, 1971). Recent theorizing has effectively elaborated on the notion that gratitude is a mechanism for reciprocal exchange. McCullough and colleagues have described gratitude as a moral and prosocial emotion that serves several functions: it alerts one to the benevolent actions of others and it motivates the grateful person and the gratitude recipient to behave positively toward each other (McCullough, Kilpatrick, Emmons, & Larsen, 2001; McCullough & Tsang, 2004). The find-remind-and-bind theory of gratitude (Algoe, 2012; Algoe, Haidt, & Gable, 2008) highlights the benefits of gratitude in forming and maintaining relationships. This idea proposes that gratitude binds people together by helping them find high-quality partners or reminding them of quality relationships they already have. Lastly, the broaden-and-build theory (Fredrickson, 1998, 2001, 2004) suggests that experiencing positive emotions, such as gratitude, broaden one’s thought-action repertoire. Hence, feeling grateful can increase creativity in prosocial behavior (e.g., by going beyond simple tit-for-tat reciprocity) and as a result build the grateful person’s interpersonal skills and resources. These different theories on gratitude complement one another and converge on a common theme that gratitude leads to upward spirals of positive social relations. Gratitude is viewed as an evolved mechanism that motivates positive interpersonal interactions and encourages the development and maintenance of positive relationships among strangers, friends, and intimates alike.

Research has provided substantial support for the theoretical claims about the positive, prosocial, and relationship-enhancing nature of gratitude. Several studies have found that
gratitude (compared to a neutral mood or a general positive mood) increased prosocial behavior toward others (Bartlett, DeSteno, 2006; DeSteno, Bartlett, Baumann, Williams, & Dickens, 2010; Tsang, 2006a; Tsang, 2007). Most studies have found increased prosocial behavior specifically toward the benefactor; but some have found that gratitude increased prosocial behavior toward novel others (e.g., Bartlett & DeSteno, 2006). Research examining the effects of gratitude on close relationships (romantic and non-romantic) has found that gratitude positively predicts increased relationship quality and satisfaction (Algoe, Gable, & Maisel, 2010; Algoe, Fredrickson, & Gable, 2013; Chang, Li, Teng, Berki, & Chen, 2013; Gordon, Arnette, & Smith, 2011; Lambert, Clark, Durtschi, Fincham, & Grahm, 2010) and increased relationship maintenance behaviors (Gordon et al., 2012; Kubacka, Finkenauer, Rusbult, & Keijsers, 2011; Lambert & Fincham, 2011). Thus, ample evidence shows that the emotion of gratitude is a powerful and positive force in helping people maintain and strengthen existing relationships.

Recent research has also discovered that gratitude facilitates relationship-building behaviors between strangers. Studies by Bartlett, Condon, Cruz, Baumann, and DeSteno (2012) found that participants chose to spend more time with someone who did them a favor and they felt grateful toward, as compared to someone who did not do them a favor. Participants were also more likely to include a partner in a game who did them a favor, as compared to those who did not. In short, Bartlett et al. (2012) found that gratitude leads to more socially affiliative behaviors toward a benefactor than a nonbenefactor. Williams and Bartlett (2015) examined the reverse situation, that is, how being a recipient of gratitude influences relationship building intentions and behaviors. Results showed that participants wanted to spend more time with a partner who expressed gratitude toward them than a partner who did not express gratitude. Additionally, participants were more likely to leave their contact information with the gratitude expresser than non-expresser. These findings suggest that gratitude promotes social affiliation in novel relationships for both the person who feels gratitude and the gratitude recipient. Key to the present study is the finding by Williams and Bartlett (2014) that people who were perceived as more grateful were also seen as more desirable friends than those who were less grateful. This supports the reasoning in the present paper that heightened levels of gratitude would facilitate the excluded person’s goal of social connection.

Most gratitude research (including the present work) has focused on explicit judgments and behaviors related to gratitude. However with regard to the relationship building functions of
gratitude there is some evidence suggesting that gratitude can promote relationships via implicit processes. Jia, Tong, and Lee (2014) found that feeling gratitude (compared to other positive emotions or no emotion) facilitated goal contagion (i.e., automatically inferring and adopting the goals implied by another’s behavior). Thus, gratitude can bring people closer together and make them more likely to cooperate and more effective at cooperating. Another study found that gratitude increased nonconscious behavioral mimicry (i.e., unknowingly imitating the body movements of another person) (Jia, Lee, & Tong, 2014). These findings suggest that gratitude triggers psychological processes and behaviors that facilitate relationship building at an unconscious level. Thus, the prosocial nature of gratitude is pervasive in that it has effects at the conscious and unconscious level.

In sum, previous research has supported the theoretical ideas that gratitude promotes prosocial behavior, increases the motivation to develop new relationships, improves existing relationships, and that those who feel and express gratitude are perceived as desirable social partners. Theory and evidence about gratitude and the need to belong, then, support the main idea in the present project: it would be beneficial for a recently excluded individual to feel especially grateful upon receiving a benefit from a potential social partner because this would increase the excluded person’s likelihood of being socially accepted.

**The Need to Belong and Motivated Gratitude**

Gratitude is fundamentally an interpersonal emotion. Previous work has demonstrated that gratitude depends heavily on person perception, specifically perception of the benefactor. The magnitude of gratitude one experiences depends, to a large degree, on appraisals of other’s behaviors and intentions. The general finding has been a positive relationship between gratitude and perception of the benefactor’s interpersonal warmth (e.g., MacKenzie, Vohs, & Baumeister, 2014; Tsang, 2006b; Weinstein, DeHaan, & Ryan, 2010; Williams & Barlett, 2015). We expected that the effects of social exclusion on gratitude would be due to a bias in this appraisal factor, that is, perception of the benefactor’s interpersonal warmth.

Currently, there is ample evidence showing that gratitude motivates prosocial behavior, relationship formation, and relationship maintenance behavior. The present investigation, however, asks how gratitude might be affected by existing and salient motivational states. We propose that an increased motivation for social affiliation, brought on by social exclusion, will
lead one to interpret friendly acts done for the self in an especially positive way. Thus, we suggest a motivated account of gratitude in which a heightened motivation for social connection increases how warmly one perceives others who perform kind actions toward the self and this in turn increases gratitude.

The mechanism underlying the proposed increase in perception of benefactor warmth (among those who are socially excluded and thus high in belonging motivation) is suggested to occur via the process of functional projection (Maner et al., 2005). The traditional definition of projection refers to attributing one’s own undesirable emotions or motivations to someone else (Freud, 1915/1957; Newman, Duff, & Baumeister, 1997). Functional projection, however, occurs when specific goals or motivations lead one to perceive emotions, desires, motivations, or traits in others that are functionally relevant to (but not necessarily the same as) one’s own emotions or motivations (Maner et al., 2005). For example, Maner and colleagues (2005) found that activating a self-protection goal and therefore fear (compared to a mate-search goal or no goal) led people to perceive greater anger (but not fear) in Black male faces (a group heuristically connected with physical threat) than White faces or Black female faces. The researchers argued that by perceiving stereotypically threatening targets as being angry the perceiver becomes more vigilant to potential threats and therefore less likely to be harmed. Thus, participants who felt fear (compared to sexual arousal or no emotion) projected traits onto a target in a functional way because it facilitated reaching/maintaining the activated goal of self-protection. With regard to social exclusion and gratitude, we suggest that because recently excluded people have a heightened goal for social connection (relative to nonexcluded people) their perception of a benefactor’s interpersonal warmth will be positively biased via functional projection. In other words, excluded people want to believe that others who behave positively toward them are warm and accepting and therefore will overperceive these characteristics.

For the present project, we expected that social exclusion would increase the motivation for social connection and thus heighten the goal for social affiliation. While in this state, a kind gesture from a novel other (one who did not exclude the person) will offer a presumably low-risk opportunity to attain one’s goal of social affiliation. To best take advantage of this situation, then, we predict that participants will perceive increased warmth in the benefactor (i.e., functionally project warmth onto the benefactor) and doing so will increases gratitude and also the pro-relationship implications of gratitude.
Individual Difference Boundary Conditions

The main hypothesis presumes that everyone will react to being excluded by wanting to reconnect with others and as a result feel especially grateful to others who reach out to them. Although all people have psychological mechanisms to help them cope with social challenges and opportunities, prior research has found that personality differences can predict how people react to social exclusion. A relevant individual difference related to social exclusion and gratitude is narcissism and particularly the entitlement component of narcissism. Previous work has found that people high in narcissism react more negatively to insult or threats to their ego than those low in narcissism (Bushman & Baumeister, 1998). Specific to social rejection, Twenge and Campbell (2003) found that people high in narcissism were angrier and more aggressive after experiencing social rejection than people low in narcissism. Additionally, Twenge and Campbell found that the aggressive actions by people high in narcissism were applied to both the person who rejected them and an innocent third party.

The previously mentioned studies looked at narcissism broadly but there are several different components to narcissism. The present paper focused on the particular component of entitlement (although entitlement and overall narcissism were tested in Study 1), which is argued to be the aspect of narcissism that contributes most to maladaptive behavior (e.g., Emmons, 1984; Emmons, 1987; Moeller, Crocker, & Bushman, 2009) and may be more closely related to gratitude than the other components. Psychological entitlement is defined as a stable and pervasive feeling that one deserves more and is entitled to more than others (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). Insofar as highly entitled people (compared to less entitled people) feel like they deserve benefits they receive, they may generally be less appreciative for them. Thus, highly entitled people could report less gratitude across all conditions relative to those who are low in a sense of entitlement. This would amount to a main effect of psychological entitlement across conditions. But it is also possible that there could be an interactive effect between trait psychological entitlement and experimental condition (particularly between the social exclusion and control condition).

As with people high in general narcissism, highly entitled people are more aggressive, and presumably angrier and more offended, when insulted than people low in entitlement (Campbell et al., 2004). So to the extent that high entitlement people feel angry while in a state of social exclusion they may be less motivated than low entitlement people to seek social
affiliation. Therefore, highly entitled people would not view benefactors as warmly and thus feel less grateful than their low entitlement counterparts. This difference in reactions to social exclusion suggests that a moderated version of the original hypothesis is possible. Specifically, this alternative hypothesis predicts that the effect of social exclusion (i.e., that it increases perception of benefactor interpersonal warmth and therefore increases gratitude) will be true only among low entitlement participants.

To summarize, it is possible that trait entitlement may have a main effect across conditions, such that those who are higher in trait entitlement will feel less grateful than those who are low in entitlement. An interactive moderation effect is also possible. Specifically, that highly entitled people would respond more antisocially to social exclusion and therefore feel less grateful than people low in a sense of entitlement. One or both (or none) of these predictions are possible, but we focus on the interactive moderation as the primary piece of the alternative hypothesis because this represents a true boundary condition (i.e., it is not that high entitlement people simply have a lower baseline of gratefulness, but that they do not undergo the same processes proposed in the main hypothesis that social exclusion increases gratitude). Lastly, we did not have specific predictions about interactive moderation between the social acceptance and control conditions.

**Social Acceptance and Gratitude**

The present research is primary focused on the effects of social rejection on gratitude; however, social acceptance does merit some attention. A feeling of social acceptance is frequently accompanied with positive feelings and a general positive mood (Blackhart et al., 2010). We expected that the positive feelings brought on by social acceptance would influence how grateful one reported feeling. Previous research has found that mood states can color judgments (Clore & Storbeck, 2006; Clore, Wyer, Dienes, Gasper, Gohm, & Isbell, 2001; Schwarz, 2012). Namely, people can attend to their current feelings as a source of information when forming judgments. Thus, insofar as feeling socially accepted puts people in a positive mood or makes people feel good, a subsequent (and ostensibly unrelated) evaluation about how grateful they feel should be increased compared to those in the control condition.

Thus, both social acceptance and social rejection are expected to increase gratitude (relevant to a control condition) but by different processes. For social exclusion, gratitude is
expected to increase for motivational reasons specific to feeling excluded, but for social acceptance gratitude is expected to increase for affective reasons not necessarily specific to social acceptance but to positive affect generally.

**Overview of the Present Research**

In two studies, we used well validated manipulations of social exclusion and social acceptance and then measured participants’ reactions to receiving a benefit, focusing on perception of the benefactor and gratitude. Study 1 provided participants with fictitious personality feedback suggesting they will be alone, accident prone, or have lasting relationships later in life. Subsequently, and ostensibly unrelatedly, participants received a small gift and reported how they felt about the gift. Study 2 participants wrote about a time they felt socially rejected, socially accepted, or wrote about a neutral event. Then, as in Study 1, participants received a gift, answered questions about it, and also wrote a thank-you note to the supposed gift giver.

We hypothesized that, due to a heightened need to belong, socially excluded participants would perceive the benefactor as more warm, and as a result feel more grateful than those in the control condition. We expected participants in the social acceptance condition (compared to the control condition) to report a heightened positive mood, and consequently feel more grateful for the benefit. Additionally, both studies measured trait psychological entitlement to test the alternative hypothesis that the predicted effects between the social exclusion and control conditions would only occur among low entitlement participants.
CHAPTER 2

STUDY 1

Study 1 provided an initial test of the hypothesis that social exclusion would increase gratitude. We used a manipulation that provided participants with one of three types of (bogus) personality feedback: that they would be alone in the future (future alone), that they would be prone to accidents and injury in the future (misfortune control), or that they would have positive and meaningful relationships throughout their life (future belonging). Thus, the control condition provided participants with negative feedback but was neutral with respect to social rejection or acceptance. This was done to help increase the confidence that any effects found would be specific to threats of social exclusion and not negative feedback in general. Previous research has shown that the future alone feedback evokes responses that are similar to other immediate forms of social exclusion (Baumeister et al., 2005; DeWall et al., 2009; Twenge et al., 2001).

To measure gratitude, participants were given a small gift from another student and subsequently answered several questions about gratitude and other related variables. Social-cognitive models of gratitude developed by Tesser, Gatewood, and Driver (1968) and Wood, Stewart, Maltby, Linley, and Joseph (2008) suggest that the degree of gratitude experienced depends on perception of three variables: 1) cost of the benefit for the benefactor, 2) value of the benefit, and 3) the sincerity of the benefactor’s motivations and intentions. Therefore, participants answered questions related to these variables. Other work on gratitude has also recognized the importance of interpersonal perception (variable number three in the Tesser et al. model and the Wood et al. model) in determining gratitude. For example, Algoe and colleagues (2008) have shown that perceptions of interpersonal responsiveness (e.g., thoughtfulness of the benefactor) played a mediating role in how much gratitude one experienced. Williams and Bartlett (2015) found that perception of the benefactor’s interpersonal warmth (e.g., friendliness, thoughtfulness, positivity) mediated how grateful one felt. Interpersonal warmth is one of the two fundamental dimensions of social perception (Fiske, Cuddy, & Glick, 2007). As Williams and Bartlett (2015) have noted, interpersonal warmth is a broad construct that likely includes other similar constructs (e.g., intentionality, motivational sincerity, responsiveness, thoughtfulness) that have been used in the gratitude literature to measure perception of the benefactor. Along with measuring gratitude, the current study measured perception of cost to the
benefactor, perception of gift value, and measured perception of the benefactor’s interpersonal warmth.

The main hypotheses were that participants in the future alone and future belonging conditions would report increased gratitude relative to the control condition. It was expected that the increase in the future alone and the increase in the future belonging groups would have different underlying processes. Specifically, participants in the future alone group were hypothesized to view the benefactor as higher in warmth, and this perception would increase gratitude compared to the control group. Those in the future belonging group were expected to have an increased positive mood, and this positive mood was predicted to be the driving force behind the increase in gratitude. Perceptions of benefit cost and value have been shown to be relevant factors underlying gratitude; however, we did not predict any differences on these variables across conditions. They were measured to help form a more complete picture of any potential underlying processes. Additionally, trait entitlement and trait narcissism were measured to test the alternative hypothesis that the predicted effects would occur only among participants low (but not high) in psychological entitlement.

Method

Participants. Seventy-four undergraduate students (43 females; \( M \) age = 19.5, \( SD = 1.71 \)) in the United States participated in exchange for partial course credit.

Procedure. After completing informed consent, participants were introduced to the feedback manipulation. Participants were told that the study was interested in the relationship among various personality factors. Participants answered some basic demographic questions, the Psychological Entitlement Scale (PES; Campbell et al., 2004), and the Narcissistic Personality Inventory (NPI-40; Raskin & Terry, 1988). The Psychological Entitlement Scale is a stable and internally consistent single-factor self-report measure of entitlement. Entitlement is conceptualized as a pervasive sense that one deserves more and is entitled to more than others (e.g., “I honestly feel I’m just more deserving than others” and “People like me deserve an extra break now and then”). The scale contains 9-items (\( \alpha = .87 \)) that were answered on a 1 (strongly disagree) to 9 (strongly agree) scale. The NPI-40 is a forty item (\( \alpha = .82 \)) forced choice scale that measures one’s disposition for narcissistic tendencies (e.g., “I find it easy to manipulate
people” or “I don’t like it when I find myself manipulating people). The NPI-40 has several component factors including entitlement; however, these subscales have been haunted by empirical concerns such as low reliability (e.g., Brown, Budzek, & Tamborski, 2009; Kubarych, Deary, & Austin, 2004). The recently developed, valid, reliable, single-factor PES, therefore, has been the focus in some recent research that is interested in entitlement (e.g., Grubbs, Exline, & Campbell, 2013; O’Brien, Anastasio, & Bushman, 2011). The current project also focused on entitlement from the PES in lieu of the entitlement component of the NPI-40. These scales (the PES and NPI-40) were given to increase the credibility of the personality feedback and were tested as moderators.

After completing the questionnaires, participants were randomly assigned to one of three feedback conditions using a procedure adapted from Twenge et al. (2001): future alone, misfortune control, or future belonging. In the future alone condition, participants were told that they would probably end up alone later in life. Those in the control condition were told that they were likely to be accident prone later in life resulting in serious injury. Future belonging participants were told they would have rewarding relationships throughout life and always have friends who care about them.

After receiving the feedback participants answered the Brief Mood Introspection Scale (BMIS; Mayer & Gaschke, 1988). The BMIS is a 16-item self-report measure of current mood that contained eight positive valence items (e.g., happy, caring; α = .75) and eight negative valence items (e.g., sad, gloomy; α = .74). The scale was presented on a 1 (definitely do not feel) to 4 (definitely feel) point scale.

After completing the BMIS, participants were told that before moving on to a few more personality measures there was an unrelated task they needed to complete. This task was the main dependent variable in which participants received a small gift and reported on several factors related to gratitude. Participants were told that a former student wanted to express thanks to participants and give them a gift. All participants received a bag of candy ostensibly from the former student. Next, participants answered several questions measuring the value of the gift, perceptions of cost to the benefactor, perceptions of benefactor warmth, and how grateful they felt.

A 3-item index (α = .84) of the average rating was created to assess differences in perceptions of benefactor warmth: “The person just genuinely wanted to give the gift”, “The
person gave the gift out of the kindness of their heart”, and “Overall, the person was motivated by a sincere desire to give me a gift.”

Participants answered five questions to measure how valuable the gift was to them: “I benefited greatly from the gift”, “I consider this to be a very big gift”, “I value this gift a lot”, “I like this gift a lot”, and “Overall, the gift was very valuable to me.” These items were averaged to create a 5-item value index ($\alpha = .90$).

To measure perception of cost to the benefactor participants answered five questions: “It cost this person a great deal of money to give this gift to me”, “It cost this person a great deal of effort to give this gift to me”, “It cost this person a great deal of time to give this gift to me”, “It was very inconvenient for the person to provide the gift”, and “Overall, the gift was very costly for the person to give.” These questions were averaged to create a 5-item perception of cost index ($\alpha = .80$).

Three items ($\alpha = .91$) were averaged to analyze gratitude: “I feel an overwhelming sense of gratitude toward the person”, “I feel extremely appreciative for the gift”, and “Overall, how grateful do you feel toward the person who gave you the gift.”

The items measuring benefactor warmth, value, cost, and gratitude were presented on 1 to 9 point scale with end points labeled “agree a little” and “very strongly agree” (the third item in the gratitude index had endpoints labeled “a little bit” and “extremely”). Thus, a “disagree” option was not offered. We reasoned that because it was explicit that a benefit was received participants would report at least a small amount of agreement on these items. By not offering a disagree option we aimed to increase the variability in responses and avoid potential ceiling effects.

**Results**

Main effects between conditions were tested first, followed by examination of potential moderation and then mediation. Comparisons of interest to the hypotheses were the focus of interpretation (i.e., the future alone compared to the control condition and the future belonging compared to control condition). Main effect differences between the future alone and future belonging conditions were also tested.

Differences in self-reported gratitude were tested first. An ANOVA revealed significant variation among conditions on gratitude, $F(2, 71) = 3.61, p = .032, \eta^2 = .09$. There was not a
significant difference between the future alone condition ($M = 4.93$, $SD = 2.33$) and control condition ($M = 4.41$, $SD = 1.85$) on gratitude, $t(47) = 0.87$, $p = .39$, $d = .25$. Those in the future belonging condition ($M = 5.96$, $SD = 2.00$) reported feeling significantly more gratitude than those in the control condition, $t(48) = 2.64$, $p = .010$, $d = .80$. People in the future belonging group also reported feeling marginally more grateful than those in the future alone condition, $t(48) = 1.74$, $p = .086$, $d = .47$. Thus, our primary predictions about gratitude were partially supported at this level of analysis. Participants in the future belonging condition reported more gratitude than participants in the control condition; however, those in the future alone condition did not differ in gratitude from those in the control condition.

There was not significant variation among conditions on the 3-item benefactor warmth index, $F(2, 71) = 0.83$, $p = .44$, $\eta^2 = .02$. The paired comparisons between the future alone ($M = 4.51$, $SD = 2.44$) and control conditions ($M = 3.75$, $SD = 2.08$), the future belonging ($M = 4.31$, $SD = 1.97$) and control conditions, and the future alone and future belonging conditions were not significant ($ps > .22$). At this level of analysis, the primary hypothesis about an increased perception of benefactor interpersonal warmth in the future alone condition was not supported.

Perception of gift value was examined with an ANOVA analysis. Results found significant variation among conditions, $F(2, 71) = 4.94$, $p = .010$, $\eta^2 = .12$. Follow-up comparisons found that those in the future alone group ($M = 4.10$, $SD = 1.85$) did not differ in perception of value from those in the control group ($M = 3.86$, $SD = 1.69$), $t(47) = 0.46$, $p = .65$, $d = .14$. Those in the future belonging group ($M = 5.41$, $SD = 2.05$) reported valuing the gift significantly more than those in the control group, $t(48) = 2.93$, $p = .005$, $d = .83$. Participants in the future belonging group reported valuing the gift more than those in the future alone group, $t(48) = 2.44$, $p = .017$, $d = .67$. No differences were predicted on perception of value; however, results showed that those in the acceptance condition valued the gift more than those in the control condition.

Lastly, perceptions of cost to the benefactor were examined. An ANOVA revealed marginal variation among conditions, $F(2, 71) = 2.77$, $p = .07$, $\eta^2 = .07$. However, a comparison between the future alone ($M = 2.66$, $SD = 1.48$) and control ($M = 3.09$, $SD = 1.12$) group was not significant, $t(47) = 1.10$, $p = .28$, $d = .33$; nor was the comparison between the future belonging ($M = 3.58$, $SD = 1.47$) and control group significant, $t(48) = 1.26$, $p = .21$, $d = .37$. There was, however, a significant difference between the future alone and future belong conditions, $t(48) =$
2.35, p = .022, d = .62. Although not predicted, participants in the future alone condition perceived the gift as being less costly to the benefactor than those in the future belonging condition. The future alone manipulation appeared to have a small, non-significant negative effect (p = .28, d = .33) on cost perception relative to the control group, while the future belonging condition appeared to have a small non-significant positive effect (p = .21, d = .37) relative to the control group. Thus, the significant difference between the future alone and future belonging condition is likely a result of the manipulations having small effects in opposite directions relative to a neutral state.

**Mood.** We predicted that participants in the future alone condition would not differ in mood relative to the control condition, but that participants in the future belonging condition would report a heightened positive mood compared to the control group. Such a finding would be consistent with previous research on the effects of social rejection and acceptance on mood.

An ANOVA did not show significant variation among conditions on the pleasant-unpleasant scoring of the BMIS, F(2, 71) = 0.66, p = .52, η² = .02. Nor were the direct comparisons between the future alone and control condition (p = .68) or future belonging and control condition (p = .47) significant. Because the prediction was specific to positive affect and the full BMIS is a mix of positive and negative affect (reversed coded), we tested for differences among conditions using only the eight positive affect items. This revealed significant variation among conditions, F(2, 71) = 3.25, p = .044, η² = .08. There was not a significant difference between the future alone (M = 2.72, SD = 0.48) and control condition (M = 2.64, SD = 0.51), t(47) = 0.61, p = .55, d = .16. The future belonging condition (M = 2.97, SD = 0.46), however, scored significantly higher on the positive mood items than the control group, t(48) = 2.45, p = .017, d = .68. There was not significant variation among conditions on the eight negative mood items (F < 1) and direct comparisons between conditions were not statistically significant (ps > .20). In support of the predictions, those in the future alone condition did not differ in mood from the control condition and those in the future belonging condition reported greater positive mood than those the control condition.
**Moderation.** The next stage of analyses investigated potential moderation by trait psychological entitlement and narcissism. These analyses were conducted to test the alternative hypotheses that low entitlement (but not high entitlement) participants in the future alone condition would report increased gratitude and an increased perception of benefactor warmth compared to those in the control condition.

To test for moderation, mean-centered moderator variables were created. Next, dummy coded contrast variables were created for the two comparisons of interest [future alone (1) vs. control (0) and future belonging (1) vs. control (0)]. Lastly, interaction terms were created from the mean-centered entitlement and narcissism variables and each contrast variable. These variables were entered in a regression analysis as predictors of the dependent variable. Simple slopes of the moderator were examined at low (-1 SD from the mean) and high (+1 SD from the mean) values.

**Gratitude.** There was a marginal interaction between entitlement and the future alone vs. control condition contrast, $\beta = -.32, p = .078, r_{\text{partial}} = -.21$. Simple slope analyses revealed that low entitlement participants had a nearly significant increase in gratitude from the control to the future alone condition, $\beta = .33, p = .059, r_{\text{partial}} = .23$. High entitlement participants did not significantly differ across conditions, $\beta = -.12, p = .50, r_{\text{partial}} = -.08$. The same analysis conducted with narcissism as the moderator also yielded a marginally significant interaction, $\beta = -.29, p = .069, r_{\text{partial}} = -.22$. Participants low on narcissism showed a marginal increase in gratitude from the control to future alone condition, $\beta = .32, p = .059, r_{\text{partial}} = .23$, and people high in narcissism did not show a significant change, $\beta = -.13, p = .48, r_{\text{partial}} = -.09$. There was not a significant interaction between entitlement ($\beta = .04, p = .80$) or narcissism ($\beta = -.20, p = .19$) on the future belonging vs. control condition contrast. In short, within the future alone condition, low entitlement (and low narcissistic) participants reported a nearly significant increase in gratitude compared to low entitlement (and low narcissistic) participants in the control group. High entitlement and highly narcissistic participants did not show a significant change between the future alone and control condition.

**Perceived benefactor warmth.** The next variable examined was the 3-item benefactor warmth index. There was a significant interaction between trait entitlement and the future alone
vs. control condition contrast on perception of benefactor warmth, $\beta = -.39, p = .041, r_{\text{partial}} = -.25$. Participants low in entitlement showed a significant increase from the control to future alone condition, $\beta = .44, p = .020, r_{\text{partial}} = .28$. Those high in entitlement did not significantly differ between conditions, $\beta = -.12, p = .53, r_{\text{partial}} = -.08$. When narcissism was the moderator, there was not a significant interaction with the future alone vs. control condition contrast, $\beta = -.18, p = .29, r_{\text{partial}} = -.13$. Last, neither entitlement ($\beta = .06, p = .75$) nor narcissism ($\beta = -.08, p = .60$) interacted with the future belonging vs. control condition on benefactor warmth.

Thus, the primary hypothesis that participants in the future alone condition would report increased gratitude and perception of benefactor warmth compared to those in the control group was not supported. However, low entitlement participants in the future alone condition felt almost significantly more grateful and viewed the benefactor more warmly than those in the control condition, lending support to the alternative hypothesis.

**Perceived gift value, perceived benefactor cost, and mood.** Reported value of the gift was analyzed next. There was not a significant interaction between entitlement ($\beta = -.14, p = .47$) or narcissism ($\beta = -.19, p = .25$) and the future alone vs. control condition contrast. Additionally, neither entitlement ($\beta = .01, p = .98$) nor narcissism ($\beta = -.20, p = .15$) significantly interacted with the future belonging vs. control condition contrast. The main effect of the future belonging group reporting a greater perception of value than the control group remained significant in both moderator interaction models ($ps < .005$).

Perceptions of benefactor cost were also examined for potential moderation. There was not a significant interaction between entitlement ($\beta = -.02, p = .91$) or narcissism ($\beta = .06, p = .73$) on the future alone vs. control condition contrast. Additionally, entitlement ($\beta < .01, p = .99$) and narcissism ($\beta = -.16, p = .31$) did not interact with the future belonging vs. control condition contrast on perception of cost.

Finally, potential moderation effects on mood were examined. Trait entitlement did not interact with either condition comparison on the BMIS ($ps > .21$), on the eight positive mood items ($ps > .43$) or the eight negative mood items ($ps > .18$) on the BMIS. Trait narcissism did not interact with either condition contrast on the full BMIS ($ps > .76$), the eight positive mood items ($ps > .36$), or eight negative mood items ($ps > .50$).
**Summary of moderation analyses.** In sum, there were not any significant interactions between trait entitlement (or trait narcissism) and the future belonging vs. control condition comparison. However, between the future alone vs. control condition gratitude was moderated by entitlement (and narcissism) and perception of benefactor warmth was moderated by entitlement (but not narcissism). Inspection of simple slopes revealed that participants low in entitlement in the future alone compared to control condition increased in both gratitude (marginally) and perception of benefactor warmth. Hence, the results supported the alternative hypothesis that only people low in psychological entitlement in the exclusion condition would perceive the benefactor more warmly and feel more grateful, as compared to those in the control condition.

**Mediation.** The primary prediction was that participants in the future alone group (vs. control) would be more grateful for the gift because they perceived the benefactor more warmly. However, only low entitlement participants reported more gratitude and stronger perception of warmth in the benefactor. Therefore, a conditional mediation analysis was used wherein the path to the outcome variable and the path to the mediator were moderated by entitlement. This was done using the Process Bootstrapping macro for SPSS (model 8; Hayes, 2013) with 5,000 resamples and 95% bias-corrected standardized bootstrap confidence intervals (CI). This analysis was conducted with the future alone group (coded as 1) and the control group (coded as 0) as the independent variable.

The direct effect of social exclusion feedback on gratitude among low entitlement participants was nearly significant without any mediators ($p = .059$). When adding benefactor warmth as a mediator, the effect among low entitlement people was reduced to non-significance ($p = .80$). Additionally, the indirect effect of condition (future alone vs. control) on self-reported gratitude through perception of benefactor warmth among low entitlement people did not contain zero and therefore was significant, $\beta = .30\ (SE = .12)$, 95% CI [.070, .537]. Thus, among low entitlement participants, the increased gratitude in the future alone feedback group (compared to the control group) was statistically mediated by perceiving the benefactor as higher in interpersonal warmth.

The prediction between the future belonging and control condition was that the future belonging group would show an increase in general positive mood and this would mediate the
increase in gratitude. Because no moderation effects were found between these two conditions a simple mediation model was used in the Process Bootstrapping macro (model 4). The eight positive mood items from the BMIS were entered as the potential mediator. Results showed that the direct effect of condition (future belonging vs. control) on gratitude was significant without any mediators \((p = .010)\) and remained significant when positive mood was added into the model \((p = .019)\). The indirect effect of condition (future belonging vs. control) on gratitude through positive mood was not significant, \(\beta = .003 (SE = .04)\), 95\% CI \([-0.077, 0.098]\). Therefore, positive mood did not mediate the increase in gratitude found in the future belonging group.

It is noteworthy that people in the future belonging condition reported valuing the gift significantly more than those in the control condition \((p = .005)\). It is possible that increased perception of value could have mediated gratitude. Therefore, we tested for mediation by reported value of the gift. The main effect of condition on gratitude was reduced to non-significance when adding value as a mediator \((p \text{ from .010 to .64})\). The indirect effect of condition on self-reported gratitude through perceived value of the gift was significant, \(\beta = .30 (SE = .11)\), 95\% CI \([0.091, 0.539]\). These results suggest that participants in the acceptance condition (compared to those in the control group) felt the gift was more valuable and this statistically mediated feeling more grateful for the gift.

**Discussion**

The main hypotheses for Study 1 predicted effects at the main effect level. Some of these hypotheses were supported and some were not. The prediction that participants in the future alone condition overall would perceive the benefactor as more warm, and report feeling more grateful for their gift, than those in the control condition was not supported. This prediction was based on the assumption that everyone in the future alone group would react similarly to the future alone manipulation. However, as discussed later, some participants in the future alone group showed the predicted effects while others did not.

The main effect predictions about differences between the social belonging and control condition were mostly supported. Results indicated that participants who received positive feedback about their social future felt more grateful for a gift than participants in the control condition. Those in the future belonging group also reported an increased positive mood relative to the control group, but this increase in positive mood did not mediate the increase in gratitude
as was predicted. Instead, future belonging participants reported valuing the gift more than the control group and this mediated the increase in gratitude. Although not originally predicted, it seems reasonable that participants in the acceptance condition valued the gift more than those in the control condition and that this mediated the increase in gratitude. According to the affect-as-information perspective “Affective reactions, in this view, provide embodied information about value, that is, about goodness and badness” (Clore & Storbeck, 2006, p. 123). Thus, it is possible that the positive mood resulting from social acceptance feedback influenced the judgment of how much one liked/valued the gift and this in turn increased gratitude.

The alternative hypothesis predicted that the effects of the future alone feedback (relative to the control condition) on gratitude and perception of the benefactor would be moderated. Reported gratitude was marginally moderated and perception of benefactor warmth was significantly moderated by trait psychological entitlement in the future alone (vs. control) condition contrast. Specifically, participants low on entitlement reported a marginally significant increase in gratitude that was mediated by a significant increase in perception of benefactor warmth. Those scoring high in entitlement did not show a significant change in gratitude or perception of benefactor warmth between conditions. Thus, the alternate hypothesis was largely supported. It is worth mentioning that the effects of the future alone feedback group were compared to the misfortune feedback group (i.e., the control condition). This increases the confidence that the effects are specific to threats of social rejection and not just general negative feedback.
CHAPTER 3  
STUDY 2

The purpose of Study 2 was to extend and replicate the pattern of findings from Study 1. To this end, Study 2 included a behavioral measure of gratitude. After the social exclusion manipulation, participants wrote a thank-you note to the supposed gift giver and independent coders rated the note. Another goal was to use a different social rejection/acceptance manipulation than Study 1. We used a vivid recall task in which participants wrote about a time they felt socially excluded, socially accepted, or about what they did yesterday (control condition). Previous research has shown that real and imagined events activate many of the same neural and psychological processes (Kosslyn, et al., 1999; McGuire, Shah, & Murray, 1993). And other research has shown that the exclusion vivid recall task evokes responses similar to those found in manipulations inducing immediate rejection (Gardner et al., 2000; Pickett, Gardner, & Knowles, 2004). After the vivid recall task, participants went through the same gift procedure as Study 1, answered the same questions, and then wrote a thank-you note.

The predictions for Study 2 were slightly modified from the predictions for Study 1 based on the Study 1 results. It was again predicted that people in the acceptance condition would report feeling more gratitude than the control group, but that this would be mediated by an increased perception of value of the gift and not general positive affect (although it was still expected that the acceptance group would report a higher positive mood than the control group). It was expected that gratitude and perception of benefactor warmth would be moderated by trait entitlement. Those low on entitlement in the rejection condition were expected to report an increase in gratitude relative to the control condition (although this was only trending toward statistical significance in Study 1). And we expected this increase in gratitude to be mediated by an increase in perception of benefactor warmth. We measured only trait psychological entitlement because, as mentioned previously, it is believed to be the most deleterious aspect of narcissism and, unlike overall narcissism, psychological entitlement marginally moderated gratitude and significantly moderated benefactor warmth in Study 1. Finally, we expected observer rated gratitude (based on the thank-you notes) to be commensurate with self-reported gratitude. Thus, we expected thank-you notes from the acceptance condition and from low
entitlement participants in the rejection condition to be rated as more grateful than those from the control group.

Method

Participants. Eighty-seven undergraduate students (64 females; $M_{\text{age}} = 18.9$, $SD = 1.11$) in the United States participated in exchange for partial course credit.

Procedure. Participants completed the experiment individually. After the informed consent process participants began the experiment. Participants first answered some basic demographic questions and completed the Psychological Entitlement Scale (Campbell et al., 2004).

Participants were told the first part of the study was interested in how people recall events from their past. Participants were randomly assigned to one of three vivid recall conditions: social rejection recall, neutral recall, and social acceptance recall. Those assigned to the social rejection condition were instructed to write about a time they felt rejected or excluded by others. In the neutral condition participants were asked to write about what they did yesterday. Those in the social acceptance condition were instructed to write about a time they experienced feeling socially accepted.

After the essay task, participants in the rejection and acceptance conditions answered two manipulation check items on a 1 (not at all) to 9 (very much) scale: “I felt socially rejected/excluded in the experience I just wrote about” and “I felt socially accepted in the experience I just wrote about.”

Subsequently, participants answered the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item self-report measure with a 10-item positive affect subscale (e.g., excited, inspired; $\alpha = .91$) and a 10-item negative affect subscale (e.g., upset, irritable; $\alpha = .88$). The scale was presented on a 1 (very slightly or not at all) to 5 (extremely) point scale.

After the mood measure participants began an ostensibly unrelated task. This was the gratitude measure. The same procedure and measures from Study 1 were used. Therefore, the dependent measures analyzed were a 3-item gratitude index ($\alpha = .87$), a 3-item benefactor warmth index ($\alpha = .77$), a 5-item value index ($\alpha = .87$), and a 5-item cost index ($\alpha = .77$).
After answering questions about the gift, participants were given a blank piece of paper and asked to write a thank you note to the supposed gift giver. Participants were told they could spend as much or as little time on the note as they wished. Two research assistants (blind to condition and hypotheses) independently rated each thank you note. Notes were scored based on the rater’s impression of how grateful the note writer seemed. Ratings were made on a 1 (a little grateful) to 9 (extremely grateful) point scale. The ratings between the two raters had good inter-rater reliability (α = .85); therefore, the ratings were averaged. After writing the note participants were thanked and fully debriefed.

Results

The analytical approach involved first testing for main effects among the conditions using ANOVA and t-test comparisons between specific conditions similar to Study 1. Thereafter, potential moderation and mediation were examined. As in Study 1, there were two moderation and mediation comparisons that were relevant to the hypotheses (except for the manipulation check): 1) the rejection vs. control condition, and 2) the acceptance vs. control condition.

Comparisons on the manipulation check revealed that participants in the rejection condition (M = 7.48, SD = 1.60) reported feeling significantly more rejected in the essay they wrote compared to those in the acceptance condition (M = 2.59, SD = 2.65), t(56) = 8.52, p < .001, d = 2.23. Additionally, participants in the acceptance condition (M = 8.38, SD = 1.42) reported feeling significantly more socially accepted in the essay they wrote than those in the rejection condition (M = 2.28, SD = 1.83), t(56) = 14.17, p < .001, d = 3.72.

Self-reported gratitude. There was significant variation among conditions on the 3-item gratitude index, F(2, 84) = 3.37, p = .039, η² = .07. Follow up comparisons found that participants in the rejection condition (M = 5.44, SD = 2.17) did not differ from participants in the control condition (M = 5.41, SD = 2.05) on gratitude, t(56) = 0.05, p = .96, d = .01. Participants in the acceptance condition (M = 6.55, SD = 1.42) reported feeling significantly more gratitude than participants in the control condition, t(56) = 2.27, p = .026, d = .65, and participants in the rejection condition, t(56) = 2.23, p = .029, d = .61. Thus, our predictions about gratitude were partially supported at this level of analysis. Particularly, those in the acceptance
condition felt more gratitude than those in the control condition, but those in the rejection condition did not differ in gratitude from the control group.

**Perceived benefactor warmth.** We did not expect differences between conditions (at the main effect level) on perceptions of benefactor warmth. An ANOVA and subsequent comparisons supported our expectations. There was not significant variation among conditions on the 3-item benefactor warmth index, $F(2, 84) = 0.44, p = .65, \eta^2 = .01$. Additionally, all three paired comparisons between the rejection ($M = 4.72, SD = 2.04$), the control ($M = 4.56, SD = 2.06$), and the acceptance ($M = 5.05, SD = 1.91$) conditions were not significant ($ts < 1; ps > .36$).

**Perceived gift value and perceived cost to benefactor.** An ANOVA found significant variation among conditions on value perception, $F(2, 84) = 5.75, p = .005, \eta^2 = .12$. There was not a significant difference between the rejection condition ($M = 4.21, SD = 1.39$) and control condition ($M = 4.37, SD = 2.28$) on value perception, $t(56) = 0.33, p = .74, d = .08$. Participants in the acceptance condition ($M = 5.70, SD = 1.73$) reported valuing the gift significantly more than those in the control condition, $t(56) = 2.76, p = .007, d = .66$, and significantly more than those in the rejection condition, $t(56) = 3.09, p = .003, d = .95$. As found in Study 1 and supporting the hypothesis for Study 2, participants in the acceptance condition reporting valuing the gift more than participants in the control condition.

Conditions did not significantly vary on perception of cost, $F(2, 84) = 1.69, p = .19, \eta^2 = .04$. There was not a significant difference between the rejection ($M = 3.08, SD = 1.25$) and control ($M = 3.57, SD = 1.76$) conditions on perception of cost, $t(56) = 1.21, p = .21, d = .32$. The acceptance ($M = 3.77, SD = 1.35$) and control conditions did not significantly differ on perception of cost, $t(56) = 0.50, p = .59, d = .13$. There was a marginally significant difference between the rejection condition and the acceptance condition of perception of cost, $t(56) = 1.79, p = .077, d = .53$.

**Thank-you notes.** Lastly, gratitude judgments on participant thank you notes were analyzed. A one-way ANOVA did not reveal significant variation among conditions, $F(2, 84) = 1.09, p = .34, \eta^2 = .03$. Direct comparison between the rejection ($M = 5.67, SD = 1.37$) and control ($M = 5.02, SD = 1.71$) condition did not reveal a significant difference, $t(56) = 1.47, p =$
.15, \( d = .42 \). Nor was there a significant difference between the acceptance condition (\( M = 5.39, SD = 1.95 \)) and the control condition, \( t(56) = 0.84, p = .41, d = .20 \). There was not a significant difference between the acceptance and rejection conditions, \( t(56) = 0.62, p = .54, d = .17 \). Thus, observer ratings of expressed gratitude did not show any main effect differences across conditions.

**Mood.** We predicted that participants in the rejection condition would not differ in mood relative to the control condition and that participants in the acceptance condition would report a heightened positive mood compared to the control group. A One-way ANOVA did not show significant variation among conditions on the positive affect subscale of the PANAS, \( F(2, 84) = 1.78, p = .17, \eta^2 = .04 \). Planned comparisons revealed that those in the rejection condition (\( M = 2.95, SD = 1.08 \)) did not differ from those in the control condition (\( M = 2.86, SD = 0.87 \)) on positive affect, \( t(56) = 0.35, p = .73, d = .09 \). Participants in the acceptance condition (\( M = 3.30, SD = 0.85 \)) reported feeling marginally significantly more positive affect than those in the control condition, \( t(56) = 1.78, p = .079, d = .51 \). There was not significant variation among conditions on the negative affect subscale of the PANAS, \( F(2, 84) = 0.30, p = .74, \eta^2 = .01 \). None of the direct comparisons between conditions on negative affect approached significance (\( ps > .45 \)). Thus, those in the rejection condition did not differ in mood from the control condition and those in the acceptance condition reported greater positive mood than those in the control condition (although this result was only marginally significant).

**Moderation by trait psychological entitlement.** To test for moderation by trait entitlement the same procedure from Study 1 was used. A mean-centered moderator (psychological entitlement) variable was created. Dummy coded contrast variables were created for the two comparisons of interest [rejection (1) vs. control (0) and acceptance (1) vs. control (0)] and interaction terms were created. Simple slopes of entitlement were examined at low (-1 SD from the mean) and high (+1 SD from the mean) values.

**Self-reported gratitude.** Results showed that there was a significant interaction between entitlement and the rejection vs. control condition contrast, \( \beta = -.40, p = .003, r_{\text{partial}} = -.32 \). The simple effect of low entitlement (1 SD below the mean) and high entitlement (1 SD above the
mean) from the control to rejection were tested to interpret the interaction. There was a significant effect of condition at low entitlement, $\beta = .37, p = .024, r_{\text{partial}} = .25$, and a nearly significant effect at high entitlement, $\beta = -.30, p = .053, r_{\text{partial}} = -.21$. In line with the prediction, within the rejection condition low entitlement participants reported an increase in gratitude compared to low entitlement participants in the control group. High entitlement participants showed the opposite effect and reported a marginal decrease in gratitude relative to high entitlement people in the control group.

There was not a significant interaction between entitlement and the acceptance vs. control condition contrast on self-reported gratitude, $\beta = .12, p = .47, r_{\text{partial}} = .08$. The main effect between the acceptance and control conditions on gratitude remained significant in the interaction model, $\beta = .28, p = .014, r_{\text{partial}} = .27$.

**Thank-you notes.** There was a marginal interaction between entitlement and the rejection vs. control condition contrast, $\beta = -.24, p = .107, r_{\text{partial}} = -.18$. Low entitlement participants in the exclusion condition were rated as significantly more grateful than those in the control condition, $\beta = .40, p = .027, r_{\text{partial}} = .24$. High entitlement participants, however, did not display a change in gratitude judgments between conditions, $\beta < .01, p = .99, r_{\text{partial}} = .01$. There was not a significant interaction between entitlement and the acceptance vs. control condition contrast, $\beta = -.01, p = .97, r_{\text{partial}} = -.01$. Supporting the prediction, thank you notes written by low entitlement participants in the rejection condition were judged as expressing significantly more gratitude than low entitlement participants in the control group.

**Perceived benefactor warmth.** This analysis did not yield a significant interaction between entitlement and the acceptance vs. control condition contrast, $\beta = -.03, p = .87, r_{\text{partial}} = -.02$. There was a significant interaction between trait entitlement and the rejection vs. control condition contrast, $\beta = -.34, p = .017, r_{\text{partial}} = -.26$. Simple slopes analyses revealed that low entitlement participants showed a significant change between conditions, $\beta = .36, p = .044, r_{\text{partial}} = .22$. There was not a significant difference among high entitlement people between conditions, $\beta = -.23, p = .17, r_{\text{partial}} = -.15$. Thus, low entitlement people in the rejection condition perceived the benefactor as warmer than those in the control condition.
Perceived gift value, perceived cost to benefactor, and mood. We next tested perceived value of the gift, perceived cost to the benefactor, and mood for potential moderation by trait psychological entitlement. There was not an interaction on benefactor cost in the rejection vs. control condition contrast, $\beta = -.14, p = .50, r_{\text{partial}} = -.08$, or on the acceptance vs. control contrast, $\beta = .02, p = .91, r_{\text{partial}} = .01$. There was not an interaction between entitlement and the rejection vs. control condition contrast on value, $\beta = -.19, p = .17, r_{\text{partial}} = -.15$ (low entitlement $\beta = .14, p = .43$; high entitlement $\beta = -.19, p = .25$); or on the acceptance vs. control contrast, $\beta = .01, p = .93, r_{\text{partial}} = .01$. The main effect of the acceptance condition reporting greater value than the control condition remained significant in the interaction model, $\beta = .33, p = .007, r_{\text{partial}} = .30$.

Finally, we tested for the possibility of moderation by entitlement on mood. There was not a significant interaction on the two condition contrasts on positive affect ($ps > .46$) or negative affect ($ps > .17$). Thus, the moderation effects found are not attributable to differences in mood between low and high entitlement participants.

Summary of moderation analyses. As in Study 1, there were not any significant interactions between entitlement and the acceptance vs. control condition contrast on any dependent variables. Between the rejection and control conditions, however, self-reported gratitude, observer rated gratitude (marginally), and perception of benefactor warmth were moderated by entitlement. Low entitlement participants in the rejection condition scored higher on self-reported gratitude, observer rated gratitude, and perceptions of the benefactor’s interpersonal warmth compared to low entitlement people in the control group. High entitlement participants in the rejection condition trended lower (self-reported gratitude, benefactor warmth) or did not change (observer rated gratitude) relative to high entitlement participants in the control group.

Mediation. The same procedures from Study 1 were used to test for mediation in Study 2. The main mediation prediction was that the increase in gratitude among low entitlement participants in the rejection condition (compared to the control condition) would be mediated by an increased perception of benefactor warmth. The second prediction was that the increase in gratitude in the acceptance group, relative to the control group, would be mediated by an increase in perceived value of the gift.
The direct effect on self-reported gratitude among low entitlement participants was significant without any mediators ($p = .024$). However, upon adding benefactor warmth as a mediator, the effect among low entitlement people was reduced to non-significance ($p = .17$). Additionally, the indirect effect of condition on self-reported gratitude through perception of benefactor warmth among low entitlement people did not contain zero and therefore was significant, $\beta = .18$ (SE = .08), 95% CI [.043, .357]. Among high entitlement participants, the direct effect also shifted to insignificant when adding benefactor warmth as a mediator ($p$ changed from .053 to .16). The indirect effect, however, was not significant, $\beta = -.11$ (SE = .10), 95% CI [-.354, .068].

The same analysis was conducted with observer rated gratitude (based on the thank-you notes) as the outcome variable. Results showed that the direct effect among low entitlement participants was significant ($p = .027$) without any mediators but shifted to nonsignificant when adding benefactor warmth as a mediator ($p = .13$). The conditional indirect effect (at low entitlement) of condition on observer rated gratitude through benefactor warmth was significant, $\beta = .14$ (SE = .07), 95% CI [.033, .313]. The conditional indirect effect at high entitlement was not significant, $\beta = -.09$ (SE = .08), 95% CI [-.314, .034]. Thus, among low entitlement participants (between the rejection and control conditions) self-reported gratitude for the gift and observer rated gratitude were statistically mediated by an increased perception of the benefactor’s interpersonal warmth. The decrease in self-reported gratitude among high entitlement participants in the rejection condition was not mediated by perception of benefactor warmth.

As in Study 1, no moderation effects were found between the acceptance and control condition. Therefore, the simple mediation model was used in the Process Bootstrapping macro (model 4) to test if perceptions of value mediated the increase in gratitude found in the acceptance condition. Also, because the acceptance condition did not show a change in observer rated gratitude (relative to the control group), mediation analyses focused on self-reported gratitude. Results showed that the main effect of condition on self-reported gratitude was reduced to non-significance when adding value as a mediator ($p$ from .026 to .46). The indirect effect of condition on self-reported gratitude through perceived value of the gift was significant, $\beta = .20$ (SE = .08), 95% CI [.048, .380]. Consistent with the prediction and the results from
Study 1, the increased perception of gift value among people in the acceptance condition (compared to those in the control group) mediated the increase in gratitude.

For good measure, we tested if the increase in positive affect mediated the increased gratitude found in the acceptance condition. The direct effect of condition on gratitude was significant without any mediators ($p = .026$) and moved into marginal significance when positive affect was added into the model ($p = .063$). However, the indirect effect of condition (acceptance vs. control) on gratitude through positive affect was not significant, $\beta = .05$ (SE = .04), 95% CI [-.002, .161]. Therefore, positive affect did not mediate the increase in gratitude found in the acceptance group (although it was close).

**Discussion**

Study 2 showed a similar pattern of results to Study 1. Low entitlement participants in the rejection condition (compared to the control condition) showed an increase in both self-reported gratitude and observer rated gratitude. The increase in gratitude (self-reported and observer rated) among low entitlement participants was mediated by an increase in perception of the benefactor’s interpersonal warmth. Participants in the social acceptance condition reported feeling more gratitude for a gift they received than those in the control condition. As in Study 1, this effect was mediated by increased perception of gift value. Counter to the prediction, those in the social acceptance group did not differ from the control group in observer rated gratitude (i.e., how grateful they seemed in the thank-you notes). It is unclear why socially accepted people reported feeling more gratitude than the control group but did not seem to display it in the thank-you notes. However, if the heightened gratitude resulted from a misattribution effect, it is possible that socially accepted participants, when asked, simply reported feeling more grateful but did not behave more gratefully relative to the control condition.
CHAPTER 4
GENERAL DISCUSSION

The present studies examined how social emotions (specifically gratitude) may serve an adaptive function in the face of threatened belongingness. The desire for positive interpersonal relations is a universal motivation among humankind. When this motive is thwarted or threatened it has a powerful effect on interpersonal psychological processes. The predictions for the effects of social exclusion on gratitude were derived from an evolutionary perspective. In this view, emotions exist because they served specific functions that helped human ancestors survive and reproduce. The feeling of gratitude evolved because it encourages the development and maintenance of positive relationships. Therefore, we hypothesized that while in a threatened (compared to unaltered) state of belongingness people would feel more grateful toward a novel person who provided a benefit because this would increase their chances of establishing a positive social connection.

Two studies using different social exclusion manipulations showed a similar pattern of results. The alternative hypothesis predicted that low entitlement people in the social exclusion condition would perceive the benefactor more warmly and feel more grateful than low entitlement people in the control condition. This hypothesis was mostly supported across both studies. Specifically, people low in a sense of entitlement reported feeling marginally more grateful in Study 1 and significantly more grateful in Study 2 than low entitlement people in the control condition. In both studies, low entitlement participants in the exclusion condition perceived the benefactor as warmer than low entitlement participants in the control condition. Mediation analyses showed that, in both studies, the increase in gratitude among low entitlement people was mediated by the increased perception of interpersonal warmth in the benefactor. In Study 2, low entitlement participants in the exclusion condition were perceived as being more grateful in thank-you notes than those in the control condition. This was also mediated by the increased perception of benefactor warmth. Highly entitled people in the exclusion condition trended toward feeling less grateful and perceiving the benefactor less warmly than those in the control condition, however these differences were not statistically significant.

Comparisons between the social acceptance and control conditions largely supported the main hypothesis. In both studies participants in the social acceptance condition reported feeling
more grateful than those in the control condition. Positive mood did not mediate this increase in gratitude as was predicted; however, those in the acceptance condition (in both studies) valued the gift more than those in the control condition, and this mediated the increase in gratitude.

**Genuinely Feeling Grateful**

Previous work has found that excluded participants were more prosocial toward people they expected to meet than people they did not expect to meet (e.g., Maner et al., 2007). Indeed, expected interaction is argued to be one of the factors determining whether one will respond prosocially to others after social exclusion (DeWall & Bushman, 2011). The reasoning is that if there is little or no chance of actually meeting someone then there is less reason to respond in a prosocial and potentially costly way.

In the present studies, however, it was made clear to participants that the supposed gift giver was a former student and the experimenter was just an intermediary. The benefactor, then, was someone with a low likelihood of potential interaction for the participant. Nevertheless, low entitlement people in the social exclusion condition perceived the benefactor as warmer, reported feeling more gratitude, and were more grateful in handwritten thank-you notes, compared to low entitlement people in the control condition.

Why did the low entitlement, socially excluded participants respond in an affiliative and prosocial way despite no anticipated interaction with the benefactor? One potential reason could be to simply display (without necessarily feeling) gratitude, with the aim of showing the experimenter that they are grateful people. Such a self-presentation strategy could be beneficial for a recently excluded person because people who display more (compared to less) gratitude are perceived as warmer and as more desirable friends (Algoe et al., 2008; Williams & Bartlett, 2015). However, a purely self-presentational explanation seems unlikely because participants put their gratitude ratings and thank-you notes into sealed envelopes. Thus, there was presumably no expectation that the experimenter would see the participant’s gratitude ratings or thank-you notes (at least during the experimental session).

Another potential reason why some participants could have responded in a prosocial way to social exclusion despite no anticipated interaction could be because they genuinely felt the emotion of gratitude more strongly. We believe that this is a better interpretation than a self-presentation interpretation because of theoretical reasons in addition to the procedural reason.
mentioned previously. Theoretically, genuinely feeling gratitude fits better with a functional evolutionary perspective than a self-presentational interpretation in which the emotion is not actually felt or results from following social norms. Genuinely feeling gratitude would include the putative benefits of the self-presentation explanation while also putting one into a proaffiliative state with a heightened motivation to perform costly prosocial behavior for others. This, in turn, would increase one’s prospects for social reconnection.

An influential evolutionary theory about emotion that supports the genuinely feeling gratitude explanation regards emotions as commitment devices (Frank, 1988; Frank, 2001, Haselton & Ketelaar, 2005; Nesse, 2001). In this view, emotions evolved because they help commit one to engage in costly short-term strategies that are beneficial in the long term. Thus, emotions can function as psychological mechanisms that help one forgo immediate rewards (such as avoiding costly reciprocal behaviors) in order to obtain larger long-term benefits (such as building social alliances). The psychological state that gratitude induces increases the likelihood that one will perform costly short-term actions for others (e.g., DeSteno & Bartlett, 2006). The psychological effects of gratitude, then, are what “commits” one (increases the probability) to follow costly short-term prosocial strategies. Therefore, as a result of feeling gratitude one performs costly behaviors for others out of a sincere desire to do so and not due to a cold and calculated concern about self-presentation or social norms. Thus, the best way to show someone that one is an especially grateful person is to genuinely feel the emotion more strongly.

The present findings can also be interpreted with an evolutionary approach to self-deception (von Hippel & Trivers, 2011; Trivers, 2011). In this view, memory, information search, and evaluations of others can be biased to help one reach salient goals or satisfy motivational states. Among those low in a sense of entitlement, the overperception of positive traits in the benefactor (previously referred to as functional projection) could be the mechanism by which self-deception occurred. The positive bias in interpersonal perception, resulting from a heightened motivation for social connection, is how the socially excluded participants unknowingly deceived themselves into genuinely feeling more grateful, as compared to those in control conditions. Ultimately, the process of self-deception is argued to have evolved because it facilitated interpersonal deception (von Hippel & Trivers, 2011). By deceiving the self into feeling heightened levels of gratitude, excluded participants would be more effective at
convincing others they are a grateful person than if they were trying to consciously feign gratitude. And as a result of feeling increased gratitude more progress would be made toward the salient goal of social connection than if gratitude was felt less strongly.

The theoretical arguments for the commitment explanation and the self-deception explanation only apply to participants low in a sense of entitlement in the present studies. A crucial step in the processes argued to occur among low entitlement participants is that, upon social exclusion, social reconnection becomes a salient motivational force. Results imply that those high in entitlement may not have had social reconnection as a major driving force behind their behavior. Thus, low and high entitlement participants may have different motivations underlying their actions while in a state of social exclusion leading to significantly different outcomes.

To summarize, for procedural reasons specific to the present studies and for broader theoretical reasons, we suggested that low entitlement socially excluded people, compared to those in the control group, genuinely felt gratitude more strongly and were not engaging in an emotionless self-presentation strategy. Anticipated future interaction with the other is an important factor determining prosocial actions in some contexts; however, it seems it is not a relevant factor determining how grateful one feels.

**Implications and Contributions of the Current Research**

The current research extends the literature on social exclusion and the literature on gratitude in several ways. Results from the current studies add to the literature showing that social exclusion can lead to prosocial and affiliation seeking responses to others (e.g., Maner et al., 2007). Previous research has found many different affiliation seeking effects of social exclusion, ranging from basic effects on cognition and attention to complex social judgments and behaviors (e.g., DeWall et al., 2009; Mead et al., 2011). The current work built on this theme by investigating how the discrete emotion of gratitude could potentially be affected by threats to social belonging. The results suggest that, at least among people low in psychological entitlement, when sense of belonging is threatened (compared to unaltered) benefactors were perceived as higher in interpersonal warmth and therefore gratitude was felt more intensely. Thus, this work is a preliminary step toward understanding the role that humans’ diverse repertoire of emotions may play in successfully dealing with threats to social belonging.
The theorizing and results in this paper dovetail with existing theories about gratitude. McCullough and colleagues (McCullough et al., 2001; McCullough & Tsang, 2004) proposed a functional model of gratitude as a moral affect. In this model, gratitude is argued to serve three main functions. First, gratitude functions as a moral barometer, signaling when one has benefitted from the kind actions of another. The second function is to motivate beneficiaries to behave morally or prosocially toward the benefactor (or a third party). And the third moral function of gratitude is as a moral reinforcer. By receiving sincere expressions of gratitude the benefactor is reinforced and this increases his or her likelihood of performing benevolent actions toward the beneficiary again. The theorizing and results of the present paper are compatible with McCullough’s moral affect model of gratitude. The moral barometer function of gratitude would increase in sensitivity while in a state of threatened belongingness and this in turn would lead to overperceiving warm intentions in others relative to control conditions.

As a result, socially excluded people would experience gratitude more strongly and more frequently and therefore in theory would perform costly prosocial behavior toward the benefactor (the moral motivator function). This in turn would reinforce the benefactor’s kind behavior and increase the likelihood of positive relations in the future (the moral reinforcer function). Thus, the moral functions of gratitude would facilitate the socially excluded person’s goal of social affiliation.

Another functional perspective is the find-remind-and-bind theory of gratitude (Algoe, 2012; Algoe, et al., 2008). In this view, gratitude functions to help one find and develop new promising social relationships (if the benefactor is unknown), to remind and orient one to existing quality relationships (if the benefactor is already known), and to promote investment in and maintenance of these relationships for both parties. Presumably, the stronger the emotion of gratitude felt and expressed, the more effective these functions will be. Linking this reasoning to the present studies, the (low entitlement) people in the social exclusion condition who reported feeling and expressed gratitude more strongly (than those in the control group) would have been more likely to find, develop, and invest in a new relationship. Or, had the benefactor been known to some extent, the participant would have been reminded of an existing social connection and be more likely to invest in and strengthen it. In short, the find-remind-and-bind theory highlights the prosocial and relationship-enhancing qualities of gratitude. By feeling gratitude more intensely,
as socially excluded low entitlement participants did, the relationship-enhancing functions of gratitude would be more effective and this would facilitate progress toward social connection.

The present investigation found that social exclusion increased gratitude among people scoring low in psychological entitlement. Highly entitled people did not show this effect and trended in the opposite direction. Psychological entitlement was measured for two different lines of reasoning. The first was that highly entitled people may generally feel they deserve favors and therefore there is less reason to feel grateful. This would result in highly entitled people feeling less grateful across all conditions compared to those low in entitlement. Our results did not show this, as those high and low in entitlement scored similarly in the control and social acceptance conditions.

The second line of reasoning was that highly entitled would feel entitled – not necessarily to small gifts, but rather to be socially accepted by others. Therefore social exclusion would be felt as a particularly offensive violation of the highly entitled person’s expectation for social approval. This negative reaction might inhibit feeling and expressing heightened gratitude for a small favor from a stronger. Indeed, previous work has found that highly entitled people react more negatively to criticism and ego threats that those who are less entitled (Campbell et al., 2004). The present findings suggest that the negative response to criticism found among those high in entitlement also extends to interpersonal rejection.

However, under certain circumstances, it is possible that the lack of gratitude found among highly entitled people in the social exclusion conditions could be seen as adaptive. One circumstance could be if the supposed benefactor was actually attempting to exploit the beneficiary in some way (e.g., by seemingly doing something nice only to get a favor in return). If a benefactor had hidden selfish or exploitative intentions, those low in entitlement could be more likely to fall victim to such a person than highly entitled people. By virtue of being extra motivated for social reconnection and having a positive bias in perception of the benefactor’s intentions, less entitled people may be more vulnerable to interpersonal exploitation while in a state of social exclusion than highly entitled people. Hence, by feeling less gratitude, highly entitled people would be less likely to engage in costly behaviors for a benefactor who may potentially have exploitative or malevolent intentions. Thus, individual differences in psychological entitlement may differentially predict what could be considered adaptive responding depending on the nature of the situation and the true motives of the benefactor.
Finally, in contrast to most previous work, which has focused on the motivational and interpersonal consequences of gratitude, the current paper examined how existing motivational states influenced gratitude. The current work expands the understanding of gratitude by showing that existing motivational states (specifically the need to belong) and thus a heightened goal for social affiliation can impact how one perceives benevolent actions by others. As a result of this bias in interpersonal perception the emotional experience of gratitude was significantly altered.

Limitations and Future Directions

Limitations of the current work may provide fruitful areas for future research to investigate. Some questions left unanswered are how participants would actually behave or interact with a benefactor or an unrelated third party. We would predict, in line with previous work (e.g., DeSteno & Bartlett, 2006), that people who felt gratitude more strongly would behave more generously and prosocially toward their benefactor and possibly others compared to those who felt gratitude less strongly. Another gap in the present work is how a benefactor (or a third party) would perceive the participant. Previous work has found that more grateful people are perceived more positively (Williams & Bartlett, 2015), so we would expect this perception to occur when looking at the heightened gratitude resulting from social exclusion among low entitlement people. Future work could also look beyond perceptions and behaviors in the laboratory and explore how the benefactor/beneficiary dynamic unfolds outside the lab in terms of social connection and relationship formation. Examining these ideas would provide valuable information about gratitude in relation to social exclusion and increase understanding about the perpetual interplay between human motivation and emotion.

The predictions for the aforementioned series of studies would derive from the evolutionary logic of gratitude as an adaptation. We would expect socially excluded people to have a threatened sense of belonging and therefore a heightened motivation for social connection. As a result of having a heighten goal for social connection, novel others who do kind deeds toward the self would be perceived as especially warm and friendly (via functional projection) and gratitude would be felt more strongly compared to control conditions (low entitlement people showed this in the present studies). As a result of feeling a stronger sense of gratitude, we would expect these previously excluded participants to behave more positively toward their benefactors (and potentially others) and the benefactors to perceive them more
positively. We would expect this dyad that feels and behaves more positively toward each other to be more likely to spend time with each other and develop a relationship than a dyad that feels less grateful and less positive toward each other.

The predictions mentioned above are expected for those who experience social exclusion but not necessarily for those who experience social acceptance. The present studies found that people in the social acceptance groups also felt more grateful relative to control conditions but via a different process than those in the exclusion conditions. And despite reporting feeling more grateful than the control condition, people in the social acceptance group were not perceived as more grateful in their thank-you notes in Study 2. Socially accepted people would not have a threatened sense of belonging or have a heighten goal for social acceptance. Therefore, the degree to which the processes proposed for socially excluded people would apply to socially accepted people is unclear and is another area for future research.

Lastly, the present studies were limited to having the benefactor as someone the participants never met before. Additionally, the current studies measured gratitude in an incidental way, that is, the gratitude measure was ostensibly an unrelated task that was detached from the social exclusion incident. Future work could expand on this aspect by manipulating the identity of the benefactor. For example, how grateful would a rejected individual feel about a kind act done for them by the person(s) who did the rejecting? Such a situation might pose a dilemma for the rejected individual and could be moderated by other factors such as trait differences in forgiveness or rejector identity (e.g., a stranger, a close friend, a lover).

In a broader sense, the effects of different motivational states on the emotion of gratitude remain largely unexplored. We believe that other fundamental social motivations (Kendrick et al., 2010) such as the desire for status, self-protection, and finding or maintaining a mate could also be related to gratitude. Previous work has found that manipulating these fundamental motives can influence person perception in a functional way that helps one reach heightened goals resulting from the induced motivational state (e.g., Maner et al., 2005; Maner, Miller, Moss, Leo, & Plant, 2012; Miller & Maner, 2012). Hence, insofar as gratitude serves specific functions and depends on appraisals of people and the situation generally, the intensity of gratitude may be affected by preexisting motivational states. Thus, novel predictions about the onset, intensity, and duration of emotions can be made based on the functional interplay between fundamental social motivations and social emotions.
Concluding Remarks

This research integrated functional evolutionary perspectives on motivation, emotion, and social cognition with a proximal appraisal perspective on gratitude. The current studies provide evidence that the fundamental social motivation for social belonging has implications for the emotion of gratitude. When need to belong was threatened, people low in a sense of entitlement reported and expressed gratitude stronger than participants whose need to belong was not threatened. Participants high in entitlement trended toward feeling less grateful and viewed the benefactor less positively in the excluded condition compared to the control conditions, but these differences were not statistically significant. Additionally, low entitlement socially excluded participants viewed the benefactor more warmly than those in the control condition, which mediated the increase in gratitude. Thus, altering fundamental social motivations can bias social cognition in a functional way and this in turn can influence the intensity of gratitude one experiences.
APPENDIX A

FLORIDA STATE UNIVERSITY IRB APPROVAL

The Florida State University
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673, FAX (850) 644-4392

RE-APPROVAL MEMORANDUM
Date: 6/11/2015
To: Michael MacKenzie
Address:
Dept.: PSYCHOLOGY DEPARTMENT
From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research
Social Rejection and Gratitude

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 5/11/2016, you must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.
By copy of this memorandum, the Chair of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: Roy Baumeister, Advisor
HSC No. 2015.15466

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673, FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 7/17/2014

To: Michael MacKenzie
Address:
Dept.: PSYCHOLOGY DEPARTMENT
From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Social Rejection and Gratitude

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 07/09/2014. Your project was approved by the Committee.
The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 7/8/2015 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Roy Baumeister, Advisor
HSC No. 2014.13113
APPENDIX B
CONSENT FORM EXAMPLE

INFORMED CONSENT FORM

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled “Social Memory.” This research is being conducted by Michael MacKenzie, a graduate student in the Department of Psychology at Florida State University working with Dr. Roy Baumeister, Professor in the Department of Psychology at Florida State University. I understand that this experiment may require me to write in detail about a specific event from my past. I understand that I will answer some questions about myself. I understand that I may make some ratings about my first impressions of others on how friendly and unfriendly they seem. Finally, I understand that I may report how I feel about the events that will occur during the experiment.

The total time commitment would be about 45-60 minutes and I will be compensated by receiving a full (1.0) credit point. I understand that my participation is totally voluntary, and I may stop participation at anytime. If I decide to stop participation, I will still be entitled to the credit point. All my answers to the questions will be confidential to the extent allowed by law and will not be connected to me by name or other identifying information. In addition, my name will not appear on any of the results. No individual responses will be reported. Only group findings will be reported. I understand that all data relevant to the study will be kept in a locked file cabinet in the researcher’s laboratory space for 10 years. I understand that I must be at least 18 years of age in order to participate.

I understand that there is a possibility of a minimal level of risk involved if I agree to participate in this study. I might experience anxiety or frustration when completing some of the questionnaires and tasks. The research assistant will be available to talk with me about any emotional discomfort I may experience while participating. I am also able to stop my participation at any time I wish.

I understand that there are no direct benefits for participating in this research project.

I understand that this consent may be withdrawn at any time without prejudice, penalty, or loss of benefits to which I am otherwise entitled. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact Michael MacKenzie, Florida State University, Department of Psychology, Psychology building room C or Dr. Roy Baumeister, Florida State University, Department of Psychology Room B437, 644-4200, baumeister@psy.fsu.edu, for answers to questions about this research or my rights. Group results will be sent to me upon my request. If I have questions about my rights as a subject/participant in this research, or if I feel I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633 or through e-mail at humansubjects@fsu.edu.

I have read and understand this consent form.

_______________________________   __________________ _____
Participant Signature     Date

FSU Human Subjects Committee approved on 7/16/2014. Void after 7/08/2015. HSC # 2014.13113
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minds: Affective influences on social cognition and behavior (pp. 21-39). New York: Psychology Press.


BIOGRAPHICAL SKETCH

Michael John MacKenzie was born in Syracuse, New York. He attended the State University of New York at Cortland and received his Bachelor of Science degree in 2008.