AN INTENTIONALITY ATTRIBUTION APPROACH TO EXAMINE THE EFFECTS OF REPEATED SOCIAL EXCLUSION ON MULTIPLE-GOAL REGULATION

By

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ABSTRACT

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Social exclusion refers to being ignored or left out by others in a group, and existing studies demonstrated inconclusive effects of social exclusion on work motivation and performance. Using a multiple-goal paradigm, I hypothesized social exclusion to have negative effects on team goal effort and performance, and positive effects on individual goal effort and performance, via team identification. I also expected these relationships to be stronger among individuals who made high intentionality attributions for being socially excluded, as compared to individuals who made low intentionality attributions. This was because intentionality attributions made individuals believe that their teammates mistreated them on purpose, thus triggering greater discontent and retaliatory motives among excluded individuals. Finally, I hypothesized these relationships to strengthen over time as individuals experienced repeated social exclusion. I conducted a lab experiment on a sample of 117 undergraduates to test my hypotheses. My results demonstrated that excluded individuals reported lower identification with their teams relative to included individuals. The results did not support an indirect effect of social exclusion \times intentionality via team identification on both individual and team goal performance after individuals were socially excluded for the first time, but showed that these indirect relationships became significant over time as individuals got excluded repeatedly. My findings offer important insights into how and when social exclusion predicts resource allocation between a team goal and an individual goal, and I discuss the implications and limitations.

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CHAPTER 1

INTRODUCTION

Social exclusion refers to being ignored or left out by others in a group (Baumeister & Tice, 1990; Williams & Sommer, 1997). In a survey conducted on 262 full-time employees from diverse industries, Fox and Stallworth (2005) found that 66% of them experienced silent treatment from their coworkers over a 5-year period. In another study, Hitlan and colleagues (2006) found that 13% of their 5,000 respondents have been excluded by others at work in the past six months. Several court cases in recent years have also passed social exclusion in the workplace as constituting an undesirable work environment (Danaher, 2013; Kageyama, 2013; Waddell, 1999). These findings suggest that social exclusion is a prevalent phenomenon in the workplace (D. L. Ferris, Brown, Berry, & Lian, 2008).

Organizational scholars typically regard social exclusion as a passive form of workplace bullying which encompasses behaviors undertaken to terrorize coworkers psychologically (Fox & Stallworth, 2005; Leymann, 1996). Numerous studies demonstrated that being excluded in the workplace is an unpleasant experience, and is in turn related to several negative work outcomes such as reduced job satisfaction (Hitlan, Cliffton, & DeSoto, 2006), lower display of prosocial behavior (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007), and greater counterproductive work behaviors (Hitlan & Noel, 2009). However, social exclusion is sometimes exercised with the purpose of sanctioning defiant members so as to promote cohesion and to enhance job performance in the group (Williams & Sommer, 1997). In support of this, some studies found that the autonomy to exclude members from subsequent interaction improved cooperation in teams (Hirshleifer & Rasmusen, 1989; Masclet, 2003). These mixed outcomes and implications associated with social exclusion in the workplace suggest that there is a lot to learn about the processes associated with workplace exclusion so as to better understand how it impacts work motivation and organizational behavior.

To shed light on these processes, my thesis uses a process model to study the effects of social exclusion on multiple-goal regulation of an individual goal and a team goal over time. Specifically, I investigate how social exclusion impacts the team identification of excluded individuals, and whether team identification in turn influences how excluded individuals allocate their resources between an individual goal and a team goal. I also look at whether this indirect relationship between exclusion and multiple-goal regulation differs as a function of the intentionality attribution made for being excluded. Lastly, I examine whether these relationships change over repeated exclusion episodes.

In addressing these questions, I aim to contribute to theory in several ways. First, using multiple-goal regulation as the dependent variable may provide a means to reconcile inconsistent findings on the effects of social exclusion on self-regulatory behaviors. This is because the multiple-goal paradigm involving an individual goal and a team goal enables me to examine whether social exclusion exercises similar influences on a task with only individual implications (i.e., individual goal) versus a task with social implications (i.e., team goal).

Second, the multi-wave design of my research helps to capture meaningful temporal patterns associated with the effects of social exclusion on motivation. As noted by Williams (2009), how individuals respond to exclusion is a dynamic process, and the same individuals can behave differently after being excluded depending on how they feel about and appraise the situation. This suggests that within-person variances exist in people's reactions to exclusion. However, most existing exclusion studies, including those looking at workplace ostracism or social exclusion, have a cross-sectional between-subjects design, which is inadequate in uncovering the dynamic nature of

ostracism. By using a longitudinal experimental design, this research can expose how the effects of exclusion on self-regulation unfold over time within and between individuals in a controlled environment, thus allowing comprehensive causal relationships to be established.

Third, using a longitudinal moderated mediation model allows me to better explain, instead of merely describe, how social exclusion affects motivation. By examining the role of team identification as a mediator between exclusion and multiple-goal regulation, the research proposes a pathway that exclusion takes to influence motivation. In addition, studying how this mediated relationship differs at high and low levels of intentionality attribution will allow me to identify boundaries associated with the relationship between social exclusion and motivation. The longitudinal element enables us to track the trajectory of behavioral changes following exclusion, thus addressing important questions like *when* exclusion can lead to positive outcomes and negative outcomes respectively. Such findings will inform scholars and practitioners of how to mitigate and manage the detrimental effects of workplace exclusion.

In the following sections, I first review existing studies and present an overview of antecedents, consequences, and moderators associated with workplace exclusion. Next, I build on extant findings to develop a theoretical model for the current research, where I argue that team identification serves as a mediator between exclusion and self-regulation of the individual and team goals, and that intentionality attribution moderates this relationship. I also propose hypotheses on how these relationships change over time. Finally, I present my method and results, before discussing the implications of my findings.

CHAPTER 2

THEORETICAL BACKGROUND

Motives Underlying Social Exclusion

Social exclusion refers to being ignored or excluded by others from a group interaction (Ciarocco, Sommer, & Baumeister, 2001; McGuire & Raleigh, 1986). Perpetrators of exclusion can have different motives, such as unintentional, punitive, defensive, and oblivious (Williams & Sommer, 1997). *Unintentional exclusion* occurs when the perpetrator is preoccupied with something else and ignores the victim accidentally. *Punitive exclusion* occurs when the perpetrator deliberately excludes the victim from social interaction to punish them for having done something wrong. *Defensive exclusion* is carried out as a preemptive measure when a person ignores or avoids others due to the anticipation of negative interaction. Lastly, *oblivious exclusion* happens when the perpetrator does not think that the victim is worthy of their attention (Williams & Sommer, 1997).

Each type of exclusion carries unique meaning for the excluded individuals, and can trigger different types of response, especially if excluded individuals are able to identify the motive accurately (Williams & Sommer, 1997). For example, excluded individuals who are aware that they are facing punitive exclusion may take corrective action for their error so as to be accepted by his or her group members again, while individuals facing oblivious exclusion may experience low self-worth and withdraw more from people. However, the link between the motive of perpetrators and the response of excluded individuals can be extremely complex because excluded individuals are often unclear of the exact reasons why they are excluded. In such circumstances, excluded individuals' attributional perceptions will determine how they react and respond to being excluded (Williams & Sommer, 1997).

The Experience of Being Excluded

Nevertheless, regardless of the underlying motive, scholars generally demonstrated that being excluded is an unpleasant experience (Lustenberger & Jagacinski, 2010; Williams & Nida, 2011). Williams (2009) conceived the need-threat temporal model to explain how individuals cope with being excluded. According to this model, individuals undergo three stages after being excluded: *reflexive* (immediate), *reflective* (coping), or *resignation* (long-term). In particular, immediately following exclusion, victims go through the reflexive stage, where they feel angry and sad about being excluded because they perceive their fundamental needs such as sense of belonging, self-esteem, control, and meaningful existence to have been threatened. In the next stage, individuals reflect on the meaning and causes of being excluded, and decide how they will react and cope with the exclusion. If exclusion continues for a prolonged period, individuals are likely to experience depletion of coping resources and resign themselves to the exclusion. When that happens, they may experience helplessness, and give up trying to change the situation.

Social Exclusion in the Workplace

In recent years, scholars have begun looking at social exclusion specifically in the workplace context (Balliet & Ferris, 2012; Robinson, O'Reilly, & Wang, 2013; Williams & Sommer, 1997). Workplace exclusion occurs when individuals are being rejected or excluded by their coworkers from social or work interactions (D. L. Ferris, et al., 2008). Several studies have examined the effects of exclusion on various work outcomes such as motivation and performance (Lustenberger & Jagacinski, 2010), cooperation (Masclet, 2003), prosocial behavior (Balliet & Ferris, 2012; Twenge, et al., 2007), and counterproductive work behavior (Hitlan & Noel, 2009). Several factors, such as gender (Williams & Sommer, 1997), social anxiety (Leary, 1990), and future orientation (Balliet & Ferris, 2012) moderate the effects of exclusion on various work outcomes. These findings have built

up a nomological network associated with exclusion, and I will review them in the following sections.

Antecedents of Social Exclusion in the Workplace

Most existing research looking at the antecedents of workplace exclusion are founded in the theory of victim precipitation. According to this theory, personality traits shape behaviors, and individuals with certain traits are more likely to become targets of social exclusion than others (Curtis, 1974; Drapkin & Viano, 1974). For instance, Wu, Wei, and Hui (2011) investigated how employees' extraversion, agreeableness, and neuroticism predict experiences of being socially excluded in the workplace. They surveyed 443 workers, and found that workers extraversion and agreeableness negatively predicted social exclusion from coworkers, while neuroticism positively predicted social exclusion from coworkers. They explained that extraverts are less likely to face exclusion because they are sociable and tend to seek positive interactions with their coworkers. Also, agreeable people are friendly, trusting, and tolerant, and have less chances of getting into conflicts with others, thus reducing their chances of being excluded. On the other hand, neurotic individuals are more sensitive and tend to express hostility to coworkers, which can provoke coworkers and elicit exclusion from them (Wu, et al., 2011). In another research, Scott, Restubog, and Zagenczyk (2013) conducted two field surveys on employees, and found that employees who displayed workplace incivility were more likely to be distrusted and to become targets of social exclusion in the workplace. They also found that this relationship became more positive when peers perceived the target employees as weak social exchange partners as opposed to valuable social exchange partners.

Outcomes Associated with Social Exclusion in the Workplace

Cooperation. Exclusion is sometimes carried out with the adaptive purpose of punishing deviant members or deterring members from deviating from group norms (Gruter & Masters, 1986;

Lancaster, 1986). Hirshleifer and Rasmusen (1989), and Masclet (2003) explained that exclusion is a form of peer pressure and can be adaptively used to discipline and sanction defective members to promote or enhance cooperation in a team. In other words, exclusion serves the functional purpose of enforcing group norms and promoting cooperation. Indeed, it was found that when people were in teams which had the opportunity to exclude detractors, they maintained consistent contributions to the public good pool throughout 31 rounds of the game (Masclet, 2003). Also, members tended to increase their contributions to the common pool in a subsequent round if they were excluded in a previous round for not cooperating. On the other hand, in teams where exclusion was not allowed, members tended to free-ride, with member contributions decreasing significantly over time, where nearly 40% of the members contributed nothing to pool in the final round of the game (Masclet, 2003). These findings suggest that social exclusion could have a positive and adaptive function of upholding group norms if imposed appropriately. However, as discussed earlier, the experience of being excluded is an uncomfortable experience despite its underlying motive. Therefore, it is possible for exclusion to also lead to suboptimal outcomes (Williams & Nida, 2011), and the studies in the following sections demonstrated some of these detrimental outcomes.

Prosocial behavior. Prosocial behavior refers to discretionary behaviors that benefit another individual, group, or organization (Brief & Motowidlo, 1986). Results from seven experiments conducted by Twenge et al. (2007) showed that being excluded could incapacitate individuals' ability to feel empathy towards others, and reduce their tendency to engage in prosocial behavior such as volunteering for further lab experiments and cooperating in a social dilemma game. Van Beest and Williams (2006) found a similar negative association between being excluded and prosocial behavior in their experiment too. Finally, Thau, Aquino, and Poortvliet (2007) replicated these findings in a field study, where employees who perceived lower than expected acceptance

from coworkers were less likely to engage in interpersonally helpful behaviors. These findings provide general support for exclusion being associated with less prosocial behavior.

Counterproductive work behavior. Counterproductive work behavior refers to acts deliberately conducted to harm other employees or the organization, and includes a wide range of behaviors from absenteeism, gossiping, to physical violence (Spector et al., 2006). From field data collected from more than 100 employees, Hitlan and Noel (2009) found that exclusion from supervisor, but not exclusion from coworkers, predicted both organizational and interpersonal counterproductive work behavior. In another study, it was found that individuals excluded in an online Cyberball game were more likely to behave aggressively to a stranger subsequently (Warburton, Williams, & Cairns, 2006). In sum, being excluded increases excluded individuals' tendency to engage in behavior detrimental to the organization and peers.

Work attitudes and health. Other than behavioral outcomes, scholars have also studied the relationship between social exclusion in the workplace and work attitudes and health. In particular, Hitlan et al. (2006) found that experiencing workplace exclusion was significantly related to lower supervisor satisfaction and co-worker satisfaction in both males and females. Excluded male employees also reported poorer psychological health such as anxiety, loneliness, and depression, and greater self-esteem threat. They explained that people seek to establish cordial relationships with others, even at work, and when they fail to do so, they are not able to derive satisfaction (Hitlan, Cliffton, et al., 2006). In another field study involving 1015 employees, O'Reilly and Robinson (2009) found exclusion in the workplace to negatively predict feeling of belongingness, which was in turn associated with poorer in-role behavior and extra-role behavior, and greater withdrawal behavior. Similarly, they explained that people have a fundamental need to build relationships with their coworkers, and when this need is not fulfilled, their sense of belonging is undermined, thus

reducing their motivation to contribute to their organization (O'Reilly & Robinson, 2009). Again, these findings demonstrate how social exclusion in the workplace leads to unfavorable work attitudes and health.

Nevertheless, not all studies found unequivocal positive or negative effects of exclusion. In particular, there are inconclusive findings on how exclusion influences self-regulation and performance. I review these studies in the following section.

Job performance. Investigating how exclusion impacts job performance is a primary concern of organizational scholars. Lustenberger and Jagacinski (2010) found that individuals who were excluded in an online ball-tossing game called Cyberball performed more poorly on a subsequent individual word-search task than individuals who were included in Cyberball game. Their results also revealed that exclusion significantly lowered positive mood, which in turn predicted poorer intrinsic motivation on the word-search task (Lustenberger & Jagacinski, 2010). In another field study by Leung, Wu, Chen, and Young (2011) where they collected data from hotel service staff at three time points over a period of six months, workplace exclusion was significantly and negatively related to service performance, and this relationship was mediated by decreased work engagement. The authors explained that it could be because exclusion by coworkers depleted individuals' energy, causing them to disengage from their work and perform more poorly. However, interestingly, Williams and Sommer (1997) found exclusion to have a more nuanced impact on performance, where excluded individuals self-reported higher effort for a collective task than an individual task (Williams & Sommer, 1997). They explained that it could be because exclusion triggered individuals' need for belongingness, thus motivating them to work harder on the collective task in order to gain acceptance into their groups. This finding suggests that the framing and

operationalization of performance (individual task vs. team task) could lead to different findings on the effects of exclusion on motivation and performance.

Moderating Variables

In attempts to reconcile some of these inconclusive findings, some scholars examined factors that moderate the relationships between exclusion and work outcomes.

Gender. In their study, Williams and Sommer (1997) found males and females to react differently to exclusion by coworkers. Specifically, they induced exclusion in participants using the Cyberball game before participants worked on a task to generate uses for an object. The task was framed as either an individual task or a group task. They found that excluded females working on the task framed as a group task tended to social-compensate by generating significantly more solutions than those working on the task framed as an individual task. On the other hand, whether the task was framed as an individual task or a team task did not matter to the excluded male participants. They concluded that females were more likely than males to social-compensate after being excluded, and argued that it could be because females tended to question themselves after being excluded and ended up increasing their contribution to the group task so as to improve their group mates' impression of them. Conversely, males coped with exclusion by convincing themselves that the group did not matter to them so as to protect their self-esteem. In another study, Hitlan et al. (2006) found that both male and female employees reported lower supervisor satisfaction and coworker satisfaction after being excluded. However, only males but not females experienced poorer psychological health and greater esteem threat from the exclusion experience. They proposed that the more detrimental effects on excluded males could be due to male employees placing more emphasis on their work performance when defining their self-identity as compared to females (Hitlan, Cliffton, et al., 2006).

Social anxiety. Besides gender, social anxiety has also been found to influence how people react to social exclusion (Oaten, Williams, Jones, & Zadro, 2008; Zadro, Boland, & Richardson, 2006). Social anxiety arises when individuals doubt that they are making a favorable impression on others (Leary, 1990). In two experiments conducted by Oaten et al. (2008), they induced exclusion in participants and measured participants' self-regulatory behavior (i.e., whether they were able to resist unhealthy food and drinks) immediately after the exclusion task and after a 45-minute period. They found that exclusion had a negative impact on self-regulation where individuals ate more unhealthily after facing social exclusion. They also found that only individuals with high social anxiety, but not those with low social anxiety, continued to experience the negative feelings of being excluded and continued eating unhealthily after the 45-minute delay.

Future orientation. In addition to gender and social anxiety, Balliet and Ferris (2012) proposed that whether individuals would engage in prosocial behavior or not after being excluded depended on their temporal orientation. Temporal orientation is the preference of relying on the past, present, or future to guide current decisions (Holman & Silver, 1998). Future-oriented individuals give greater weight to potential future outcomes when making decisions (Holman & Silver, 1998). According to Balliet and Ferris (2012), individuals face a social dilemma when deciding whether to engage in prosocial behavior. Future orientation predisposes individuals to place greater weight on the potential long-term benefits of prosocial behavior, such as gaining acceptance or protecting the collective good of the group in the long run, thus making them more likely to engage in prosocial behavior after being excluded . They conducted three studies, two laboratory experiments and one field study, and their results supported their hypotheses where individuals with high future orientation performed more prosocial acts to others who have previously excluded them, than individuals with low future orientation.

Relational identity. Individuals' relational identity (independent vs. interdependent) influences their reactions to exclusion as well (Nakashima, Kawamoto, Isobe, & Ura, 2013). People with an independent identity see themselves as a unique and separate individual from others, while those with an interdependent identity view themselves to be closely connected to other people (Triandis, 1989). In two studies involving 80 and 78 undergraduates respectively, Nakashima et al. (2013) found that students with an interdependent identity were more affected by the recall of a social exclusion experience. These people reported lower identification with their groups and lower self-worth after recalling a social exclusion experience, while those with an independent identity did not exhibit such effects. Also, the study found that interdependent people were more motivated to establish connections across their overall networks to restore their sense of security as compared to independent people (Nakashima, et al., 2013).

Gaps in Existing Literature and Contributions of the Current Study

Findings from the above studies form a comprehensive scaffold guiding scholars' predictions of how individuals with certain traits such as gender or social anxiety behave on the various outcome domains after being excluded. In other words, they elucidate the boundaries of the effects of exclusion on various outcomes. However, it is surprising that few studies to date have utilized a process model to understand the effects of exclusion on work outcomes. For example, while we know from the above studies that a female is more likely than a male to invest more effort on the team task after being excluded, and that a socially anxious person is more likely to fail in self-regulation after being excluded, we do not know exactly *why* and *when* these happen. Most of the authors have attempted to explain their findings, but few have tested these speculations empirically in their studies (Hitlan, Cliffton, et al., 2006; Twenge, et al., 2007). One study that have attempted to to tease out the mediating process between exclusion and outcome was a study by Chow, Tiedans, and

Govan (2008). They found in their experiment that some participants felt angry while some felt sad after being excluded. Those participants who felt angry engaged in antisocial behavior subsequently, while those who felt sad did not (Chow, et al., 2008). The authors explained that it was because anger put individuals in a "fight" mode and made them more likely to retaliate to mistreatment. Such studies demonstrate the usefulness of process models in explaining psychological processes associated with exclusion, because process models allow us to track the pathways linking exclusion and its relevant outcomes, and allow us to predict and perhaps even manage responses to exclusion more optimally. The following sections discuss how my thesis aims to overcome the shortcomings in the existing theory.

Individual task vs. team task. Existing studies found mixed results on how workplace exclusion impacts performance, with some seeing an improvement in performance of excluded individuals (Williams & Sommer, 1997) while others seeing a drop in performance (Leung, et al., 2011; Lustenberger & Jagacinski, 2010). I argue that such inconsistent findings could be due to the nature of tasks used in existing studies. As noted by Lustenberger and Jagacinski (2010), and Williams and Sommer (1997), exclusion is a social phenomenon, and is thus expected to exercise unique influences on motivation on a *collective* task versus an *individual* task. Existing studies often utilized a single individual or team task, but not both, to evaluate the effects of exclusion on performance, and this could be the reason why findings have been inconclusive. Integrating findings from existing studies, it is likely for social exclusion to direct the excluded member's attention to the team task and away from the individual task (Lustenberger & Jagacinski, 2010; Williams & Sommer, 1997). However, exclusion may also lower the excluded individual's sense of belonging to the team (Williams, Cheung, & Choi, 2000), and cause him or her to focus on individual goal instead of team goal. To test these plausible propositions, I use a multiple-goal paradigm consisting of an

individual goal and a team goal to examine how individuals allocate their resources between the two goals after being excluded.

A multiple-goal environment refers to a situation where one has to work on two or more goals simultaneously (DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004; Kernan & Lord, 1990). In the multiple-goal literature in organizational psychology, the words "goals" and "tasks" are used almost interchangeably, where each task is completed as a natural course of action to achieve the respective goal. In the organizational context, employees often have to balance the demands of individual goals and team goals. For example, an employee may have an individual goal of completing a sales report for an existing product, and a team goal where he has to brainstorm ideas for a new product his team is developing. In this case, the employee has to decide where and how much resources to allocate into each goal (DeShon, et al., 2004; Pashler, 1994). The multiple-goal paradigm consisting of an individual goal and a team goal enables me to tease out any differential effects of social exclusion on individuals' motivation to work on the individual goal versus the team goal.

Repeated exclusion and within-person variance. Next, existing studies have generally adopted a between-persons approach to study the effects of exclusion, and found traits such as future orientation and gender to predict responses to exclusion (Balliet & Ferris, 2012; Bozin & Yoder, 2008). However, individuals' response to exclusion possibly a self-regulatory state because it depends on how individuals utilize their resources to cope with it at that point of time (Williams & Nida, 2011). As discussed in the temporal need-threat model and motivation theories, how individuals regulate their motivation and respond to negative treatments can change over time, which suggests that within-person differences in response patterns to exclusion exist (Williams & Nida, 2011). Despite such theoretical propositions, no study has explicitly examined how psychological

processes underlying the experience of social exclusion unfold over time. All of the studies I reviewed above looked at exclusion as a one-time event in their designs (Balliet & Ferris, 2012; Ciarocco, et al., 2001; Hitlan & Noel, 2009; Williams & Sommer, 1997), which may not reflect how exclusion occurs in real life. In particular, social exclusion is a social phenomenon resulting from dynamic interpersonal interactions that fluctuate over time (Williams, 2009). Therefore, it is likely for social exclusion to be dynamic too. For example, an employee can be excluded by his coworkers once and never again, or intermittently, or all the time. This suggests that previous studies with a between-persons static conceptualization of social exclusion are not adequate in uncovering the long-term regulatory behavior that individuals engage in to deal with exclusion. This limits our understanding of how individuals cope with the experience of being excluded. To address this shortcoming, I use a multiple-trial design to study the effects of exclusion on self-regulation of the individual goal and team goal so as to capture the effects of social exclusion on multiple goal regulation over time.

Intentionality attribution. Several scholars have recognized that intentionality attribution can determine how individuals cope with and react to negative events (Dasborough & Ashkanasy, 2002; Fragale, Rosen, Xu, & Merideth, 2009; Jones & Kelly, 2010). For example, Jones and Kelly (2010) noted that, if individuals perceive that others are excluding them from social interactions on purpose, they are more likely to report less liking for the perpetrators. Such findings suggest that intentionality attribution is an important factor shaping victims' reactions to exclusion. However, few studies have empirically evaluated how intentionality attribution impacts excluded individuals' self-regulatory motivation, or how repeated social exclusion experiences impacts intentionality attributions made (Ahn & Bailenson, 1996; Morris & Larrick, 1995). Taking these points together, I investigate whether intentionality attribution changes the relationship between exclusion and the

regulation of the individual and team goals, and whether excluded individuals make stronger intentionality attributions after experiencing repeated social exclusion.

Summing up the above points, I investigate how individuals make intentionality attributions for being socially excluded, and how the attributions influence their regulation an individual goal and a team goal. I also examine whether and how these patterns change over time. In doing so, my thesis provides a fresh perspective for understanding how individuals cope and respond to repeated social exclusion in the workplace, and findings from my study will hopefully provide scholars and practitioners with insights into how to minimize detrimental effects and maximize positive effects associated with social exclusion. I present my theoretical model and hypotheses in the following sections.

CHAPTER 3

DEVELOPMENT OF THEORETICAL MODEL

Overview of Model

My model hopes to capture the interactive effects of exclusion and intentionality attribution on team identification and multiple-goal regulation both for the first time individuals experience exclusion, and also over time when individuals experience repeated exclusion episodes. Hypotheses 1 to 4b are proposed with regard to the first social exclusion experience, while Hypotheses 5a to 5c propose how these relationships change over repeated exclusion episodes. Figure 1 presents Hypotheses 1 to 3d in my theoretical model.

Exclusion and Team Identification

Exclusion happens when team members exclude someone from the team interaction (Williams & Sommer, 1997). The need to belong is fundamental to all humans (Baumeister & Leary, 1995), and being excluded from the team interaction signals to victims that they are not valued by their team members (Williams, 2007; Zadro, Williams, & Richardson, 2004). In their sample of 1,486 participants across 62 countries, Williams, Cheung, and Choi (2000) found that the more individuals were ignored during an online game by their team members, the more they reported losing their sense of belonging. Jones and Kelly (2010) replicated these results and found that participants who were left out of an information loop reported low satisfaction on their need for belonging. They also found exclusion to negatively predict how much participants liked their team members (Jones & Kelly, 2010).

Extending these findings, I expect excluded member to experience a drop in their identification with the team after being excluded by their team members for the first time. Team identification refers to the extent to which one's image of oneself is tied to his or her membership in

a team (Ellemers, Kortekaas, & Ouwerkerk, 1999; Van Der Vegt, Van De Vliert, & Oosterhof, 2003). Being excluded deprives individuals of their belonging to the team. This threatens individuals' natural desire to be valued and included, and creates a cognitive dissonance (Festinger, 1957). In order to resolve this dissonance, excluded individuals reevaluate their attitude toward their team by detaching their team membership from their personal identity so as to cushion the negative impact of exclusion on their self-esteem (Bem, 1967; Davis & Jones, 1960). In other words, excluded individuals attempt to convince themselves that it is fine to be excluded because they do not care to be part of the team. As a result of this, excluded individuals are likely to exhibit lower team identification than included individuals.

Hypothesis 1. After experiencing exclusion for the first time, excluded individuals report lower identification with their teams than included individuals.

Intentionality Attribution as a Moderator

Attributions theory posits that people try to make sense of why an event has happened by making attributions, and these attributions shape how they respond to the event (Martinko, Douglas, & Harvey, 2006; Weiner, 1985). There are several dimensions on which individuals can make attributions, such as locus of causality, stability, controllability, and intentionality (G. R. Ferris, Bhawuk, Fedor, & Judge, 1995; Weiner, 1985). In this thesis, I am particularly interested in examining whether *intentionality* attribution moderates the relationships between social exclusion and multiple-gaol regulation because intentionality is an important determinant of people's retaliatory responses to negative events (G. R. Ferris, et al., 1995).

Applied to the context of my thesis, intentionality attribution refers to how much the victims perceive that others are excluding them purposely rather than accidentally (G. R. Ferris, et al., 1995; Malle & Knobe, 1997). According to Malle and Knobe (1997), people believe that an act has been

performed intentionally if they perceive that the perpetrator to have committed the act with a conscious and effortful intention. Whether victims attribute the cause of exclusion to be intentional or unintentional influences how they interpret and label their experience of being excluded (Dasborough & Ashkanasy, 2002). Specifically, when individuals perceive that others have intentionally performed an undesirable act to them, they are more likely to respond negatively to it (Fedor, 1991; G. R. Ferris, et al., 1995; Jones & Kelly, 2010).

As reviewed earlier, there can be many motives for being excluded from a social interaction, and many times, the perpetrators' motives may not be clear to the victims. For example, if an employee is excluded from an email discussion thread and does not confront his or her teammates directly, he or she may perceive this act as intentional or accidental. In general, the more intentional an act is attributed to be, the more negatively victims evaluate it. For example, in two experimental studies, Fragale, Rosen, Xu, and Merideth (2009) found that when observers were more likely to recommend severe punishments for actors who did a harmful act intentionally than those who did so unintentionally. In addition, Vaish, Carpenter, and Tomasello (2010) found that children avoided helping those who intentionally caused harm to others as compared to those who accidentally caused harm to others. In other words, once a negative act is determined to be done intentionally, it communicates malice, and makes victims and observers respond negatively to it (Gray & Wegner, 2008).

Applied to my research, it is likely for individuals who perceive themselves to have been excluded by their teammates intentionally to experience lower team identification than those who perceive the exclusion to be unintentional. This is because victims tend to believe that an act is unpreventable and unchangeable when it is conducted intentionally (Jones & Kelly, 2010). In this case, since victims believe that they cannot do anything to improve their situation, they are likely to

reappraise their liking for their team and the importance they place in their team membership, thus resulting in low team identification, and little effort invested into the team goal subsequently. This proposition is supported by an experimental study conducted by Jones and Kelly (2010), where they found that participants who were intentionally left out from an information loop reported lower liking for their teammates. On the other hand, exclusion may not have a deleterious effect on team identification if victims perceive it to be unintentional. This is because victims are likely to believe that the situation is not permanent and is preventable when they perceive it to be unintentionally done (Jones & Kelly, 2010). In other words, excluded individuals are likely to believe that they can do something to change their situation and be accepted by their team again. Taking these findings together, I make the following hypotheses.

Hypothesis 2. In appraising the first experience of being excluded, intentionality attribution moderates the negative relationship between exclusion and team identification, i.e., the slope between exclusion and team identification is more negative for individuals who make high intentionality attributions than those who make low intentionality attributions.

Exclusion and Multiple-Goal Regulation via Team Identification

A multiple-goal environment refers to a situation where one has to work on two or more goals simultaneously (DeShon, et al., 2004; Kernan & Lord, 1990). According to the capacity sharing theory, the total amount of resources that individuals can allocate to multiple goals is finite (Tombu & Jolicœur, 2003). Therefore, the pursuit of multiple goals and the execution of multiple tasks often require some degree of trade-off on each task, where the performance on one task can only be improved at the expense of the other task when individuals are performing at their maximum capacity (Navon & Miller, 1987).

Expanding Hypothesis 1, I expect excluded individuals to invest less effort into the team goal and more effort into the individual goal due to a lower team identification. According to literature on team processes, team identification reflects the extent to which members are committed to the team and its goal(s) (Marks, Mathieu, & Zaccaro, 2001). Specifically, members with high team identification are more likely to prioritize the team goal over their own individual goals (Van Der Vegt & Bunderson, 2005). This is because team identification motivates members to overcome obstacles and to work with their team members towards common team objectives (Kearney, Gebert, & Voelpel, 2009; Van Der Vegt & Bunderson, 2005). Building on the previous hypothesis, it is likely that lower team identification experienced by excluded individuals will cause them to place less value on the team goal as compared to their individual goal (Van Der Vegt & Bunderson, 2005). This will in turn result in them channeling less effort into the team goal and more effort into the individual goal.

Hypothesis 3a. Team identification positively predicts team goal effort.

Hypothesis 3b. Team identification negatively predicts individual goal effort.

Hypothesis 3c. Team identification positively predicts team goal performance.

Hypothesis 3d. Team identification negatively predicts individual goal performance.

Hypothesis 4a. Exclusion \times intentionality have an indirect relationship with team goal effort via team identification, i.e., exclusion is more negatively related to team goal effort via team identification when there is high intentionality attribution than when there is low intentionality attribution.

Hypothesis 4b. Exclusion \times intentionality have an indirect relationship with individual goal effort via team identification, i.e., exclusion is more positively related to individual goal effort via

team identification when there is high intentionality attribution than when there is low intentionality attribution.

Hypothesis 4c. Exclusion \times intentionality have an indirect relationship with team goal performance via team identification, i.e., exclusion is more negatively related to team goal performance via team identification when there is high intentionality attribution than when there is low intentionality attribution.

Hypothesis 4d. Exclusion × intentionality have an indirect relationship with individual goal performance via team identification, i.e., exclusion is more positively related to individual goal performance via team identification when there is high intentionality attribution than when there is low intentionality attribution.

Longitudinal Relationships between Exclusion, Attributions, Team Identification, and Multiple-Goal Regulation

Majority of exclusion research recognizes individuals' reactions and responses to social exclusion to be a dynamic process. For example, in an economic experiment studying how repeated exclusion influenced contributions to a public good, members reacted differently in the first time they were being excluded as compared to when they were being excluded repeatedly (Maier-Rigaud, Martinsson, & Staffiero, 2010). In an attempt to explain how exclusion processes are temporally bound, Williams (2009) proposed the temporal needs-threat model to conceptualize how the interplay of relevant factors unfold over time to predict victims' reactions and response to exclusion. According to this model, when individuals first notice they are being excluded, the reflexive reaction is experiencing negative emotions such as hurt and pain. Next, they will appraise the situation, such as reflecting on the meaning of being excluded and decide how they want to cope with it. Lastly, if individuals are exposed to exclusion constantly over time, their desire and motivation to be accepted

by the team may deplete, resulting in feelings of helplessness and resignation to the exclusion (Case & Williams, 2004; Williams, 2009).

Applying the theory of learned helplessness to explain this, when individuals are subject to exclusion repeatedly, they are more likely to believe that exclusion is intentional and unpreventable (Case & Williams, 2004), causing them to feel helpless about their predicament (Maier & Seligman, 1976; Seligman, 1972). This is supported by early experiments conducted by Maier and Seligman (1976) on animals where they found that when animals were exposed to electrical shocks for the first time, they would try to escape. However, when the animals were shocked repeatedly, they gave up escaping and accepted the shocks to be uncontrollable and unpreventable. Transferred to our context, when individuals get excluded from social interaction over and over again, they will experience learned helplessness and be more likely to perceive the act of exclusion to be deliberate and not random or accidental.

Hypothesis 5a. Intentionality attribution increase over time among repeatedly excluded individuals as compared to repeatedly included individuals.

In addition, when individuals become helpless, they are more likely to give up putting in extra effort on the team goal in hope of gaining acceptance by their teammates. In support of this, Dweck and Reppucci (1973) found that children who attributed negative performance feedback to unchangeable causes were more likely to report feeling helpless, and tended to give up on the task subsequently. Also, Dor-Shav and Mikulincer (1990) found that, when participants experienced failure on an experimental task continuously for four times, most of them were likely to attribute the repeated failure to causes that they could not change, and were more likely to give up or perform poorly on the task subsequently (Dor-Shav & Mikulincer, 1990). Based on these findings, I propose

the following hypotheses regarding repeated exclusion and excluded individuals' motivation on the team goal.

Hypothesis 5b. There is an increasingly negative relationship between intentionality and team identification over time among individuals who face repeated social exclusion than among individuals who do not experience social exclusion, i.e., intentionality \times time interaction on team identification differs significantly between excluded and included individuals.

Hypothesis 5c. There is an increasingly negative indirect relationship between intentionality and team goal effort via team identification over time among individuals who face repeated social exclusion than among individuals who do not experience social exclusion, i.e., intentionality \times time interaction on team goal effort via team identification differs significantly between repeatedly excluded and included individuals.

Hypothesis 5d. There is an increasingly positive indirect relationship between intentionality and individual goal effort via team identification over time among individuals who face repeated social exclusion than among individuals who do not experience social exclusion, i.e., intentionality × time interaction on individual goal effort via team identification differs significantly between repeatedly excluded and included individuals.

Hypothesis 5e. There is an increasingly negative indirect relationship between intentionality and team goal performance via team identification over time among individuals who face repeated social exclusion than among individuals who do not experience social exclusion, i.e., intentionality × time interaction on team goal performance via team identification differs significantly between repeatedly excluded and included individuals.

Hypothesis 5f. There is an increasingly positive indirect relationship between intentionality and individual goal performance via team identification over time among individuals who face

repeated social exclusion than among individuals who do not experience social exclusion, i.e., intentionality \times time interaction on individual goal performance via team identification differs significantly between repeatedly excluded and included individuals.

CHAPTER 4

METHOD

Participants

I recruited 314 participants from the HPR system at Michigan State University to participate in my research. Participants reported to the laboratory in sessions of three to eight. Each experiment session lasted for 90 minutes, and each participant received three HPR credits as compensation. I had to drop the data from one session because the Qualtrics online server broke down during the experimental session, and participants could not complete the session (n = 6). I also dropped data from participants who indicated that they have played the Cyberball game before (n = 4). This resulted in valid data from 304 participants who were randomly assigned into five conditions (Control Condition: included in all Cyberball trials; Condition 1: excluded in the first Cyberball trial, and included in the next three trials; Condition 2: excluded in the first two Cyberball trials, and included in the next two trials; Condition 3: excluded in the first three Cyberball trials, and included in the last trial; Condition 4: Excluded in all four Cyberball trials). However, I realized that only data from two conditions (i.e., Control Condition and Condition 4) were relevant and sufficient for testing my hypotheses. This was because I wanted to examine the linear relationships between repeated social exclusion versus repeated inclusion over time, so I only needed data from the two conditions where participants were repeatedly included versus repeatedly excluded for all rounds of Cyberball game. Therefore, the eventual sample used for my data analyses consisted of 117 participants $(n_{Control} = 60; n_{Condition4} = 57)$. Their mean age was 19.42 (SD = 1.37), 67.5% were female, and 65.8% were Caucasian.

Design and Procedure

Once participants reported to the laboratory, they read and signed the informed consent form. I led each participant to a computer kiosk. On the computer, participants completed the baseline survey measuring the control variable of negative affectivity and demographics. Next, to create the team context, I informed participants that they would be randomly grouped into a team with two other participants who were currently participating in the experiment in either the same room or another room. This was actually not true, and the teammates were fictitious. Participants then spent the next two minutes typing a 50-word introduction of themselves, which I told them would be shown to their teammates. At the end of two minutes, participants submitted their introductions, and read the introductions of their fictitious teammates (shown in Appendix A). They then completed the baseline (Time 0) measure for team identification. Next, I introduced the Objects Classification Task (OCT) and explained the multiple-goal paradigm to them. Participants then engaged in a 3-minute trial to familiarize themselves with the task. I told participants they would be completing several rounds of this task in the entire experiment session, but did not tell them exactly how many rounds. This was to prevent the end-game effect, where participants tended not to cooperate (i.e., not work on the team goal) in the last round of multiple-wave interaction games (Morehous, 1966; Normann & Wallace, 2012). After the practice trial, participants spent six minutes performing the first round of the OCT. At the end of six minutes, they submitted their solutions, and the computer screen showed them their actual performance feedback. The computer also displayed the bogus results of the two other fictitious teammates on the team task. The teammates' results were random values between 12 and 31 points, derived from plus/minus one standard deviation of the mean score on the task obtained in the pilot test (M = 21.29, SD = 9.46).

Next, I informed the participants they would engage in a ball-tossing game, Cyberball, with their teammates to take a break before the next OCT round. I introduced participants to the Cyberball game, which was meant to manipulate exclusion. Participants completed the Cyberball game for the next three minutes. In actuality, the Cyberball game used fictitious teammates whose ball-tossing patterns were formulated to manipulate exclusion. At the end of the game, participants completed measures of intentionality attribution and team identification, before returning to complete the next round of the OCT. This whole procedure repeats four times.

In total, participants completed five rounds of OCT including the first one which acted as a baseline performance measure, and four rounds of Cyberball in between every round of OCT. At the end of the session, participants responded to a question asking if they had played the Cyberball game before, and provided demographic information. I debriefed the participants and explained to them the true purpose of the Cyberball game. I also let participants know that the teammates were fictitious so as to undo any detrimental impacts caused by the social exclusion.

Social Exclusion Manipulation with Cyberball Game

I manipulated social exclusion using the Cyberball game (Williams, et al., 2000; Williams, Yeager, Cheung, & Choi, 2012). In this game, participants took part in a ball-throwing interaction task on the computer during which the participant is excluded (exclusion manipulation) or included (inclusion manipulation) from throwing and receiving the ball from two other teammates. The teammates were not real participants, instead they were characters programmed by the computer. Participants in the excluded condition received and tossed the ball twice at the beginning of the game, and were excluded for the rest of the game while the other two teammates toss the ball to each other. Participants in the included condition received and tossed the ball for one-third of the time. Each Cyberball round was programmed for 45 throws lasting for approximately 3 minutes, as per the
procedure in existing studies that have successfully used this game to manipulate exclusion (Boyes & French, 2009; Bozin & Yoder, 2008; Williams & Jarvis, 2006; Williams & Nida, 2011). Participants in the experimental condition faced social exclusion in all four rounds of the Cyberball game, while participants in the control condition were included in all four rounds of the Cyberball game. As noted above, I collected data for conditions in which participants were excluded for less than four rounds of the Cyberball game, but I determined that only those who were included and excluded for all four rounds were relevant for testing the hypotheses.

To prevent effect bias in my actual data collection caused by manipulation check, I conducted a manipulation check for the Cyberball game using a separate equivalent sample (n = 31). All participants engaged in two Cyberball games, one in which they were included and one in which they were excluded, in random order. They then responded to three manipulation check items provided by the creators of the Cyberball game (Williams, et al., 2000). An example item was, "It seems I was not included in the ball toss game (1 = strongly disagree; 5 = strongly agree)." Results supported the manipulation, where individuals reported significantly higher mean on the check items when they were excluded (M = 4.34, SD = .77) than when they were included (M = 1.88, SD = .46), t(30) = 17.96, p < .05. Appendix B shows the interface of the game and the manipulation check items.

Task for the Multiple-Goal Paradigm

As I was interested in assessing participants' regulation towards both the team goal and individual goal during the experiment, I needed to use a similar task for both goals so task difficulty, task valence, and required skills were kept constant across the two goals (Schmidt & DeShon, 2007). Also, the task had to elicit effort and performance in an objective and straightforward manner. Existing studies on multiple-goal regulation have used various tasks for the multiple-goal paradigm. One of these was the course scheduling task (Earley & Kanfer, 1985; Schmidt & DeShon, 2007; Schmidt & Dolis, 2009; Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000). In this task, participants created class schedules for fictitious students based on certain task rules, such as not having more than two psychology courses within one hour of each other. Once the schedule fulfilled the requirements, it got submitted. The multiple-goal paradigm was incorporated by having two separate lines of students for whom to schedule courses. Each line of students constituted one goal, and when participants chose the line from which they picked a student for whom they will schedule courses, it became their goal choice. Another task used in multiple-goal regulation research was the TANDEM, also known as TEAMSim if used in a team setting (DeShon, et al., 2004; Kozlowski & Bell, 2006). This is a computer radar-tracking simulation task. Participants have to hook contacts, collect information on them, and classify them, before making a decision to take action or clear them. The multiple-goal setting is incorporated by segmenting the area displayed on the screen, where participants make decisions on which part on the screen (i.e., which goal) to work on during the task duration. However, both of these tasks require intensive training, which posed a time constraint to the resources for my thesis research. Therefore, I modeled the scheduling task and TANDEM, and developed a simplified task, called the Objects Classification Task, for use in my thesis.

Objects classification task (OCT). In the OCT, participants had a hardcopy reference list containing 200 serial numbers sorted by alphabetical order (e.g., AKL9033, BHC4870, etc). Beside each number, there was a corresponding classification group (e.g., alpha, beta, sigma, and omega). On the computer screen, 80 serial numbers were listed in a random order. There were also some bogus serial numbers shown on the screen that could not be found in the hardcopy reference list. Participants had to locate each serial number displayed on the screen on the hardcopy reference list

to check its corresponding classification group. They then selected the correct classification group beside the number on the computer screen. I designed this task to be straightforward and effort-based so performance depended heavily on the time and attention participants devoted to each goal. This effort-based nature was optimal for studying individuals' motivation on the two goals (Wickens, 1991). The task interface is shown in Appendix C.

Multiple-goal paradigm. I constructed the multiple-goal environment by informing participants that they had to work on two OCTs concurrently in five minutes. There were two pages for the OCT task, one page was the individual goal (labeled as "*Personal Client*"), and the other page was the team goal (labeled as "*Team Client*"). I told participants to classify as many serial numbers as they could for both goals during the five minutes. I informed them that both goals were equally weighted in contributing to their overall performance, and that they were free to alternate between the two pages (individual goal page vs. team goal page) during each 5-minute task period. I programmed hidden timers into the two pages to record the duration participants spent on each page.

Performance feedback. At the end of each round, participants submitted their work on both goals, and Qualtrics tabulated their scores for each goal. Participants received their performance feedback for both goals. They also viewed their teammates' performance on the team goal. The teammates' scores were actually fixed by the computer to fall in the range of the average score obtained for the task during the pilot test.

Pilot test. I pilot-tested the OCT multiple-goal task on a separate equivalent sample (n = 31). Participants completed four rounds of the OCT. The pilot-test sample worked on two individual goals instead of a single individual goal and a single team goal because I wanted to examine whether the two goals were equivalent. Mean performance on the four rounds ranged from 17.68 to 24.06 (SD = 8.19 - 11.25), and mean percentage of time spent on each goal ranged from 45.58% to

54.42% (SD = 15.54 - 25.10). Results showed that performance on the two goals did not differ significantly for all four rounds ($t_1(30) = 1.24$; $t_2(30) = -1.55$; $t_3(30) = 1.54$; $t_4(30) = 1.43$, p = n.s.). Effort on the two clients also did not differ significantly for all four rounds ($t_1(30) = .01$; $t_2(30) = -$ 1.58; $t_3(30) = -.10$; $t_4(30) = .28$, p = n.s.). These supported the two goals in the OCT as equivalent, making it an appropriate task to examine how social exclusion shapes motivation on the two goals in the actual data collection.

Measures of Key Variables

Effort on individual goal vs. team goal. I operationalized effort on each goal for each round by the amount of time individuals spent on the individual goal OCT page and the team goal OCT page respectively.

Performance on individual goal vs. team goal. I operationalized performance on each goal for each round of OCT using measures of sensitivity and specificity diagnostic measures (Altman & Bland, 1994). *Sensitivity* refers to the number of true positives that are correctly classified (i.e., serial numbers displayed on the screen that can also be found in the reference list should be correctly classified into their respective classification groups), while *specificity* refers to the proportion of true negatives that are correctly classified (i.e., bogus serial numbers displayed on the screen but cannot found in the reference list should not be classified). I also created an overall performance score (i.e., number of true positives correctly classified and true negatives correctly rejected) for each OCT round. The sensitivity and specificity scores had an average correlation of .81 (p < .01) across the five OCT rounds, and all results were the same when either sensitivity or specificity or the overall performance score, which was the sum of the sensitivity (true positives) and specificity (true negatives) scores, in the Results section.

Intentionality attribution. I used a self-developed three-item scale to measure intentionality attribution. I developed these items to collectively capture the components of intentionality– desire, belief, intention, and awareness– proposed by Malle and Knobe (1997). The three items are, "*How often I received the ball was an intentional decision made by my teammates*", "*My teammates consciously determined when to pass the ball to me during the game*", and "*My teammates knew how often they passed the ball to me during the game*". These items should be able to capture a range of intentionality for both included and excluded participants. Please refer to Appendix D for the complete instructions for this scale. Participants rated these items on a 5-point scale (1 = *Strongly disagree*; 5 = *Strongly agree*). They completed this scale four times, once after each Cyberball game. The scale had an average internal reliability of .90 over the four rounds.

I pilot-tested this scale on a separate equivalent sample (n = 31) before my actual data collection. Each participant in the pilot test completed two rounds of Cyberball, one round in which they were included and another rounded in which they were excluded, in random order. The mean intentionality made for being excluded was 4.06 (SD = 1.09), and for being included was 3.27 (SD = .94). The two means differed significantly, where being excluded was related to making higher intentionality attribution than being included, t(30) = 4.19, p < .05. However, the scale captured similar and sufficient variance in both excluded and included rounds ($SD_{Excluded} = 1.09$; $SD_{Included} = .94$). The internal reliability of the scale was.84 for the excluded round, and.92 for the included round. These descriptives supported the scale as a suitable intentionality measure.

Team identification. I measured team identification using the four highest-loading items from the affective commitment scale by Allen and Meyer (1990). According to Ellemer, Kortekaas, and Ouwerkerk (1999), the affective commitment scale assesses how much emotional attachment individuals feel towards a referent (i.e., team), and is an appropriate measure for team identification.

Participants rated four items (e.g., "*I feel a strong sense of belonging to my team*.") on a 5-point scale ($1 = Strongly \, disagree$; $5 = Strongly \, agree$). Participants reported their team identification five times in the experiment, before the beginning of each OCT round. Appendix E shows this scale. The scale had an average internal reliability of .87 over the five rounds.

Measures of Control Variables

Negative affectivity. Negative affectivity (NA) refers to the extent one feels aversive mood states (Watson, Clark, & Tellegen, 1988). I included NA as a control variable in this research because studies have demonstrated that negative affectivity influences how people make causal attributions (Ahrens & Haaga, 1993; Orobio de Castro, Slot, Bosch, Koops, & Veerman, 2003), and how they respond to exclusion (Ciarocco, et al., 2001; Peterson, Gravens, & Harmon-Jones, 2011) Participants completed the Positive and Negative Affect Schedule Short Form (I-PANAS-SF) developed by Thompson (2007). They indicated how frequently they experienced the 10 emotions in the scale in general on a 5-point Likert (1 = Never; 5 = Always). The negative affectivity composite was formed by aggregating ratings on the five negative emotions in this scale. The internal reliability of this scale was .81.

Gender. I controlled for gender because extant literature has shown that males and females differ in how they interpret and respond to workplace exclusion (Williams & Sommer, 1997).

CHAPTER 5

RESULTS

Analytic Overview

I tested Hypotheses 1 to 4b using t-tests and regressions in SPSS v21.0 because they were cross-sectional hypotheses with regard to the first social exclusion experience. I tested Hypotheses 5a to 5d using hierarchical linear modeling in HLM v7.0 because these tests involved multilevel data where multiple time points were nested within individuals (Raudenbush & Bryk, 2002). I added negative affectivity and gender as the control variables in all my models.

Preliminary Analyses

Table 1 shows the descriptives and correlations of all the variables in my study. As predicted by the capacity sharing theory, performance on the individual goal and the team goal exhibited a significant negative correlation (average r = -.62, p < .05) across the five OCT rounds. Effort and performance across all five OCT rounds for the two respective goals were positively and significantly correlated (average r = .72, p < .05), supporting the effort-performance link in the OCT task. Independent samples t-tests also showed that participants in the included condition and excluded condition did not differ significantly in baseline team identification (t(115) = .47, p = n.s.), individual goal performance (t(115) = -.78, p = n.s.), team goal performance (t(115) = -.12, p = n.s.), individual goal effort (t(115) = -.70, p = n.s.), or team goal effort (t(115) = .70, p = n.s.) measured before the Cyberball game. These findings supported the equivalence between participants in the two conditions at the beginning of the experiment.

Hypothesis Tests

Hypothesis 1. I hypothesized that excluded individuals would report lower identification with their teams than included individuals after experiencing social exclusion for the first time. I ran

an independent samples t-test with Round 1 team identification as the dependent variable and the experimental condition (1 = *excluded*; 0 = *included*) as the factor predictor. The results showed that participants in the excluded condition reported lower team identification after the Cyberball game (M = 1.97, SD = .79) than participants in the included condition (M = 2.91, SD = .68). The difference between the two means was significant t(115) = 6.95, p < .05, and supported Hypothesis 1.

Hypothesis 2. To test Hypothesis 2, I ran a multiple regression with Round 1 team identification as the dependent variable, gender, NA, exclusion (1 = excluded; 0 = included), and intentionality as predictors in the first step, and the exclusion × intentionality interaction term as a predictor in the second step. Table 2 shows the results. The main effects of gender, NA, exclusion, and intentionality collectively accounted for 34.4% of the variance in Round 1 team identification, F(4,113) = 14.65, p < .05. After including the interaction term, the explained variance in Round 1 team identification increased by 3.7%, F(1,111) = 6.57, p < .05. Intentionality was positively but not significantly related to Round 1 team identification (b = .21, SE = .11, p = n.s.), exclusion was positively but not significantly related to Round 1 team identification (b = .24, SE = .47, p = n.s.), and the exclusion × intentionality interaction term was negatively and significantly related to Round 1 team identification (b = .24, SE = .47, p = n.s.),

Figure 2 shows the simple slopes for the effects of exclusion on Round 1 team identification for individuals who made high intentionality attribution (one standard deviation above mean) as compared to low intentionality attribution (one standard deviation below mean). Specifically, the negative relationship between exclusion and team identification was stronger among individuals who made high intentionality attribution than those who made low intentionality attribution after experiencing social exclusion for the first time. As additional analyses, I also ran the same regression model on data from Rounds 2, 3, and 4. All the results were in the same direction, where the negative relationship between exclusion and team identification was more strongly negative among individuals who made high intentionality attribution than those who made low intentionality attribution for each round, except in Round 4 where the interaction term had no significant effect on the team identification. Figures 3, 4, and 5 show the simple slopes for the effects of exclusion on team identification for high intentionality versus low intentionality for Rounds 2, 3, and 4. I examined whether these relationships strengthened over time in the tests of Hypotheses 5a to 5f.

Hypotheses 3a and 3b. Team goal effort and individual goal effort were negatively correlated at unity because they were operationalized by the proportion of time spent on each goal out of total time available for each round. Hence, I ran a single multiple regression model to test Hypotheses 3a and 3b. Round 1 team goal effort was the dependent variable, Round 1 team identification was a predictor, and gender and NA were covariates. The results did not support Hypotheses 3a and 3b. As shown in Table 3, team identification was not significantly related to team goal effort in Round 1 team goal effort (*b* = 4.95, *SE* = 2.75, *p* = .07) or individual goal effort (*b* = - 4.95, *SE* = 2.75, *p* = .07). Nevertheless, additional analyses showed that team identification positively and significantly predicted team goal effort in Round 2 (*b* = 7.74, *SE* = 2.47, *p* < .05), Round 3 (*b* = 7.92, *SE* = 2.72, *p* < .05), and Round 4 (*b* = 9.12, *SE* = 2.65, *p* < .05). I examined these relationships over time using HLM in the tests of Hypotheses 5a to 5f.

Hypotheses 3c. I hypothesized a positive relationship between team identification and team goal performance after individuals experienced social exclusion for the first time. I ran the same regression model as above with team goal performance as the dependent variable. As shown in Table 4, the results indicated a positive and significant relationship between team identification and team performance in Round 1 (b = 3.43, SE = 1.06, p < .05). Therefore, Hypothesis 3c was supported. There were also significant positive relationships between team identification and team performance

in Round 2 (*b* = 4.26, *SE* = 1.04, *p* < .05) and Round 3 (*b* = 4.67, *SE* = 1.20, *p* < .05), but not in Round 4 (*b* = .27, *SE* = .21, *p* = .20).

Hypothesis 3d. I hypothesized a negative relationship between team identification and individual goal performance after individuals experienced social exclusion for the first time. When I ran the above model with individual goal performance as the dependent variable, the results showed that team identification significantly and negatively predicted individual goal performance in Round 1 (b = -3.26, SE = 1.26, p < .05), supporting Hypothesis 3d. Team identification also significantly and negatively predicted individual goal performance in Round 2 (b = -4.21, SE = 1.33, p < .05) and Round 3 (b = -4.19, SE = 1.27, p < .05), but not in Round 4 (b = -1.01, SE = .76, p = .19). Table 4 reports these results. I examined these relationships over time using HLM in the tests of Hypotheses 5a to 5f.

Hypotheses 4a and 4b. Hypotheses 4a and 4b posited exclusion × intentionality attribution to have an indirect relationship with team goal effort and individual goal effort via team identification after individuals faced social exclusion for the first time. Because Hypothesis 3a and 3b were not supported (i.e., no significant relationship between team identification and team goal effort in the first round), Hypotheses 4a and 4b were not expected to be supported. Nevertheless, I followed the guidelines from Edwards and Lambert (2007) and ran a path analysis and bootstrapping via 1000 data draws. I added the intentionality and exclusion main effects, gender, and NA as covariates in the model. The indirect relationship was not significant (b = 2.50, SE = 4.94, p = .61, CI = -5.44 to 1.50) as the confidence interval contained 0. Therefore, there was no support for Hypotheses 4a or 4b. Specifically, the interaction effect of exclusion × intentionality on team identification was significant (b = -.34, SE = .13, p < .05), but the path between team identification and team goal effort was not significant (b = 3.10, SE = 3.41, p = .36). The relationship between the interaction and team goal effort was also not significant, (b = -1.98, SE = 1.10, p = .07).

Hypothesis 4c. I examined whether the exclusion × intentionality interaction had an indirect relationship with team goal *performance* via team identification after individuals faced social exclusion for the first time. Similar to the tests of Hypotheses 4a and 4b, I ran a path analysis and boostrapping via 1000 data draws with maximum likelihood estimates (Edwards & Lambert, 2007). I added the main effects of exclusion and intentionality, gender, and NA as the covariates. Overall, the indirect effect of exclusion × intentionality on team goal performance was not significant (*CI* = - 1.00 to .11) as the confidence interval contained 0. Therefore, Hypothesis 4c was not supported. There was a direct path between exclusion × intentionality and team goal performance (*b* = -1.42, *SE* = .42, *p* < .05), and the exclusion × intentionality to team identification path (*b* = -.22, *SE* = .03, *p* < .05), but there was no support for the team identification to team goal performance path (*b* = 2.12, *SE* = 1.26, *p* = .09).

Hypothesis 4d. I examined whether the exclusion × intentionality interaction had an indirect relationship with individual goal *performance* via team identification. Overall, the indirect effect of exclusion × intentionality on individual goal performance was not significant (CI = -.57 to .79) as the confidence interval contained 0. Therefore, the results did not support Hypothesis 4d. The exclusion × intentionality to team identification path was significant (b = -.22, SE = .03, p < .05), but the team identification to individual goal performance path was not significant (b = -.12, SE = 1.42, p = .93).

Hypothesis 5a. Hypotheses 5a to 5f involved multilevel analyses for which I used HLM. Figures 6 to 11 are the graphs showing the trajectories of each variable of interest over time. In Hypothesis 5a, I expected individuals facing repeated exclusion to make increasingly higher intentionality attributions over time. I first ran an unconditional HLM model with intentionality attribution as the within-person level-1 dependent variable. The between-person level-2 variance explained was .88, and the within-person level-1 variance explained was .38, thus ICC was 69.71%, justifying the use of HLM to analyze the data. I then proceeded to run an HLM model with intentionality attribution as the within-person level-1 dependent variable, time as a within-person level-1 predictor, and experimental condition (1 = repeated exclusion; 0 = repeated inclusion) as a between-person level-2 predictor. I added gender and NA as covariates in the model. The model equations are as follow:

Level-1 Model Intentionality_{ti} = $\pi_{0i} + \pi_{1i}^{*}(Time_{ti}) + e_{ti}$

Level-2 Model $\pi_{0i} = \beta_{00} + \beta_{01} * (Exclusion_i) + \beta_{02} * (NA_i) + \beta_{03} * (Gender_i) + r_{0i}$ $\pi_{1i} = \beta_{10} + \beta_{11} * (Exclusion_i) + \beta_{12} * (NA_i) + \beta_{13} * (Gender_i)$

Mixed Model Intentionality_{ti} = $\beta_{00} + \beta_{01}(Exclusion_i) + \beta_{02}(NA_i) + \beta_{03}(Gender_i) + \beta_{10}(Time_{ti}) + \beta_{11}(Exclusion_i *Time_{ti}) + \beta_{12}(NA_i *Time_{ti}) + \beta_{13}(Gender_i *Time_{ti}) + r_{0i} + e_{ti}$

As shown in Table 5, the results indicated that excluded participants made higher intentionality attribution than included participants ($\beta = .60$, SE = .19, p < .05) after the first Cyberball round. The results also demonstrated a significant exclusion × time slope ($\beta = .14$, SE =.05, p < .05) on intentionality, indicating that individuals made higher intentionality attributions over time after facing repeated social exclusion as compared to not facing repeated social exclusion. These results supported Hypothesis 5a.

Hypothesis 5b. I posited an increasingly negative relationship between intentionality and team identification over time among individuals who were repeatedly excluded as compared to individuals who were repeatedly included. In other words, I wanted to test whether the intentionality

× time interaction on team identification differed significantly between participants in the experimental condition and the control condition. I ran a model with team identification as the within-person level-1 dependent variable, time, intentionality, and time × intentionality as the within-person level-1 predictors, and experimental condition as the between-person level-2 predictor. I also added gender and NA as covariates in the model. The model equations are as

follow:

Level-1 Model *Team Identification*_{*ti*} = $\pi_{0i} + \pi_{1i}(Time_{ti}) + \pi_{2i}(Intentionality_{ti}) + \pi_{3i}(Intentionality * Time_{ti}) + e_{ti}$

Level-2 Model $\pi_{0i} = \beta_{00} + \beta_{01}(Exclusion_i) + \beta_{02}(NA_i) + \beta_{03}(Gender_i) + r_{0i}$ $\pi_{1i} = \beta_{10}$ $\pi_{2i} = \beta_{20}$ $\pi_{3i} = \beta_{30} + \beta_{31}(Exclusion_i) + \beta_{32}(NA_i) + \beta_{33}(Gender_i)$

Mixed Model Team Identification_{ti} = $\beta_{00} + \beta_{01}(Exclusion_i) + \beta_{02}(NA_i) + \beta_{03}(Gender_i) + \beta_{10}(Time_{ti}) + \beta_{20}(Intentionality_{ti}) + \beta_{30}(Intentionality * Time_{ti}) + \beta_{31}(Exclusion_i * Intentionality * Time_{ti}) + \beta_{32}(NA_i * Intentionality * Time_{ti}) + \beta_{33}(Gender_i * Intentionality * Time_{ti}) + r_{0i} + e_{ti}$

As shown in Table 6, the results provided support for the exclusion × time × intentionality interaction on team identification (β = -.033, *SE* = .013, *p* < .05). The slope between intentionality and team identification was more negative over time among individuals who were excluded repeatedly as compared to individuals who were included repeatedly.

Hypotheses 5c and 5d. For Hypotheses 5c and 5d, I hypothesized an increasingly negative relationship over time between intentionality and team goal effort via team identification (and a stronger positive relationship over time between intentionality and individual goal effort via team identification) among individuals who were repeatedly excluded as compared to those who were repeatedly included. I first ran a model to test if team identification predicted team goal effort, controlling for gender and NA. The results supported team identification as a positive predictor of

team goal effort ($\beta = 7.17$, SE = 1.60, p < .05). Next, I ran a model to test if the intentionality × time interaction on team goal effort and individual goal effort differed between participants in the two conditions, as shown in Table 7. Team goal effort was the within-person level-1 dependent variable, time, intentionality, and time \times intentionality were the within-person level-1 predictors, and experimental condition was the level-2 predictor. Again, I controlled for gender and NA. The results indicated that the exclusion \times intentionality \times time interaction on team goal effort was significant, (β = -1.09, SE = .54, p < .05), suggesting that the slope between intentionality and team goal effort was increasingly more negative for individuals who faced repeated social exclusion as compared to individuals who did not face social exclusion. Finally, I ran a model with team identification added as a covariate to examine if the exclusion \times intentionality \times time interaction effect remained significant, also shown in Table 7. The exclusion \times time \times intentionality interaction on team goal effort became not significant ($\beta = -.91$, SE = .56, p = .09). This implied that team identification partially absorbed the interaction effect of exclusion \times intentionality \times time on team goal effort, thus supporting the predictions of Hypotheses 5c and 5d that the relationship between intentionality and team goal effort via team identification was more strongly negative over time for individuals who faced repeated social exclusion than individuals who did not face social exclusion. The equations for the final model are:

Level-1 Model *Team Goal Effort* = $\pi_{0i} + \pi_{1i}(Time_{ti}) + \pi_{2i}(Intentionality_{ti}) + \pi_{3i}(Team Identification_{ti}) + \pi_{4i}(Intentionality \times Time_{ti}) + e_{ti}$

Level-2 Model $\pi_{0i} = \beta_{00} + \beta_{01}(Exclusion_i) + \beta_{02}(NA_i) + \beta_{03}(Gender_i) + r_{0i}$ $\pi_{1i} = \beta_{10}$ $\pi_{2i} = \beta_{20}$ $\pi_{3i} = \beta_{30} + \beta_{31}(Exclusion_i) + \beta_{32}(NA_i) + \beta_{33}(Gender_i)$ $\pi_{4i} = \beta_{40} + \beta_{41}(Exclusion_i) + \beta_{42}(NA_i) + \beta_{43}(Gender_i)$ Mixed Model Team Goal Effort = $\beta_{00} + \beta_{01}(Exclusion_i) + \beta_{02}(NA_i) + \beta_{03}(Gender_i) + \beta_{10}(Time_{ti}) + \beta_{20}(Intentionality_{ti}) + \beta_{30}(Team Identification_{ti}) + \beta_{31}(Exclusion * Team Identification_{ti}) + \beta_{32}(NA_i * Team Identification_{ti}) + \beta_{33}(Gender_i * Team Identification_{ti}) + \beta_{40}(Intentionality * Time_{ti}) + \beta_{41}(Exclusion * Intentionality * Time_{ti}) + \beta_{42}(NA * Intentionality * Time_{ti}) + \beta_{43}(Gender * Intentionality * Time_{ti}) + r_{0i} + e_{ti}$

Hypotheses 5e. Next, I hypothesized an increasingly negative relationship over time between intentionality and team goal performance via team identification among individuals who were excluded repeatedly as compared to those who were included repeatedly. I followed the same procedure as for the tests of Hypotheses 5c and 5d, except that I changed the dependent variable to team goal performance in these models. The results showed that team identification positively predicted team goal performance ($\beta = 3.32$, SE = .65, p < .05). Next, the exclusion × intentionality × time interaction effect on team goal performance was negative and significant ($\beta = -.61$, SE = .18, p < .01). After adding team identification as a covariate, the exclusion × intentionality × time interaction effect on team goal performance became smaller and less significant ($\beta = -.51$, SE = .21, p < .05), implying that its effect on team goal performance was partially and indirectly through team identification. Table 8 summarizes the results from these models. These results support Hypothesis 5e, where the relationship between intentionality and team goal performance via team identification became increasingly negative over time among individuals who faced repeated social exclusion as compared to individuals who did not face social exclusion.

Hypothesis 5f. Finally, I hypothesized an increasingly positive relationship over time between intentionality and individual goal performance via team identification among individuals who were excluded repeatedly as compared to those who were included repeatedly. The procedure for testing this hypothesis was similar to that for Hypotheses 5e. The results, shown in Table 9, indicated that the exclusion \times time \times intentionality interaction predicting individual goal

performance became smaller after team identification was added as a covariate ($\beta = .35$, SE = .23, p = .12), indicating that the interaction effect exercised its influence on team goal performance partially and indirectly through team identification. Therefore, there was support for Hypothesis 5f, which predicted that the relationship between intentionality and individual goal performance via team identification was increasingly positive over time among repeatedly excluded individuals as compared to repeatedly included individuals.

CHAPTER 6

DISCUSSION

Using an experiment with multiple social exclusion manipulations, I investigated how individuals' intentionality attributions about social exclusion influenced their regulation of an individual goal and a team goal. The results showed that excluded individuals reported significantly lower identification with their teams as compared to included individuals after their first experience of being socially excluded. The results also supported intentionality as a moderator, where making higher intentionality attribution made the negative relationship between exclusion and team identification increasingly strong. Team identification did not significantly predict team goal effort and individual goal effort, but it significantly predicted team goal performance (positively) and individual goal performance (negatively). Nevertheless, the results did not support an indirect effect of exclusion × intentionality via team identification on team goal effort and performance, or individual goal effort and performance.

I also used multilevel analyses to look at these relationships over time. The results showed that individuals who faced repeated social exclusion made increasingly higher intentionality attributions and reported lower team identification over time as compared to repeatedly included individuals. The negative relationship between intentionality and team identification among repeatedly excluded individuals became increasingly strong over time relative to repeatedly included individuals. My results also supported an increasingly negative indirect relationship between intentionality and team goal effort and team goal performance via team identification over time among repeatedly excluded individuals as compared to repeatedly included individuals. Finally, there was an increasingly positive relationship over time between intentionality and individual goal effort and individual goal performance via team identification in repeatedly excluded individuals as

compared to included individuals. As I discuss below, these findings offer important insights into how social exclusion and intentionality attributions shape patterns of regulating a team goal and an individual goal simultaneously over time.

Theoretical Implications

My results make three primary contributions to the social exclusion literature. First, I demonstrated the importance of intentionality attributions in strengthening the negative relationship between social exclusion and team identification. Specifically, social exclusion had a more strongly negative relationship with team identification among individuals who made high intentionality attributions as compared to individuals who made low intentionality attributions. This provides empirical support for existing conceptual propositions contending that individuals' attributional perceptions play a role in determining how they react to social exclusion (Williams & Sommer, 1997). However, when studying the effects of social exclusion on work outcomes, the majority of existing social exclusion studies focused solely on perpetrators' actions of social exclusion. For example, Warburton and colleagues (2006) showed that individuals excluded in the Cyberball game were more likely to behave aggressively to a stranger subsequently as compared to individuals included in the Cyberball game. While extremely useful in demonstrating the main effects of social exclusion, such studies did not recognize that intentionality attributions partially determine how individuals react to social exclusion, and that it is possible for different individuals to appraise and react differently to the same social exclusion experience. Therefore, my findings extend theory by demonstrating how individuals' attributions of social exclusion predict their reactions to the experience.

Second, the multiple-goal paradigm used in this research allowed me to tease out the different effects that social exclusion has on team goal performance as compared to individual goal

performance. My results generally demonstrated that social exclusion predicted team goal performance negatively but predicted individual goal performance positively, and these effects became increasingly negative and positive, respectively, over time. These findings help to integrate results from existing studies, which have used either an individual task or a team task to study the effects of social exclusion. Those studies found inconclusive effects of social exclusion on work motivation with results tending to differ based on task type. As discussed in the Introduction section, social exclusion is a social process and may thus exercise different influences on work motivation on collective goals as compared to individual goals (Lustenberger & Jagacinski, 2010). Indeed, as shown in my results, social exclusion lowered team goal performance but improved individual goal performance. This suggests that individuals' overall work motivation did not decrease due to social exclusion, instead they redistributed their resources from the team goal to the individual goal after experiencing social exclusion. In other words, it would be useful for scholars to be more precise about the type of goal and task (i.e., individual versus team) when discussing the effects of social exclusion in the workplace.

Third, my findings reinforced Williams' (2009) temporal need-threat model. This model posits that individuals take time to make sense of their social exclusion experiences, and repeated exclusions signal to individuals that they cannot change their predicament, thus causing them to feel more socially detached and be resigned to being socially excluded (Williams, 2009). By demonstrating that the social exclusion × intentionality interaction had an increasingly more negative effect on team goal performance and an increasingly more positive effect on individual goal performance over time, my findings showed that the effects of social exclusion on work outcomes become stronger over time. Because social exclusion stems from dynamic social interactions between people, it is highly possible for individuals to face intermittent or repeated social exclusion

over time. Therefore, my results contribute to the existing theory concerning social exclusion by elucidating such temporal characteristics associated with repeated social exclusion experiences. These significant findings also suggest that the previous studies that have largely relied on a static single-episode conceptualization of social exclusion might have underestimated the effects of social exclusion on work outcomes among individuals who face repeated social exclusion at their workplace. Hence, it may be fruitful for future research to take into consideration how the processes of social exclusion and making intentionality attributions unfold over time so as to more accurately assess their impacts on work outcomes.

Practical Implications

My research also has practical implications. The results showed that social exclusion × intentionality attributions increasingly lowered team goal effort and performance via team identification over time. This suggests that it is important and necessary for team leaders and managers in team-structured organizations to be cognizant of the social relations between employees, and to step in to intervene as early as possible once they notice instances of social exclusion among employees. This may help to prevent detrimental effects on team functioning. The positive joint effects of high social exclusion and high intentionality attributions on individual goal performance as compared to team goal performance over time also suggest that the effects of social exclusion on overall work motivation may differ across different job types which vary in the degree of interdependence between coworkers. In particular, social exclusion may not have negative effects on employees who primarily work alone to complete their core job functions (i.e., the job consists mostly of individual goals), as compared to employees who have to work interdependently with other coworkers (i.e., the job consists mostly of team goals). Therefore, managers in highly teamstructured organizations where employees work interdependently should be especially mindful of the

social interactions occurring among the employees so they can step in efficiently to mitigate the negative effects of social exclusion on team functioning.

Social exclusion might be seen as needed by some teams as a means to punish team members who deviate from core team norms. Some existing experimental studies demonstrated that teams possessing the autonomy to exclude team members from subsequent interactions elicited greater cooperative behaviors among members than teams which did not have the autonomy to exclude team members (Hirshleifer & Rasmusen, 1989; Masclet, 2003). However, the results from my study showed that the actual action of socially excluding team member in fact led individuals to invest less effort into the team goal, especially among individuals who made intentional attributions for the social exclusion. This highlights a difference between *the autonomy to exclude members* and *the actual action of excluding members*. Therefore, while leaders or team managers may want team members to retain the autonomy to exclude a team member from the team to preempt deviating behaviors, they may want to exercise such power only sparingly. Given potential adverse effects on team functioning, team leaders and managers should seek to promote other means to sanction deviating team members.

Limitations and Future Directions

Despite critical design strengths such as random assignment of participants into conditions and the temporal separation of the predictors, mediator, and outcomes, I acknowledge the following limitations in my study. First, I used fictitious teammates for team formation, and provided fake teammates' performance scores to participants after each OCT round in my experiment. This may raise concerns about whether participants believed in the team formation and social exclusion manipulations. Using fake teammates' scores for each OCT round also did not allow me to examine how social exclusion influenced relative contributions of team members to the team goal over time.

However, these manipulations were necessary to construct an equivalent experimental environment for all participants to ensure internal validity in examining the incremental effects of social exclusion and intentionality on team identification and work motivation. I also took a few steps to minimize these limitations. I led participants to believe that their teammates were real participants by letting them read the introductions of their teammates. That helped participants form unique and personal images of their two teammates. Also, these introductions were pilot-tested before the actual data collection, and the pilot-test results showed that liking for the two teammates did not differ. In addition, I derived the fake teammates' performance scores from the pilot-test, so those were actual performance scores by an equivalent sample and were thus realistic performance scores that participants might expect from real teammates. Moreover, I made sure there was a mix of conditions in each experimental session so there were both included and excluded participants in the same room during each Cyberball game. This increased the believability of the Cyberball game, especially when excluded participants turned to peek out of their computer cubicles and saw that some others were actively engaged in the Cyberball game. In sum, I argue that using fictitious teammates and bogus teammates' performance scores were not major limitations, and these features allowed me investigate the interactive effects of social exclusion and intentionality attributions on work motivation over time in a controlled fashion. Nevertheless, future research could consider adding a manipulation check in the form of an open-ended question at the end of the experiment to ask participants whether they suspected that their teammates were not real. Doing so would help to identify cases in which the team formation manipulation failed and guide the decision to remove invalid cases from data analyses.

As I used a simple objects classification task in my experiment, some may also be concerned about the generalizability of my findings to the real world where tasks and goals are often more

complex and ambiguous. Nevertheless, I contend that this simple task design could in fact be regarded as a strength of my research because it reduced confounding effects that could be introduced with more complex and ambiguous tasks. Another potential concern is that individuals worked separately for the team goal, making it an additive team task that required little interdependence between the team members. However, using an additive task was necessary considering the need to use artificial teammates. I tried to minimize this limitation by emphasizing to participants that the complete fulfillment of the team goal was dependent on both themselves and also their teammates, seeking to induce psychological interdependence between team members for the team goal. Nevertheless, future research could consider varying the types of team tasks or using a field sample to examine if my findings generalize.

In terms of future directions, scholars may want to explore the mediating mechanisms between social exclusion and multiple-goal regulation more comprehensively. My results demonstrated that the interaction of social exclusion and intentionality exercised its effects on goal performance and effort indirectly and partially through team identification, and this suggests the presence of other plausible mediating variables. For example, the emotions social exclusion induces in individuals may shape their subsequent behaviors. According to existing literature on emotions and motivation, individuals who feel angry after being mistreated are more likely to engage in retaliatory behaviors as compared to individuals who feel sad, because anger is an approach-oriented emotion while sadness is an avoid-oriented emotion (Carver & Harmon-Jones, 2009; Crisp, Heuston, Farr, & Turner, 2007). Going by this logic, it is likely for individuals who feel angry for being socially excluded to withdraw their effort on the team goal as a proactive means of getting back at their team members, as compared to individuals who feel sad for being socially excluded. Alternatively, previous research on social exclusion showed that individuals engaged in implicit self-

esteem compensation following social exclusion, where they performed more self-serving acts and less cooperative acts (Rudman, Dohn, & Fairchild, 2007). This is because social exclusion lowers individuals' self-esteem, and self-serving behaviors act as a damage control allowing individuals to compensate for this and to maintain their self-esteem. Applied to my theoretical framework, a drop in self-esteem caused by social exclusion could be a possible reason why individuals redistributed their resources from the team goal to the individual goal. Examining these other potential mediators will enable us to get a more complete understanding of the pathways through which social exclusion shapes multiple-goal regulatory behaviors.

Future studies may also examine whether other types of attributions also strengthen the effects of social exclusion on team identification and goal performance in a similar fashion as intentionality attributions. Specifically, attributions can be made on several dimensions, such as locus of causality (internal versus external), controllability (controllable versus uncontrollable), and stability (changeable versus unchangeable). For example, it is possible for individuals who make low stability attributions (i.e., perceiving that the situation can be changed) to invest more effort into the team goal to gain acceptance by their teammates than individuals who make high stability attributions (i.e., perceiving the situation cannot be changed). Incorporating these other types of attributions into the study of the effects of social exclusion on work outcomes may potentially extend my results to inform us about how individuals allocate their resources between an individual goal and a team goal.

In addition, my research conceptualized and operationalized attribution as a state variable which could change with each social exclusion experience, but some existing studies view attribution as a stable trait, where constant attributional styles guide individuals' responses across different situations (Martinko, Harvey, & Douglas, 2007; Martinko, Harvey, Sikora, & Douglas,

2011). For example, Martinko and colleagues (2011) showed that subordinates with a hostile attributional style reported higher perceptions of abuse from their supervisors. This suggests that individuals have dominant attributional patterns that may bias their attributional perceptions in all situations. Therefore, future research may want to examine how such stable attributional styles predict state attributions, or interact with state attributions to predict reactions to social exclusion.

Future research may also consider investigating whether my findings generalize to different types of teams. In this research, I formed ad-hoc project teams to work on the Objects Classification Task, and participants were aware that their teams would be dismissed at the end of the experimental session. However, different types of teams exist, and teams can be permanent instead of ad-hoc (Edmondson, 1999). Earlier research demonstrated that employees who considered future consequences were more likely to engage in prosocial behavior following workplace exclusion than employees who focused on short-term consequences (Balliet & Ferris, 2012). Applying this to my context, individuals working in permanent teams may be more conscious of the long-term work relations, and be more likely to suppress their discontent or retaliatory intentions after being excluded. In this case, individuals working in permanent teams might not as readily redistribute their resources from the team goal to the individual goal.

Conclusion

In using an intentionality attribution approach and a multiple-goal paradigm, my research provides a novel perspective for examining the effects of social exclusion on work motivation over time. My results shed light on how social exclusion and intentionality attributions jointly influence responses to a social goal as compared to an individual goal, and how these relationships strengthened over time. These findings highlight the importance of considering the intentionality attributions individuals make for their experiences of being excluded, distinguishing individual

performance and team performance, and taking into account the frequency of social exclusion when researches attempt to determine the effects of social exclusion on work outcomes. I hope my findings serve as a framework to guide future research which further probes the motivational mechanisms triggered by social exclusion in the workplace. APPENDICES

Appendix A: Tables and Figures

Table 1:Descriptives, Reliabilities, and Correlations of Variables

		Mean	SD	1	2	3	4	5	6	7	8
1	Gender	.325	.470								
2	Negative affectivity	1.997	.747	124	(.811)						
3	Repeated exclusion	.487	.502	092	.027						
4	Intentionality (R1)	3.518	1.134	.005	043	.299**	(.797)				
5	Intentionality (R2)	3.561	1.096	.028	.007	.366**	.763***	(.917)			
6	Intentionality (R3)	3.581	1.165	.035	.031	$.450^{**}$.627**	.914**	(.939)		
7	Intentionality (R4)	3.581	1.165	132	.149	007	063	033	.022	(.938)	
8	Team identification (Baseline)	3.256	1.091	.038	072	.284**	.670 ^{**}	.671**	.571**	.049	(.811)
9	Team identification (R1)	2.450	.873	.103	230*	544**	171	185*	203*	128	058
10	Team identification (R2)	2.342	.967	.102	208*	637**	111	164	229*	024	097
11	Team identification (R3)	2.279	.981	.163	207*	617**	114	206*	279***	027	078
12	Team identification (R4)	2.248	1.031	.158	127	629**	117	164	238**	010	109
13	Team goal effort (Baseline)	58.487	27.944	006	037	066	156	128	071	.087	064
14	Team goal effort (R1)	51.083	25.181	006	.065	186*	062	125	130	017	133
15	Team goal effort (R2)	53.591	26.093	.095	115	395***	185*	245**	280**	020	186*
16	Team goal effort (R3)	48.928	28.599	065	.103	235*	221*	243**	244**	.087	253***

Note. *p < .05, **p < .01. N = 117. Gender (1 = *Male*; 0 = *Female*). Repeated exclusion (1 = *Repeatedly* excluded; 0 = *Repeatedly* included).

Table 1 (cont'd)

		9	10	11	12	13	14	15	16
1	Gender		-						
2	Negative affectivity								
3	Repeated exclusion								
4	Intentionality (R1)								
5	Intentionality (R2)								
6	Intentionality (R3)								
7	Intentionality (R4)								
8	Team identification (Baseline)								
9	Team identification (R1)	(.889)							
10	Team identification (R2)	$.802^{**}$	(.921)						
11	Team identification (R3)	.774 ^{**}	.936**	(.914)					
12	Team identification (R4)	.738 ^{**}	$.876^{**}$.925***	(.926)				
13	Team goal effort (Baseline)	020	016	004	024				
14	Team goal effort (R1)	.147	.078	.083	.105	001	—		
15	Team goal effort (R2)	.258**	.303**	$.286^{**}$.322**	086	.143		
16	Team goal effort (R3)	.201*	.262**	$.226^{*}$.244**	.136	$.190^{*}$.343**	

Table 1 (cont'd)

		Mean	SD	1	2	3	4	5	6	7	8
17	Team goal effort (R4)	50.189	30.055	.064	046	331**	208*	176	167	064	085
18	Team goal performance (Baseline)	21.000	9.581	010	.008	183*	046	069	073	101	070
19	Team goal performance (R1)	20.949	10.027	.115	050	365**	084	116	136	033	049
20	Team goal performance (R2)	19.487	11.177	.007	.075	261**	143	219*	221*	.061	211*
21	Team goal performance (R3)	21.701	12.912	002	062	423**	154	182*	170	.011	083
22	Team goal performance (R4)	20.718	2.270	.006	086	151	167	143	160	.023	113
23	Indiv goal effort (Baseline)	41.513	27.944	.006	.037	.066	.156	.128	.071	087	.064
24	Indiv goal effort (R1)	48.917	25.181	.006	065	$.186^{*}$.062	.125	.130	.017	.133
25	Indiv goal effort (R2)	46.409	26.093	095	.115	.395**	$.185^{*}$.245**	$.280^{**}$.020	$.186^{*}$
26	Indiv goal effort (R3)	51.072	28.599	.065	103	$.235^{*}$.221*	.243**	.244**	087	.253**
27	Indiv goal effort (R4)	49.811	30.055	064	.046	.331**	$.208^{*}$.176	.167	.064	.085
28	Indiv goal performance (Baseline)	19.462	9.910	.008	087	$.200^{*}$.215*	.194*	$.186^{*}$	100	$.236^{*}$
29	Indiv goal performance (R1)	20.350	11.680	065	030	.356**	.271**	.313**	.306**	082	.257**
30	Indiv goal performance (R2)	23.094	14.055	.040	153	.199*	.276***	.300**	.275***	193*	.269**
31	Indiv goal performance (R3)	21.308	13.503	.068	043	.333***	.293**	.313**	.292**	080	$.209^{*}$
32	Indiv goal performance (R4)	19.308	8.258	.050	066	.011	.043	.015	.058	041	.058

Tab	le 1	(cont	'd)

		9	10	11	12	13	14	15	16
17	Team goal effort (R4)	.290**	.313**	.276**	.316**	.184*	.159	.441**	$.400^{**}$
18	Team goal performance (Baseline)	.099	.065	.051	.065	.006	$.789^{**}$.105	.076
19	Team goal performance (R1)	.301**	$.370^{**}$.353**	.364**	018	.211*	$.685^{**}$	$.252^{**}$
20	Team goal performance (R2)	.238**	.336**	.307**	.303**	.141	$.210^{*}$	$.209^{*}$	$.827^{**}$
21	Team goal performance (R3)	.313**	.357**	.344**	.369**	.147	.249**	.449**	.318**
22	Team goal performance (R4)	.018	.018	.059	.127	122	.069	.122	.082
23	Indiv goal effort (Baseline)	.020	.016	.004	.024	-1.000**	.001	.086	136
24	Indiv goal effort (R1)	147	078	083	105	.001	-1.000**	143	190 [*]
25	Indiv goal effort (R2)	258**	303**	286**	322**	.086	143	-1.000**	343**
26	Indiv goal effort (R3)	201*	262**	226*	244**	136	190*	343**	-1.000**
27	Indiv goal effort (R4)	290**	313**	276***	316***	184*	159	 441 ^{**}	400***
28	Indiv goal performance (Baseline)	072	022	012	087	006	714**	245**	181
29	Indiv goal performance (R1)	228*	288**	266**	317***	.005	124	782**	327**
30	Indiv goal performance (R2)	189 [*]	241**	217*	248**	104	127	248**	794**
31	Indiv goal performance (R3)	205*	277***	268**	291**	133	153	496**	306**
32	Indiv goal performance (R4)	091	095	068	107	$.590^{**}$.041	224*	.068

Tab	le 1	(cont ³	'd)

		17	18	19	20	21	22	23	24
17	Team goal effort (R4)								
18	Team goal performance (Baseline)	.037	—						
19	Team goal performance (R1)	.370***	.283**						
20	Team goal performance (R2)	.295***	.238**	.317***					
21	Team goal performance (R3)	.689**	.317**	.653**	.414**	—			
22	Team goal performance (R4)	.005	.114	.161	.019	.047			
23	Indiv goal effort (Baseline)	184*	006	.018	141	147	.122		
24	Indiv goal effort (R1)	159	789 ^{**}	211 [*]	210*	249**	069	001	—
25	Indiv goal effort (R2)	 441 ^{**}	105	685***	209*	449**	122	086	.143
26	Indiv goal effort (R3)	400**	076	252***	827***	318**	082	.136	$.190^{*}$
27	Indiv goal effort (R4)	-1.000**	037	370***	295***	689**	005	$.184^{*}$.159
28	Indiv goal performance (Baseline)	032	582**	037	084	036	075	.006	$.714^{**}$
29	Indiv goal performance (R1)	413**	.081	614**	152	362**	124	005	.124
30	Indiv goal performance (R2)	291**	.090	057	734**	088	049	.104	.127
31	Indiv goal performance (R3)	716**	.047	366***	200*	619**	.020	.133	.153
32	Indiv goal performance (R4)	.033	.193*	.049	.249**	$.200^{*}$	058	590**	041

Table 1 (cont'd)

		25	26	27	28	29	30	31
17	Team goal effort (R4)							
18	Team goal performance (Baseline)							
19	Team goal performance (R1)							
20	Team goal performance (R2)							
21	Team goal performance (R3)							
22	Team goal performance (R4)							
23	Indiv goal effort (Baseline)							
24	Indiv goal effort (R1)							
25	Indiv goal effort (R2)	—						
26	Indiv goal effort (R3)	.343**	_					
27	Indiv goal effort (R4)	.441**	$.400^{**}$					
28	Indiv goal performance (Baseline)	.245**	.181	.032				
29	Indiv goal performance (R1)	$.782^{**}$.327***	.413**	.366**			
30	Indiv goal performance (R2)	.248**	.794**	.291**	.294**	.425**		
31	Indiv goal performance (R3)	.496**	.306**	.716**	.272***	.675**	.395**	—
32	Indiv goal performance (R4)	.224*	068	033	.199*	.295***	.084	.111

Table 2:

	,		
	b	SE	ΔR^2
Intercept	2.827**	.374	
Gender	039	.145	
Negative affectivity	.292**	.090	
Social exclusion	.243	.474	
Intentionality	.212	.108	.344**
Social exclusion \times Intentionality	343*	.134	.037**

Multiple Regression Results Predicting Round 1 Team Identification with Exclusion, Intentionality, and Interaction (Hypothesis 2)

Note. *p < .05, **p < .01. Gender (1 = *Male*; 0 = *Female*). Social exclusion (1 = *Excluded*; 0 = *Included*). Regression coefficients in the table are all from the final regression model that included the interaction term.

Table 3:

	<i>c j</i>							
	Ну	pothesis 3a	ı	Hypothesis 3b				
	DV: R1	team goal	effort	DV: R1 indiv goal effort				
	b	SE	ΔR^2	b	SE	ΔR^2		
Intercept		10.701		7.869**	10.701			
	2.131**							
Gender	555	5.009		.555	5.009			
Negative affectivity	3.497	3.224		- 3.497	3.224			
Round 1 team	4.959	2.752	.032	- 4.959	2.752	.032		
identification								

Multiple Regression Results Predicting Round 1 Goal Effect with Round 1 Team Identification (Hypotheses 3a and 3b)

Note. *p < .05, **p < .01. Gender (1 = *Male*; 0 = *Female*). Regression coefficients in the table are all from the final regression model that included the interaction term.

Table 4:

5 1 21		/						
	Н	ypothesis	3c	Hypothesis 3d				
	DV: R1 te	am goal p	erformance	DV: R1 indiv goal performance				
	b	SE	ΔR^2	b	SE	ΔR^2		
Intercept	11.140**	.112		31.629**	.887			
Gender	1.873	.925		- 1.269	.288			
Negative affectivity	.396	.239		- 1.438	.472			
Round 1 team	3.432**	.057	.099**	- 3.263*	.257	.062		
identification								

Multiple Regression Results Predicting Round 1 Goal Performance with Round 1 Team Identification (Hypotheses 3c and 3d)

Note. *p < .05, **p < .01. Gender (1 = *Male*; 0 = *Female*). Regression coefficients in the table are all from the final regression model that included the interaction term.
Hypothesis 5a							
Variable	DV: Intent	ionality					
Fixed Effects	Estimate	SE					
Intercept	3.230**	.294					
Gender	.064	.199					
Negative affectivity	113	.125					
Social exclusion	.604**	.185					
Time	082	.077					
Time × Gender	.053	.052					
Time \times Negative affectivity	.036	.033					
Time \times Social exclusion	.136**	.048					
Dondom Efforts	Variance	SD.					
Kalidolli Effects	v arrance	SD 860					
Individual (Intercept)	.740	.800					
Residual	.356	.597					
Model Statistics							
Number of observations	468	3					
Number of individuals	117	7					
Deviance	1110.3	351					

HLM Results Predicting Effect of Social Exclusion on Intentionality Over Time (Hypothesis 5a)

Table 5:

Table 6:

	Hypothesis 5b					
Variable	DV: Team id	entification				
Fixed Effects	Estimate	SE				
Intercept	3.436**	.211				
Gender	.027	.146				
Negative affectivity	274**	.076				
Social exclusion	981**	.126				
Intentionality	.003	.039				
Time	089	.073				
Time \times Intentionality	.000	.039				
Time \times Intentionality \times Gender	.016	.011				
Time \times Intentionality \times Negative affectivity	.009	.008				
$Time \times Intentionality \times Social \ exclusion$	033*	.013				
Random Effects	Variance	SD				
Individual (Intercept)	.406	.637				
Residual	.142	.376				
Model Statistics						
Number of observations	46	8				
Number of individuals	11	7				
Deviance	752.0)88				
<i>Note.</i> $*p < .05$, $**p < .01$. Gender (1 = <i>Male</i> ; 0)	O = Female). Social	exclusion (1 = <i>Excluded</i> ; 0 =				
Included).						

HLM Results Predicting the Interactive Effects of Social Exclusion and Intentionality on Team Identification Over Time (Hypothesis 5b)

Table 7:

Hypotheses 5c/5d							
	First m	nodel	Hypothe	Hypothesis 5c/5d			
	DV: Tea	m goal	Final model				
Variable	effo	ort	DV: Team	DV: Team goal effort			
Fixed Effects	Estimate	SE	Estimate	SE			
Intercept	61.570**	9.066	49.802**	11.130			
Gender	988	4.433	962	4.412			
Negative affectivity	.728	2.786	1.718	2.827			
Social exclusion	- 9.109*	4.307	- 5.841	4.647			
Intentionality	- 1.882	1.940	- 2.008	1.936			
Time	- 1.859	3.422	- 1.457	3.424			
Time × Intentionality	1.158	1.319	1.111	1.317			
Time \times Intentionality \times Gender	.158	.530	.083	.531			
Time \times Intentionality \times Negative affectivity	118	.325	153	.325			
Time \times Intentionality \times Social exclusion	- 1.084*	.540	905	.559			
Team identification			3.545	1.952			
Random Effects	Variance	SD	Variance	SD			
Individual (Intercept)	152.693	12.357	148.998	12.206			
Residual	545.962	23.370	544.838	23.342			
Model Statistics							
Number of observations	46	8	468	8			
Number of individuals	11′	7	11′	7			
Deviance	4334.	499	4326	5.2			

HLM Tests of Indirect Interactive Effects of Social Exclusion and Intentionality on Team Goal Effort and Individual Goal Effort Over Time (Hypotheses 5c and 5d)

Table 8:

	Hypothe	eses 5e	Hypothesis 5e			
	First n	nodel	Final model			
Variable	DV: Team	goal perf	DV: Tear	DV: Team goal perf		
Fixed Effects	Estimate	SE	Estimate	SE		
Intercept	22.100**	3.612	15.539**	4.460		
Gender	.221	1.810	.215	1.795		
Negative affectivity	.162	1.138	.706	1.149		
Social exclusion	- 3.678*	1.751	- 1.838	1.889		
Intentionality	013	.751	067	.747		
Time	.110	1.280	.322	1.278		
Time \times Intentionality	.450	.494	.430	.492		
Time \times Intentionality \times Gender	064	.198	102	.198		
Time \times Intentionality \times Negative affectivity	052	.122	071	.121		
Time \times Intentionality \times Social exclusion	604**	.206	514*	.208		
Team identification			1.959*	.792		
Random Effects	Variance	SD	Variance	SD		
Individual (Intercept)	35.115	5.926	34.083	5.838		
Residual	74.935	8.657	74.367	8.623		
Model Statistics						
Number of observations	46	8	468			
Number of individuals	11	7	117	,		
Deviance	3459.	.149	3449.8	352		

HLM Tests of Indirect Interactive Effects of Social Exclusion and Intentionality on Team Goal Performance Over Time (Hypothesis 5e)

	Hypothe	ses 5f			
	First m	odel	Hypot	hesis 5f	
	DV: Indi	v goal	Final model		
Variable	per	f	DV: Indiv goal perf		
Fixed Effects	Estimate	SE	Estimate	SE	
Intercept	5.779**	4.038	21.557**	5.002	
Gender	.096	1.854	.101	2.015	
Negative affectivity	- 1.177	.946	- 1.658	1.290	
Social exclusion	3.203	1.646	1.566	2.120	
Intentionality	1.449*	.647	1.504	.836	
Time	.188	1.264	.005	1.428	
Time × Intentionality	105	.500	090	.550	
Time \times Intentionality \times Gender	.103	.253	.137	.221	
Time \times Intentionality \times Negative affectivity	015	.121	.002	.136	
Time \times Intentionality \times Social exclusion	.425*	.204	.348	.233	
Team identification			- 1.730	.888	
Random Effects	Variance	SD	Variance	SD	
Individual (Intercept)	44.412	6.664	43.449	6.592	
Residual	93.122	9.650	92.839	9.635	
Model Statistics					
Number of observations	468	3	468	3	
Number of individuals	117	7	117	7	
Deviance	3559.9	960	3552.	741	

HLM Tests of Indirect Interactive Effects of Social Exclusion and Intentionality on Individual Goal Performance Over Time (Hypothesis 5f)



Figure 1: Theoretical model representing Hypotheses 1 to 3d.



Figure 2: Simple slopes for the effects of exclusion on Round 1 team identification for high intentionality versus low intentionality.



Figure 3: Simple slopes for the effects of exclusion on Round 2 team identification for high intentionality versus low intentionality.



Figure 4: Simple slopes for the effects of exclusion on Round 3 team identification for high intentionality versus low intentionality.



Figure 5: Simple slopes for the effects of exclusion on Round 4 team identification for high intentionality versus low intentionality.



Figure 6: Intentionality attributions over time.



Figure 7: Team identification over time.



Figure 8: Individual goal effort over time.



Figure 9: Team goal effort over time.



Figure 10: Individual goal performance over time.



Figure 11: Team goal performance over time.

Appendix B: Team Formation

In our study, we want to understand how members work in a team without meeting each other. In the following space, please introduce yourself in less than 50 words. This will be shown to your two teammates who are currently participating in this experiment in two other rooms. Please <u>do</u> <u>not</u> indicate your name, gender, and race in your introduction. You may talk about your major, hobbies, interests, etc.



Figure 12: Team formation loading bar.

Participants will next read the following introductions of two fictitious teammates.

Teammate A:

hey, Im a psych major in freshman year here for my psych 101 credits. I like to hit the gym, basketball, watching movies just chillin with friens during free time.

Teammate B:

psychology sophomore. into rockkk music. ive been in a band for 3 yr, as guitarist. My favorite bad is muse,,, i like killers too. work in a restarant when not in school or jammin.



Appendix C: Cyberball (Williams et al., 2012)

Figure 13: Cyberball front page.



Figure 14: Cyberball interface.

(This is the manipulation check for the Cyberball game used in pilot test)

Typically, team members receive and toss the ball for an almost equal number of times during the Cyberball game (i.e., each member receives and tosses the ball approximately 20 times if the ball is passed around for 60 times). However, social interaction between members in each team is unique and dynamic, so some members may receive the ball more frequently (e.g., 50 out of 60 times), and some members may receive the ball less frequently (e.g., 10 out of 60 times).

For now, think about the Cyberball game you just played with your teammates, recall how frequently you got the ball during the game.

Based on your recall, approximately what percentage of the total number of throws did you receive the ball during the game? _____

	Strongly disagree	Ne ne	either agre or disagre	e e	Strongly agree
My teammates included me in the ball toss game.	1	2	3	4	5
My teammates did not want to include me in the ball toss game.	2 1	2	3	4	5
It seems I was not included in the ball toss game.	1	2	3	4	5

TEAM GOAL REFERENCE LIST (ROUND 1)										
QG19199	Sigma		RT64054	Alpha	[UD97919	Omega		WJ53984	Ome
QH32687	Alpha		SA71521	Alpha		UF59498	Omega		WL45285	Sigm
QH79197	Omega		SA71753	Beta		UK62186	Beta		WM18255	Beta
QJ76673	Beta		SB79048	Alpha		UL55914	Beta		WN35100	Beta
QK34069	Omega		SC26584	Beta		US94565	Beta		WQ40117	Omeg
QK56006	Alpha		SD11357	Sigma		UY86650	Alpha		WR91754	Beta
QL10789	Beta		SD47082	Omega		VB28866	Omega		WT33352	Beta
QL32150	Alpha		SE13970	Alpha		VC34075	Alpha		WT42459	Omeg
QM29683	Sigma		SE61828	Sigma		VF11005	Sigma		WV27824	Omeg
QN89696	Sigma		SG25548	Beta		VF14796	Omega		WX33492	Beta
QP62476	Beta		SH96357	Beta		VF46269	Sigma		WY36351	Sigma
QR63091	Omega		SL50682	Beta		VG78276	Omega		WZ13263	Omeg
QS80028	Sigma		SN39500	Omega		VH31673	Beta		XB24503	Alpha
QT48590	Omega		SQ43335	Sigma		VJ48645	Alpha		XD90994	Sigma
QU98241	Beta		SQ70787	Alpha		VS89243	Beta		XL44826	Sigma
QV73703	Alpha		SW34967	Beta		VT61625	Alpha		XV96894	Sigma
QW26678	Beta		SY88058	Omega		VT83868	Alpha		XV99739	Alpha
QW69037	Sigma		TC49203	Beta		VZ55130	Omega		YC15184	Beta
QX65189	Beta		TH11391	Alpha		WB98938	Omega		YH84769	Omeg
QY18505	Alpha		TN59682	Sigma		WC52657	Omega		YL25590	Omeg
QZ66058	Omega		TR84057	Omega		WD38978	Beta		YM70605	Sigma
RE70750	Omega		TW83287	Beta		WE68810	Sigma		YR11044	Alpha
RF82083	Beta		TY99601	Sigma		WF56877	Beta		YU80317	Beta
RF82083	Sigma		UA28372	Sigma		WG30694	Sigma		ZF60170	Sigma
RH58425	Alpha		UC71249	Sigma		WH27278	Beta		ZX14521	Alpha

Appendix D: Objects Classification Task (OCT)

Figure 15: Team goal reference list.

041020	Beta	EW41549	Sigma	HY40209	Alpha	ML48356	Be
E85669	Beta	FB93755	Omega	JH51560	Beta	MS95476	Si
AF78021	Alpha	FD58359	Omega	JH79942	Sigma	ND31543	Al
AQ74784	Omega	FG37834	Sigma	JS85892	Sigma	NF57156	Al
AS74264	Omega	FJ31604	Sigma	JT51208	Omega	NG41012	Be
AU47615	Omega	FR37026	Beta	JT58461	Omega	NH26311	Sig
BD71066	Beta	FT20862	Sigma	JW14400	Sigma	NK47800	Be
BF96226	Omega	FT58324	Omega	JZ15550	Sigma	NL39395	Be
BG98617	Beta	GA13954	Omega	KL54345	Alpha	NR50707	Be
BH95278	Omega	GA89840	Beta	KM46914	Omega	NS90740	Be
BS70407	Sigma	GC65165	Alpha	KU66416	Beta	NT66439	On
BV62115	Sigma	GE83576	Sigma	KZ59269	Beta	NX24378	Alp
BY25952	Alpha	GF79807	Alpha	LC50649	Sigma	NY42074	Sig
BY32097	Omega	GF97271	Sigma	LJ82578	Omega	NY79350	Be
CN68137	Alpha	GH15218	Beta	LK31870	Beta	PK79111	Be
CQ88692	Sigma	GJ67927	Alpha	LM93824	Omega	PR73631	Sig
DE19646	Sigma	GM83918	Sigma	LN36949	Sigma	PS71351	Bet
DG74174	Alpha	HD83570	Alpha	LN63580	Alpha	PU61716	Be
DK32000	Omega	HE36269	Sigma	LP33806	Sigma	PY95550	Alp
DN17550	Alpha	HE82590	Alpha	LR16914	Sigma	QA53488	On
DR77698	Beta	HF11705	Alpha	LX59909	Sigma	QB63574	On
DZ87562	Sigma	HL56067	Omega	LY47572	Omega	QC49231	On
EF61889	Alpha	HL95449	Sigma	MD81784	Alpha	QD90018	Be
EG15998	Omega	HS16190	Beta	MJ47830	Beta	QE39595	Be
EW39933	Sigma	HS80117	Beta	MK45898	Sigma	QF78439	On

Figure 16: Personal goal reference list.

	Team Client	
You can click on the >> button at th	e bottom of the page to switch to the PERSONAL minutes.	CLIENT page <u>anytime</u> within the 6
1) LY65778		DELTA
2) HT80884		OMICRON
3) QT48590		OMICRON
4) CY28958		NOT ON LIST
5) WM18255		
6) JT51208		DELTA
7) HD83570		OMICRON
8) WR91754		THETA NOT ON LIST
9) CS73921		NOT ON LIST

Figure 17: Team client classification page.

	Personal Client
You can click on the >> button at the bottom	of the page to switch to the TEAM CLIENT page <u>anytime</u> within the 6 minutes
1) UC71249	BETA
2) BH95278	SIGMA
3) QW69037	NOT ON LIST
4) BR82041	NOT ON LIST
5) BZ55349	BETA
6) YR11044	OMEGA
7) HL95449	
3) WD38978	ALPHA
9) AD41020	BETA SIGMA
10) 11550 100	OMEGA

Figure 18: Personal client classification page.

Appendix E: Intentionality Attribution

You have just completed a round of Cyberball game.

Typically, team members receive and toss the ball for an **almost equal number of times** during the Cyberball game (i.e., each member receives and tosses the ball approximately 15 times out of 45 times). However, social interaction between members in each team is unique and dynamic, so some members may receive the ball more frequently (e.g., 35 out of 45 times), and some members may receive the ball less frequently (e.g., 5 out of 45 times).

There are many reasons why the ball could be tossed for an unequal number of times between team members. For example, it could be due to liking (if I like you more, I pass the ball to you more), or past interaction experiences (if you contribute to the team more, I pass the ball to you more), or it could be due to carelessness or randomness (I just blind select who to pass the ball to).

For now, think about the Cyberball game you just played with your teammates. The ball was tossed approximately 45 times in total between the three of you during the game. **Recall how frequently you got the ball and rate your agreement or disagreement with the statements below.**

	Strongly disagree	No no	either agre or disagre	e e	Strongly agree
How often I received the ball was an intentional decision made by my teammates.	1	2	3	4	5
My teammates consciously determined when to pass the ball to me during the game.	1	2	3	4	5
My teammates knew how often they passed the ball to me during the game	1	2	3	4	5

Appendix F: State Team Identification (Allen & Meyer, 1990)

	Strongly disagree		Neither agree nor disagree		Strongly agree
I do not feel like 'part of the family' at my team.	1	2	3	4	5
I do not feel emotionally attached to this team.	1	2	3	4	5
This team has a great deal of personal meaning for me.	1	2	3	4	5
I do not feel a <i>strong</i> sense of belonging to <i>my team</i> .	1	2	3	4	5

Please indicate how much you agree with each statement at this moment.

Appendix G: Positive Affectivity/Negative Affectivity (Thompson, 2007)

This scale consists of a number of words that describe different feelings and emotions. Indicate to what extent you feel each feeling <u>in life in general</u>.

	Not at all				Extremely
Determined	1	2	3	4	5
Upset	1	2	3	4	5
Hostile	1	2	3	4	5
Alert	1	2	3	4	5
Guilty	1	2	3	4	5
Inspired	1	2	3	4	5
Nervous	1	2	3	4	5
Attentive	1	2	3	4	5
Afraid	1	2	3	4	5
Active	1	2	3	4	5
Ashamed	1	2	3	4	5

Appendix H: Goal Commitment Measure (Klein et al., 2001)

Using the scale below, please indicate your agreement with each item for this upcoming round of objects classification task.

For the upcoming round	Strongly disagree		Neither agree nor disagree		Strongly agree
It's hard to take the individual goal seriously.	1	2	3	4	5
Quite frankly, I don't care if I achieve this individual goal or not.	1	2	3	4	5
I am strongly committed to pursuing this individual goal .	1	2	3	4	5
It wouldn't take much to make me abandon this individual goal .	1	2	3	4	5
I think this is a good individual goal to shoot for.	1	2	3	4	5

Using the scale below, please indicate your agreement with each item for this upcoming round of objects classification task.

For the upcoming round	Strongly disagree		Neither agree nor disagree		Strongly agree
It's hard to take the team goal seriously.	1	2	3	4	5
Quite frankly, I don't care if I achieve this team goal or not.	1	2	3	4	5
I am strongly committed to pursuing this team goal .	1	2	3	4	5
It wouldn't take much to make me abandon this team goal .	1	2	3	4	5
I think this is a good team goal to shoot for.	1	2	3	4	5

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