

Power and Altruistic Helping in Organizations: Roles of Psychological Closeness,  
Workplace Design, and Relational Self-Construal

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## **Abstract**

I tested a model wherein psychological closeness mediated the negative relationship between power and altruistic helping. I also proposed two moderators—physical distance and relational self-construal—to moderate this relationship, specifically by interacting with power to influence psychological closeness. First of all, this study did not support the proposition that power was negatively related to helping. Power was not associated with helping in the lab setting; perceptions of power measures were positively associated with helping whereas most of the measures of status and relative power were not associated with helping. Second, I did not find support for the model wherein psychological closeness mediated the negative relationship between power and helping in both the lab setting and the field setting. Third, neither physical distance nor relational self-construal was a significant moderator of the relationship between power and psychological closeness. Therefore, the association between power and helping via psychological closeness did not vary by either of the moderators.

To my father, Dr. Mahnhee Yoon

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## Chapter 1: Introduction

One of the first lessons that we learn as working adults is that our bosses can be insensitive to us and not care about our daily struggles. Over the past seventy years, scholars across a number of disciplines attempted to answer the next logical question to this universal dilemma: exactly *why* do bosses treat us poorly? Recently, researchers have found that it is because our bosses have power over us. Keltner, Gruenfeld, and Anderson (2003) proposed that having power affects individual's neurobiological system. This makes powerful individuals think of others differently. They jump to general conclusions about others more easily and consider those with less power as means to reach their goal. Thus, although they may help others when there is an instrumental, work-related reason for doing so, powerful individuals are less likely to help others in need if such helping does not have any instrumental value to meeting their goals.

Despite this prediction, the evidence that links power to positive interpersonal behaviors such as altruistic helping remains inconclusive. This is because most research has focused on how having power accentuates the relationship between individual characteristics and prosocial attitudes and cognition (Chen, Lee-Chai, & Bargh, 2001; Côté et al., 2011). However, these studies are relatively silent in conveying the process and conditions under which power affects positive interpersonal behaviors. One explanation for these inconclusive findings is the omission of an important psychological process through which power influences positive interpersonal behaviors such as helping others. Psychological closeness is one such process. Psychological closeness is a subjective experience that someone is far or close from the self (Trope & Liberman, 2010). When we feel that someone is psychologically distant from us rather than close,

we are more prone to think of that someone in a very abstract manner, forming our mental representation of the person based on the most basic, invariant aspects about the person and not based on the person's day-to-day situations (construal-level theory of psychological distance; Trope & Liberman, 2010). This explanation suggests that psychological closeness changes how we behave to others since it changes how we form mental representations of others. Recently, scholars found that power leads to lower psychological closeness to others (Smith & Trope, 2006). Thus, in addition to the existing neurobiological processes, psychological closeness may also be an important process that links power to positive interpersonal behavior in organizations. One such positive interpersonal behavior that is impacted by psychological closeness is helping behavior.

Helping behaviors, especially powerful individuals' helping behaviors towards others with less power, are important for organizations for a number of reasons. First of all, when a powerful individual helps others in need, he or she sends a message to not only the individual whom he or she helps but also to his or her work group that this type of behavior is important. For instance, helping others is considered an exemplary behavior but one that requires individualized consideration of the needs of those that one helps. A powerful individual who is able to engage in such exemplary behavior through individualized consideration of others' needs also inspires others to model such behaviors as it communicates to others in the workplace that these behaviors are important for the group (e.g., Bass, 1985; Conger & Kanungo, 1998; Shamir, House, & Arthur, 1993). This is especially important for those who are in dire need of such role models: those who are newcomers to the organization, those with little work experience in the organization, or those who are in need of guidance for correct behavior at work (see French & Raven,

1959; Hinkin & Schriesheim, 1989). As such, a powerful individual's helping behavior has trickle-down effects to those who are less powerful.

Powerful individuals' helping behavior is also important to consider because it is associated with a plethora of benefits for the organization. For instance, helping behavior is associated with better task performance, higher job satisfaction, higher commitment, providing support for leaders, and higher perception of interactional and procedural justice at work (Hoffman, Blair, Meriac, & Woehr, 2007; LePine, Erez, & Johnson, 2002). Conversely, when powerful individuals are not able to demonstrate helping behavior towards others, they set a negative norm; such negative norms spread to their direct reports and their work outcomes (see Liu, Liao, & Loi, in press).

Existing literature suggests that there are certain conditions under which power leads to helping behaviors through psychological closeness. Self-construal refers to how individuals define themselves in the social world (Brewer & Gardner, 1996). Self-construal governs the type of goals—personal gain or belongingness—that an individual pursues at work (Cooper & Thatcher, 2010) and is important to how powerful individuals perceive psychological closeness from others and respond to them (Howard, Gardner, & Thompson, 2007). Physical environment is another condition that impacts how powerful individuals perceive psychological closeness to others and respond to them (e.g., Grant, 2007), but it is still unclear what roles these two play in how power relates to helping behavior. This is an important oversight as physical distance, barriers, and the larger physical environment can impact a wide array of outcomes such as work attitudes, interpersonal behavior, and performance (Danielsson & Bodin, 2008; de Croon, Sluiter, Kuijer, & Frings-Dresen, 2005; Greenberg, 1988; McElroy & Morrow, 2010; Oldham &

Fried, 1987; Oldham & Rotchford, 1983; Paulus, Annis, Seta, Schkade, & Matthews, 1976; Sundstrom, Burt, & Kamp, 1980; Zalesny & Farace, 1987).

In this study, I seek to add to our understanding of power in organizations by looking at the psychological processes that link power and helping behaviors and the different conditions in which these processes may occur. I hypothesize that having power will lead to lower psychological closeness to others, and this lower psychological closeness will lead to these powerful individuals helping others less. The extent to which this sequence occurs will depend on the physical environment of the individual and his or her self-construal. I will test these hypotheses in a lab study and a field study.

The first theoretical contribution of this study is to explore the role that psychological closeness plays in linking power to interpersonal helping behavior at work. The second theoretical contribution of this study is to examine the roles that an individual's self-construal—specifically, relational self-construal—and his or her workplace elements play as either an enhancer or a reducer of the negative relationship between power and psychological closeness, which will subsequently impact the likelihood of helping behaviors. The first practical implication of this study is in identifying workspace design elements that decrease powerful individuals' psychological closeness with others at work, thereby, degrading the quality of powerful individuals' contact with others. Hence, I examine whether a decrease in these workplace design elements that hamper psychological closeness will reduce the negative behavioral effects of power. By identifying these negative workspace design elements, organizations can change the workspace design to promote positive work relationships, especially those between powerful individuals and those with less power. The second practical

implication of this study is in gaining knowledge of the role that self-construal plays in the workplace. This study will provide practitioners an insight as to which current or future bosses are more likely to perceive high psychological closeness to others based on their self-construal, thereby, decreasing the likelihood that they fail to help others.

## **Chapter 2: Literature Review**

### **Power**

#### **Definition of Power**

As mentioned in the introduction, power is a capacity to influence others. More specifically, this capacity entails providing or withholding actual resources and administering reward or punishment to make others do a task that they would not do otherwise (Emerson, 1962; Fiske, 1993; Keltner et al., 2003; Kipnis, Schmidt, & Wilkinson, 1980; Mowday, 1978; Parker & Rubenstein, 1981; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; Thibaut & Kelly, 1959). These resources and punishment can be material (e.g., termination or compensation) or social (e.g., friendship or emotional support).

Power is also perceived freedom from others to which the powerful individual administers reward and punishments. This perceived freedom is based on an individual's position in dyads or in groups. This sense of perceived freedom is a mutual understanding among individuals in a dyad or a group on who can change others' behaviors (Mintzberg, 1983; Salancik & Pfeffer, 1977). For instance, an individual can occupy a position in a group that leads her to believe that she is in a position of power. However, other group members may not believe this to be the case. The position that one occupies—a position of power—must elicit mutual understanding that the individual is free from others' influence. This mutual understanding is based on the sources (Bacharach & Lawler, 1980; Pfeffer, 1981), bases (French & Raven, 1959; Peabody, 1962), kinds (Etzioni, 1961), and types (Olsen, 1978) of power in an organization. This mutual understanding is also formed from the structural characteristics of the hierarchy and social relationships



(structural perspective on power; Brass & Burkhardt, 1993; Pfeffer, 1981). Thus, power is an ability to administer reward or punishment and a mutual understanding by others that an individual can administer these decisions with a certain degree of freedom (Farmer & Aguinis, 2005, Fiol, O'Connor, & Aguinis, 2001; French & Raven, 1959; Nesler, Aguinis, Quigley, & Tedeschi, 1993).

### **Power: How Does it Work?**

Power is important because of its ramifications on workplace relationships. In the approach theory of power, Keltner and colleagues (2003) explained the determinants and the social consequences of having power. They juxtaposed two power conditions. High power condition entails having valuable resources and freedom from others; low power condition entails having less valuable resources and having their freedom constrained by others. Keltner et al. proposed that the type of neurobiological system that is activated from an individual's high or low power is responsible for how an individual feels, thinks, and behaves. This process starts from the types of input that high power versus low power individuals receive from their respective environment.

A high power situation is full of environmental cues that signal reward and non-punishment. These rewards include having a higher salary, eating better food, being in a more comfortable physical environment, and being surrounded by those who reinforce the individual's self-esteem and praise the individual. Having power makes one aware that he or she can act without interferences and scrutiny from others (Aquino & Lamertz, 2004; Brass, Butterfield, & Skaggs, 1998; Weber, 1997|1947). These environmental cues from high power activate the behavioral approach system (BAS; Gray & McNaughton, 2000), a neurobiological system that is "characterized by incentive-reward motivation

and a subjective state of desire, positive affect, and potency that activates forward locomotion and search behavior as a means of satisfying an animal's need for food, sex partner, social interaction, a nesting place, etc." (Depue, 1995, p. 414). When the behavioral approach system is activated, it triggers approach-related regulatory processes that help an individual to seek out goals that are linked to rewards. These approach-related processes dictate the type of motivational and emotional state of an individual is in, the type of cognitive assessments used to seek out these rewards, and the type of goals that one sets before acting. More specifically, these approach outcomes are expressions of the behavioral approach system and include positive emotion and affective aggression, attention to rewards, automatic information processing, and display of disinhibited behaviors. The approach-related regulatory process extends to social cognition as well. Powerful individuals view others in an instrumental manner. They view others as means to their own end and perceive others in a stereotypical manner. They also favor in-group members while discriminating out-group individuals and attribute collective tasks from their own vantage point and use their own disposition when attributing others' actions. They believe that they are beyond the social norms that constrain those with less power.

In contrast, a low power situation is full of environmental cues that signal non-reward and punishment (see Gray & McNaughton, 2000). When individuals lack power and are in that social context, they are in an environment that lacks rewards. They have less access to higher salary or a comfortable environment, and are surrounded by those who pose threats to what resources they have (Domhoff, 1998). They are also aware that they have to be vigilant and measured in how they react to others so that they can stay in favor of others (e.g., Fiske, 1993; Steele & Aronson, 1995). They must stay in others'

favor because their lack of power makes them the target of others' harm (Aquino & Lamertz, 2004; Brass et al., 1998; Sidanius, 1993; Gottfredson & Hindelang, 1981). These environmental cues from low power activate the behavioral inhibition system (BIS; Gray, 1973; Gray & McNaughton, 2000), a neurobiological system that is “characterized by a negative motivational state of anxiety and apprehension and by an inhibition of BFS activity under stimulus conditions connoting potential punishment” (Depue, 1995, p. 414-415).<sup>1</sup> When the behavioral inhibition system is activated, it triggers inhibition-related regulatory processes that help an individual to seek out goals that are linked to avoiding punishment. More specifically, these inhibition outcomes are expressions of the behavioral inhibition system and include negative emotion and anxiety, attention to punishment and threat, controlled information processing, inhibited behaviors, and attention to others' interests. Thus, having power versus lacking power creates a different set of behaviors and requires a closer examination on how an individual obtains or lacks power.

### **Determinants of Power**

With these divergent behavioral implications, the natural question that follows then is to ask what makes an individual more powerful or less powerful than others. Although there are a variety of ways that scholars have attempted to understand what makes someone more powerful than others, two dominant perspectives have guided much of the research in power. The first perspective is that individuals' power is derived from

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<sup>1</sup> The BFS is an acronym for the behavioral facilitation system, which is synonymous to the behavioral activation system or behavioral approach system (Depue, 1995).

different bases (French & Raven, 1959; Peabody, 1962). These scholars have focused on self- and other-perception of the different bases of an individual's power and how these perceptions relate to the attitude and behavior of the powerful individual and those around the individual (Carson, Carson, & Roe, 1993; Hinkin & Schriesheim, 1989; Schriesheim, Hinkin, & Podsakoff, 1991; Ward, 1998). The second view is that individuals' power is derived from different sources (Astley & Sachdeva, 1984; Bacharach & Lawler, 1980; Pfeffer, 1981). These scholars have focused on the different objective characteristics specific to the individuals themselves or their advantageous position in a group of individuals that give individuals power (Astley & Sachdeva, 1984; Brass & Burkhardt, 1993; Keltner et al., 2003). These scholars have examined the formal structural sources of power (i.e., hierarchical authority, subunit membership), informal structural sources of power (i.e., network centrality; Astley & Sachdeva, 1984; Ibarra, 1993), and personal sources of power (e.g., education, professional experience; Ibarra, 1993). These two perspectives share the common ground that power—an ability to reward and punish others—can be achieved in different ways. However, despite the similarity they share in semantics—bases and sources—they reflect a philosophical difference in their focus on whether power should be construed as a subjective perception of an ability or as an objective observation of an ability. In the section below I present a literature review of what makes an individual powerful by first reviewing the power-as-bases perspective and then by reviewing the power-as-sources perspective.

**Bases of power.** An individual can have many bases of power in an organization. Although many typologies and frameworks exist for power, the most influential and seminal typology belongs to French and Raven (1959). French and Raven (1959)

distinguished between reward, coercive, expert, legitimate, and referent power; Hinkin and Schriesheim (1989) further clarified the boundaries of each base of power and created the widely used Bases of Social Power scale. I review the five bases of power below.

***Reward power.*** This is an ability to administer to others things they desire or an ability to remove things that they do not desire (French & Raven, 1959; Hinkin & Schriesheim, 1989). The individual does not need to be the owner of the resources that others desire to have reward power. In most organizations, individuals with reward power mediate the rewards for others, meaning these individuals have a direct impact on how others attain the desirable resources from the owner of such resources. Thus, the extent to which an individual has reward power is the amount of rewards that others perceive an individual can mediate for them (French & Raven, 1959).

***Coercive power.*** This is an ability to administer to others things they do not desire or an ability to remove things they do desire (French & Raven, 1959; Hinkin & Schriesheim, 1989). The extent to which an individual has coercive power is a function of the intensity of the threatened punishment and the perceived probability that one can avoid punishment (French, Morrison, & Levinger, 1960).

***Expert power.*** This is an ability to give others information, expertise, or knowledge that they do not have (French & Raven, 1959; Hinkin & Schriesheim, 1989). The amount of expert power that an individual has largely depends on the recipient of the information. When individuals receive information, it occurs in two steps. First is accepting the validity of the information and second is considering how to apply the information. French and Raven (1959) note that whether or not an individual has expert

power is determined by the first step; as long as others consider the information that the individual gives to be valid, the individual has expert power. Thus, the amount of expert power an individual has is determined by other's perception of the individual's extent of knowledge possession (French & Raven, 1959).

***Legitimate power.*** This is an ability to administer to others feelings of obligation or responsibility (French & Raven, 1959; Hinkin & Schriesheim, 1989). There are a number of bases that elicit the feelings of obligation and responsibility. French and Raven (1959) note three such bases of legitimate power. One base is cultural value. An individual who has legitimate power has characteristics prescribed by the culture as giving the individual a right to command others. Weber (1997|1947) notes that these characteristics of an individual may include age, gender, intelligence, and physical characteristics. Another base is the acceptance of the social structure that surrounds individuals in a group. For instance, if individuals accept the hierarchy of the organizations as the right type of command-and-control structure to get the job done, they are more likely to accept that their boss has the authority to give them orders. The third base of legitimate power is being designated by someone who is already considered legitimate. For instance, a boss from a different department may be considered legitimate by employees of a different department because this boss was designated by a higher-level boss such as the CEO.

***Referent power.*** This is an ability to administer to others feelings of personal acceptance or approval (French & Raven, 1959; Hinkin & Schriesheim, 1989). An individual has referent power if others are attracted to her, want to be associated with her, and want to perceive, believe, and behave as she does (French & Raven, 1959). Thus, at

the heart of this individual's power is others' desire to identify with her. Two situations occur when an individual gains referent power (French & Raven, 1959). First is when others seek a sense of stability in ambiguous situations. Individuals in organizations often face ambiguous situations where they seek role models and adopt the cognitive structure of these role models. These are situations where an individual to whom others look for a sense of stability gains referent power. Second is when the individual has characteristics that others desire. One such example is prestige. In this situation, others value prestige that an individual holds such as an employee of the month award and desires to be associated with the individual and assume the attitudes and beliefs of the individual.

**Sources of power.** Unlike the power-as-bases perspective, the power-as-sources perspective focuses on the objective determinants of power and has most recently been delineated in the approach theory of power (Keltner et al., 2003). The unique contribution of the approach theory of power was that it challenged the notion at the time that an individual's tendency for the behavioral approach system or the behavioral inhibition system in the face of conflict was mostly a function of individual differences (e.g., Carver & White, 1994; Elliot & McGregor, 2001; Elliot & Sheldon, 1998). Keltner et al. suggested that power—an important social context—also determines the activation of either the behavioral approach system or the behavioral inhibition system above and beyond individual differences. However, they also noted that many sources contribute to whether an individual has high power versus low power. Thus, the first part of their theory outlined the relationship between the power and its sources. The sources span across the individual level (e.g., traits, physical features), dyadic level (e.g., degree of commitment to the relationship), within-group level (e.g., formal hierarchies and informal

authority structures), and between-group level (e.g., socioeconomic status and majority affiliation).

*Individual-level sources.* Certain traits are associated with high power. From the Big Five, extraversion (Anderson, John, Keltner, & Kring, 2001; Anderson, Spataro, & Flynn, 2008; Judge, Bono, Ilies, & Gerhardt, 2002) and its dimension of dominance (Anderson & Kilduff, 2009; Buss & Craik, 1981; Judge et al., 2002; Megargee, 1969) were the strongest positive predictors of gaining a position of power or influence. Furthermore, conscientiousness and openness to experience were positive predictors of gaining a position of power (Judge et al., 2002). Conversely, neuroticism had negative association with gaining a position of power (Anderson et al., 2001; Judge et al., 2002). Across a number of studies of the Big Five traits, extraversion—especially its dominance dimension—and conscientiousness were the strongest predictors of an individual gaining power.

Dark-side traits are also associated with an individual gaining power. For instance, narcissism is positively related to leader emergence because others often mistake behaviors associated with this trait to be charismatic (e.g., Sankowsky, 1995). Also, Machiavellianism—an individual's tendency to be cold and opportunistic at the expense of morality—is positively associated with gaining a position of power because individuals with this trait are apt at reacting to situational demands and are effective at influencing others (Drory & Gluskinos, 1980; Mael, Waldman, & Mulqueen, 2001; Wilson, Near, & Miller, 1996).

Some also consider power itself to be dispositional and this dispositional power is also positively related to being in a position of power. Although power is often viewed as



a structural variable (Ng, 1980) and a function of social relationships (Emerson, 1962), others believe that power is also a psychological attribute of an individual (Anderson, John, & Keltner, 2012; Anderson et al., 2001; Bargh, Raymond, Pryor, & Strack, 1995; Bugental, Blue, & Curzcosa, 1989; Chen et al., 2001; Galinsky, Gruenfeld, & Magee, 2003). Anderson and Galinsky (2006) specifically developed a measure called the Sense of Power scale that measured the subjective sense of power that spanned across an individual's social relationships. Empirically, this dispositional power was positively related to individuals' standing in hierarchies and their being in a position of power (Anderson & Galinsky, 2006; Anderson et al., 2012; Chen, Langner, & Mendoza-Denton, 2009).

Certain social skills are also positive predictors of power. The assumption is that how an individual interacts with others help them gain a position of power. This skill set is unique to the individual. For instance, women's accuracy in encoding happiness of others and men's accuracy in encoding anger of others were positive predictors of them being in a position of power in their respective gender groups (Coats & Feldman, 1996). Such accuracy in interpreting others' emotions is important in navigating through and establishing a powerful position in groups. Other social skills exude leader-like behaviors. One such skill is an individual's charisma. Charisma is articulating a compelling vision for others and arousing other's commitment to work toward a vision by using personal charm, by communicating persuasively, and by being a role model in conduct (Bass, 1985; Conger & Kanungo, 1998; House, 1977). Charisma is considered to be the most important dimension of transformational leadership (Judge & Bono, 2000) as

it motivates others to reach important goals (Shamir et al., 1993). These charismatic individuals often gain positions of power (Hogan, Raskin, & Fazzini, 1990).

An individual's status characteristics are also important predictors of power. Status characteristics refer to individual attributes that communicate to others prominence, respect, prestige, and influence (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Wegener, 1992). Status is different from power. Power is a zero-sum condition such that if an individual loses the position of power to the challenger, the challenger takes over what the individual has lost (Wegener, 1992). Unlike power, status is not zero-sum but it is still predictive of whether or not an individual can gain a position of power. As mentioned earlier, an important component of power is expertise as it is a valuable resource in organizations. Status characteristics such as tenure, professional activity, and education level are relevant to providing expertise to an individual. Individuals acquire these status characteristics from outside the organization but can convert them to a wide array of valuable social resources such as advice and emotional support that place the individual in a position of power. An individual with long tenure in the profession knows how to achieve desired outcomes by correctly navigating through organizational politics (Kimberly & Evanisko, 1981). An individual who partakes in many professional activities has more expertise in producing innovation (Daft, 1978; Damanpour, 1987; Evan & Black, 1967) because she has contacts that are outside of the organization that provide her with innovation-related information (Aiken & Hage, 1971). An individual who has high levels of education is more exposed to new ideas and is more receptive toward them, which contributes to her expertise (Kimberly & Evanisko, 1981;

Zmud, 1984). As such, status characteristics are strong predictors of an individual gaining power, especially expert power.

*Within-group level sources.* Within groups, power is determined by the importance of the position or the role that one occupies in the group. An important position determines how resources are to be distributed or withheld from others (Carter, Haythorn, & Howell, 1950; Emerson, 1962). Positions that one occupies in the group is important in both formal hierarchies and in informal relationships in organizations (Brass & Burkhardt, 1993; Hickson, Hinings, Lee, Schneck, & Pennings, 1971; Ibarra, 1993).

*Hierarchical authority.* An individual has power when he or she occupies a position higher in the organizational hierarchy than others. A position in the hierarchy and the power attached to it is considered legitimate by the individual occupying the position and by those influenced by the directives of the position (French & Raven, 1959). Astley and Sachdeva (1984) note that a position in the hierarchy is a legitimate source of power:

The interpretation of power in terms of authority relations, on which all of these latter studies focus, is grounded in the conception of power as something that inheres in official positions. Power is viewed as the product of formal decree.

Subordinates obey superiors not so much because they are dependent on the latter, but because they believe that the latter have a right to exercise power by virtue of their position (p.105-106).

A position in the hierarchy can command such obedience because it signals competence of the person in the position. In most organizations, an individual's position in the hierarchy is determined by work experience, seniority, or performance. In other words, a

position in the hierarchy shows that the individual's merit is endorsed by the group. Thus, hierarchical authority is endorsed by those who lead and those who follow (Astley & Sachdeva, 1984; Lammers, Galinsky, Gordijn, & Otten, 2008; Madison, Allen, Porter, Renwick, & Mayes, 1980). As such, individuals in higher position in the hierarchy command obedience, neither because of how they contribute resources to their subordinates nor because they are central in the social network per se, but because their position symbolizes the individual's past performance that warrant institutional privileges.

*Network centrality.* Network centrality is another source of power based on an individual's position within a group. However, this source of power is different from hierarchical authority in two ways. First, the type of resource that an individual controls in the position is different. An individual who occupies a higher position in the hierarchy controls material resources such as salary, termination, and performance evaluation of those who occupy a lower position. But an individual who occupies a central position in a network controls social resources such as advice, friendship, or emotional support (Ibarra, 1993; Ibarra & Andrews, 1993). Second, how the individual reaches the position is different. A position in the hierarchy is assigned by the organization and can be established instantaneously. In contrast, a central position in a network is not forced upon by the organization; an individual attains that position over time and through numerous interactions with others (Astley & Sachdeva, 1984; Brass & Burkhardt, 1993; James & Jones, 1976; Mintzberg, 1979; Tichy, Tushman, & Fombrun, 1979). Over time, an individual navigates through the social relationships and builds his or her position in critical pathways through where these social resources travel between group members.

While different from hierarchical authority in that power difference is self-determined, there still exists differences in resources between individuals, even if this resource is social in nature. Emerson (1962) explains how resource dependence in advice, friendship, and emotional support occurs between individuals:

Thus, it would appear that the power to control or influence the other resides in control over the things he values, which may range all the way from oil resources to ego-support... The dependence of actor A upon actor B is (1) directly proportional to A's *motivational investment* in goals mediated by B, and (2) inversely proportional to the *availability* of those goals to A outside of the A-B relation. (p. 32)

When an individual has these social resources and others value these resources but cannot obtain these resources outside of the relationship with the actor, the individual has power and others are dependent on the individual for these social resources (Brass, 1984; Emerson, 1962; Fiske, 1993; Rusbult et al., 1991; Thibaut & Kelley, 1959).

Power from network centrality can be assessed in three ways. First is in-degree centrality or the “number of people who choose the focal individual” (Brass & Burkhardt, 1993, p. 445). The measure of in-degree centrality is often considered a measure of prestige since the focal individual is often the object of communication and not the source, which indicates that the relationships within the network are asymmetric (Knoke & Burt, 1983). Second is closeness, which is defined as the “[sum of] the lengths of the shortest paths from a focal person to all other persons in an organization” (Brass & Burkhardt, 1993, p. 445). A focal person who has high closeness can reach other members of the organization with a few number of direct links (i.e., one step removed

from others) and indirect links (i.e., connected to others that are removed two steps or more; Freeman, 1979). Lastly, betweenness centrality is the “extent to which a focal person falls between pairs of other persons on the shortest path connecting the pairs” (Brass & Burkhardt, 1993, p. 446). A focal person in this position is at the strategic position of controlling the flow of information and resources between two individuals (Freeman, 1979).

*Between-group variables.* Not all sources of power are unique to an individual and her position in a group. The power of an individual may also due to being a member of an influential group.

*Subunit membership.* Some units within organizations have more control over valuable resources than do other units. At first sight, this point is difficult to grasp as units are dependent on one another for subsistence in most organizations. For example, the finance department depends on the sales department for metrics related to product sales and the sales department depends on the finance department for operating budget. So there is an exchange relationship where units supply each other with resources in return for resources that are of equal value. However, power imbalance occurs when the resource one unit supplies to another is more valuable and more difficult to obtain than the resource the unit receives. Valuable resources for an organization are often difficult to secure and is critical to organizational functioning (Astley & Sachdeva, 1984). Financial resources are one such valuable resource. For instance, an academic department may hold valuable funding resources and outside contracts that are rare and not easily available to other academic departments (Salancik & Pfeffer, 1974). In this situation, the department

that has these resources has the ability to grant or deny other department's requests (e.g., Emerson, 1962).

Information is also a valuable resource that some units have while others do not. Units that have direct contact with its customers or trade partners are considered more powerful than other units because of the firsthand knowledge and information that they have of customers and partners. This information is also a critical resource because it is critical to controlling and reducing uncertainties surrounding the organization's survival (Hickson et al., 1971; Pfeffer, 1981). Individuals in these units are called the boundary spanners or boundary role persons because they make purchases and sales with other customers or organizations and are the first to know of the organization's financial situation (Aldrich & Herker, 1977; Jackson & King, 1983; Spekman, 1979; Whetten, 1978) and help the rest of the organization to cope with the uncertainty of the environment surrounding the organization (Hickson et al., 1971; Pondy, 1977; Provan, 1989). Generally speaking, the units that have such immediate knowledge include the customer service, distribution, and operations departments (Bowen & Schneider, 1985; Schneider & Bowen, 1995; Sheridan, Slocum, Buda, & Thompson, 1990), but may also include other departments depending on the type of market uncertainty of the industry in which the organization operates (Hambrick, 1981; Lawrence & Lorsch, 1967; Woodward, 1965). Due to this immediate knowledge of the business operations, these units have expert power and are considered powerful in organizations (Bowen & Schneider, 1985; Jackson & King, 1983; Schneider & Bowen, 1995; Sheridan et al., 1990; Spekman, 1979). In sum, an individual that is a member of a subunit that has resources that are difficult to attain and are valuable to the organization are able to

control and regulate the supply of these resources to others and are more powerful (Mindlin & Aldrich, 1975; Pfeffer & Salancik, 1978; Yuchtman & Seashore, 1967).

*Majority membership.* Finally, individuals may be a member of a group outside of the organization that accords them more power. This includes being a member of a higher socioeconomic class (Domhoff, 1998), being a member of an experimental group that was the majority (Brewer, 1979; Ng, 1980), being in a majority ethnicity (Sidanius, 1993), or being a male in the political arena (Henley & LaFrance, 1984; see also Hall & Halberstadt, 1994). Being a member of a majority group may not directly give individuals greater control over rewards and punishments, but may allow individuals to gain better access to a position of power.

### **Consequences of Power**

Power is important because it impacts outcomes that are important to social relationships. Under Keltner et al.'s framework, these outcomes can be broadly divided into approach and inhibition outcomes. As mentioned earlier, high power triggers approach outcomes ranging from emotions, social cognition, and behaviors. In the following section, I review the consequences of power.

**Emotion and mood.** Emotions are important to helping, as an increase in positive emotions from elevated power detracts from an individual's ability to relate to the negative emotions of those who are in a dire situation (van Kleef et al., 2008). Powerful individuals experience more positive emotions than less powerful individuals. Keltner et al. (2003) proposed that when an individual experiences high power, neurobiological markers of the behavioral approach system are activated (Keltner et al., 2003). This includes the activation of the left frontal cortex and the secretion of dopamine, which are



associated with positive emotions (Ashby, Isen, & Turken, 1999; Carver & White, 1994; Davidson, 1992; Depue, 1995; Sutton & Davidson, 1997). In test of this theory, Anderson and Berdahl (2002) found that when individuals either have high dominance or when they were assigned to a powerful role that has control over resources, they experienced more positive emotions than negative emotions. In a more recent study, Berdahl and Martorana (2006) found that when individuals have power—specifically, a leadership role with control over how to allocate rewards to group members—they experienced more positive emotions than negative emotions. Berdahl and Martorana (2006) also found that powerful individuals expressed more positive emotions than negative emotions compared to their powerless counterpart, replicating an earlier study that found the link between power and display of positive emotions in a fraternity (Keltner, Young, Heerey, Oemig, & Monarch, 1998). In a romantic relationship, individuals who were perceived by their partners to have more power in the relationship experienced more positive emotions than did their partner. Conversely, individuals who were perceived by their partner to have less power in the relationship experienced more negative emotions than their more powerful partner (Langner & Keltner, 2008). This finding also extends to the relationship between power and positive mood—a sustained state of positive emotion (Russell, 2003). Watson and Clark (1997) found that that self-reports of dominance and leadership role were positively related to positive mood.

**Social cognition.** Powerful individuals are more likely to make swift, shortcut-driven judgments regarding others' hardships and needs. They perceive their social environment using mental shortcuts that are rapid and effortless (automatic social cognition; Bargh & Chartrand, 1999; Chaiken, Liberman, & Eagly, 1989; Wegner &

Bargh, 1998). In contrast, individuals with low power are more likely to be effortful and deliberate in examining their social environment (controlled social cognition; Keltner et al., 2003). This difference in social cognition is important as it impacts how individuals interpret the hardship cues provided by those around them.

*Automatic social cognition.* There are several explanations for this discrepancy in social cognition. First is that powerful individuals focus on different types of cues from the environment than those with less power. Powerful individuals focus on pursuing rewards in their environment such as higher salary, promotion, or physical comfort that are extra to what they currently have. They gain benefits from attaining those rewards, but they do not necessarily lose anything that they already have if they do not gain those rewards. In that regard, they differ from those with low power. Those with low power are in a position where they take orders from those with more power; should they fail to deliver on those orders, they are more likely to receive punishment and lose what job security and salary that they already have. In this situation, individuals with less power must be vigilant in seeking out danger cues to maintain their status quo.

Second, powerful individuals are often in a position of high cognitive demand where they have to make a number of important decisions and coordinate many subordinates. According to the conservation of resources theory (Hobfoll, 1989), individuals strive to obtain and maintain cognitive (e.g., intelligence and attention), emotional (e.g., emotion and mood), and motivational (e.g., goal commitment; Wang, 2007) capabilities and reduce threats that may lead to a loss of these capabilities. Powerful individuals are given a goal by the organization to deliver business objectives and require these capabilities to successfully reach those goals (Overbeck & Park, 2006).

However, having to pay attention to others depletes these capabilities in dispersing attention, enthusiasm, and commitment, reducing the powerful individual's resources to meet business objectives. Thus, as a way of protecting these capabilities, powerful individuals perceive minor social events in an automatic fashion to maintain their capabilities and to manage their job demands (Fiske, 1993; Neuberg & Fiske, 1987).

Third, as mentioned earlier, powerful individuals tend to experience more positive emotions and maintain a more positive mood than those with low power. An increase in positive emotion and mood are associated with a higher chance of using mental shortcuts when making judgments (Bodenhausen, Sheppard, & Kramer, 1994; Lerner & Keltner, 2000). In contrast, individuals with less power experience more negative emotions and are prone to a more depressive and anxious mood. An increase in negative emotions and mood are associated the use of more deliberate judgments (Bodenhausen et al., 1994), as it helps individuals to be more vigilant in guarding themselves from others' harming behavior (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001).

Fourth, powerful individuals are more likely to view others as means to an end. In other words, powerful individuals approach others for what they can do for them regardless of others' important qualities (objectification; Nussbaum, 1999). Furthermore, having power leads to a more heightened sense of rewards (Keltner et al., 2003). For instance, a supervisor may view the next promotion as the reward for which he or she is striving. When a supervisor mentally locks onto this reward, her view of her subordinates becomes instrumental, meaning the subordinates' individual needs are secondary to what the subordinates' contribution is for the supervisor to attain her reward. Furthermore, being in a position of power heightens one's sense of independence and autonomy. This

sense of independence makes it more likely for these powerful individuals to objectify others as strategic tools through which they advance their personal goals (Lee & Tiedens, 2001). Empirically, Gruenfeld, Inesi, Magee, and Galinsky (2008) found that viewing others as means to an end happens when one gains power. Powerful individuals approached others because of others' usefulness in pursuing their goal.

*Stereotyping.* Powerful individuals use stereotypes—a manifestation of automatic social cognition—to reach inaccurate inferences of other individuals in their own group. Stereotypes refer to beliefs about groups that individuals apply in an automatic fashion (Devine, 1989). Fiske (1993) pointed out that power triggers automatic social cognition which results in the use of stereotypes when viewing others. For instance, Depret and Fiske (1999) found that when an individual has more decision-making power, he or she becomes less attentive to the individuating information of the other person. Powerful individuals are also less flexible in changing their beliefs of those with less power when they face information that disconfirms the stereotype they held about those with less power. Powerful individuals showed increased interest toward stereotype-confirming information of their subordinates, but showed decreased interest when exposed to stereotype-disconfirming information of their subordinates (Goodwin, Gubin, Fiske, & Yzerbyt, 2000). Conversely, those with low power are more aware of the powerful individual's individuating information instead of relying on stereotypes. Low power individuals observe the behaviors of the powerful, analyze the complexity of the situation, and react appropriately to it (Anderson & Willis, 1976; Gruenfeld, 1995; Gruenfeld & Preston, 2000; La Freniere & Charlesworth, 1983).

Powerful individuals also use stereotypes in viewing individuals in other groups. Specifically, individuals with power show discrimination toward out-groups but show favoritism toward in-groups. Individuals who are part of powerful groups (e.g., European American versus African American) or hierarchical groups (e.g., police versus social services) more strongly endorse the idea of their own group dominating others (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999). Powerful individuals who subscribe to the belief that their own group can dominate others were also less likely to be inviting of those from low power groups (Umphress, Simmons, Boswell, & Triana, 2008). In intergroup conflict studies, group representatives had high power when they represented more powerful groups that were on the offensive in the dispute or when they represented groups that have previously defeated the opposition. These group representatives showed higher levels of preferential allocation of resources to one's own group and higher levels of discrimination in allocation of resources to other groups, using heuristic judgments across all groups that were not their own (Brewer, 1979; Howard et al., 2007; Mullen, Brown, & Smith, 1992; Ng & Cram, 1988; Sachdev & Bourhis, 1991). Hence, equal power is one of the key conditions in reducing intergroup stereotypes (Allport, 1954; Pettigrew & Tropp, 2006).

**Behavior.** Powerful individuals, compared to low power individuals, have more freedom to act as they please. Having power disinhibits a wide range of behaviors, some that are positive and some that are negative (Chen et al., 2001; Keltner et al., 2003).

While the popular notion of power is that it leads only to negative behaviors, this notion oversimplifies the psychological effect of power on behaviors. According to the approach theory of power, an individual's level of power (or lack thereof) determines how much

one can express their true self whether that be positive or negative. Having power leads individuals to act out their personality traits and who they are, without many repercussions. Not having power leads individuals to act according to the situation or others' desire, since they are more exposed to repercussions of their actions.

*Approach-related behavior.* Keltner et al. (2003) proposed that elevated power activates the behavioral approach system, which regulates processes that are associated with social interaction, harming behavior, sexual behavior, eating, and physical comfort (see Depue, 1995). Hence, having power would increase the likelihood of an individual engaging in behaviors that fall under these domains.

*Physical contact and social interaction.* Powerful individuals are more likely to enter into other's social space and initiate physical contact and social interaction. Indeed, high levels of touching behavior correlate with proxies of power, which are being male, being older, and having a higher socioeconomic status (Henley, 1977; Heslin & Boss, 1980; Kunstman & Maner, 2011). When observing others, being the toucher as opposed to being touched was rated by others as being more dominant, assertive, and expressive (Major & Heslin, 1982), although this difference was weaker among romantic relationships (Pisano, Wall, & Foster, 1982). Studies of military personnel with different ranks (Dean, Willis, & Hewitt, 1975) showed that individuals with more power were more likely to approach those with lower power at closer interpersonal distances. Other studies show a different effect. When participants were told to choose a seat, they chose seats that were far from both high- and low-power individuals compared to those who were of equal power (Lott & Sommer, 1967). Overall, there is a positive association between power and being in other's social space.

*Harming behavior.* Powerful individuals are more likely to engage in harming behavior. One reason is because power increases an individual's confidence. Elevated power activates the behavioral approach system and as a result, leads to individuals being more confident, assertive, optimistic, and impulsive than those with low power (Anderson & Berdahl, 2002; Anderson & Galinsky, 2006; Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Galinsky et al., 2003; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Gonzaga, Keltner, & Ward, 2008; Keltner et al., 2003; Lammers, Stoker, & Stapel, 2009; Magee, Galinsky, & Gruenfeld, 2007; See, Morrison, Rothman, & Soll, in press). This heightened sense of confidence manifests in romantic behavior. Powerful individuals focus more of their attention on those who are physically attractive (Brady, Lord, & Hill, 2011) and are bolder in approaching others romantically (Wilkey, 2011). They are more confident when they are with strangers who are of a different gender and who have less power than themselves (Gonzaga et al., 2008). Furthermore, powerful individuals were more likely to believe they were attractive and believe that their subordinate had sexual interest in them (Kunstman & Maner, 2011; Lerner, 2011). Believing that others consider them attractive may not be completely baseless; increased confidence led to increased attractiveness as confident individuals showed more eye-contact, moved closer to others, and displayed more expansive postures (Friedman, Riggio, & Casella, 1988; Huang, Galinsky, Gruenfeld, & Guillory, 2011). Such increased confidence makes it more likely for individuals to feel invincible rather than measured when interacting with others, making it more likely they harm others as a result.

Closely related to confidence is risk-taking. Powerful individuals are not preoccupied with punishment as are those with less power, and are less sensitive to the

risks involved in their actions (Keltner et al., 2003; Lammers, Stoker, Jordan, Pollmann, & Stapel, 2011). Powerful individuals tend to make more optimistic assessment of the likelihood of success (Anderson & Galinsky, 2006) and believe that they have control over their success (Fast et al., 2009). They are also more likely than those without power to put these optimistic assessments to practice (Fast et al., 2009). Even if they are in situations where others pressure them to follow a prescribed example, powerful individuals are more likely to take risks if they set their minds to do so (Galinsky et al., 2008). But when the situation is more forgiving for them to take risks, they are even more likely to take risks in harming others.

As such, powerful individuals are more likely to take risks in harming others when they are in an environment where the risk of getting caught is little. An organization and its pyramid-like hierarchy is such a context that minimizes the risk that powerful individuals must take when harming others. The higher individuals move up the organizational hierarchy, the less they face individuals of equal or more power. Thus, by virtue of this pyramid structure, there are fewer checks in place. By not providing adequate monitoring mechanisms for powerful individuals, it is likely that organizations typically condone powerful individuals' mindset of viewing those below them as strategic tools for their personal gain. Hence, individuals occupying higher levels in the hierarchy have more opportunities and less risk of harming others, striving on their freedom from the close scrutiny of others (social network perspective of relationships and unethical behavior; Brass et al., 1998). Thus, hierarchical organization structure reduces the powerful individuals' risk of suffering repercussion for their actions and paves way for them to engage in harming behavior.



One such harming behavior is cheating. Powerful individuals have different moral views than less powerful individuals as they are more prone to moral hypocrisy—“imposing strict moral standards on other people but practicing less strict moral behavior oneself” (Lammers, Stapel, & Galinsky, 2010, p. 737). Powerful individuals were more likely to condemn others’ moral transgressions than were the powerless individuals (Lammers et al., 2010). But they also cheated more than powerless individuals (Lammers et al., 2010). In a romantic relationship setting, powerful individuals were more likely to have the intention to cheat on their partners and were more likely to actually cheat (Lammers et al., 2011). This was partly due to the powerful individuals’ heightened sense of confidence in their ability to attract others (Lammers et al., 2011). Powerful individuals have self-serving moral standards and a heightened sense of confidence to get away with the act of cheating, and this combination makes them more likely to cheat against partners and against their organization.

Another harming behavior in which powerful individuals engage is violating norms related to polite behavior. Being sensitive to others’ feelings and thereby being polite and socially appropriate requires an ability to take others’ perspectives. Studies show that powerful individuals are poor at taking others’ perspectives (Galinsky, Magee, Inesi, & Gruenfeld, 2006) and stick to their own norms of socially appropriate communication without considering how others are influenced by their behavior (see Lammers & Stapel, 2009). Similarly, powerful individuals also violate norms of polite communication (for a review, see Brown & Levinson, 1987) and more frequently engage in hostile teasing (Keltner, Capps, Kring, Young, & Heerey, 2001; Keltner et al., 1998).

Lastly, powerful individuals also engage in more blatant forms of harming behavior. For instance, powerful individuals were more willing to harm partners and were more likely to engage in aggressive behavior (Fast & Chen, 2009) and were more likely to bully partners in close relationships (Howard, Blumstein, & Schwartz, 1986). Such harming behavior of the powerful also extends to sexual behavior and ranges from sexual licentiousness (Winter, 1988; Winter & Barenbaum, 1985) to more egregious behaviors such as sexual harassment (Studd, 1996). Considering that interpersonal harming behavior in its many forms are prevalent in organizations, leading to turnover of the harmed employees (see Sutton, 2007), it is important to consider what causes such behavior at work.

***State- and trait-consistent behavior.*** Since powerful individuals seek rewards and are less deterred by social constraints in their search for these rewards, they are more likely to express who they are and how they feel at a given moment (Keltner et al., 2003). This is because powerful individuals tend to have higher consistency in viewing different aspects of themselves—traits, goals, motives—across various contexts (Block, 1961; Donahue, Robins, Roberts, & John, 1993; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). This is called self-concept consistency (Kraus, Chen, & Keltner, 2011). For instance, an individual who has low self-concept consistency may be a dominant partner at home but may be a submissive employee at work. Several factors impact the extent to which one has self-concept consistency. These factors include culture (e.g., English & Chen, 2007; Markus & Kitayama, 1991), immediate social environment (Donahue et al., 1993), and types of relationships one has with others (e.g., Chen, Boucher, & Tapias, 2006).

One such factor that affects self-concept consistency is power. Powerful individuals think and behave based on their own thoughts and goals rather than based on pressures from others (Galinsky et al., 2008; Keltner et al., 2003). For instance, powerful individuals were more likely to be persistent in their behaviors when those behaviors were aligned with their internal goals (Guinote, 2007a, 2007b). This does not mean powerful individuals do not behaviorally adapt to their context. Instead, the behavioral adaptations occur with the purpose of further pursuing their internal goals (Guinote, 2007c). An example of this is how powerful individuals plan their work day activities and weekend activities. Presuming powerful individuals have both work and life goals just as less powerful individuals do, powerful individuals planned work-related activities during the work days to pursue work-related goals and planned leisure-related activities during the weekends to pursue goals outside of work whereas powerless individuals did not show a clear pattern of compartmentalization of activities according to their separate goals (Guinote, 2008).

Powerful individuals also think and behave based on their own traits. The earliest empirical test of this was a study by Hecht and LaFrance (1998) who found that high power individuals' (i.e., interviewers) smiles were significantly correlated with their reports of positive emotion whereas this correlation was not significant for those with low power (i.e., interviewees). Furthermore, powerful individuals—as measured by their high levels of trait dominance—experienced more positive mood than individuals with low power (Watson & Clark, 1997). Powerful individuals who view relationships as an exchange of comparable benefits were more likely to behave in a self-interested manner but powerful individuals who view relationships as benefitting one another without

expectations of return were more likely to behave in a socially responsible manner (Chen et al., 2001). In another study, when individuals' traits matched their powerful position, they were more likely to freely express themselves (Chen et al., 2009). Furthermore, powerful individuals show more consistency in how they view themselves across various contexts and report higher levels of authenticity in their behaviors compared to those with low power (Kraus et al., 2011). These results show that compared to less powerful individuals, powerful individuals are freer to be themselves and act as such.

*Helping behavior.* Powerful individuals are less likely to help others in need, especially when helping others does not benefit them directly. This is due to a number of reasons. On the basis of the approach theory of power (Keltner et al., 2003), powerful individuals seek rewards in their environment such as monetary rewards, promotions, and physical comfort. Second, from a practical standpoint, obtaining these rewards and personal gains is tied to meeting organizational objectives. Therefore, powerful individuals have a tendency to view others, especially those with less power, as strategic tools through which they reach their rewards.

For these reasons, any aspect of others individuals that do not have instrumental value for the powerful individuals in reaching their rewards is often ignored. Ignoring aspects of others that are not important to their goals makes it difficult for powerful individuals to notice the signs of distress of others. Helping behavior, much like compassion, is a process where the individual first notices the other's distress, appraises the situation, responds emotionally, and helps (process model of compassion; see Frost et al., 2006; Goetz, Keltner, & Simon-Thomas, 2010). Powerful individuals experience difficulty throughout all stages that lead up to helping. First, powerful individuals are less

likely to notice others' distress in the first place. Powerful individuals often use automatic social cognition in viewing their less powerful partners (Fiske, 1993) and use stereotype-based inferences when observing their partners' situation. In this situation, they often do not perceive others' distress as suffering (van Kleef et al., 2008). Second, powerful individuals are less likely to appraise the distress situation correctly and respond emotionally. Powerful individuals experience more positive emotion and mood than negative (Anderson & Berdahl, 2002; Berdahl & Martorana, 2006; Hecht & LaFrance, 1998; Watson & Clark, 1997), which makes it more likely for them to use automatic social cognition (Bodenhausen et al., 1994; Lerner & Keltner, 2000). This also suggests that their baseline for positive emotion is higher, making it more difficult to respond to other's distress with a reciprocating feeling (van Kleef et al., 2008) and making it less likely for them to accurately judge others' situation due to the bloated sense of confidence that comes with having positive emotion or mood (See et al., in press). They also fundamentally view their social universe very differently than those with less power. Powerful individuals view others as means to their own end and are self-focused (Keltner et al., 2003), and are less influenced by others' emotions because their success is not dependent on accurately assessing the emotional state of those with less power (van Kleef, De Dreu, Pietroni, & Manstead, 2006). As such, powerful individuals respond with less distress and compassion in their conversation with their partners and use more automatic emotional regulation upon hearing the partner's problems (van Kleef et al., 2008).

For these very reasons, powerful individuals are also less likely to seek help from others themselves. Several studies show that powerful individuals are less likely to seek

or accept help (Fang & Shaw, 2009; See et al., in press). This may be because the powerful individuals' seeking or accepting of help may be interpreted as signs of incompetence and illegitimacy by their followers. When powerful individuals perceive themselves to lack in competence, they also feel threatened (Fast & Chen, 2009; Georgesen & Harris, 2006; Morrison, Fast, & Ybarra, 2009), which would explain why a powerful individual would not seek or accept help. However, Fang and Shaw (2009) also found that an individual who was central in friendship networks in the workplace were more likely to seek or accept help; moreover, an individual who was central in workflow networks in the workplace was more likely to seek help but not so much accept it. This suggests that those who have power from social networks—especially that from friendship network—are more likely to ask and accept help since their power is not based on hierarchy and is thus less threatened by concerns of incompetence and illegitimacy. It may also be that since networks are connected by friendship and workflow information, individuals that derive power from network centrality are more attune to others' plights and feel less threatened to ask for or give help to others. In sum, with an exception of few circumstances such as being central in friendship networks, powerful individuals are less likely to help others and are less likely to seek help from others.

*Psychological distance.* Another important outcome of power is that it increases the psychological distance between powerful individuals and less powerful individuals. Psychological distance is a subjective experience that something—a person, an event, or an object—is close or far away from self, here, and now (Trope & Liberman, 2010). This subjective experience can be based on a number of factors such as how far one is away from others or how familiar and comfortable one is with others. The approach theory of

power notes that one of the rewards that powerful individuals seek is autonomy and physical comfort in the work setting. For instance, a powerful individual may seek out office locations that have more space and less interruption from others since elevated power makes individuals seek out such rewards of physical comfort and freedom from other's influence (see Keltner et al., 2003).

Besides the approach theoretical explanation, there are a number of reasons why powerful individuals are psychological distant with others rather than close. First of all, powerful individuals are more likely to create psychological distance from others to make it easier for them to make decisions that directly affect others. Having power entails many responsibilities and one of them is making tough decisions that may negatively affect those in the workplace. On the basis of the theory of necessary evil (Molinsky & Margolis, 2005), powerful individuals often choose to be at a location that removes them from experienced palpability of harming others. Whereas individuals with less power are not afforded the opportunity to change their physical work environment (e.g., move from an open-space cubicle to an enclosed office) or change their social environment (e.g., frequently drop in the supervisor's office whenever they feel like), powerful individuals are often in a position to craft their physical and social work environment to be more or less relational (Wrzesniewski & Dutton, 2001).

Second, powerful individuals are more psychologically distant with others for ego-maintenance. The social identity theory of leadership (Hogg, 2001; Hogg & Reid, 2001) notes that powerful individuals prefer to be with few other similarly powerful individuals to maintain their ego and to separate themselves from the rest of the group. This also comes from the belief that a powerful individual's day-to-day intimacy with

others with less power destroys the powerless individuals' illusion of perfection and invincibility of the powerful individual (Antonakis & Atwater, 2002). One way of expressing this tendency for psychological distance is to create physical distance, especially in the form of enclosed space. An enclosed space that separates powerful individuals from others signals that powerful individuals can observe others without being challenged by those with less power. In that sense, workspace characteristics are materializations of power relations (Taylor & Spicer, 2007). Workspace characteristics have long been considered physical representations of an organization's culture (Becker, 1981; Davis, 1984; McElroy & Morrow, 2010) and have the ability to communicate meaning (objective language, Lewis, 1987; atmospherics, Kotler, 1973; servicescape, Bitner, 1992; organizational artifacts, Rafaeli & Pratt, 2006). In essence, office is a status symbol (Greenberg, 1988) and can also be construed as a non-verbal gesture to others that signal power. Such power-signaling gestures are important ways of communicating one's power. Power-signaling expansive gestures enhance one's sense of power and lead them to evaluate events based on a more global outlook more so than those who have to display constrictive gestures (Huang et al., 2011). Thus, powerful individuals' need for ego-maintenance and power-signaling will lead them to prefer workspace characteristics that increase their psychological distance from others.

Third, powerful individuals are psychologically distant with others in order to be free from distractions and to keep their concerns to a manageable level. As such, they would want to be placed in situations where they are more in control of their environment—an environment that signals autonomy—and free from others' influence or distractions (Lee & Tiedens, 2001; see also Desor, 1972; Oldham & Fried, 1987).



According to the social impact theory (Latané, 1981), spatial distance, along with relationship strength and number of individuals surrounding an individual, determines the degree to which an individual is free from social influence. Due to their positional demand, powerful individuals may want to keep psychological distance from others and thereby free up their resources for meeting organizational objectives (Hobfoll, 1989; Hobfoll & Freedy, 1993). When a target individual is psychologically distant, the focal individual resorts to abstract knowledge of the target individual and engages in heuristics (Trope & Liberman, 2010). Thus, given the need to obtain organizational goals, powerful individuals may desire to be in situations where they can avoid having to consider all relevant contexts of others (e.g., daily hardships and work-life troubles of others) that drain their resources. Overbeck and Park (2001, 2006) found that powerful individuals place their priority on organizational objectives with less regard for people-related issues. Thus, high power is more likely to lead to an increase in psychological distance from others.

Powerful individuals perceive and even prefer psychological distance from others, especially from those with less power. Studies found that elevated power indeed led to greater psychological distance from others, which subsequently led to using more abstract thinking in visualizing others (Huang et al, 2011; Smith & Trope, 2006). When the target stimulus is psychologically distant, individuals tended to focus on the primary aspects of the target stimulus and, thus, reach more abstract summaries of the stimulus. They may intentionally be psychological distant with others to conserve resources and hold onto the simplistic, utopian idea of having ideal coworkers or subordinates. For instance, individuals use a more abstract concept (e.g., diligence) in judging distant target

individuals rather than being more effortful in their judgment. In contrast, when judging near target individuals and their actions, the same individuals allow contextual considerations to moderate their moral stance (Eyal, Liberman, & Trope, 2008). Considered differently, getting to know others (reducing psychological distance, especially the social distance dimensions) means finding out more about these contextual considerations. Kipnis (1972) found that powerful individuals showed less willingness to get to know the target individuals outside of the study setting. Presumably, this is to minimize the emotional and psychological cost of having to keep a target individual closer psychologically only to have to make decisions that would adversely affect the target individual when powerful individuals have to layoff the target individual (Folger & Skarlicki, 1998). In sum, powerful individuals are more likely to be psychologically distant with less powerful individuals.

### **Boundary Conditions**

Even though power is positively related to a number of behaviors, it is possible that there are certain individual characteristics that enhance or attenuate the effects of power on behavior.

**Self-construal.** Self-construal is the knowledge structure and mental representation of the self that is made up of beliefs about the self, which includes the attributes, social roles, and goals of the self (Fiske & Taylor, 1991). In an organizational context, Cooper and Thatcher (2010) note that self-construal is “the general tendency to think of the self in terms of individual characteristics, role relationships, or group memberships” (p. 519). Brewer and Gardner (1996) theorized that individuals with a strong sense of personal self-construal (synonymous to individual self-concept

orientation in Cooper and Thatcher, 2010) use their own traits as the basis of their own self-evaluation, use interpersonal comparison between self and others as their frame of reference, and are driven primarily by self-interest. Individuals with a strong sense of relational self-construal use their social roles as a basis of their own self-evaluation, use satisfaction of the other person in the relationship as their frame of reference, and are driven primarily by other's benefit and well-being. Lastly, individuals with a strong sense of collective self-construal use the group prototype as a basis of their own self-evaluation, use intergroup comparisons as their frame of reference, and are driven primarily by the group's benefit and welfare (Brewer & Gardner, 1996). Relational and collective self-construal both fall under the broader category of interdependent view of self (Markus & Kitayama, 1991) but are two different dimensions rather than one bipolar dimension of a broader interdependent self-construal (Cross, Gore, & Morris, 2000). For instance, an individual can define herself in terms of her social roles (e.g., being a mother) without defining herself as member of a collective (e.g., an extended family or a community). Therefore, self-construal may be understood as three levels: individual/personal self-construal, relational self-construal, and collectivity self-construal.

There are two perspectives of self-construal when considering how an individual's social environment affects his or her dominant level of social self-construal. The first perspective is the trait view of self-construal. Although any individual would have a coexistence of these three levels of self-construal, studies show that one of these levels of self-construal tends to be dominant over the other two levels for an individual because an individual's self-construal is often connected to the national culture that either promotes individual self-construal or interdependent self-construal to the populace

(Fiske, Kitayama, Markus, & Nisbett, 1998; Markus & Kitayama, 1991; Taras, Kirkman, & Steel, 2010; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). These aspects of self-construal influence how individuals think of themselves in reference to others, where they direct their attention, how they interpret events, and how they act under different circumstances, including circumstances that involve individuals having power (Cross & Madson, 1997; Markus & Kitayama, 1991; Rhee, Uleman, Lee, & Roman, 1995; Trafimow, Triandis, & Goto, 1991). As such, although there are different levels of self-construal, the most dominant level of self-construal becomes the most self-defining level of self-construal. Subsequently, the dominant self-construal affects how the self views specific individuals at work and whether he or she considers each individual at work to be an important part of his or her self-definition, a phenomenon called identification. Whereas self-construal refers to the knowledge of self and one's position compared to others, identification refers to the extent to which one views that knowledge to be self-defining (Cooper & Thatcher, 2010; Sluss & Ashforth, 2007). For instance, a supervisor may value close relationships in general (i.e., high relational self-construal), but may not view her relationship with a specific subordinate to be self-defining (i.e., low relational identification). However, in most cases, an individual's dominant self-construal is a strong indicator of the type of identification that an individual will make with most individuals at work (Cooper & Thatcher, 2010).

The second perspective is the state view of self-construal. This perspective is important when examining the relationship between power and behaviors as self-construal is deeply intertwined with how an individual perceives and exercises power. This perspective predicated on the notion that self-construal is malleable. This school of

thought is spearheaded by Lee and Tiedens (2001) who considered self-construal to be a malleable individual characteristic, especially when considering its complex interplay with having power. In their view, an individual's self-construal is updatable wherein certain aspects become more or less salient based on different relationships in which they engage or based on different social roles and social contexts of which they are part (Baldwin & Holmes, 1987; Festinger, 1954; Leary, 1995; McGuire & McGuire, 1981; Tesser, 1988; Tice, 1992). In their relational identification model, Sluss and Ashforth (2007) posited that power relationships make it even more difficult for both supervisor and subordinate to define themselves in terms of their relationship (i.e., relational identification) with each other because a role with power over others affects the type of relational identification that occurs in the supervisor-subordinate relationship. This includes positive identification outcomes such as relational identification or negative outcomes such as ambivalent relational identification and relational disidentification. They argue that the powerful role impacts the extent to which an individual defines oneself in terms of a given work relationship. In sum, this perspective is agentic; individuals can select the type of self-construal to surface based on the context and once they are exposed to that context long enough, that context also shapes their dominant self-construal.

Thus, self-construal can be both trait and state. The trait view self-construal posits that self-construal is deeply rooted in the culture from which one was brought up and is the undercurrent that directs individual's attention and behavior. In contrast, the state or agentic view of self-construal reveals to us that power is indeed a significant force that shapes human behavior. This is also consistent with more traditional power studies that

take on a metamorphic or corruptive view of power (Kipnis, 1976) where having power leads to changes in self-view. Both perspectives point to the importance of not just having a certain self-construal but also understanding how it relates to identification, which is a stepping stone in predicting outcomes. Cooper and Thatcher (2010) further evolved this concept and noted that an individual's self-construal predicts the likelihood of identifying with the organization, workgroup, or coworkers via activating different motives uniquely associated with each level of self-construal.

I am testing the approach theory of power at the individual level. Specifically, I test the idea that powerful individuals are less likely to help others. In order to more fully develop the theory that powerful individuals engage in less helping at work, especially helping directed at those with less power than themselves, I will review the literature on psychological closeness. Based on this review, I will integrate theories and empirical findings from power and psychological distance theories in the development of the specific hypotheses to be tested.

### **Psychological Closeness**

One clear conclusion from the power literature is that positions of power change the social cognition of the powerholder. As noted in the introduction, construal-level theory of psychological distance (Trope & Liberman, 2010) is a theory of social cognition based on the idea that an individual's perception of psychological closeness is a culmination of the objective indicators such as physical, social, temporal, and hypothetical distance. In this section, I will review the definition of psychological closeness and its dimensions, followed by a review of the construal-level theory of psychological distance.

Social psychology and earlier organizational research used the term psychological distance in their reports. In recent organizational research, the term psychological closeness is more prevalent (see Galinsky & Gino, 2012) as it more closely aligns the valence in which the scales measured psychological closeness. In the following review, I will use the terms psychological distance as it was used in the cited studies.

### **Definition of Psychological Closeness**

In modern language, closeness or distance simply means a degree of separation between two points or the state of being separated. This separation can be spatial, personal, and emotional, and can refer to differences between individuals (Merriam-Webster, 2012). As this definition notes, distance is an important topic in psychology and organizational studies because distance in one form or another exists in virtually all relationships and concepts that govern our lives. Also, as noted in the previous section, one of the fundamental effects of power is that power distances the more powerful from the less powerful. Thus, an understanding of distance is important to explaining both power dynamics and its impact on interpersonal outcomes. First step to understanding this phenomenon is examining how distance as a concept evolved.

There are three conceptual taxonomies that exist in regards to distance. First is the dyadic distance model in supervisor-subordinate relationships proposed by Napier and Ferris (1993). They defined distance between a supervisor and subordinate as “a multidimensional construct that describes the psychological, structural, and functional separation, disparity, or discord between a supervisor and a subordinate” (Napier & Ferris, 1993, p. 326). There are three dimensions that make up dyadic distance: (1) psychological distance (demographic similarity, perceived similarity, values similarity,

power distance), (2) structural distance (design distance, opportunity to interact, spatial distance, span of management), and (3) functional distance (affect, perceptual congruence, latitude, and relationship quality). They also proposed that psychological distance and structural distance affected functional distance; functional distance, in turn, affected subordinate performance, subordinate satisfaction, and subordinate withdrawal.

Building on this dyadic distance model, Antonakis and Atwater (2002) suggested a new leader distance model. Although they use the same definition of distance as Napier and Ferris (1993), they diverged in a number of ways. First of all, they noted that in a leader-follower relationship, indicators of leader distance are (1) psychological or social distance (perception of intimacy), (2) physical distance, and (3) interaction frequency between leader and follower. They deemed these indicators to be important as they affect a leader's ability to legitimately influence members. Unlike Napier and Ferris (1993), Antonakis and Atwater (2002) did not believe that functional distance (i.e., affect, perceptual congruence, latitude, and relationship quality) mediated the relationship between psychological and structural distance (e.g., physical distance) and follower outcomes. Instead, they argued that the chief mediator of the relationship between leader distance and follower outcomes is the degree to which a leader can legitimately influence his or her followers. They did not suggest, however, that leaders who have close versus far distance from their followers in any one of the three indicators will necessarily lack legitimate influence. To illustrate this point, consider a socially close leader versus a socially distant leader. A leader who is socially close to his or her followers may be better able to deliver sensitive, individualized communication to followers (Yagil, 1998). In this case, leaders will be ascribed legitimate influence based on the followers' direct



observation of the leader's performance and the positive examples that the leader sets (relational charisma; Antonakis & Atwater, 2002). But followers may ascribe legitimate influence to the leader even if the leader is socially distant (Shamir, 1995). A leader that is socially distant has an aura that invokes attributions of positive qualities due to the signals from how she contributed to organizational performance, how she spoke and behaved as a visionary, and how she built the image of herself in the organization (Shamir, 1995). This type of leader can also have legitimate influence but in a different way than a socially close leader (attributional charisma; Antonaks & Atwater, 2002).

To reflect such complexity and the various interactions between distances, Antonakis and Atwater (2002) proposed a profile approach that combined different levels of the three distance indicators and coupled them with the type of attributions the followers make regarding the leader's legitimate influence. This profile ranged from virtually distant leadership (i.e., high physical distance, high social distance, high interaction frequency) where the leader heavily depends on technology for her influence, to hands-off leadership (i.e., low physical distance, low social distance, low interaction frequency) where the leader works at the same location and is accessible to the followers but does not interact frequently since there may be other leaders that may act as substitutes for the leader herself (e.g., Howell, Bowen, Dorfman, & Kerr, 1990). These two leadership styles go through different pathways in achieving organizational outcomes. Virtually distant leaders often interact with followers as groups so the followers have to fill in the details regarding the leader by themselves. Consequently, followers decide whether or not the leader is legitimate based on their attribution of the leader's performance or reputation. In this case, the leader's legitimate influence is also

determined by such attribution, and this leads to the followers identifying with their leader and trusting her. In contrast, hands-off leaders often interact with followers as individuals so the followers must decide whether or not the leader is legitimate based on their direct evaluation of the leader and her performance, instead of resorting to their attributions of the leader's performance. In this case, the followers determine the leader's legitimate influence by their first-hand knowledge from the relationship they have with their leader, and this leads to the followers identifying with their leader and trusting her (Antonakis & Atwater, 2002).

More recently, Trope and Liberman (2010) further clarified the taxonomy of distance by dividing distance into objective distance and subjective distance. They proposed that there were four objective distances such as physical distance (i.e., spatial distance between self and target), social distance (i.e., degree to which self is intimate with target), temporal distance (i.e., how far in the future is the target), and hypotheticality (i.e., degree to which self views target to be real or imaginary). These four objective distances are indicators; taken together, they lead to an overall subjective assessment of how far or close a person, object, or an event is from the individual. Such subjective assessment is called psychological distance and they define it as such:

Psychological distance is a subjective experience that something is close or far away from the self, here, and now. Psychological distance is thus egocentric: Its reference point is the self, here, and now, and the different ways in which an object might be removed from that point—in time, space, social distance, and hypotheticality—constitute different distance dimensions (Trope & Liberman, 2010, p. 440).

It is noted in the latter part of Trope and Liberman's definition that psychological distance has different dimensions (e.g., Antonakis & Atwater, 2002; Latané, 1981; Latané, Liu, Nowak, Bonevento, & Zheng, 1995; Napier & Ferris, 1993). This definition of psychological distance is different from the definition in previous theoretical work. The previous two theories noted that psychological distance was both objective and subjective. For instance, Napier and Ferris (1993) note that:

Psychological Distance refers to the psychological effects of actual and perceived demographic, cultural, and value differences between the supervisor and subordinate... Psychological Distance is hypothesized to consist of four logically related facets: demographic similarity, power distance, perceived similarity, and actual values similarity (p. 328-329).

Antonakis and Atwater (2002) also equated psychological distance to social distance. This is due to the fact that in most organizational studies, the target with which an individual feels psychologically distant was a person and not an object or an event. Since the target is a person, psychological distance was synonymous with social distance. The discussion of the two preceding theories shows that what constitutes psychological distance is much debated, fragmented across disciplines, and has evolved over the years. Although there are many other categorizations of psychological distance, I use Trope and Liberman's (2010) categorization as it provides clear conceptual boundaries between the objective distance reflecting actual reality and a subjective experience of distance which is a type of social cognition that results in processing different objective distances. This distinction is important because empirical studies have shown that actual realities and perceived realities are two separate phenomena (Turban & Jones, 1988).

Thus, in the following section, I explain two objective distances—indicators of psychological distance—that are relevant to the work setting. I first review physical distance as this is the most extensively studied distance dimension and still remains important in modern workspace settings. Then I explain social distance, a concept that was developed with the advent of the subjective reality over objective reality movement (Lewin, 1943). Social distance is important because it exclusively deals with the distance between an individual and a target that is a person rather than an object or an event. I focus on these two types of psychological distances as they are relevant to the discussion of work relationships.<sup>2</sup>

### **Indicators of Psychological Distance**

**Physical distance.** Physical or spatial distance is how close or how far an individual is located from others (Antonaks & Atwater, 2002; Trope & Liberman, 2010). In the early twentieth century, scholars believed that physical distance was necessary to cultivate social interaction (see Bossard, 1932; Festinginer, Schachter, & Back, 1950;

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<sup>2</sup> Although Trope and Liberman (2010) mention temporal distance and hypotheticality as types of psychological distance, I will not discuss these two in this study. This is because temporal distance—time lapse between the present and a point in the future—is not directly applicable to how one individual views another individual. Temporal distance deals with psychological distance between events rather than people. Also, I do not focus on hypotheticality—degree to which one perceives an object, event, or an individual to be real versus imaginary—as vast majority of employees consider other employees that they see at work on a daily basis to be real.

Stewart, 1941; Zipf, 1949). The operationalization of physical distance has not changed much since that time to more recent times, with the most common operationalization being the distance between work desks or work spaces of self and others (Oldham & Fried, 1987; Paulus et al., 1976; Sundstrom et al., 1980; van den Berg, Segers, & Cillessen, 2012). Physical distance is not just actual distance, however.

Physical distance also deals with whether or not an individual can see others or is visible from others. This has become an important issue to consider in organizations as obstacles related to absolute physical distance between individuals has largely been removed with the use of emails, online chatting, virtual team, and other advanced communication technologies (Gibson, Gibbs, Stanko, Tesluk, & Cohen, 2011). Although much research has examined physical distance from a pure straight linear distance perspective (Macrae, Bodenhausen, Milne, & Jetten, 1994; Mooney, Cohn, & Swift, 1992; Vohs, Mead, & Goode, 2006), others, notably environmental psychologists, industrial architects, and space-syntax theorists point out that the physical distance that matters in modern work settings, especially in contemporary workplaces where one can effectively perform tasks with someone in a different country, is visual copresence or the “number of people visible from a path of observation” (Rashid, Kampschroer, Wineman, & Zimring, 2006, p. 827) and the perception of closeness that is generated from being able to see one another (Napier & Ferris, 1993). From this standpoint, physical distance is also construed as whether or not there are impediments to visual contact in a given space such as enclosures between workspaces (Fried, 1990; Napier & Ferris, 1993; Oldham & Fried, 1987; Oldham, Kulik, & Stepina, 1991; Rashid et al., 2006; Sundstrom, 1986; Sundstrom et al., 1980).

**Social distance.** Social distance is the degree of understanding and intimacy that one has with others (Park, 1924). Much like physical distance, the research in social distance started in the early twentieth century. During that era, sociologists believed that social distance is what determined how an individual formed racial judgments (Bogardus, 1925; Park, 1924). Soon, the definition of social distance broadened to denote differences in status (Bogardus, 1928; Park, 1924), prestige (Bogardus, 1927), and acquaintance (Frank, 1974). The operationalization of social distance varies widely across disciplines as well. For instance, in sociology, social distance pertains to the aforementioned status differences (Bogardus, 1928; Park, 1924); in psychology, it pertains to whether it is self versus other (Eyal et al., 2008), whether individuals have friendship/familial relationships (Trope & Liberman, 2010), whether individuals are in-group versus out-group (Liviatan, Trope, & Liberman, 2008), or whether individuals are in close network distances with each other (Krackhardt & Kilduff, 1999); in other organizational studies, specifically in the leadership domain, it means differences in authority, power, social standing, or demographic and values similarity that impact the contact and intimacy that exists between a leader and a follower (Antonakis & Atwater, 2002; Napier & Ferris, 1991).

**Relationship between objective distance and psychological distance.** Objective distance dimensions contribute to a subjective experience of psychological distance. For an illustration, consider the case of an individual who will have a job interview with a company interviewer that will take place in a location about a 3-hour flight away. Would the individual feel the interviewer to be close to her or far? When we further dissect this situation, we realize that two objective distance dimensions at work simultaneously when reaching an answer to this question. First, the interviewer is a complete stranger to the

individual; not a family member, romantic partner, or a friend. This is far social distance. Second, the interview will take place in a relatively far place and is removed from the present location. This is far physical distance. Since we are interested in how this individual views another person (i.e., interviewer), the factor that may have the most significant contribution to the overall perception of distance (i.e., psychological distance) may be the fact that the interviewer is a stranger (i.e., social distance), more so than how far away this company is (i.e., physical distance). Studies show that compared to other objective distances, physical distance is learned earlier in life, is less ambiguous, and is more clearly communicated. But social distance is also particularly strong in one's perception of distance because it is a distinction between self and others and is important to basic human functions such as perspective-taking (e.g., Pronin, 2008). Thus, both objective distance indicators have different weights when an individual assesses the overall psychological distance depending on the type of relationship in which one engages. Most importantly, both distance indicators determine the overall perception of closeness between individuals in organizations.

As such, both objective distances are formative indicators of a common latent construct of psychological distance—a subjective overall perception of distance. There are four reasons for this conclusion and I follow the decision rule suggested by MacKenzie, Podsakoff, and Jarvis (2005). First, the dimensions are defining characteristics that collectively explain the meaning of psychological distance. Trope and Liberman (2010) further noted that these dimensions “have a common meaning and that people access this common meaning automatically...the common meaning is psychological distance and that it is automatically assessed because of its important

implications for the perceiver” (p. 442). They also clarified that although these distances are related to one another, they are not the same and different distances combine to influence psychological distance (Trope & Liberman, 2010).

Second, these dimensions are not conceptually interchangeable. But this point comes with a caveat. When perceiving psychological distance, the different dimensions are cognitively associated with one another, since when one thinks about one distance, they also think about other distances (Bar-Anan, Liberman, Trope, & Algom, 2007; Wakslak, 2012). For example, researchers at one point believed that physical and social distance were isomorphic; social psychologists used physical distance to measure social distance (e.g., Macrae et al., 1994; Mooney et al., 1992). However, this does not mean that these dimensions are conceptually interchangeable in measurement, specifically when considering how both objective distances dimensions map onto a generalized psychological distance. For instance, it is not difficult to imagine a situation where an individual sits close to someone else (low physical distance) who is a stranger (high social distance), and this has very different implications on how that individual perceives psychological distance from this person than if the magnitude of the distances were reversed (e.g., sitting far from a friend). In other words, both dimensions are reflective indicators when they are viewed in isolation in a situation where an individual is exposed to one distance but must contemplate on others. In contrast, both social distance and physical distance are formative indicators when a researcher is trying to measure the overall psychological distance between individuals based on a snapshot of where the individuals are. An example may be when a researcher is interested in measuring the psychological distance between a supervisor and a subordinate where the supervisor



works in an office and the subordinate works in a cubicle at the opposite end of the building. Thus, some dimensions are indeed more influential than others and are expected to contribute incrementally to the perception of psychological distance (Trope & Liberman, 2010), which is in contrast to the conceptual interchangeability that comes from reflective indicators.

Third, closely related to conceptual interchangeability, both objective indicators are not necessarily thought to covary with each other (Boroditsky, 2000, 2001; Boroditsky & Ramscar, 2002; Cassantano & Boroditsky, 2008; Trope & Liberman, 2010). For instance, we have no reason to believe that individuals who sit close to one another at work are expected to be friends or do more non-work activities together.

Fourth, these dimensions do not have the same antecedents and consequences since they are not conceptually interchangeable.

### **Psychological Distance: How Does it Work?**

Psychological distance and its objective indicators are important to consider at work because it impacts work outcomes. According to the construal-level theory of psychological distance (Trope & Liberman, 2010), psychological distance from a target impacts the construal-level of the target. Construal is a constructed mental representation of a target and there are different levels to construal (Trope & Liberman, 2003). When considering a target, an individual may have a high-level construal versus a low-level construal. A high-level construal is a mental model that is abstract, coherent, prototypical, simple, and superordinate to low-level construal (Fiske & Taylor, 1991; Smith, 1998; Trope & Liberman, 2010). In contrast, a low-level construal is a mental model that is concrete, situational, detailed, and subordinate to high-level construal. To illustrate this

difference in levels of construal, imagine a case when an individual first considers a target from a low-level construal but then shifts to considering it as high-level construal. For example, when an individual moves the representation of an iPad (low-level construal) to a computing device (high-level construal), he omits information regarding its detailed features such as size, shape, and portability. When moving from a low-level construal to high-construal, the individual has a more abstract mental representation of the iPad and considers its central features such as computing while omitting other peripheral features such as size and shape that may be considered incidental to the superordinate function of computing. Based on this distinction, Trope and Liberman (2010) argued that when a target is psychologically distant, an individual considers this target based on a high-level construal, using more vague, abstract terms, and glossing over relevant details of the target (see also Eyal et al., 2008). So when an individual perceives a target individual to be far (high psychological distance), they place more emphasis on the global, abstract aspects of the individual and place less emphasis on the exact context that is surrounding the target individual (Trope & Liberman, 2010).

This theory can be further applied to the organizational setting between individuals. When a coworker is perceived to be far away (high psychological distance), an employee will consider the coworker in abstract, global terms. For instance, an employee who works next to the cubicle of the coworker and can easily see the coworker would think of the name of the coworker and conjure up the quirks that the coworker has. On the contrary, an employee who works on a different floor from a coworker would construe the coworker as a coworker from the same company, but in a more abstract manner. Construal-level theory predicts that she might actually view this distant

coworker according to the general image of those that work at the organization. For example, if the organization is highly competitive and hires the absolute best talent that the labor market has to offer, the distant coworker may be represented as a prototypical employee of this respected organization, that is, as a competitive, hardworking person rather than as a mother of three children.

The character of psychologically distant coworkers may even be judged from a higher-level construal such as morality. For instance, an individual may interpret the overtime work of someone sitting far away as due to diligence (higher-level construal) versus interpreting it as having to meet regular deadlines that everyone else has to meet (lower-level construal; see Eyal et al., 2008; Liberman & Trope, 1998; Nussbaum, Trope, & Liberman, 2003; Trope & Liberman, 2000). Thus, psychological distance that exists in the modern workplace has important implications in how employees judge others' situations and their subsequent actions based on their judgment of others' situations.

### **Consequences of Psychological Distances**

**Prediction.** When a target person is psychologically distant, an individual is more likely to predict the outcome of the hardship that the target person is experiencing according to a global, general trend. According to the construal-level theory, targets that are psychologically distant are considered according to its global tendencies rather than its situation-specific details. Henderson, Trope, and Carnevale (2006) examined the effects of physical distance on the tendency to make predictions based on global rather than location information. In their study, the participants had to look at a number of graphs that showed trend information from 1999 to 2004. Each of the graphs showed either a downward or an upward trend, but the final year of 2004 deviated from the global

trend. The participants had to predict whether year 2005 was going to follow the global trend or deviate from the trend. The manipulation condition was that the phenomenon in the graph was taking place either in the United States (i.e., close physical distance) or in Italy (i.e., far physical distance). Consistent with the construal-level theory, participants who were told that the graph was information regarding a sample in Italy were more likely to predict that year 2005 will follow the global trend as described in the graph in contrast to participants who were told that the graph was information regarding a sample in the United States. As such, when considering what will happen to a psychologically distant coworker who is experiencing difficulties, an employee is more likely rely on the global trend of that coworker (e.g., he is a manager and has overcome many adversities in the past, so he will overcome this difficulty as well) rather than on the situation-specific details (e.g., he is a competent manager, but he is going through personal difficulties at home that is affecting his work).

**Evaluation and choice.** When a target person is psychologically distant, individuals are likely to evaluate others' situation and choose their action based on the central, salient aspects of the individual that one sees on a daily basis at work rather than on the peripheral aspects of the individual that are not easily seen at work. Based on the construal-level theory, when a target person is psychologically distant, individuals consider the target as high-level construal and weigh more heavily the central features of the target when evaluating the target (Trope & Liberman, 2010). Liviatan and colleagues (2008) examined whether social distance as operationalized as interpersonal similarity with the target would affect whether an individual would evaluate the performance of the target based on its central features versus its peripheral features. The participants had to

evaluate an essay written by another student that was either of high quality or low quality (central feature of target); the participants were also told that this student was either a high performer or a poor performer on an unrelated physics exam (peripheral feature of target). The researchers manipulated interpersonal similarity (i.e., social distance) by either telling the participants that the student who wrote the essay took very different classes from the participant (i.e., high social distance) or that the student took very similar classes as the participant (i.e., low social distance). The results indicated that participants placed more emphasis on the results of the physics exam results vis-à-vis the essay quality when the student who wrote the essay was similar to themselves. In a different stream of work, Kray and Gonzalez (1999) and Kray (2000) operationalized social distance as being either self, socially close others (i.e., close friend), or socially distant others (i.e., acquaintances or other students). They examined whether social distance would determine the type of career advices participants would give to others: advices that emphasize single most important attributes or advices that emphasize peripheral attributes of a job. They found that participants were more likely to promote the single most important attribute of a job (i.e., personal satisfaction) to others who were socially distant others rather than promoting the peripheral attributes of a job (i.e., salary and location; Kray, 2000; Kray & Gonzalez, 1999). They also found that when the participants had to make the choice for themselves (i.e., no social distance), they rated all the attributes, both central and peripheral, to be equally important.

When choosing an activity to do such as helping others in need, evaluating whether helping is worthwhile and feasible is also important. Psychological distance influences an individual's evaluation as to whether the action is worthwhile and feasible.

Specifically, construal-level theory predicts that desirability concerns regarding the value of an outcome relate to abstract thinking (i.e., high-level construal) and that feasibility concerns regarding the means used to reach the outcome relate to contextual thinking (i.e., low-level construal). Thus, as psychological distance increases, individuals place more emphasis on the desirability concerns over the feasibility concerns. In support of the theory, individuals thought that target individuals that were dissimilar to themselves (i.e., high social distance) were more likely to pursue activities that were highly desirable; they also thought that target individuals that were similar to themselves (i.e., low social distance) were more likely to pursue activities that were highly feasible (Liviatan et al., 2008). Thus, when a coworker sits far away from an individual at work (i.e., high physical distance), helping that person becomes a concern of whether or not it is a good thing to do help the other person rather than a concern of how feasibly and practically one can help that person.

**Interpersonal behavior.** Currently, most studies using the construal-level framework investigate the link between psychological distance and perception, cognition, and decision-making. The link between psychological distance and interpersonal behaviors in organizations is an under-researched topic. A reason for this dearth of research in this arena may be because the psychological distance literature in the social psychological and cognitive psychological domains uses vastly different paradigms from the distance literature in the organizational domain. Many organizational studies that examined the relationship between distance and interpersonal behaviors use a number of different explanations as to why distance leads to the specific interpersonal behaviors. In

the section below, I revisit studies that examined the relationship between distance and interpersonal behavioral outcomes and their respective theoretical frameworks.

*Harming.* It is not clear whether more psychological distance leads to more or less harming of others. On one hand, when individuals perceive close psychological distance between themselves and others, they may be less likely to deliver harm. Hall (1966) proposed the idea of proxemics and noted that individuals manipulate their physical environment in order to regulate their social interaction and intimacy with others. Hall further posited that when individuals share intimate bonds (low social distance), their communication distance (physical distance) decreases. As such, physical proximity exudes willingness and liking (Kahn & McGaughey, 1977; Mehrabian, 1968). When individuals increased physical distance, their partners perceived them to be unfriendly when they were forming first impressions about them (Patterson & Sechrest, 1970). The idea of proxemics also extends to physical distance in terms of copresence. For instance, individuals felt more intimate and identified better with those that they believed were closer to themselves as defined by copresence (Gibson et al., 2011). In other words, close psychological distance leads individuals to like or identify with others, making it less likely for these individuals to deliver harm to them.

On the other hand, when individuals perceive close psychological distance between themselves and others, they may be more likely to deliver harm. This is by virtue of close psychological distance, meaning more chances of dealing daily mistreatment to one another. Latané (1981) proposed the social impact theory and delineated the role that physical distance plays in producing social influence. Latané explained that the degree to which a target individual feels impacted by a social source is

a multiplicative function of (1) strength (e.g., source's age, socioeconomic status, and status), (2) immediacy (e.g., closeness in time, space, or absence of barriers), and (3) number of sources present (e.g., how many individuals there are). Conversely, when the target, instead of the source, has more strength, immediacy, or number, the source's social impact is divided and is lessened. For instance, a line manager (i.e., high strength) may exert much social impact on target subordinates when she is closer by (i.e., high immediacy) and the target would feel more overwhelmed by her power when she is closer rather than farther.

Although the evidence for psychological distance and harming is sparse in both the psychological and organizational literature, we can see this contradiction and to a larger extent, the interaction between the psychological distance dimensions, in studies conducted in educational settings. Van den Berg and colleagues (2012) manipulated physical distance such that students who reported disliking one another in the beginning of the semester were told to sit closer to one another. Consistent with Hall's theory, they found that reduced physical distance over time significantly increased likeability between these students and reduced peer-reported victimization (i.e., being bullied), a high-intensity harming behavior. However, they also found that close physical distance also increased low-intensity harming such as spreading rumors about others, ignoring them, or excluding them. They explained that this was possibly due to close physical distance being associated with more opportunities to engage in such low-intensity harming behavior among now-acquaintances.

***Helping.*** An individual who perceives high psychological distance between herself and others is less likely to help them. Construal-level theory predicts that



individuals are more likely to view others in an abstract manner when there is psychological distance. When an individual takes on a distant perspective, she places priority on global concerns and central features of the stimuli instead and deemphasizes local concerns (Trope & Liberman, 2010). This logic centers on the notion that an individual is ego-centric; when something is far and is not readily perceivable, she views it in ways that reflects her own values or beliefs. This notion is supported in a number of studies. Eyal et al. (2008) found that individuals use high-level moral principles (e.g., desecrating a national symbol) when viewing more psychologically distant situations whereas individuals use low-level moral principles (e.g., cutting a flag into rags) when viewing less psychologically distant situations and allow such contextual consideration to factor into their moral judgment. When psychologically distant, individuals also assume others' behaviors are driven by the same common goal as themselves (Henderson, 2009). Theory and empirical studies support the notion that when others are psychologically distant, a lot of details of others get simplified and lost.

This is not an ideal situation when others are in need of help. When individuals are psychologically distant from others, there is room for ambiguity when making decisions to help others. Ambiguity is detrimental to helping behavior as it diminishes the likelihood that the event is interpreted as someone needing assistance (Staub, 2003). Ambiguity of the situation is also detrimental to helping because it makes the observer question whether the act of helping is socially appropriate or foolish and intrusive. For instance, Yakimovich and Saltz (1971) found that when a workman fell off a ladder in front of others, the workman was more likely to receive help when the workman reduced ambiguity by specifically calling for help. Other studies also showed that the elimination

of ambiguity by defining a situation to require assistance (Bickman, 1971; Staub, 1974) and specifying the type of assistance required (Schwartz & Clausen, 1970) increased helping from others. Psychological distance has ramifications in reducing ambiguity. For instance, when an individual is physically closer to others, the likelihood of her noticing the distress signals of others increases. This is consistent with the construal-level prediction: when an individual is physically close to others and is thereby psychologically close, she focuses on the contextual details of others and is more likely to look out for others' distress cues. Furthermore, when an individual is physically close, the situation that she observes is less likely to be ambiguous compared to if she was far away or did not have any visual copresence, forcing her to rely on global assumptions of the person in need (e.g., "he's a hard working guy and is always on top of his work, so he won't be experiencing problems with this task").

## **Chapter 3: Hypotheses**

### **Power and Interpersonal Helping Behavior**

My dissertation examines the effects of power on helping behavior. I focus on altruistic helping behavior: helping that does not directly benefit the helper in doing his/her job. In my dissertation, I examine power drawn from hierarchical authority. As noted in the review of power, power from hierarchical authority is commonplace in many organizational settings. Hierarchical authority is also important because it embodies many bases of power. First of all, individuals with hierarchical authority hold legitimate power because employees understand this structure to be an acceptable way for the organization to manage its employees (Astley & Sachdeva, 1983; French & Raven, 1959; Lammers et al., 2008; Madison et al., 1980). Employees follow the orders of the individuals with hierarchical authority, especially their direct supervisors, also because these individuals are placed in that position by someone who the employees believe are legitimate and even more powerful such as senior managers or the CEO (French & Raven, 1959). Second, individuals with hierarchical authority hold reward and coercive power. Most employees perceive these individuals with hierarchical authority to be able to deliver reward or punishment, either directly through performance evaluation, promotion, and termination, or indirectly through sharing influential opinions about employees to their direct supervisors. Third, individuals with hierarchical authority hold expert power. Individuals with hierarchical authority occupy a high position in the hierarchy and this signals to others that they are knowledgeable about the work area. Hence, powerful individuals are often in the center of the advice network—a person whom others at work go to for work-related advice, guidance, and information (Bono &

Anderson, 2005; Lee & Tiedens, 2001). Fourth, in most cases, individuals with hierarchical authority hold referent power. This is because a higher position in the hierarchy is a position of prestige and is an enviable position. Less powerful individuals turn to powerful individuals in times of uncertainty and strive to identify with the powerful individuals (French & Raven, 1959). In sum, hierarchical authority embodies wide bases of power and is the most recognizable form of power in organizations. For these reasons, I explore power from hierarchical authority.

The main objective of my dissertation is to determine whether or not power is negatively associated with interpersonal helping behavior. Previous field and lab studies provide preliminary support for the notion that having power leads to helping others less, especially those with less power. These results were reviewed in detail in the previous section. The studies reviewed in the previous section demonstrate that having power leads to (1) increased difficulty in noticing others' hardships and correctly interpreting their distress signals and to (2) increased positive mood that leads to automatic social cognition and inaccurate assessment of others' emotional state (Anderson & Berdahl, 2002; Berdahl & Martorana, 2006; Bodenhausen et al., 1994; Lerner & Keltner, 2000; Hecht & LaFrance, 1998; van Kleef et al., 2008; Watson & Clark, 1997). These factors are serious obstacles to powerful individuals helping others, especially those who have less power than them. Thus, I expect that power will be negatively associated with helping.

*Hypothesis 1: Power is negatively related to helping.*

## **Psychological Closeness<sup>3</sup> as a Mediator of the Power and Helping Behavior Relationship**

The second objective of my dissertation is to examine the extent to which psychological closeness mediates the relationship between power and interpersonal helping behavior. Hence, in the following section, I argue that having power decreases psychological closeness to others, and that decreased psychological closeness leads to less helping.

There are many forms of psychological closeness and I examine social closeness—psychological closeness in interpersonal relations. As noted in the previous review, there are many forms of psychological closeness such as physical closeness, social closeness, temporal closeness, and hypotheticality (Trope & Liberman, 2010). However, the common ground among the major theoretical works is that the form of psychological closeness that is most relevant for interpersonal relations is social closeness as it concerns the degree of intimacy in relationships (Antonakis & Atwater, 2002; Magee & Smith, 2011).

When individuals possess power over others, they may experience reduced psychological closeness to others. The link between power and psychological closeness has been largely assumed on the basis of the construal-level theory. Smith and Trope (2006) showed that elevated power led to the use of more abstract information

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<sup>3</sup> Recent organizational literature use the term psychological closeness in referring to psychological distance. I will use the term “psychological closeness” in my formal tests of hypotheses.

processing. They attributed that increased power decreased psychological closeness with others by instilling in the mind of the power holders the belief that they are distinct from others in general, and which led to more abstract information processing. Magee, Milliken, and Lurie (2010) also found that individuals with high positional power were more likely to use more abstract, positive, and certain language in describing crisis events. They noted that this may be because elevated power increases psychological distance with the crisis event, leading to more abstract thinking. However, neither of these studies have directly shown that elevated power leads to decreased psychological closeness with others in an interpersonal setting. In sum, these studies support the idea that power is associated with abstract information process presumably because of decreased psychological closeness with other people (Smith & Trope, 2006) or events (Magee et al., 2010).

However, it is still unclear (1) whether psychological closeness leads to less helping at work and (2) whether psychological closeness mediates the relationship between power and helping. Lammers et al. (2011) provided preliminary evidence that psychological closeness mediates the relationship between an individuals' power in their organization and harming behavior (i.e., their infidelity intentions toward their romantic partner). However, we are still unsure if psychological closeness is an important pathway through which power affects an individual's helping behavior toward others at work.

By testing this model, I also determine whether or not the approach theory of power and construal-level theory of psychological distance can combine to predict workplace behavior. Magee and Smith (2011) proposed a social distance theory of power where they integrate these two paradigms—approach theory of power and construal-level

theory—to explain that power leads to either (1) increased social distance (a form of psychological distance) or (2) activation of the behavioral approach system. The two paths have opposite predictions regarding self-control and projection, but share similar predictions regarding value-behavior correspondence, lack of attention to the partner, inaccuracy in perceiving others' needs and responding to them. For these similar predictions, Magee and Smith's integrative model hints at a mediation model: powerful individuals may be unresponsive towards others' needs or feelings, but this may be through psychological distance in interpersonal relations (i.e., social distance), not just through the activation of the behavioral approach system. This mediation has not been tested.

The proposed mediation path is going from power to helping via psychological closeness. Both the approach theory and the construal-level theory predict that powerful individuals will experience difficulty in correctly creating mental representations of others and in accurately identifying interpersonal cues. Furthermore, whereas the approach theory predicts that powerful individuals, even if they do get an accurate picture of the partner's hardship, will not offer aid, the construal-level theory predicts that this will happen because power makes the powerful individuals psychologically distant from the partner, thereby leading them to viewing others in an abstract manner (Smith & Trope, 2006). This then interferes with their ability to notice others' needs. Thus, powerful individuals will be disconnected with others psychologically making it less likely for them to help others.

*Hypothesis 2:* The negative association between power and helping is mediated by psychological closeness.

## **Physical Distance as a Moderator of the Mediation Model**

Workplace designs that physically separate powerful individuals from others will make it even less likely for powerful individuals to feel socially close and intimate with others. The relational job design model (Grant, 2007) suggests that an increased contact with others for whom an individual is responsible will lead to an increase in the degree to which the individual can positively impact others and are affectively committed to them. Increasing contact with others at work can be done in a number of ways including increasing physical proximity with others, increasing interaction frequency with others, and increasing depth and breadth of contact with other. In their meta-analysis of work design characteristics, Humphrey, Nahrgang, and Morgeson (2007) found that work context characteristics such as physical demands, work conditions, and ergonomics explained significant incremental variance above and beyond motivational and social characteristics in predicting job satisfaction and stress. However, they did not include work context characteristics related to physical distance. This is an important oversight as workplace design elements that increase physical distance between individuals is an increasingly common element in the era of virtual work teams (Gibson et al., 2011).

Powerful individuals are often physically distant from others at work. These reasons were noted in the previous literature review section. To recapitulate, the reasons are twofold. First, they are physically distant for ego-maintenance purpose. According to the social identity theory of leadership and the social dominance theory, powerful individuals prefer to be distant for ego maintenance (Hogg, 2001; Hogg & Reid, 2001; Sidanius & Pratto, 1999) as these elements of physical distance symbolizes an individual's status in the organization (Greenberg, 1988). Second, powerful individuals



also want to be placed in situations where they need to pay less attention to others and are more in control of their environment, free from others' influence or distractions (Lee & Tiedens, 2001). Thus, I examine physical distance, in the form of linear distance.

I specifically predict that physical distance will exacerbate the negative relationship between power and psychological closeness, subsequently leading to less helping behavior. In other words, I predict that the association between power and helping behavior via psychological closeness to be stronger when physical distance is high. Using the terminology from Edwards and Lambert (2007), the indirect effects of power on helping behavior via psychological closeness will vary as a function of physical distance (first stage moderator). Thus, I expect that:

*Hypothesis 3:* The negative association between power and helping will vary based on physical distance. Specifically, (H3a) the association between power and psychological closeness will be weaker when physical distance is low than when it is high. Thus, (H3b) the indirect effects of power on helping (via psychological closeness) will be weaker when physical distance is lower.

### **Self-Construal as a Moderator of the Mediation Model**

Self-construal is an important individual characteristic to consider in how power impacts outcomes via psychological closeness. Self-construal is individuals' mental representation of themselves and how they define themselves around others (Gardner, Gabriel, & Lee, 1999). Psychological closeness affects other-construal: ways in which individuals form mental representations of others (Trope & Liberman, 2010). Thus, self-construal affects how one perceives psychological closeness with others and how psychological closeness affects interpersonal behaviors. Self-construal is important to

consider because the premise of the construal-level theory is that individuals understand their social environment in an ego-centric manner (Trope & Liberman, 2010) where the ego is the center-point from which closeness is determined. By exploring how an individual views himself or herself in relation to the social world, I extend the existing approach theory of power and construal-level theory of psychological distance in determining when it is more likely for psychological closeness mediation to occur.

**Relational self-construal.** Individuals with a strong sense of relational self-construal have goals and motives that relate to those who are close to them. That is because these individuals have a tendency to define oneself in terms of those close relationships and in their connection with them (Cross et al., 2000; Markus & Kitayama, 1991). These individuals also define themselves in terms of specific relationships at work, which includes coworkers but not in terms of groups (Cooper & Thatcher, 2010). In contrast to those with strong individual self-construal, individuals with strong relational self-construal do not have self-enhancement motives, but instead, evaluate themselves based on motives associated with interpersonal roles (Brewer & Gardner, 1996). They consider their close relationships to be important to them and are more committed to such relationships than those who have low relational self-construal; furthermore, they are more likely to consider others' needs and wishes when making decisions and are rated by their partners as more open and responsive in the relationship than those who have low relational self-construal (Cross et al., 2000). This positive evaluation from their partner is also a function of their behavioral flexibility. Individuals with strong relational self-construal tailor their behaviors to their partner and do not display the constant dominance that individuals motivated by self-enhancement often

display (Gabriel & Gardner, 1999; Stapel & Van der Zee, 2006). Furthermore, since they are less motivated by trait-behavior consistency, they do not base their happiness on fulfilling such self-consistency (Cross, Gore, & Morris, 2003).

Instead, individuals with strong relational self-construal are driven by relational desires toward those that are close to them. Specifically, they are motivated by uncertainty reduction, self-expansion, and personalized belongingness (Cooper & Thatcher, 2010). These individuals' uncertainty is inherently relational; they strive to maintain the longevity of their close relationships and reduce uncertainty that may threaten those relationships (Lydon, Meana, Sepinwall, Richards, & Mayman, 1999). These individuals also strive for uncertainty reduction in the relationship by avoiding taking advantage of alternatives that would serve as leverage to threaten the partner and by being more committed to the relationship (Lydon, Menzies-Toman, Burton, & Bell, 2008). They are also motivated by self-expansion in relationships, by expanding themselves to include the perspective of the partner (Gore, Cross, & Morris, 2006). They are better perspective-takers (Cross & Morris, 2003) since having this skill is important in maintaining an enduring relationship. Lastly, individuals with strong relational self-construal are more easily attached to their partners and are vested in such connection (Brewer & Chen, 2007; Cross et al., 2000; Gelfand, Smith, Raver, & Nishii, 2006). As such, they are more likely to help the people that mean much to them (Kashima & Hardie, 2000). Powerful individuals that have strong relational self-construal cherish their relationship with others at work and are that much more attached to these relationships. Thus, these individuals are more likely to help subordinates, since good relationships with these people are the basis of their self-construal.

Since these individuals care about work relationships, I specifically predict that high relational self-construal will attenuate the negative relationship between power and psychological closeness, subsequently leading to more helping behavior. In other words, I predict that the association between power and helping behavior via psychological closeness to be weaker when relational self-construal is high. Using the terminology from Edwards and Lambert (2007), the indirect effects of power on helping behavior via psychological closeness will vary as a function of relational self-construal (first stage moderator). Thus, I expect that:

*Hypothesis 4:* The negative association between power and helping will vary based on relational self-construal. Specifically, (H4a) the association between power and psychological closeness will be weaker when relational self-construal is high than when it is low. Thus, (H4b) the indirect effects of power on helping (via psychological closeness) will be weaker when relational self-construal is higher.

### **Overview of Studies**

I conduct two studies to test the pattern of associations depicted in Figure 1. In Study 1, I manipulate both power and physical distance to examine whether or not having power coupled with physical distance makes it more likely for an individual to experience reduced psychological closeness with others and help them less. In Study 1, I also test relational self-construal as a moderator by collecting participant self-reports of their relational self-construal. In Study 2, I test the proposed model in a field setting to replicate the moderated mediation model.

## **Chapter 4: Method for Study 1**

The first purpose of the lab study is to determine whether power is negatively related to helping (Hypothesis 1) and whether psychological closeness mediates the relationship between power and helping (Hypothesis 2). The second purpose is to determine whether physical distance (Hypothesis 3a) and relational self-construal (Hypothesis 4a) decreases the association between power and psychological closeness. The third purpose is to determine whether the indirect effects of power on helping (via psychological closeness) will vary by physical distance (Hypothesis 3b) and relational self-construal (Hypothesis 4b). Please see Appendix A for the full experiment protocol for Study 1.

### **Power Analysis**

There are two sample size criteria to consider when determining the sample size required to detect moderated mediation. First, According to Fritz and MacKinnon (2007) in testing mediation, empirical estimates of sample sizes needed for .8 power to detect mediation effects ranges from 34 to 462 when using bias-corrected bootstrapping. The literature review suggests that the size of the parameter value from power to psychological closeness may be large whereas the size of the parameter value from psychological closeness to helping behavior may fall between small and medium. Based on Fritz and MacKinnon (2007), the lower limit of the number of subjects needed for .8 power to detect mediation is 115. This sample size is also consistent with previous studies that used bootstrapping to test experimental mediation (e.g., Koo, Algoe, Wilson, & Gilbert, 2008).

Second, according to Cohen (1988) in testing interaction in experimental studies, the cell sample size for each of the four conditions in a 2 x 2 design with a desired effect size of .40 (a conventionally large effect), a power of .80, and alpha = .05 is  $n = 26$ . This means the total sample size required to detect interaction is  $N = 4(26) = 104$ , providing a lower limit of sample size in this study. Since the bootstrap framework can be applied to a small sample size (20-80 cases; Efron & Tibshirani, 1993), I tested the significance of moderated mediation using the bias-corrected bootstrap resampling method to construct a confidence interval for direct and indirect effects (Mallinckrodt, Wei, Russell, & Abraham, 2006; Shrout & Bolger, 2002), and compared them across the two conditions of physical distance (far versus close) and relational self-construal (+1 SD/-1 SD) using Edwards and Lambert's (2007) moderated mediation method.

### **Participants**

Participants were 114 individuals from the general population that were part of the behavioral subject pool at the University of Minnesota, Carlson School of Management. Total of five participants were dropped from final analysis as one participant was familiar with the confederate, another participant left early, and three participants were suspicious of the study. Thus, the final sample size was 109 ( $M_{\text{age}} = 27.51$ ,  $SD_{\text{age}} = 10.49$ ; 44 males, 65 females; 39 Asian or Pacific Islander, 4 African or African-American, 1 Native American or Alaskan Native, 65 Caucasians). Participants received \$10.

### **Procedure**

I used a randomized 2 x 2 between-subjects design (power/no power; far/close physical distance) to test the proposed moderated mediation model in Study 1 (see Stone-

Romero & Rosopa, 2011). I also collected a self-report of relational self-construal to test moderated mediation. Three days prior to coming in for the study, participants received a link to complete an online survey that measured relational self-construal. Participants were then randomly assigned to one of the four conditions—(1) high power (supervisor) and far distance (sitting far apart), (2) high power and close distance (sitting close together), (3) baseline power (coworker) and far distance, and (4) baseline power and close distance. Participants were told that they will have to work with a partner on separate grading and input tasks. Participants were also told that the goal of this study was to gauge the total grading accuracy of both people, so the participant and his/her partner will work on the same grading and input task but for different class sections.

Participants were escorted to a separate room to start the first task set. In the first task set, they completed (1) a background survey (page 1), (2) the first part of the power manipulation which was an experiential recall (page 2), and (3) the second part of the power manipulation which was reading role instructions (page 3; Appendix C and D).

Upon completing the first task set, participants were instructed to enter a second room with a conference table. After being seated at the conference table, both the participant and the confederate opened their folder to discover (1) grading instructions, (2) the Inclusion of Others in the Self scale to measure psychological closeness (Figure 2; Aron, Aron, & Smollan, 1992), (3) an answer key, (4) list of names of hypothetical students, and (5) 20 exams of fake University of Minnesota students. The grading instruction page noted that both the participant and the other participant (i.e., confederate) will be grading two different exams from different classes and that they may leave the room at any moment during the grading task for restroom breaks. For confidentiality,

both confederate and participant were asked to take their grading packet, pencil box, and their belonging with them should they need to exit the room (see Appendix E and F).

Participants worked on this grading and input task for 5 minutes.

After 5 minutes of grading, the confederate hurriedly packed her grading material back in the large folder, picked up her pencil box per task instructions, and headed toward the door to leave the conference room. She then staged an accident wherein she dropped the box that contained 30 golf pencils next to the chair where the participant was sitting (5-7 feet away; noted as flash sign in room diagram above; also noted in Figure 3). When the confederate gathered the pencils, she re-inserted them into the box from which they came; however, the participant handed the pencils directly to the confederate—if the participant picked up pencils—and the confederate slipped them into the folder she was carrying. The number of pencils the participant picked up and handed the confederate was the helping behavior.

After one minute, the confederate returned to the conference room where she was originally seated and resumed her grading task. Two minutes later, the researcher entered the room and said to both the participant and the confederate that that was the end of the study. Participants were given manipulation checks (Appendix G) and were then asked to complete a debrief statement (Appendix H).

### **Manipulations**

**Power manipulation.** Power manipulation was twofold. I used the modified version of the experiential prime and role manipulation as was extensively used in similar studies (Galinsky et al., 2003; Gruenfeld et al., 2008). The experiential recall was as such for the supervisor:



Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power—what happened, how you felt, etc.

The experiential recall for the coworker was as such:

Please recall your last visit to a grocery store. Please describe this situation—what happened, how you felt, etc.

After completing the recall task, the researcher escorted the participant to the entrance of a conference room in the lab. Next to the door were two boxes, one labeled “supervisor” and another labeled “subordinate”; each of these boxes contained folders with the grading material. Participants with the supervisor role were instructed to pick up one folder from each box, enter the room, keep the supervisor folder but give the subordinate folder to the other participant (i.e., confederate). Participants with the coworker role were escorted to the conference room where the researcher handed one folder to the participant and the other folder to the confederate. Both participant and confederate folders were labeled “participant.”

**Physical distance manipulation.** Participants in the close physical distance condition sat adjacent to the confederate at the conference table; participants in the far physical distance sat near the end of the table. Please see the diagram in Figure 3 for participant and confederate seating.

## **Measures**

**Relational self-construal.** I used the 11-item Relational Interdependent Self-Construal Scale (Cross et al., 2000;  $\alpha = .89$ ) to assess relational self-construal. This measure was positively correlated with the Communal Orientation Scale ( $r = .41$ ) and the Interdependent Self-Construal Scale ( $r = .41$ ), but was not related to the Independent Self-Construal Scale (Cross et al., 2000). This measure is a well-validated measure of relational self-construal (Cooper & Thatcher, 2010; Sluss & Ashforth, 2007). Please see Appendix B for the survey that measured relational self-construal.

**Psychological closeness.** I used the single-item Inclusion of Others in the Self (Aron et al., 1992) to measure psychological closeness. This measure has varying degree of overlapping circles, which indicate the degree of self-other overlap that individuals report between themselves and others. Magee and Smith (2011) proposed using this measure as psychological closeness, and Galinsky and Gino (2012) recently used this measure of psychological closeness.

**Helping behavior.** Helping behavior was assessed by counting the number of pencils picked up by the participant. This design is consistent with how previous researchers operationalized non-instrumental helping behavior in an experimental setting (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007; Vohs et al., 2006).

**Manipulation check.** There were three manipulation checks. First, the researcher verified that the participant chose the correct folder based on their role assignments. All participants chose the correct folder based on their role assignments. Second, participants were asked to complete an item adapted from Galinsky et al.'s (2003) study. Participant were asked "Which of the following best represents your role in this study in relation to the other participant?" and were asked to rate on a Likert-type scale with three response

options (1 = *Supervisor*, 2 = *Coworker or Co-Participant*, 3 = *Subordinate*). The manipulation check showed that the procedure successfully induced the role of supervisor versus co-participant,  $F(1, 107) = 101.24, p < .001$ . Third, to gauge perception of supervisory power in everyday life, participants were asked “Based on your experience in everyday life, how much power do you think supervisors have over their subordinates?” to which they had to answer on a 4-point Likert-type scale (1 = *Not at all*, 4 = *A lot*). However, participants in the power condition reported that supervisors in general do not have as much power ( $M = 2.84, SD = 0.88$ ), compared to participants in the control condition ( $M = 3.20, SD = 0.71$ ),  $t(107) = 2.40, p = .02$ . Thus, the manipulation checks show that role had been manipulated but sense of power was not adequately manipulated.

### **Data Analysis Strategy**

**Moderated mediation model.** I used the Edwards and Lambert (2007) method and tested whether the mediation effect differed across two conditions: far versus close physical distance and high versus low relational self-construal. Traditionally, analysis of variance (ANOVA) has been used to examine experimental designs when the experimenter sought to compare two different conditions and determine whether or not the implementation of the experimental condition led to a significant change in the dependent variable. However, current research questions examine whether or not psychological closeness mediated the relationship between power and helping behavior and whether this mediation effect is increased or decreased with two moderators: physical distance and relational self-construal. The disadvantage of using ANOVA to analyze these questions is that it is done in a piecemeal fashion (Edwards & Lambert, 2007). In

other words, it cannot simultaneously consider direct, indirect, and total effects of power on helping behavior via psychological closeness across different levels.

Thus, I tested Hypotheses 3a and 3b, and Hypotheses 4a and 4b using Edwards and Lambert's (2007) approach. This approach uses path analysis with nested equations where the relationships between the variables are noted in a series of equations that, combined, allow the researcher to test for moderated mediation. I follow this approach and substitute the regression equation for the mediating variable (i.e., psychological closeness) into the equations for helping behavior. Next, these reduced form equations were used to calculate direct, indirect, and total effects of the independent variable (i.e., power) across different levels of the moderator variables (i.e., far/close physical distance, +1/-1 SD relational self-construal). The proposed model is a first stage mediation model because the moderator variables impact the first stage of the indirect relationships between power and the dependent variable (Edwards & Lambert, 2007). The reduced form equations are noted in Appendix M.

I used path analytic conventions in explaining the direct, indirect, and total effects of power on helping at different levels of physical distance and relational self-construal.

The paths are noted as below:

$P_{MX}$ : path from power (X) to psychological closeness (M)

$P_{YM}$ : path from psychological closeness (M) to helping behavior (Y)

$P_{YX}$ : path from power (X) to helping behavior (Y)

$P_{YM} * P_{MX}$ : indirect effect

$P_{YX} + P_{YM} * P_{MX}$ : total effect of power (X) on helping (Y)

The indirect effect ( $P_{YM} * P_{MX}$ ) is a multiplication of two paths and is not normally distributed, leading to higher chances for Type I error to occur. Moreover, this error rate may be inflated when testing such product term for significance (Shrout & Bolger, 2002). To alleviate this concern, I estimated the sampling distributions of the product term by using a bootstrapping procedure with 1,000 samples to construct confidence intervals for the significance tests of indirect and total effects (Edwards & Lambert, 2007). These simple paths ( $P_{MX}$ ,  $P_{YM} * P_{MX}$ , and  $P_{YX} + P_{YM} * P_{MX}$ ) were compared across the two levels of physical distance and relational self-construal, respectively.

**Negative binomial regression.** Negative binomial regression was used in this analysis for several reasons on the basis of Cohen, Cohen, West, and Aiken's guideline (2003). First, the outcome variable—number of pencils picked up—is a count variable. Second, the distribution of the outcome variable is positively skewed, meaning approximately half of the participants picked up no pencils whereas the rest picked up varying number of pencils. Third, a log transformation of the outcome variable where there are many zeroes would lead to undefined data. Also, natural zeroes in this case are meaningful information. Fourth, the outcome was overdispersed, that is, the variance was much larger than the mean. In such case, Cohen et al. recommended that negative binomial regression be used since the negative binomial model of error allows greater variance than the Poisson regression, which is typically used for positively skewed count data. Unlike quasi-likelihood models such as the Poisson model that do not specify a second probability distribution for the excess variance, negative binomial regression models specify a second probability distribution (i.e., discrete probability gamma

distribution) for the second source of variance across individuals over and above the Poisson distribution (Cohen et al., 2003).

## Chapter 5: Results for Study 1

The descriptive statistics, reliability, and correlations for the Study 1 variables are presented in Table 1. Power ( $r = .01$ , n.s.), psychological closeness ( $r = .11$ , n.s.), physical distance ( $r = -.05$ , n.s.), relational self-construal ( $r = .07$ , n.s.) were not significantly correlated with helping behavior. Contrary to expectations, power was positively associated with psychological closeness ( $r = .24$ ,  $p < .05$ ).

### Main Effect and Mediation Test

Hypothesis 1 predicted that power will be negatively related to helping behavior. The negative binomial regression analyses are presented in Table 2. As the results in the right column of Table 2 show, power was not related to helping ( $b = .05$ , n.s.); thus, I find no support for Hypothesis 1.

Hypothesis 2 predicted that psychological closeness will mediate the relationship between power and helping. As shown in the left column in Table 2, power did not predict psychological closeness ( $b = .24$ , n.s.). Finally, as shown in the right column of Table 2, neither power nor psychological closeness were significant predictors of helping, therefore, there was no mediation. The test of mediation using bias-corrected bootstrapping showed that neither the indirect effect ( $P_{ym} \times P_{mx} = .03$ , n.s.) nor the total effect ( $P_{yx} + P_{ym} \times P_{mx} = .07$ , n.s.) were significant. Therefore, Hypothesis 2 was not supported.

### Moderated Mediation Test: Physical Distance

Hypothesis 3a predicted that the association between power and psychological closeness will be weaker when physical distance is low than when it is high. In Model 2 of Table 3, physical distance did not moderate the relationship between power and

psychological closeness ( $b = .03$ , n.s.). Thus, Hypothesis 3a was not supported. Since Hypothesis 3a was not supported, Hypothesis 3b was not supported. However, the path-analytic tests at far and close physical distance are noted in Table 4.

### **Moderated Mediation Test: Relational Self-Construal**

Hypothesis 4a predicted that the association between power and psychological closeness will be weaker when relational self-construal is high than when it is low. In Model 2 of Table 5, relational self-construal did not moderate the relationship between power and psychological closeness ( $b = .11$ , n.s.). Thus, Hypothesis 4a was not supported. Since Hypothesis 4a was not supported, Hypothesis 4b was not supported. However, the path-analytic tests at far and close physical distance are noted in Table 6.

### **Post Hoc Analysis**

I transformed helping behavior into a binary categorical variable and conducted a 2 X 2 between-subjects ANOVA. The binary outcomes were (1) picked up one more pencils and (2) picked up zero pencils. I also median split relational self-construal for this analysis. As noted in Table 19, neither power nor physical distance had main effects on helping (for power,  $F [1, 108] = .10$ , n. s.; for physical distance,  $F [1, 108] = .10$ , n. s.). The interaction between power and physical distance was not significant,  $F (1, 108) = .10$ , n. s. As noted in Table 20, neither power,  $F (1, 99) = .10$ , n. s., nor relational self-construal had a main effect on helping,  $F (1, 99) = 3.62$ , n. s. The interaction between power and relational self-construal was not significant,  $F (1, 99) = 2.85$ , n. s.

### **Summary**

None of the hypotheses were supported in Study 1. However, this might be due the weak power manipulation. Although the first and second manipulation checks



indicated that the role of the supervisor was sufficiently manipulated, the third manipulation check (i.e., “Based on your experience in everyday life, how much power do you think supervisors have over their subordinates?”) showed that the conditions may have affected participants’ perceptions of supervisory power in a negative way. One possibility is that the use of reflection manipulations (i.e., experiential recall) may have evoked the notion that supervisors generally hold very little power over others. Another possibility may be that the title-only manipulation of power without any real influence over the confederate evoked the notion that supervisors, in general, have little power over subordinates. The implications of this manipulation are further noted in the Discussions.

Study 2 examines the hypotheses in the context of a work situation where variability in power and physical distance exist within the natural environment. Study 2 is a constructive replication of Study 1 in a number of ways. First, I examined power using the objective measure of hierarchical status of participants in addition to using other subjective measures of power. Second, I examined helping behavior from the standpoint of workplace altruism toward individuals to examine interpersonal helping in organizations that are non-instrumental to meeting organizational objectives. Third, I examined power that is built and exercised over time. One limitation of Study 1 was that it manipulated power in a narrow fashion where the supervisor is given a title and is given a simple task of handing out folders without actually instructing and evaluating the subordinate. Thus, participants in Study 1 were given only the title of a supervisor without the actual ability to reward and punish based on evaluating others.

Thus, in Study 2, I determined whether power was negatively related to helping (Hypothesis 1) and whether psychological closeness mediated the relationship between

power and helping behavior (Hypothesis 2). I also test whether physical distance (Hypothesis 3a) and relational self-construal (Hypothesis 4a) decreases the association between power and psychological closeness. Lastly, I test whether the indirect effects of power on helping (via psychological closeness) will vary by physical distance (Hypothesis 3b) and relational self-construal (Hypothesis 4b).

## Chapter 6: Method for Study 2

### Participants

I selected the daycare teacher/staff member sample as there is a wide array of formal power differences that exist in each daycare center, ranging from child care workers, teaching assistants, teachers, lead teachers, assistant directors, and directors. In each daycare center, the director was the highest authority. The assistant director reported to the director. In larger daycare centers, there were distinctions between lead teachers and teachers. When there were many students in a room, lead teachers were assigned to the specific room to oversee the teachers and teaching assistants. Teachers were assigned to a specific room but did not have the responsibility of overseeing a whole age group spanning multiple rooms. In smaller daycare centers, there were no lead teachers as each age group was housed in a single room. Teachers reported to lead teachers; however, if there were no lead teachers in the daycare center, teachers reported directly to either assistant director or director. Both teachers and lead teachers reported to the assistant director; however, if there was no assistant director position in the daycare center, they reported directly to the director. Teaching assistants reported to teachers and child care workers reported to teachers or in some instances, teaching assistants.

Each room in the daycare centers contained at least one teacher with one to three teaching assistant working with the teacher. Child care workers often rotated across different rooms, but primarily spent their work day helping teachers and teaching assistants in one room. Each room would, on average, have one teacher, two teaching assistants, and one child care worker. These rooms were separated by walls and doors. As such, all personnel working in the same room would be able to see and hear each other;

however, they would not be able to see or hear someone else outside of the room. In all daycares, only directors and assistant directors had offices. Due to the small size of the participating daycares, everyone at each daycare knew each other and saw each other on a daily basis. All employees were invited to participate in the study.

The sample was drawn from 88 employees of 8 daycare centers in a major Midwestern metropolitan area. Of the 88 participants, 74 participated in time 1 (participation rate at Time 1 = 86.0%) and 69 participated in time 2. Therefore, the final sample for this study is 69 individuals. Of the five employees that did not participate in time 2, three were assistant teachers, one was a teacher, and another was a lead teacher. Participants in time 2 were 99% female, 82% Caucasian, had worked for their current daycare for an average of 5 years, and were an average of 32 years old. Fifty-one percent of employees had a bachelor's degree and 16% had graduate degrees. Please see Table 7 for sample characteristics of each of the daycare centers.

### **Procedures**

Participants responded to two online surveys approximately one month apart. One week following the second survey, a visit was made to each site to assess physical distance between participants. At time 1, participants received an online survey which included measures of power, psychological closeness, relational self-construal, and demographic information. Participants were asked to report on power and psychological closeness with two other employees at the daycare center. At time 2, participants received an online survey where they reported helping behavior of the two employees from the

time 1 survey.<sup>4</sup> A week after administering the time 2 survey, I made an onsite visit to record the physical distance between each of employee dyads using a measuring wheel. Please see Appendix I for the data collection schedule.

## **Measures**

**Power (time 1).** Power was assessed in eight different ways. Two of the measures assessed status (i.e., general power in the organization that does not reflect specific power over another individual), two of the measures assessed perceptions of power in a dyad, and four of the measures assessed relative power in a dyad.

**Status.** First, power was assessed using hierarchical status. Hierarchical status represents formal power in organizations (Astley & Sachdeva, 1984; Brass & Burkhardt, 1993; Ibarra & Andrews, 1993). Hierarchical status is an important foundation for an individual to establish bases of power (French & Raven, 1959). Furthermore, hierarchical status is highly correlated with the well-validated Bases of Social Power scale (Hinkin & Schriesheim, 1989). Hierarchical status for each participant was obtained from organizational records. Power was coded as such to reflect the reporting relationship: 1 =

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<sup>4</sup> The strength of this method is that it is an other-report of the participant's behaviors rather than it being a self-report of the participant's behavior (Podsakoff & Organ, 1986). The interval between Time 1 and Time 2 was approximately a month to collect independent and dependent variables at two different times (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). I used a temporally lagged survey design with different sources to reduce potential common method bias (see Podsakoff et al., 2003).

child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Second, power was assessed using a symbol of status—whether or not participants had a private office. Private offices convey power in organizations (Greenberg, 1988; Taylor & Spicer, 2007). This is partly due to the freedom that a private office offers. Private offices hinder others’ intrusion into an individual’s workspace and prevent others’ scrutiny over the individual (Oldham, 1988). Private offices provide architectural privacy— “visual and acoustic isolation supplied by an environment”—and gives individuals the sense of control over how they can reach others and how others can reach them (Sundstrom et al., 1980, p. 102). As such, having a private office provides individuals with control over how much information they want to present to others and how much influence they get from others (Altman, 1975; Margulis, 1977; Marshall, 1972; Sundstrom & Altman, 1989). Thus, I use whether or not participants have a private office as a proxy for power.

*Perception of power in dyad—self and other.* First, power in a dyad was assessed using the 8-item Personal Sense of Power Scale (Anderson et al., 2012). This scale is a self-report of an individual’s perception of power over another person. This scale is positively related to hierarchical status, control over resources, confidence in decisions, and dominance (Anderson et al., 2012; Fast, Sivanathan, Mayer, & Galinsky, 2011; Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). Sample items are: “In my relationship with [NAME OF PERSON], I can get him/her to do what I want” and “In my relationship with [NAME OF PERSON], I think I have a great deal of power.” The

items had seven Likert-type response options (1 = *disagree strongly*, 7 = *agree strongly*;  $\alpha = .82$ ).

Second, power was assessed using the 20-item Bases of Social Power scale (Hinkin & Schriesheim, 1989). This is a well-validated other-report measure based on French and Raven's (1959) concept of bases of power and includes five dimensions: reward, coercive, legitimate, expert, and referent power. The original scale asks about supervisor power. However, in this study, some participants report on supervisors, some on peers, and some on subordinates. Thus, rather than "My supervisor can increase my pay level", items were changed to include a name (i.e., "Mary Smith can increase my pay level"). Sample items are: "[NAME OF PERSON] can increase my pay level", "[NAME OF PERSON] can make my work difficult for me", and "[NAME OF PERSON] can make me feel personally accepted." The items had five Likert-type response options (1 = *strongly disagree*, 5 = *strongly agree*;  $\alpha = .90$ ).

**Relative power.** First, power was measured using a difference score between participant and coworker in the self-report measure of Personal Sense of Power Scale (difference in participant self-reports of power; Anderson et al., 2012). Participants reported on their perception of power over their coworkers (Self-Power) and their coworkers reported on their own perceptions of power over the participants (Partner-Power). For each participant, the degree to which they had more power than their coworker in the relationship was their own power minus coworker power (i.e., Self-Power – Partner-Power). Since this is relative power, the difference score will sometimes be positive and sometimes be negative, thus, I consider the sign of the difference score (i.e., plus or minus) in the analysis.

Second, power was assessed using a difference score between participant and coworker in the other-report measure of Bases of Social Power Scale (difference in participant other-reports of power; Hinkin & Schriesheim, 1989). Participants' power was rated by their coworker (Self-Power) and coworker power was rated by the participants (Partner-Power). For each participant, the degree to which they had more power than their coworker in the relationship was their own power minus coworker power (i.e., Self-Power – Partner-Power). Since this is relative power, the difference score will sometimes be positive and sometimes be negative, thus, I consider the sign of the difference score (i.e., plus or minus) in the analysis.

Third, each participant was coded either above, equal, or below in relative hierarchical status vis-à-vis the coworker. For instance, if a participant is a director and is paired with an assistant teacher, she will be assigned an “above” to reflect her higher hierarchical status compared to the assistant teacher who will be assigned “below.”

Fourth, the difference score in the hierarchical status was taken between participants and coworkers to assess how much more hierarchical status a participant had over a coworker. For each participant, the degree to which she had more power than her coworker in the relationship was her own hierarchical status minus coworker hierarchical status. Since this is relative power, the difference score will sometimes be positive and sometimes be negative, thus, I consider the sign of the difference score (i.e., plus or minus) in the analysis.

**Psychological closeness (time 1).** Measurement of psychological closeness has been approached from different perspectives. These three perspectives are cognitive closeness, behavioral closeness, and affective closeness (Aron, Aron, & Norman, 2001;



Agnew et al., 2004). Thus, I measured psychological closeness with three scales that correspond to these perspectives. First of all, cognitive closeness was measured with the IOS scale (Aron et al., 1992) as in Study 1. Participants were asked: “Please mark the number under the picture which best describes your relationship with [NAME OF PERSON].” Each participant saw Figure 2 but with each diagram labeled with a corresponding number.

Second, behavioral closeness was assessed with the 10-item communal strength scale (Mills et al., 2004) which is a self-report measure of the participant’s motivation to respond to the partner’s need. Sample items were: “How happy do you feel when doing something that helps this person” and “How far would you go out of your way to do something for this person?” The items had eleven Likert-type response options (1 = *not at all*, 11 = *extremely*;  $\alpha = .88$ ).

Third, affective closeness was measured with the 7-item perceived similarity scale (Schaubroeck & Lam, 2004) which is a self-report measure. All participants were asked to report the extent to which they were similar to their dyadic partner in terms of their background, work experiences, work attitudes, performance, personality, and opinions. Sample items are: “[NAME OF PERSON] and I have a similar background” and “[NAME OF PERSON] and I have a similar personality.” The items had five Likert-type response options (1 = *strongly disagree*, 5 = *strongly agree*;  $\alpha = .88$ ).

Exploratory factor analysis showed that these three measures form a central factor that explained 70.9% of variance between them. Thus, I standardized and averaged the items to form a psychological closeness scale. The coefficient alpha for the combined psychological closeness measure was  $\alpha = .92$ .

**Relational self-construal (time 1).** This was assessed with the same 11-item Relational Interdependent Self-Construal scale (Cross et al., 2000) as in Study 1 ( $\alpha = .82$ ).

**Control variables (time 1).** I controlled for several demographic variables such as age, gender, education, race, relationship tenure, and organizational tenure as these are also bases for either psychological closeness or power (Ibarra, 1993; Ibarra & Andrews, 1993; Napier & Ferris, 1993). Time 1 measures are noted in Appendix J.

**Helping behavior (time 2).** I assessed helping behavior using a 7-item workplace altruism from the Prosocial Individual Behavior scale (McNeely & Meglino, 1994). The original Prosocial Individual Behavior scale is a measure of altruism directed at other individuals (Dunlop & Lee, 2004; Lee & Allen, 2002) and is positively correlated with concern for others and empathy, but is not correlated with desire for recognition (McNeely & Meglino, 1994). The original measure is correlated with other subscales of the Prosocial Organizational Behavior: Role-Prescribed Prosocial Behavior ( $r = .23$ ) and prosocial organizational behavior ( $r = .38$ ; McNeely & Meglino, 1994).

I modified the original scale for this study. The modifications were (1) making the items hypothetical, (2) changing the response anchors to be likelihood scales (3) adding an item that measures providing useful information, (4) reporting on the dyadic partner helping the participant, and (5) adopting the scale to reflect realistic helping in current organizations. Sample items from the original scale are: "Sends birthday greetings to co-workers in the office" and "Brings in food to share with co-worker." Sample items of the modified scale were: "Sends birthday greetings to me in the office" and "Brings food or treats to share with me." The items had five Likert-type response options (1 = *not at all*

*likely*, 5 = *very likely*;  $\alpha = .90$ ). Two coworkers reported on each participant's helping behavior.

I also assessed helping behavior using the 8-item OCB-I scale modified from the original scale from Lee and Allen (2002). The OCB-I scale measures citizenship behavior that clearly benefits individuals. The original OCB-I scale is highly correlated with the organizational citizenship behavior that is beneficial to the organization ( $r = .46$ ; Lee & Allen, 2002) and is negatively related to counterproductive work behaviors (Dunlop & Lee, 2004; Lee & Allen, 2002). I modified the original OCB-I scale so that the participant's coworkers reported the frequency with which the participant engaged in OCB-I using a 7-point response scale (ranging from 1 = *never* to 7 = *always*). Sample items from the original scale are: "Help others who have been absent" and "Adjust your work schedule to accommodate other employees' requests for time off." Sample items of the modified scale were: "Help *me* when I was absent," "Adjust *his/her* work schedule to accommodate *my* requests for time off," and "Share personal property with *me* to help *my* work" (italicized words note the modification from the original scale;  $\alpha = .95$ ). Two coworkers reported on participant's helping behavior.

Exploratory factor analysis showed that these two measures of helping form a central factor that explained 82.4% of variance between them. Thus, I standardized and averaged the items to form a helping behavior scale. The coefficient alpha for the combined helping measure was  $\alpha = .95$ . Time 2 measures are noted in Appendix K.

**Physical distance.** Following the precedent of workplace physical distance measurement (Gibson, Gibbs, Stanko, Tesluk, & Cohen, 2011; Sundstrom, Burt, & Kamp, 1980; Sundstrom, Herbert, & Brown, 1982), I visited each work site and recorded

the physical distance in feet between each employee's workspace and his/her coworker's workspace using a measuring wheel. Specifically, the distance between workspace was defined as the distance between the entrance of the participant's room and the entrance of the coworker's room. However, if the participant and the coworker worked in the same room without desks, their distance was coded as 6 feet based on directors' input regarding typical physical distance between employees in a same room. If the participant and the coworker worked in the same room with desks, their distance was measured as the distance between the center of the participant's desk to the center of the coworker's desk. See Appendix L for the measurement sheet.

### **Data Analysis Strategy**

Through modified random assignment, each participant was linked to two other participants. One caveat is that each random assignment reduces the number of participants remaining that have not been linked; thus, the randomization of the next participant on the roster occurred with a smaller pool after each pairing until everyone was paired with two other coworkers. There was no consideration of power in linking participants with other participants. For instance, a teacher may be paired with a supervisor and a subordinate, or with two peers, or with two subordinates, etc. The arrangement of the data is further illustrated in Table 8.

Using a list of employees for each daycare center, I chose one participant and assigned her two other participants at random. I then continued with each participant until all employees had been assigned twice. Thus, each of the 69 participants is the self in two dyads, and is a partner in two additional dyads. As the unit of analysis is the dyad, each participant had two unique dyadic relationships. Following guidelines regarding pairwise

dyadic data (Campbell & Kashy, 2002; Kenny, Kashy, & Cook, 2006), there were two unique cases per dyad where each participant's report on coworker helping and coworker's report on participant helping was treated as two unique cases. This procedure creates a number of dependencies in the data (i.e., dependency from a participant reporting on two different relationships, dependency from each participant being nested in a dyad), and leads to biased standard errors and liberal tests of significance. Thus, Campbell and Kashy (2002) recommended using multilevel modeling to account for dependencies within each participant (e.g., one participant having two relationships) and within dyads (participant and his/her partner having two perspectives on the same relationship). Accordingly, I modeled for these dependencies by setting a random intercept model where intercepts are allowed to vary; helping behavior for each individual case was predicted by the intercept that varied across each participant. Furthermore, I controlled for the dyad in the level 1 regression equation to take into account the dyad's effects on helping behavior.

Since each participant was entered twice in the data set, the sample size was 138. However, due to the odd number of participants in some daycare centers, eight participants were asked to report on their relationship with one more coworker to ensure everyone participating was matched in a pair. Thus, the final sample size was  $N = 146$ .

**Moderated mediation model.** I adapted the same approach to moderated mediation as in Study 1 (Edwards & Lambert, 2007). Due to dependencies in the data, the path estimates used for the bias-corrected bootstrapping were derived from HLM results. Hence, unlike in Study 1, the coefficients used in the bootstrapping procedure were  $\gamma$ 's.

The  $\gamma$  coefficients were used in conducting nested-equations path analysis. The reduced form equations are noted in Appendix M.

## Chapter 7: Results for Study 2

The descriptive statistics, reliabilities, and intercorrelations are presented in Table 9. Results do not reflect adjustments to account for dependencies. Thus, the correlations are unbiased; however, the significant tests are liberal due to the downward bias of the standard errors. I will account for those dependencies in my formal test of hypotheses.

Perceptions of power measures had significant positive associations with helping (for other-report,  $r = .37, p < .01$ ; for self-report,  $r = .35, p < .01$ ). Status measures did not have significant associations with helping (for hierarchical status,  $r = .16, n. s.$ ; for having private office,  $r = .13, n. s.$ ). Of the relative power measures, only difference in participant other-reports of power ( $r = .18, p < .05$ ) was significantly associated with helping. Of all the power measures, only participant self-report of power ( $r = .45, p < .01$ ) and difference in participant other-reports of power ( $r = -.17, p < .01$ ) were significantly related to psychological closeness. Both psychological closeness ( $r = .46, p < .01$ ) and physical distance ( $r = -.19, p < .05$ ) were significantly related to helping. Of the control variables, being Caucasian ( $r = .19, p < .05$ ) and education level ( $r = .17, p < .05$ ) were significantly related to helping.

### Main Effect and Mediation Test

Hypothesis 1 predicted that power will be negatively related to helping behavior. However, as the results in the Model 2 of Table 11 show, none of the status measures predicted helping. Both perceptions of power measures predicted helping. Self-report ( $\gamma = .28, p < .01$ ) and other-report ( $\gamma = .40, p < .01$ ) of power positively predicted helping. Of the measures of relative power, only difference in the other-reports of power ( $\gamma = .18,$

$p < .05$ ) significantly predicted power.<sup>5</sup> Thus, I did not find support for Hypothesis 1; the associations between power and helping were inconsistent across measures of power. Furthermore, for the three significant effects that I did find, the effects were opposite to what was hypothesized.

Hypothesis 2 predicted that psychological closeness will mediate the relationship between power and helping. I tested the mediation hypothesis using the bias-corrected bootstrapping method (MacKinnon et al., 2007), estimating the sampling distributions of the indirect effect by using a bootstrapping procedure with 1,000 samples to construct confidence intervals for the significance tests of indirect and total effects (Edwards & Lambert, 2007). I used the path analysis results in Table 11 for the bootstrapping procedure. Path analytic results for the indirect and total effects of power on helping (via psychological closeness) are presented in Table 12. Most of the indirect effects were not significant. However, measures of hierarchical status had significant indirect effects ( $P_{ym} \times P_{mx} = -.08, p < .05$ , for hierarchical status not controlling for office;  $P_{ym} \times P_{mx} = -.17, p < .05$ , for hierarchical status controlling for office) but had non-significant direct effects ( $P_{yx} = .12, n. s.$ , for hierarchical status not controlling for office;  $P_{yx} = .15, n. s.$ , for hierarchical status controlling for office). Thus, Hypothesis 2 was not supported;

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<sup>5</sup> To further examine the nature of the power difference/similarity effects based on the other-report measure, I conducted polynomial regression to determine whether there was a significant similarity effect. The increase in incremental  $R^2 = .02$  from adding the polynomial terms (Self Power<sup>2</sup>, Other Power<sup>2</sup>, and Self X Other Power) was not significant.



psychological closeness did not mediate the negative relationship between power and helping.

### **Moderated Mediation Test: Physical Distance**

Hypothesis 3a predicted that the association between power and psychological closeness will be weaker when physical distance is low than when it is high. In Model 2 of Table 14 (status and perceptions of power) and Table 15 (relative power), physical distance did not moderate the relationship between power and psychological closeness in any of the measures of power. Thus, Hypothesis 3a was not supported. Since Hypothesis 3a was not supported, Hypothesis 3b was not supported.

### **Moderated Mediation Test: Relational Self-Construal**

Hypothesis 4a predicted that the association between power and psychological closeness will be weaker when relational self-construal is high than when it is low. In Model 2 of Table 17 (status and perceptions of power) and Table 18 (relative power), relational self-construal did not moderate the relationship between power and psychological closeness in any of the measures of power. Thus, Hypothesis 4a was not supported. Since Hypothesis 4a was not supported, Hypothesis 4b was not supported.

### **Post Hoc Analysis**

I tested second stage moderation wherein the association between psychological closeness and helping will be stronger when physical distance is high than when it is low. Furthermore, I tested whether the indirect effects of power on helping (via psychological closeness) will be weaker when physical distance is lower. In Model 3 of Table 21, physical distance moderated the relationship between psychological closeness and helping ( $\gamma = .25, p < .01$ ). In Table 22, when physical distance was high, there was a

significant indirect effect ( $P_{ym} \times P_{mx} = -.27, p < .05$ ) of power on helping behavior. In contrast, when physical distance was low, the indirect effect ( $P_{ym} \times P_{mx} = -.10, n.s.$ ) of power on helping behavior was not significant.

Similarly, I tested second stage moderation wherein the association between psychological closeness and helping will be stronger when relational self-construal is high than when it is low. Furthermore, I tested whether the indirect effects of power on helping (via psychological closeness) will be weaker when relational self-construal is lower. In Model 3 of Table 23, physical distance did not moderate the relationship between psychological closeness and helping ( $\gamma = -.04, n.s.$ ). Thus, the indirect effect of power on helping (via psychological closeness) did not vary by the level of relational self-construal. Potential reasons for these findings are noted in the Discussion section.

### **Summary**

I did not find support for the negative association between power and helping. The association between power and helping was inconsistent and the few significant effects that I found showed positive associations between power and helping. Although psychological closeness mediated the relationship between power and helping when measuring power with hierarchical status, I did not find support for psychological closeness mediating the negative association between power and helping. The association between power and psychological closeness neither varied by physical distance nor by relational self-construal. As such, the indirect effect of power on helping behavior via psychological closeness neither varied by physical distance nor by relational self-construal.

## **Chapter 8: Discussion**

I tested a model wherein psychological closeness mediated the negative relationship between power and altruistic helping. I also proposed two moderators—physical distance and relational self-construal—to moderate this relationship, specifically by interacting with power to influence psychological closeness. First of all, this study did not support the proposition that power was negatively related to helping. Power was not associated with helping in the lab setting; perceptions of power measures were positively associated with helping whereas most of the measures of status and relative power were not associated with helping. Second, I did not find support for the model wherein psychological closeness mediated the negative relationship between power and helping in both the lab setting and the field setting. Third, neither physical distance nor relational self-construal was a significant moderator of the relationship between power and psychological closeness. Therefore, the association between power and helping via psychological closeness did not vary by either of the moderators. Below, I address the limitations and future possibilities for this study, discuss the theoretical implications for the studying findings, and provide practical implications.

### **Study Limitations**

There are five possible reasons for the results being inconsistent with the hypotheses. First, the field study dealt with a predominantly female population, which may limit the external validity of the results from the field study. Although studies do not show power and gender interactions in social judgment (see Kunstman & Maner, 2011), this does not rule out the possibility that the relationship between power and helping differs for women than it does for men. For instance, women, due to their communal

characteristics, may feel stronger obligation than men to help others with their power. However, Chen et al. (2001) found that when power is activated for individuals with high communal orientation, power leads to socially responsible behavior whereas when power is activated for exchange orientation, power leads to self-interested behavior, regardless of gender. Thus, it may be that the relationship between power and helping may vary by individual characteristics such as agreeableness or communal orientation and less so due to gender. Given that the field study participants were child care workers, it is likely that they had higher communal orientation than employees in other industries, making them more likely to use power for socially responsible behaviors such as helping.

Second, one alternative explanation that cannot be ruled out in terms of the lab study findings is the difficulty of the dummy task that prevented participants from helping the confederate. The grading task was intended to require moderate attention in order to simulate administrative work tasks; however, a few participants reported that the grading task was very difficult, so much so that it required their full concentration. This led to them either not noticing that the participant spilled the pencils or assuming that the participant did not need help. Thus, nearly half of the participants picked up of zero pencils. A future study may need to employ a task set that requires less attention so that participants may have a clearer, more intentional decision to help others in need.

Third, the power manipulation in the lab study may not have been sufficient. The manipulation check indicated that participants were aware of their role in the study as a supervisor or as a subordinate. However, neither the clear understanding of their role nor the experiential prime was sufficient to instill the feeling of power. As noted before, one manipulation asked participants about how much power they believed supervisors had

over their subordinates in their daily life. Participants in the power condition responded that supervisors in everyday life had less power over their subordinates compared to what the participants in the coworker condition reported. There may be two reasons for this response. The first reason may be that due to the majority of the participants being undergraduate students, their experience of power may not have been as strong or sustained as the working population. Thus, the experiential prime in having participants write about a time when they had power over other may not have been strong enough to elicit the feeling of power. The second reason may be that the task as a supervisor involved no reward, punishment, or evaluation ability. The three participants that were dropped from the analysis due to suspicion noted that they did not feel like the supervisor role involved any supervising or any influence. Thus, the lab study manipulated the role of a supervisor, but it neither manipulated the ability nor feeling of power for the participants.

Fourth, the sample sizes for both studies were small. In the lab study, possibly due to the summer schedule, there was an unusually high no-show rate for participants in the behavioral subject pool. Although the average no-show rate for the participants is around 10%, the no-show rate for the lab study was 32%. Furthermore, although all participants were instructed to complete the online study prior to coming in for the study, nine participants did not complete the online survey. The field study sample size was less than anticipated due to a number of daycare centers going through transitions such as change of director or summer vacation. This led to daycare centers withdrawing participation at the beginning of the study. Until larger samples are collected, it is difficult to draw

conclusions from these two studies. A small sample means that there is a higher probability of sampling errors that prevent researchers from gleaning significant effects.

Fifth, there was evidence that race may have played an important role in how participants helped others. There were significant mean differences in helping between Caucasians and non-Caucasians in the field study. Caucasians ( $M = .07, SD = 0.06$ ) were more likely to help their coworkers than were non-Caucasians ( $M = -.31, SD = 0.16$ ),  $t = -2.31, p = .02$  (two-tailed test). This suggests the possibility that Caucasians, being the majority and being surrounded by coworkers of similar racial background, may have perceived coworkers to be more similar to themselves than did non-Caucasians and may have had an easier time accepting them as in-group members. In such a setting, it is more likely for Caucasians to demonstrate sacrificial behavior such as helping toward other Caucasians who may be part of their in-group on the basis of racial similarity (Halevy, Bornstein, & Sagiv, 2008). In the lab setting, although not reaching significance in a two-tailed test, Caucasians ( $M = 6.68, SD = 0.90$ ) picked up more pencils than did non-Caucasians ( $M = 4.34, SD = 0.94$ ),  $t = -1.74, p = .08$ . Furthermore, although not reaching significance in a two-tailed test, Asians ( $M = 4.26, SD = 1.00$ ) picked up less pencils than did non-Asians ( $M = 6.56, SD = 0.86$ ),  $t = 1.67, p = .10$ , despite the confederate being Asian. Given the aforementioned limitations, the following theoretical implications must be approached with caution.

### **Theoretical Implications**

“Power tends to corrupt, and absolute power corrupts absolutely. Great men are almost always bad men.” – Lord John Dalberg-Acton, 19th century British historian and politician (Dalberg-Acton, 1907, p. 504).

This study set out to test whether this popular observation of power manifests in a smaller scale in the lab and in daycare care centers. Specifically, I hypothesized that such notion of power corruption that Lord Acton spoke of would manifest in helping others less and sought to understand if this was because elevated power leads to feeling distance from others and if this sense of distance led to less helping. This study and the theory on which the hypotheses were constructed set out with the notion that power is detrimental to helping behavior, yet, what was discovered showed that the relationship between power and helping is much more complex than expected.

**Power and psychological closeness.** Contrary to existing theories, the relationship between power and psychological closeness proved to be complex. This is partly due to the nuances in what connotes having power. As mentioned in the earlier section, power can be defined as a position where both the power holder and those around her implicitly understand that the power holder is in control, just by virtue of being in the position of power with or without the actual ability to influence others (Mintzberg, 1983; Salancik & Pfeffer, 1977). Others have defined power strictly based on the ability to reward or punish (Keltner et al., 2003). In the lab study, a supervisor position/role was manipulated but the abilities typically associated with being a supervisor—reward, punishment, evaluation—were not. When the context involved two strangers, having a supervisory role—albeit in title only—appeared to impose a connection and context between individuals; in contrast, participants who were assigned to be co-participants did not have any context when they first met. In the daycare center, however, being in a higher hierarchical status coupled positions/roles with actual abilities to influence and control others. In this setting, the role of power involves the exercise of influencing

abilities over time. When participants were in a higher hierarchical status in the organization, or had more power than their coworker as perceived by the coworker, or were in a higher hierarchical status compared to their coworker, they felt less close to that coworker. However, there were also inconsistencies. Self-report of power over the coworker was positively related to psychological closeness whereas coworker-report of participant power was not related to psychological closeness.

This juxtaposition of power as a position and power as an ability, and how they have different associations with psychological closeness can be explained with the theory of necessary evil (Molinsky & Margolis, 2005). According to this theory, on one hand, when individuals are given an ability to harm others due to the position of being a boss, they are more likely to distance themselves with others to reduce the amount of emotional burden they have to endure when making decisions that negatively impact close others. On the other hand, when individuals do not have to exercise the ability of doling out punishments, they can more freely connect with others since they will not have to make punishment decisions that will damage the close relationships one has already built with others. Thus, power as a role in the lab study and power as an ability in the field study have differing relationships with psychological closeness, since the repercussions born out of having to make adverse decisions toward others are minimal in the lab setting whereas the repercussions from making adverse decisions are magnified in a work setting where there is high interaction frequency between all coworkers. When participants were in a higher hierarchical status in the daycare center or when they were in a higher hierarchical status than their coworker, they felt more distant from their coworker



although this conclusion represents a stark contrast to the positive association found between participant self-report of power and their report of psychological closeness.

This study shows that individuals' self-perception of power have different associations with psychological closeness than do hierarchical status and other-perception of power. In the lab setting where only the role—but not the accompanying ability—was manipulated, power was positively associated with psychological closeness. Furthermore, in the field setting, when participants were asked to report the extent to which they had power over a coworker, higher power led to higher psychological closeness with the coworker. However, when power was construed as an objective measure of hierarchical status or when participants occupied a higher hierarchical status than their coworker, higher power led to lower psychological closeness. Also, when the extent of participants' power was reported by the coworker, having more power than the coworker was associated with lower psychological closeness. Thus, having the role of power without its ability to make negative decisions to others in the lab setting and the self-report of power in the field were associated with higher psychological closeness. In other words, the belief of being in a powerful role and reporting of one's own power over others tend to be associated with feeling close to others, whereas objective measures of power in hierarchical status and other-reports of power are associated with lower psychological closeness.

These discrepant results across measurement sources show that power distorts the power holder's view of their social relationships. Much of the theoretical work on power (Keltner et al., 2003; Smith & Trope, 2006) focuses on how elevated power distorts power holders' view of others, relegating others to instruments and strategic tools for

power holders to reach organizational objectives. However, there may be another parallel mechanism that occurs in a power holder's mind, which is that supervisory role activates the sense of closeness with others whereas supervisory power creates distance. Given that the field setting was a daycare setting and is inherently an environment of caring, the environment may elicit and support care for others. Thus, being reminded of a supervisory role may bring other coworkers into the scope of concern or care and serve as a reinforcement to look after coworkers. This is consistent with the theory on the strength of the situation (Kenrick & Funder, 1988; Price & Bouffard, 1974; Schutte, Kenrick, & Sadalla, 1985). In a setting where caring for others is a strong expectation for employees (i.e., strong situation), participants may have associated a supervisory role with even more closeness and a stronger obligation to care for others. This may partially explain why self-report of power positively predicted psychological closeness. When asked about how much power one has over a specific coworker, participants who reported high level of power over a coworker also reported being psychologically close to the coworker.

On the contrary, power—the ability to give resources or withhold resources—may increase distance with others. A higher hierarchical status in an organization is often associated with an increased ability to control resources (Astley & Sachdeva, 1984; Brass & Burkhardt, 1993; Emerson, 1962; French & Raven, 1959). Furthermore, in a work relationship, being the boss (i.e., having a higher hierarchical status than the subordinate) would also entail having a greater ability to withhold resources over the subordinate. Existing theories suggest that when an individual has this ability to withholding resources over another individual, it would create distance with others (Molinsky & Margolis, 2005). Consistent with this notion, hierarchical status—both in the overall organizational

ladder and in comparison to specific coworkers—was negatively associated with psychological closeness with those coworkers. Thus, the lab study and the field study show that supervisory role and supervisory power may not have the same association with the sense of closeness one experiences in work relationships. This may be especially pertinent at lower hierarchical levels such as teachers who have to supervise teaching assistants or child care workers who are lower than teachers themselves in hierarchical status. In these relationships, teachers have to work closely and frequently with teaching assistants and child care workers, helping them do their job while caring for their overall well-being in daycare centers.

**Power and helping.** Contrary to expectations, I found a positive association between perception of power measures and helping. Furthermore, although psychological closeness did not mediate the negative relationship between power and helping, it did mediate the *positive* relationship between power and helping. Most studies of power have been outside the context of a direct supervisory relationship and have not been able to test supervisory role and supervisory power separately (see Keltner et al., 2003). The results from the field study suggests that in an environment where caring for others is a norm, this norm may serve as a strong situation that reinforces employees to care for one another. Under this situation, both supervisory role and supervisory power may negatively affect helping only when there is little or no relational connection between employees

However, the non-significant mediation effects of the other measures of power point to the possibility that there may be other potential mechanisms through which power affects helping behavior. One such route may be through emotions. According to

the approach theoretical framework, elevated power would lead to increased positive emotions, and increased positive emotion would lead to less helping. However, the link between positive emotions and helping behavior is unclear. While some would argue that positive emotions would lead to more helping (Chen et al., 2001; Keltner, Young, & Buswell, 1997), others would argue that negative emotions would lead to more helping (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Hence, exploring the mediating role of emotions—both positive and negative—in addition to the role that psychological closeness plays as a mediator may be an important next step in untangling the complex relationship between power and helping.

**Moderating role of physical distance.** In both the lab and the field study, I did not find support for physical distance as a moderator of the relationship between power and helping. This point was especially salient in the field setting where the interaction of power and physical distance in predicting psychological closeness was measured in a number of different ways; in all operationalizations of power, the power and physical distance interaction was not significant in predicting psychological closeness. A strong reason for the insignificant moderating roles of physical distance is model misspecification. Post hoc analysis showed that physical distance was a second stage moderator, meaning that the association between psychological closeness and helping varied by physical distance. The positive relationship between psychological closeness and helping was stronger for those who were physically farther apart than those who were physically close. Thus, this suggests that physical distance at work does not impact how powerful people form closeness perceptions with others, but may impact how they help after they perceive others to be close to themselves.

**Moderating role of relational self-construal.** I did not find support for relational self-construal as a moderator of the relationship between power and helping. This point was especially notable in the field setting where the interaction of power and relational self-construal in predicting psychological closeness was measured in a number of different ways; in all operationalizations of power, the power and relational self-construal interaction was not significant in predicting psychological closeness.

The insignificant findings regarding relational self-construal may be that other levels of self-construal such as collective self-construal are stronger predictors of helping. An important theoretical underpinning of relational self-construal is that individuals with high relational self-construal care much about close others and act upon that tendency. However, the definition of close others may be confined to friends and families that are outside of the work setting. Thus, it may be that individuals with high relational self-construal may have a general tendency to value close others, but that tendency among friends and family may not expand to how they view their coworkers. Given that the construct of relational self-construal is considered to be a specific subset of the interdependent self-construal (Cross et al., 2000), it may be that in most cases, participants did not consider coworkers to be close others.

As such, it may be fruitful for future research to focus on collective self-construal. Individuals with a strong sense of collective self-construal are more likely to use the group prototype as a basis of their own self-evaluation, use intergroup comparisons as their frame of reference, and are driven primarily by the group's benefit and welfare (Brewer & Gardner, 1996; Markus & Kitayama, 1991). These individuals define oneself in terms of the larger entity: the work group and the organization (Brewer & Gardner,

1996; Cooper & Thatcher, 2010). Individuals with strong collective self-construal are not motivated by self-enhancement motives (Yuki, 2003); instead, they find pleasure in benefitting the collective (Brewer & Gardner, 1996; Sedikides, Gaertner, & Vivea, 2005). They are more responsive to the cues from the context and are accepting of tailoring their self to the group (Suh, 2002). These individuals—once they feel close to their coworkers as well as the work group—may be more likely to help their coworkers, as they view close coworkers as an extension of themselves and as a member of their work group. Thus, collective self-construal may be more critical in examining whether the associations between power, psychological closeness, and helping vary by self-construal.

### **Practical Implications**

Power factors into every interaction one makes in organizations and every work relationship involves the exercise of power (Hawley, 1963). Thus, it is important to note how having power impacts the way employees view their social environment and how they behave based on their perception of the social environment. Given the limitations of this study, the results from the field study support the notion that when powerful individuals have more power than their coworkers as reported by the coworkers or when they have more hierarchical status than their coworkers, these powerful individuals feel less close to the coworkers around them. Furthermore, results show that feeling close to others was directly associated with more helping. Thus, managers can be informed that the more power employees gain in an organization as defined as gaining higher hierarchical status in the organizational ladder or gaining higher hierarchical status in relation to specific coworkers, they may feel more distance from their coworkers; this increased sense of distance, in turn, may negatively impact their ability to help coworkers

in their time of need. Results from the field study also showed that as an employee gains power in an organization, he or she tends to be further removed from others physically. Results showed that being physically distant from others significantly decreased an employee's likelihood to help others in need. Thus, to increase the likelihood that powerful individuals help others, it may be worthwhile to reduce the physical distance that separates them from others.

### **Conclusion**

Due to some aspects of the design and data, it is difficult to be conclusive of the results from this study. Given these limitations, this study found support for the potential mediating role that psychological closeness may play in the *positive* relationship between power and helping. The results highlight that psychological distance or closeness is a promising pathway through which both researchers and managers can learn of the behavioral implications of having power in organizations. Furthermore, the results show that power is nuanced and lead to different perceptions of others as well as helping based on how power is defined.

## Tables and Figures

Table 1  
*Means, Standard Deviations, and Correlations between Study 1 Variables*

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Helping	5.73	6.94					
2. Power	0.50	0.50	.01				
3. Psychological closeness	1.41	0.89	.11	.24*			
4. Physical distance	0.50	0.50	-.05	.02	-.05		
5. Relational self-construal	5.18	0.87	.07	.09	.12	-.11	(.89)

*Note.*  $N = 100$ . Used listwise deletion. Power: supervisor condition = 1, coworker condition = 0. Physical distance: far = 1, close = 0. None of the correlations were significant at  $p < .05$ .

Coefficient alpha reliabilities are reported on the main diagonal in parentheses.



Table 2  
*Results of Mediation, Negative Binomial Regression Analysis (Study 1)*

	Psychological Closeness		Helping	
	<i>b</i>	<i>Bootstrap SE</i>	<i>b</i>	<i>Bootstrap SE</i>
Power	.24*	.111	.05	.251
Psychological closeness			.12	.162
Model deviance	282.35		529.38	
Pseudo $R^2$	.001		.001	

*Note:*  $N = 109$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized observed coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit. Power: supervisor condition = 1, coworker condition = 0. Physical distance: far = 1, close = 0. †

Table 3

*Results of First Stage Moderated Mediation, Negative Binomial Regression Analysis (Study 1)*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Power	.24*	0.111	.23	0.167	.05	0.250	.03	0.272
Physical distance	-.07	0.119	-.09	0.107	-.25	0.263	-.23	0.269
Power X physical distance			.03	0.218				
Psychological closeness							.10	0.164
Model deviance		282.15		282.14		529.24		529.10
Pseudo $R^2$		.001		.001		.001		.001

*Note:*  $N = 109$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Power: supervisor condition = 1, coworker condition = 0. Physical distance: far = 1, close = 0. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Table 4

*Path Analytic Results, Study 1: Indirect and Total Effects of Power (via Psychological Closeness) on Helping at Close and Far Physical Distance*

	Pmx	Pym	Direct Effect (Pyx)	Indirect Effect (PymPmx)	Total Effect (Pyx+PymPmx)
Simple paths for far physical distance	.26*	.10	.03	.03	.05
Simple paths for close physical distance	.23	.10	.03	.02	.05

*Note:*  $N = 109$ . \*  $p < .05$ , \*\*  $p < .01$ . Pmx = path from power to psychological closeness; Pym = path from psychological closeness to altruistic helping; Pyx = path from power to altruistic helping. Significance tests for the indirect, total, and differences in these effects were based on bias-corrected confidence intervals derived from 1,000 bootstrap estimates.

None of the coefficients were significantly different across far and close physical.

Table 5

*Results of First Stage Moderated Mediation, Negative Binomial Regression Analysis (Study 1)*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	<i>Bootstrap</i>		<i>Bootstrap</i>		<i>Bootstrap</i>		<i>Bootstrap</i>	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Power	.29*	0.116	.29*	0.171	-.02	0.299	-.05	0.301
Relational self-construal	.07	0.077	.01	0.130	.08	0.155	.04	0.168
Power X relational self-construal			.11	0.174				
Psychological closeness							.15	0.183
Model deviance		258.56		258.18		475.58		475.30
Pseudo $R^2$		.015		.016		.000		.001

*Note:*  $N = 109$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Power: supervisor condition = 1, coworker condition = 0. Model deviance ( $-2 \times$  log-likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Table 6

*Path Analytic Results, Study 1: Indirect and Total Effects of Power (via Psychological Closeness) on Helping at High and Low Relational Self-Construal*

	Pmx	Pym	Direct Effect (Pyx)	Indirect Effect (PymPmx)	Total Effect (Pyx+PymPmx)
Simple paths for high self-construal (+1 SD)	.40*	.15	-.05	.06	.01
Simple paths for low self-construal (-1 SD)	.18*	.15	-.05	.03	-.02

*Note:*  $N = 100$ . \*  $p < .05$ , \*\*  $p < .01$ . Pmx = path from power to psychological closeness; Pym = path from psychological closeness to helping; Pyx = path from power to helping. Significance tests for the indirect, total, and differences in these effects were based on bias-corrected confidence intervals derived from 1,000 bootstrap estimates.

None of the coefficients were significantly different across high and low relational self-construal.

Table 7  
*Sample Characteristics*

Daycare Center	1	2	3	4	5	6	7	8
Total number of employees	14	21	17	8	11	5	7	5
Number of T1 respondents/response rate	12/86%	15/71%	15/88%	8/100%	8/73%	5/100%	6/86%	5/100%
Number of T2 respondents/response rate*	12/100%	15/100%	15/100%	6/75%	7/88%	5/100%	6/100%	4/80%
Gender (percentage of Females)	100%	100%	93%	100%	100%	100%	100%	100%
Age (Years)	28	25	33	42	34	39	27	49
Percentage Caucasian	92%	87%	67%	67%	100%	100%	67%	100%
Education	3.2	2.9	2.6	3.2	2	3	2.5	2.75
Organizational Tenure (Months)	52	52	66	170	48	22	22	95
Number of directors	1	1	1	1	1	2	1	1
Number of assistant directors	1	1	1	0	0	0	0	0
Number of lead teachers	0	0	6	0	4	0	3	2
Number of teachers	6	5	1	5	0	1	0	0
Number of assistant teachers	4	3	6	0	2	2	1	1
Number of childcare workers	0	5	0	0	1	0	1	0

*Note.* \* Time 2 response rate of time 2 based the number of time 1 participants who decided to participate in time 2.  
 Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Table 8  
*Data Arrangement*

Dyad Number	Self	Other	Source of Report				
			Power (Organizational record, self- report, other- report)	Psychological Closeness (Self-report)	Relational Self-Construal (Self-report)	Physical Distance (Onsite Measurement)	Helping (Other-report)
1	A	B	Record, A, B	A	A	Researcher	B
1	B	A	Record, A, B	B	B	Researcher	A
2	A	C	Record, A, B	A	A	Researcher	C
2	C	A	Record, A, B	C	C	Researcher	A
3	B	C	Record, A, B	B	B	Researcher	C
3	C	B	Record, A, B	C	C	Researcher	B

*Note.* This is an example of how the data set appears when there are three employees, designated as employee A, B, and C.

Table 9  
Means, Standard Deviations, and Correlations between Study 2 Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Gender: female	0.99	0.12						
2. Age	31.84	9.93	.03					
3. Race: Caucasian	0.82	0.38	-.06	.13				
4. Education	2.74	0.79	-.04	.20*	.07			
5. Organizational tenure (in months)	59.83	62.89	.05	.51**	.01	.25**		
6. Relationship tenure (in months)	29.19	29.14	-.02	.32**	-.04	.20*	.55**	
7. Power (self-report)	5.01	0.98	.22**	.23**	.13	.14	.20*	.11
8. Power (other-report)	3.05	0.66	.01	.37**	.07	.15	.40**	.06
9. Power (hierarchical status)	3.24	1.49	.02	.54**	-.08	.36**	.51**	.21**
10. Power (office)	0.20	0.40	.06	.46**	-.08	.29**	.55**	.14
11. Power (above, equal, below)	1.97	0.86	.13	.28**	-.16	.22**	.39**	.01
12. Power (self-report difference)	0.00	1.27	.25**	.18*	-.04	.04	.25**	.05
13. Power (other-report difference)	0.00	0.94	.15	.24**	-.11	.06	.36**	.00
14. Power (hierarchical status difference)	0.00	2.10	.14	.31**	-.10	.27**	.39**	.00
15. Psychological closeness	-0.02	0.65	.18*	.12	.24**	.08	.08	.10
16. Physical distance (in feet)	52.46	46.54	-.31**	.41**	-.18*	.07	.32**	.22**
17. Relational self-construal	5.47	0.67	-.19*	.05	.21*	.09	-.02	.10
18. Helping	0.00	0.76	.13	.16	.19*	.17*	.11	.11

Note:  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Coefficient alpha reliabilities are reported on the main diagonal in parentheses. Gender: 1 = female, 0 = male. Race: 1 = Caucasian, 0 = non-Caucasian. Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree. Power (office): 1 = has private office, 0 = does not have private office. Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.



Table 9 (continued)

Variable	7	8	9	10	11	12	13	14
1. Gender: female								
2. Age								
3. Race: Caucasian								
4. Education								
5. Organizational tenure (in months)								
6. Relationship tenure (in months)								
7. Power (self-report)	(.82)							
8. Power (other-report)	.34**	(.90)						
9. Power (hierarchical status)	.19*	.50**						
10. Power (office)	.34**	.58**	.80**					
11. Power (above, equal, below)	.28**	.45**	.65**	.58**				
12. Power (self-report difference)	.65**	.26**	.32**	.41**	.42**			
13. Power (other-report difference)	.24**	.71**	.42**	.52**	.65**	.38**		
14. Power (hierarchical status difference)	.30**	.40**	.70**	.66**	.91**	.45**	.59**	
15. Psychological closeness	.45**	.13	-.05	.06	-.14	.07	-.17*	-.13
16. Physical distance (in feet)	-.11	.06	.30**	.22**	.01	.00	.01	.01
17. Relational self-construal	-.06	-.15	-.16	-.19*	-.37**	-.05	-.35**	-.33**
18. Helping	.37**	.35**	.16	.13	.15	-.02	.18*	.14

Note:  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Coefficient alpha reliabilities are reported on the main diagonal in parentheses.

Table 9 (continued)

Variable	15	16	17	18
1. Gender: female				
2. Age				
3. Race: Caucasian				
4. Education				
5. Organizational tenure (in months)				
6. Relationship tenure (in months)				
7. Power (self-report)				
8. Power (other-report)				
9. Power (status)				
10. Power (office)				
11. Power (above, equal, below)				
12. Power (self-report difference)				
13. Power (other-report difference)				
14. Power (hierarchical status difference)				
15. Psychological closeness	(.92)			
16. Physical distance (in feet)	-.08			
17. Relational self-construal	.25**	.08	(.82)	
18. Helping	.46**	-.19*	.09	(.95)

Note:  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Coefficient alpha reliabilities are reported on the main diagonal in parentheses.

Table 10

*Multilevel Modeling Results for Mediation, Power (Above, Below, Equal) (Study 2)*

	Psychological Closeness		Helping			
	Model 1		Model 2		Model 3	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Gender: female	1.24**	0.434	.88	0.573	.22	0.555
Age	.00	0.007	-.01	0.009	-.01	0.009
Race: Caucasian	.39**	0.138	.42*	0.183	.22	0.178
Education	.11	0.072	.17	0.094	.09	0.091
Organizational tenure	.00	0.001	.00	0.001	.00	0.000
Relationship tenure	.00	0.002	.00	0.003	.00	0.003
Dyad ID	.01*	0.003	.01*	0.004	.00	0.005
Power (above, equal, below)	-.11	0.059	.12	0.070	.18**	0.063
Psychological closeness					.52**	0.082
Model deviance		260.30		308.70		269.29

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Gender: 1 = female, 0 = male.

Race: 1 = Caucasian, 0 = non-Caucasian

Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Table 11  
*Multilevel Modeling Results for Mediation (Study 2)*

	Psychological Closeness		Helping			
	Model 1		Model 2		Model 3	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
<b>Status</b>						
Power (hierarchical status) /not controlling for power (office)	-.15*	0.070	.06	0.095	.12	0.092
Psychological closeness					.51**	0.084
Power (hierarchical status)/ controlling for power (office)	-.33**	0.092	.00	0.128	.15	0.125
Psychological closeness					.51**	0.085
Power (office)	.09	0.171	.22	0.225	.14	0.220
Psychological closeness					.49**	0.083
<b>Perception of power</b>						
Power (self-report)	.33**	0.047	.28**	0.058	.15*	0.064
Psychological closeness					.38*	0.096
					*	
Power (other-report)	.10	0.087	.40**	0.096	.32**	0.088
Psychological closeness					.45**	0.081
<b>Relative power</b>						
Power (self-report difference)	.02	0.042	-.03	0.049	-.05	0.043
Psychological closeness					.51**	0.084
Power (other-report difference)	-.14*	0.060	.18*	0.072	.24**	0.065
Psychological closeness					.54**	0.082
Power (above, equal, below)	-.11	0.059	.12	0.070	.18**	0.063
Psychological closeness					.52**	0.082
Power (hierarchical status difference)	-.12*	0.059	.09	0.072	.16*	0.066
Psychological closeness					.53**	0.083

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.

Table 12

*Path Analytic Results (Study 2): Indirect and Total Effects of Power on Helping (via Psychological Closeness): Summary Table*

	Direct Effect (Pyx)	Indirect Effect (PymPmx)	Total Effect (Pyx+PymPmx)
<b>Status</b>			
Power (hierarchical status) /not controlling for power (office)	.12	-.08*	.04
Power (hierarchical status) /controlling for power (office)	.15	-.17*	-.02
Power (office)	.14	.05	.19
<b>Perceptions of power</b>			
Power (self-report)	.15*	.13	.27*
Power (other-report)	.32*	.05	.37*
<b>Relative power</b>			
Power (self-report difference)	-.05	.01	-.04
Power (other-report difference)	.24*	-.08	.16*
Power (above, equal, below)	.18*	-.06	.13
Power (hierarchical status difference)	.16*	-.07	.09

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.

Table 13

*Multilevel Modeling Results for Moderated Mediation with Physical Distance, Power (Above, Below, Equal) (Study 2)*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Gender: female	1.16 *	0.448	1.09 *	0.468	.52	0.566	-.09	0.553
Age	.00	0.007	.00	0.007	.00	0.010	.00	0.009
Race: Caucasian	.37 **	0.140	.37 **	0.140	.34	0.178	.15	0.174
Education	.12	0.071	.12 *	0.072	.19 *	0.089	.10	0.087
Organizational tenure	.00	0.001	.00	0.001	.00	0.001	.00	0.001
Relationship tenure	.02	0.002	.00	0.002	.00	0.002	.00	0.002
Dyad ID	.01 *	0.003	.01 *	0.003	.01 *	0.003	.01	0.003
Power (above, equal, below)	-.12	0.059	-.11	0.060	.10	0.069	.17 **	0.062
Physical distance	-.04	0.058	-.03	0.058	-.16 *	0.069	-.15 *	0.061
Power X physical distance			.03	0.057				
Psychological closeness							.52 **	0.081
Model deviance		259.95		259.63		303.41		263.81

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Gender: 1 = female, 0 = male.

Race: 1 = Caucasian, 0 = non-Caucasian

Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Table 14

*Multilevel Modeling Results for Moderated Mediation with Physical Distance (Study 2): Status and Perception of Power*

Status	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Power (hierarchical status) /not controlling for power (office)	-.15 *	0.070	-.15 *	0.071	.07	0.090	.13	0.087
Physical distance	-.01	0.057	-.01	0.060	-.18 **	0.068	-.17 **	0.062
Power X physical distance			-.02	0.067				
Psychological closeness							.51 **	0.083
Power (hierarchical status) /controlling for power (office)	-.33 **	0.092	-.35 **	0.094	.04	0.122	.19	0.120
Physical distance	.01	0.056	.02	0.059	-.18 *	0.069	-.18 **	0.062
Power X physical distance			-.06	0.067				
Psychological closeness							.52 **	0.084
Power (office)	.04	0.068	.04	0.068	.07	0.085	.04	0.084
Physical distance	-.01	0.058	-.01	0.059	-.17 *	0.068	-.16 **	0.062
Power X physical distance			.00	0.061				
Psychological closeness							.50 **	0.082

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.

Table 14 (continued)

*Multilevel Modeling Results for Moderated Mediation with Physical Distance (Study 2): Status and Perception of Power*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
<b>Perception of power</b>								
Power (self-report)	.33**	0.048	.32**	0.048	.26**	0.057	.13*	0.062
Physical distance	.06	0.054	.06	0.054	-.13*	0.065	-.15*	0.062
Power X physical distance			.03	0.047				
Psychological closeness							.40**	0.095
Power (other-report)	.07	0.058	.07	0.058	.24**	0.064	.19**	0.059
Physical distance	.01	0.061	.02	0.061	-.12	0.067	-.13*	0.061
Power X physical distance			.05	0.055				
Psychological closeness							.46**	0.080

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.



Table 15

*Multilevel Modeling Results for Moderated Mediation with Physical Distance (Study 2): Relative Power*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
<b>Relative power</b>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Power (self-report difference)	.03	0.053	.03	0.053	-.03	0.061	-.05	0.054
Physical distance	-.01	0.059	-.04	0.061	-.17*	0.069	-.16**	0.062
Power X physical distance			.09	0.057				
Psychological closeness							.51**	0.082
Power (other-report difference)	-.14*	0.057	-.13*	0.057	.15*	0.067	.21**	0.061
Physical distance	-.04	0.076	-.05	0.077	-.18*	0.087	-.16*	0.075
Power X physical distance			.07	0.060				
Psychological closeness							.54**	0.081
Power (above, equal, below)	-.12	0.059	-.11	0.060	.10	0.069	.17**	0.062
Physical distance	-.04	0.058	-.03	0.058	-.16*	0.069	-.15*	0.061
Power X physical distance			.03	0.057				
Psychological closeness							.52**	0.081
Power (hierarchical status difference)	-.13*	0.060	-.13*	0.060	.06	0.071	.14*	0.065
Physical distance	-.04	0.058	-.04	0.058	-.17*	0.069	-.15*	0.062
Power X physical distance			.03	0.065				
Psychological closeness							.52**	0.082

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID. Power and physical distance were standardized for the moderation analysis.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Table 16

*Multilevel Modeling Results for Moderated Mediation with Relational Self-Construal, Power (Above, Equal, Below) (Study 2)*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Gender: female	1.35 **	0.429	1.44 **	0.436	.95	0.577	.26	0.563
Age	.00	0.007	.00	0.007	-.01	0.010	.00	0.009
Race: Caucasian	.35 *	0.136	.36 **	0.136	.39	0.184	.21	0.179
Education	.09	0.072	.09	0.072	.16	0.095	.08	0.092
Organizational tenure	.00	0.001	.00	0.001	.00	0.001	.00	0.001
Relationship tenure	.00	0.002	.00	0.002	.00	0.002	.00	0.002
Dyad ID	.00	0.003	.00 *	0.003	.01	0.004	.00	0.004
Power (above, equal, below)	-.07	0.062	-.07	0.062	.14	0.073	.19 **	0.065
Relational self-construal	.11	0.056	.11	0.056	.07	0.074	.03	0.071
Power X relational self-construal			-.05	0.054				
Psychological closeness							.52 **	0.082
Model deviance		256.83		255.80		307.92		269.13

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Gender: 1 = female, 0 = male.

Race: 1 = Caucasian, 0 = non-Caucasian

Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Table 17

*Multilevel Modeling Results for Moderated Mediation with Relational Self-Constraint (Study 2): Status and Perception of Power*

<b>Status</b>	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Power (hierarchical status) /not controlling for power (office)	-.12	0.071	-.14	0.073	.08	0.098	.12	0.094
Relational self-construal	.11	0.054	.11*	0.054	.04	0.075	-.01	0.072
Power X relational self-construal			-.06	0.051				
Psychological closeness							.51**	0.084
Power (hierarchical status) /controlling for power (office)	-.30**	0.092	-.30**	0.092	.01	0.130	.15	0.126
Relational self-construal	.11*	0.052	.11*	0.052	.04	0.074	-.01	0.072
Power X relational self-construal			-.04	0.050				
Psychological closeness							.52**	0.086
Power (office)	.07	0.066	.10	0.076	.10	0.092	.05	0.089
Relational self-construal	.14*	0.054	.14**	0.055	.04	0.073	-.02	0.072
Power X relational self-construal			.04	0.059				
Psychological closeness							.50**	0.084

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.

Table 17 (continued)

*Multilevel Modeling Results for Moderated Mediation with Relational Self-Construal (Study 2): Status and Perception of Power*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
<b>Perception of power</b>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Power (self-report)	.32**	0.045	.32**	0.046	.27**	0.057	.14*	0.063
Relational self-construal	.13*	0.053	.13*	0.052	.04	0.070	-.01	0.069
Power X relational self-construal			.07	0.051				
Psychological closeness							.39**	0.098
Power (other-report)	.10	0.057	.10	0.057	.28**	0.065	.21**	0.060
Relational self-construal	.14**	0.055	.15**	0.055	.07	0.069	.01	0.068
Power X relational self-construal			.02	0.054				
Psychological closeness							.45**	0.082

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Power (office): 1 = has private office, 0 = does not have private office.

Table 18

*Multilevel Modeling Results for Moderated Mediation with Relational Self-Construal (Study 2): Relative Power*

	Psychological Closeness				Helping			
	Model 1		Model 2		Model 3		Model 4	
<b>Relative power</b>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Power (self-report difference)	.02	0.052	.03	0.053	-.03	0.062	-.06	0.055
Relational self-construal	.13 *	0.054	.13 *	0.054	.03	0.074	-.03	0.071
Power X relational self-construal			.03	0.054				
Psychological closeness							.51 **	0.084
Power (other-report difference)	-.10	0.058	-.10	0.058	.18 **		.23 **	0.063
Relational self-construal	.10	0.056	.10	0.057	.06	0.073	.01	0.069
Power X relational self-construal			-.01	0.059				
Psychological closeness							.54 **	0.082
Power (above, equal, below)	-.07	0.062	-.07	0.061	.14	0.073	.19 **	0.065
Relational self-construal	.11	0.056	.11	0.056	.07	0.074	.03	0.071
Power X relational self-construal			-.08	0.052				
Psychological closeness							.52 **	0.082
Power (hierarchical status difference)	-.09	0.061	-.09	0.061	.10	0.075	.16 *	0.068
Relational self-construal	.10	0.056	.11	0.056	.05	0.074	.01	0.071
Power X relational self-construal			-.04	0.053				
Psychological closeness							.52 **	0.083

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Control variables were gender: female, age, race: Caucasian, education, organizational tenure, relationship tenure, and dyad ID.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Table 19

*Results of Analysis of Variance (ANOVA) in 2 (Power) X 2 (Physical Distance) Factorial Design, Post Hoc Analysis (Study 1)*

Helping	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model	3	0.582	0.194	0.78	.511
Power	1	0.025	0.025	0.10	.752
Physical distance	1	0.177	0.177	0.71	.402
Power X physical distance	1	0.378	0.378	1.51	.222
Error	105	26.280	0.250		
Total	108	26.862	0.249		

*Note.* *N* = 109. Helping was a categorical outcome (1 = picked up one or more pencils, 0 = did not pick up any pencils).  
 Power: 1 = supervisor condition, 0 = coworker condition.  
 Physical distance: 1 = far, 0 = close

Table 20

*Results of Analysis of Variance (ANOVA) in 2 (Power) X 2 (Relational Self-Construal) Factorial Design, Post Hoc Analysis (Study 1)*

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Model	3	1.495	0.498	2.08	.108
Power	1	0.002	0.002	0.01	.928
Relational self-construal	1	0.867	0.867	3.62	.060
Power X relational self-construal	1	0.684	0.684	2.85	.094
Error	96	23.015	0.234		
Total	99	24.510	0.248		

*Note.*  $N = 100$ . Helping was a categorical outcome (1 = picked up one or more pencils, 0 = did not pick up any pencils).

Power: 1 = supervisor condition, 0 = coworker condition.

Relational self-construal: 1 = high, 0 = low (median split).

Table 21

*Multilevel Modeling Results for Second Stage Moderated Mediation with Physical Distance (Study 2), Power (Hierarchical Status), Post Hoc Analysis*

	Psychological Closeness		Helping			
	Model 1		Model 2		Model 3	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Gender: female	1.10**	0.409	-.02	0.549	-.63	0.586
Age	.00	0.007	.00	0.009	.00	0.009
Race: Caucasian	.41**	0.128	.09	0.172	.04	0.172
Education	.17*	0.072	.08	0.093	.06	0.092
Office	.61**	0.210	-.21	0.283	-.24	0.281
Organizational tenure	.00	0.001	.00	0.001	.00	0.001
Relationship tenure	.00	0.002	.00	0.002	.00	0.002
Dyad ID	.01**	0.003	.00	0.003	.00	0.003
Power (hierarchical status)	-.33**	0.092	.19	0.120	.23	0.120
Physical distance			-.18**	0.062	-.20**	0.061
Psychological closeness			.52**	0.084	.56**	0.082
Psychological closeness X physical distance					.25**	0.087
Model deviance		251.45		268.04		260.35

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Gender: 1 = female, 0 = male. Race: 1 = Caucasian, 0 = non-Caucasian. Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Office: 1 = has private office, 0 = does not have private office.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.



Table 22

*Path Analytic Results, Study 2: Indirect and Total Effects of Power (via Psychological Closeness) on Helping at Far and Close Physical Distance, Power (Hierarchical Status), Post Hoc Analysis*

	Pmx	Pym	Direct Effect (Pyx)	Indirect Effect (PymPmx)	Total Effect (Pyx+PymPmx)
Simple paths for far physical distance (+1 SD)	-.33*	<b>.81**</b>	.23*	<b>-.27*</b>	<b>-.04</b>
Simple paths for close physical distance (-1 SD)	-.33*	<b>.32*</b>	.23*	<b>-.10<sup>†</sup></b>	<b>.13</b>

*Note.*  $N = 146$ . <sup>†</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ . Pmx = path from power to psychological closeness; Pym = path from psychological closeness to helping; Pyx = path from power to helping. Significance tests for the indirect, total, and differences in these effects were based on bias-corrected confidence intervals derived from 1,000 bootstrap estimates.

Coefficients in bold are significantly different across physical distance at  $p < .05$ .

Table 23

*Multilevel Modeling Results for Second Stage Moderated Mediation with Relational Self-Construal (Study 2), Power (Hierarchical Status), Post Hoc Analysis*

	Psychological Closeness		Helping			
	Model 1		Model 2		Model 3	
	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>	$\gamma$	<i>SE</i>
Gender: female	1.10**	0.409	.37	0.571	.42	0.585
Age	.00	0.007	-.01	0.009	.00	0.010
Race: Caucasian	.41**	0.128	.17	0.182	.17	0.182
Education	.17*	0.072	.08	0.100	.08	0.100
Office	.61**	0.210	-.10	0.297	-.10	0.297
Organizational tenure	.00	0.001	.00	0.001	.00	0.001
Relationship tenure	.00	0.002	.00	0.002	.00	0.002
Dyad ID	.01**	0.003	.00	0.004	.00	0.004
Power (hierarchical status)	-.33**	0.092	.15	0.126	.14	0.127
Relational self-construal			-.01	0.072	-.02	0.074
Psychological closeness			.52**	0.086	.52**	0.086
Psychological closeness X relational self-construal					-.04	0.087
Model deviance		251.45		275.82		275.66

*Note:*  $N = 146$ . \*  $p < .05$ , \*\*  $p < .01$  (two-tailed test). Values are unstandardized coefficients. Model deviance ( $-2 \times \log$ -likelihood of the full maximum-likelihood estimate) is an indicator of model fit; the smaller the deviance, the better the model fit.

Gender: 1 = female, 0 = male. Race: 1 = Caucasian, 0 = non-Caucasian Education: 1 = high school, 2 = two-year degree or some college, 3 = bachelor's degree, 4 = master's degree or other professional degree, 5 = doctoral degree.

Office: 1 = has private office, 0 = does not have private office.

Power (hierarchical status): 1 = child care worker, 2 = teaching assistant, 3 = teacher, 4 = lead teacher, 5 = assistant director, 6 = director.

Figure 1  
*Research Model*

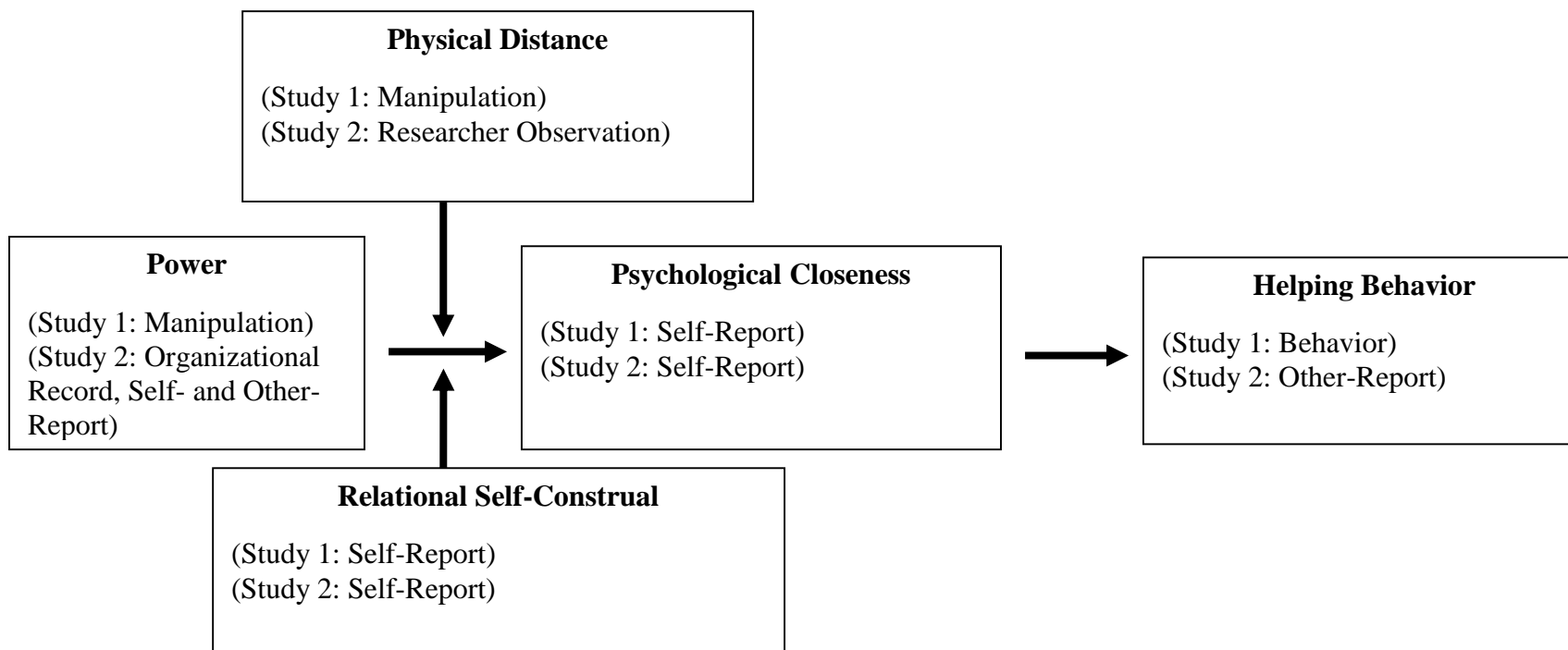


Figure 2

*Study 1 and 2 Measures of Psychological Distance (Inclusion of Other in the Self; Aron, Aron, & Smollan, 1992)*

Please circle the picture below which best describes your relationship with the partner

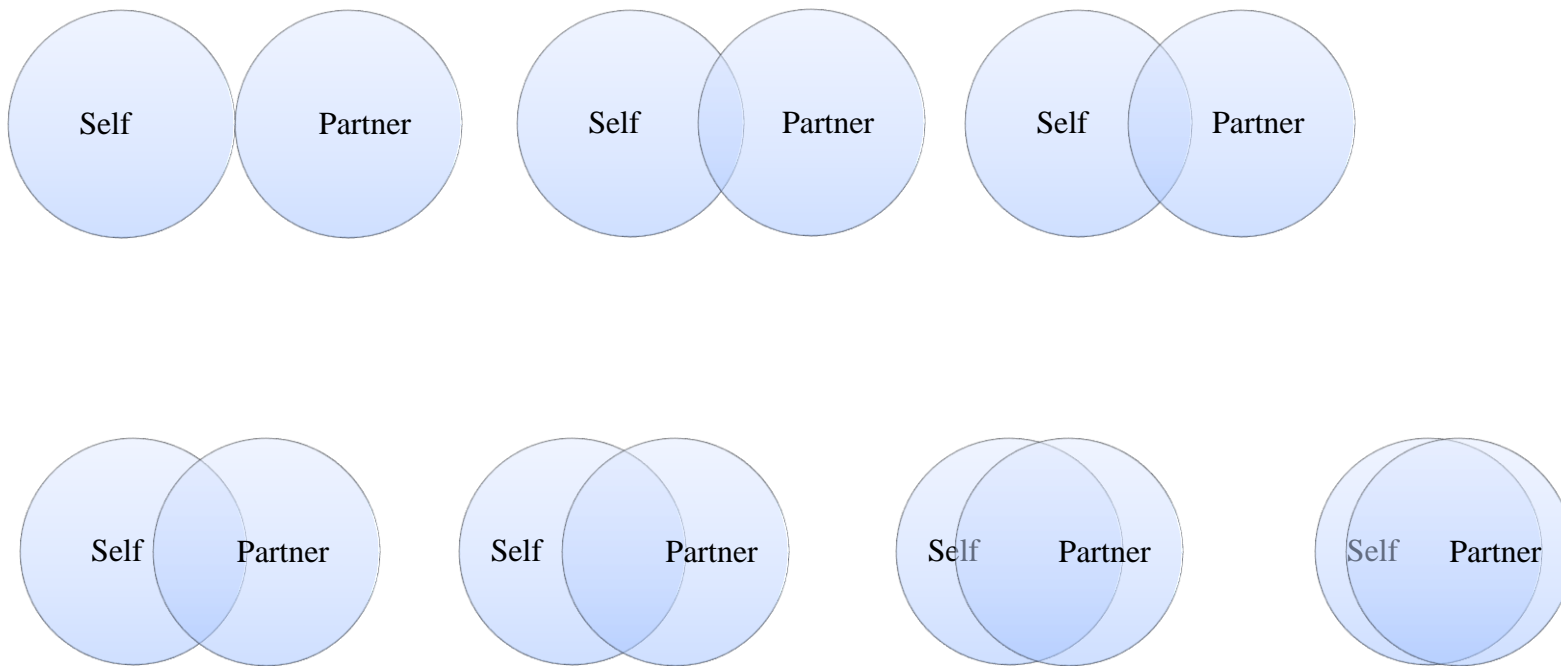
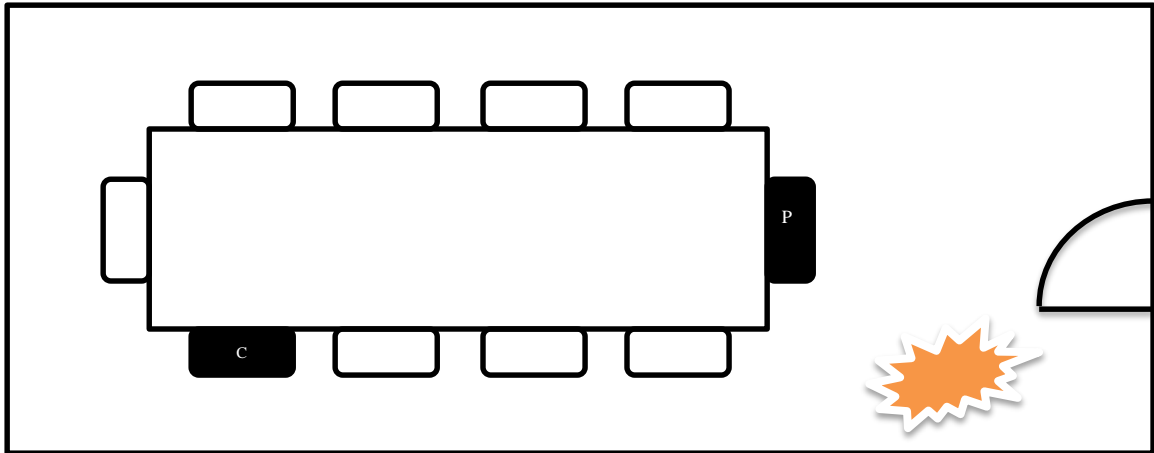
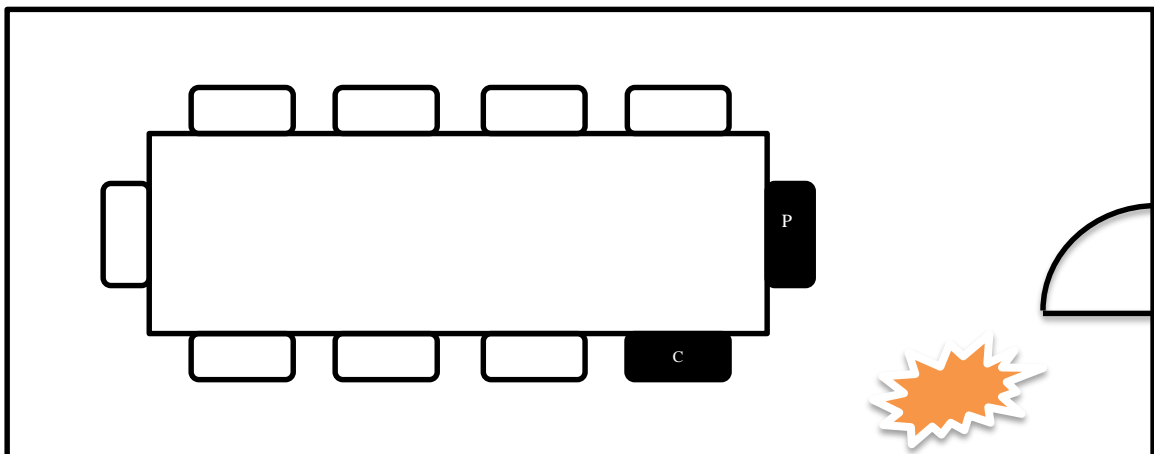


Figure 3  
*Physical Distance Manipulation for Study 1*

**a. High physical distance**



**b. Low physical distance**



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## **Appendix A: Experimental Protocol (Study 1)**

### **Step 1: Pre-lab online survey to measure relational self-construal**

Subjects will complete an online survey regarding self-construal (Appendix B) when they schedule their time to arrive for the lab study.

### **Step 2: Random assignment**

Prior to greeting the participant, I will assign one of the four experimental conditions to the participant.

### **Step 3: Greeting**

The researcher will meet the participant who is at the behavioral lab waiting area.

### **Step 4: Consent form**

The researcher will lead the participant to a room in the behavioral lab where there will be a desk and two chairs. The researcher will tell the participant that he or she needs to fill out the consent form in order to participate in the study. The researcher will leave the room for 5 minutes. After 5 minutes, the researcher will enter the room and take the consent form.

### **Step 5: Introduction of the study**

In the same room, the researcher will tell the participant that this study examines cognitive accuracy in a series of tasks of memory recall and pattern recognition, the second task requiring two people.

### **Step 6: Background survey and power manipulation**

The researcher will then ask the participant to complete a questionnaire that contains (1) the background survey (page 1) and (2) the first part of the power manipulation which was an experiential recall (page 2), and (3) the second part of the power manipulation which was reading role instructions (page 3; Appendix C and D). After the participant completes the demographic information (page 1), he/she will proceed to the experiential recall (page 2). The experiential recall will be as such:

#### **a. Power condition**

“Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power—what happened, how you felt, etc.”

#### **b. Control condition**

“Please recall your last visit to a grocery store. Please describe this situation—what happened, how you felt, etc.”

For both conditions, participants will have a sheet of paper with 19 lines to complete this recall task. Upon completion of this task, the participant will read the third page, which introduces the role instructions. The instructions are as such:

**a. Power condition**

“The next task is a grading and data input task that gauges the speed and accuracy of pattern matching. In this grading and data input task, you will be the *supervisor*. Please return these forms to the researcher. The researcher will provide further instructions regarding the materials you need to distribute to your subordinate, who is waiting in the other room.”

**b. Control condition**

“The next task is a grading and data input task that gauges the speed and accuracy of pattern matching. You will be working with another person, who is waiting in the other room. Please return these forms to the researcher. The researcher will provide further instructions regarding the next task and take you to the other room.”

**Step 7: Taking participant to the grading and data input area**

**a. Power condition**

After receiving the participant’s forms, the researcher will escort the participant to the entrance of a separate room in the lab. Next to the door will be two boxes, one labeled “supervisor” and another labeled “subordinate”; each of these boxes will contain folders with the grading material. The “supervisor” box and folder will be red; the “subordinate” box and folder will be blue. The participant will be instructed that as the supervisor, he/she needs to pick up one folder from each box and keep the supervisor folder but give the subordinate folder to the other participant (i.e., confederate).

The researcher will give the following instruction:

“As a supervisor, please pick up one folder from the ‘supervisor’ box and keep it for your own use and pick up another folder from the ‘subordinate’ box to give to the other participant waiting in the room. Once entering the room, hand the ‘subordinate’ folder to the other participant and sit where the box of pencils is placed on the table.”

**b. Control condition**

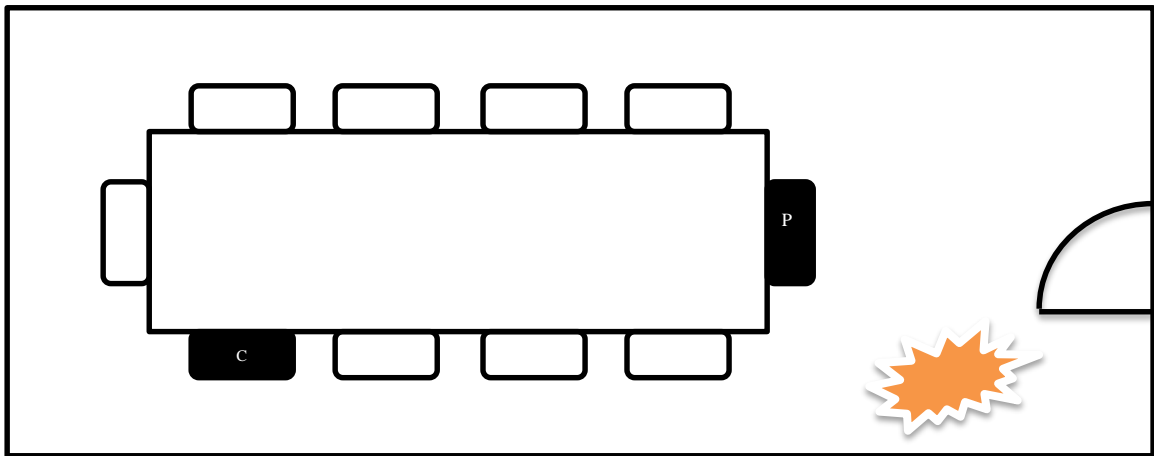
After receiving the participant’s forms, the researcher will escort the participant to the entrance of a separate room in the lab. Next to the door will be two boxes, both labeled “participant.” Both of these boxes will contain folders with the grading material. Both of these boxes and folder will be green. The participant will be instructed to pick up one folder from either one of the boxes. The confederate will already have a green folder.

The researcher will give the following instruction:  
“Please pick up one folder from either one of the ‘participant’ boxes and keep it for your own use. Once entering the room, sit where the box of pencils is placed on the table.”

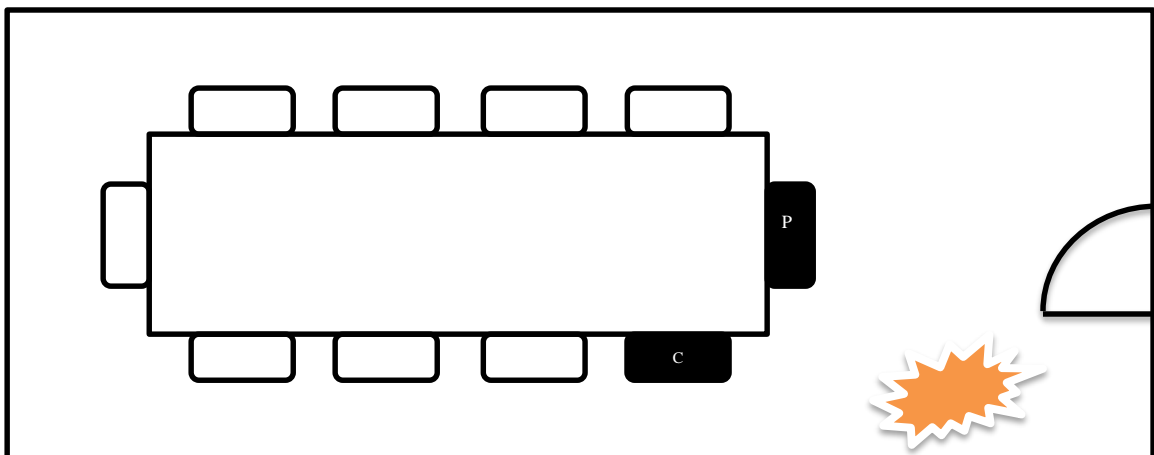
**Step 8: Physical distance manipulation**

Once entering the room, the participant will sit at the location where the box of pencils is placed. “P” is where the participant sits; “C” is where the confederate sits.

**c. High physical distance**



**d. Low physical distance**



**Step 9: Participant opens up the packet that contains psychological distance**

The participant will open his/her large manila envelope to discover (1) a number of papers stapled together, (2) an answer key, and (3) a printed out spreadsheet with names of hypothetical students. The first page of the stapled papers will contain instructions on the grading and data input task. This page will note that both the participant and the other



participant will be grading two different exams from different classes (see Appendix E and F). The second page of the stapled papers will contain the Inclusion of Other in the Self scale (Figure 2; Aron, Aron, & Smollan, 1992) to measure psychological distance. The third page and onward will contain the exams of students that were not graded. The participant will work on this grading and input task for 5 minutes.

**Step 10: Staged accident and measurement of helping**

After 5 minutes, the confederate will check his/her cell phone and leave with the packet that he/she was working on along with a folder and a box of pencils that he/she **will drop next to the chair where the participant is sitting (5-7 feet away; noted as flash sign in room diagram above; also noted in Figure 3)**. When the confederate gathers the pencils, he/she will re-insert them into the box from which they came; however, the participant will hand the confederate the pencils he/she gathered, and the confederate will slip them into the folder he/she was carrying. The number of pencils the participant picks up and hands the confederate will be helping behavior.

**Step 10: Manipulation check**

The researcher will come in 2 minutes after the confederate leaves. The researcher will say to the participant the following: “That’s all the time we have today, so let’s stop where you are and have you complete the last task.” The experimenter will receive the folder from the participant and will determine whether or not the participant chose the right color folder based on their role assignment as the first manipulation check. The experimenter will then give the participant the second manipulation check (Appendix G) to complete.

**Step 11: Debrief**

Upon completion of the manipulation check, the experimenter will debrief the participant in a separate room, provide a debriefing statement (Appendix H), and provide compensation.

## Appendix B: Pre-Lab Online Questionnaire (Study 1)

Please indicate your agreement with the following statements about you, using the following scale:

- |                                |                       |
|--------------------------------|-----------------------|
| 7 = Strongly Agree             | 3 = Somewhat Disagree |
| 6 = Agree                      | 2 = Disagree          |
| 5 = Somewhat Agree             | 1 = Strongly Disagree |
| 4 = Neither Agree Nor Disagree |                       |

1. My close relationships are an important reflection of who I am. ① ② ③ ④ ⑤ ⑥ ⑦
2. When I feel very close to someone, it often feels to me that person is an important part of who I am. ① ② ③ ④ ⑤ ⑥ ⑦
3. I usually feel a strong sense of pride when someone close to me has an important accomplishment. ① ② ③ ④ ⑤ ⑥ ⑦
4. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are. ① ② ③ ④ ⑤ ⑥ ⑦
5. When I think of myself, I often think of my close friends or family also. ① ② ③ ④ ⑤ ⑥ ⑦
6. If a person hurts someone close to me, I feel personally hurt as well. ① ② ③ ④ ⑤ ⑥ ⑦
7. In general, my close relationships are an important part of my self-image. ① ② ③ ④ ⑤ ⑥ ⑦
8. Overall, my close relationships have very little to do with how I feel about myself. ① ② ③ ④ ⑤ ⑥ ⑦

9. My close relationships are unimportant to my sense of what kind of person I am. ① ② ③ ④ ⑤ ⑥ ⑦

10. My sense of pride comes from knowing who I have as close friends. ① ② ③ ④ ⑤ ⑥ ⑦

11. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person. ① ② ③ ④ ⑤ ⑥ ⑦

**Appendix C: Task Set #1 (Supervisor Condition; Study 1)**

**SECTION I.** Please complete the following information.

Gender:     \_\_\_ Male     \_\_\_ Female

Age (Years): \_\_\_\_\_

Ethnicity (check as many as it applies to you):

- \_\_\_ Asian or Pacific Islander
- \_\_\_ African or African-American (not of Hispanic origin)
- \_\_\_ Hispanic
- \_\_\_ Native American or Alaskan Native
- \_\_\_ Caucasian (not of Hispanic origin)

Education level of education:

- \_\_\_ High School
- \_\_\_ Two-Year Degree or Some College Courses
- \_\_\_ Bachelor's Degree
- \_\_\_ Master's Degree or Other Professional Degree
- \_\_\_ Doctoral Degree

Do you currently have either a part-time or a full-time job?     \_\_\_ Yes     \_\_\_  
No

**NOTE:** If you answered "Yes" to the previous question, please answer the questions below. If you answered "No," please move on to the next page.

What is your current job title?

Job title: \_\_\_\_\_

How many hours do you work per week?     \_\_\_\_\_ Hours/week

How long have you been employed at your current workplace?

\_\_\_\_\_ Years     \_\_\_\_\_ Months



**SECTION III. Task Instruction.** The next task is a grading and data input task that gauges the speed and accuracy of pattern matching. In this grading and data input task, you will be the *supervisor*. The researcher will provide further instructions regarding the materials you need to distribute to your subordinate, who is waiting in the other room.

**AFTER READING THE TASK INSTRUCTION, PLEASE RETURN THESE FORMS TO THE RESEARCHER.**

**Appendix D: Task Set #1 (Control Condition; Study 1)**

**SECTION I.** Please complete the following information.

Gender:     \_\_\_ Male     \_\_\_ Female

Age (Years): \_\_\_\_\_

Ethnicity (check as many as it applies to you):

- \_\_\_ Asian or Pacific Islander
- \_\_\_ African or African-American (not of Hispanic origin)
- \_\_\_ Hispanic
- \_\_\_ Native American or Alaskan Native
- \_\_\_ Caucasian (not of Hispanic origin)

Education level of education:

- \_\_\_ High School
- \_\_\_ Two-Year Degree or Some College Courses
- \_\_\_ Bachelor's Degree
- \_\_\_ Master's Degree or Other Professional Degree
- \_\_\_ Doctoral Degree

Do you currently have either a part-time or a full-time job?     \_\_\_ Yes     \_\_\_  
No

**NOTE:** If you answered "Yes" to the previous question, please answer the questions below. If you answered "No," please move on to the next page.

What is your current job title?

Job title: \_\_\_\_\_

How many hours do you work per week?     \_\_\_\_\_ Hours/week

How long have you been employed at your current workplace?

\_\_\_\_\_ Years     \_\_\_\_\_ Months





**SECTION III. Task Instruction.** The next task is a grading and data input task that gauges the speed and accuracy of pattern matching. You will be working with another person, who is waiting in the other room. Please return these forms to the researcher. The researcher will provide further instructions regarding the next task and take you to the other room.

**AFTER READING THE TASK INSTRUCTION, PLEASE RETURN THESE FORMS TO THE RESEARCHER.**

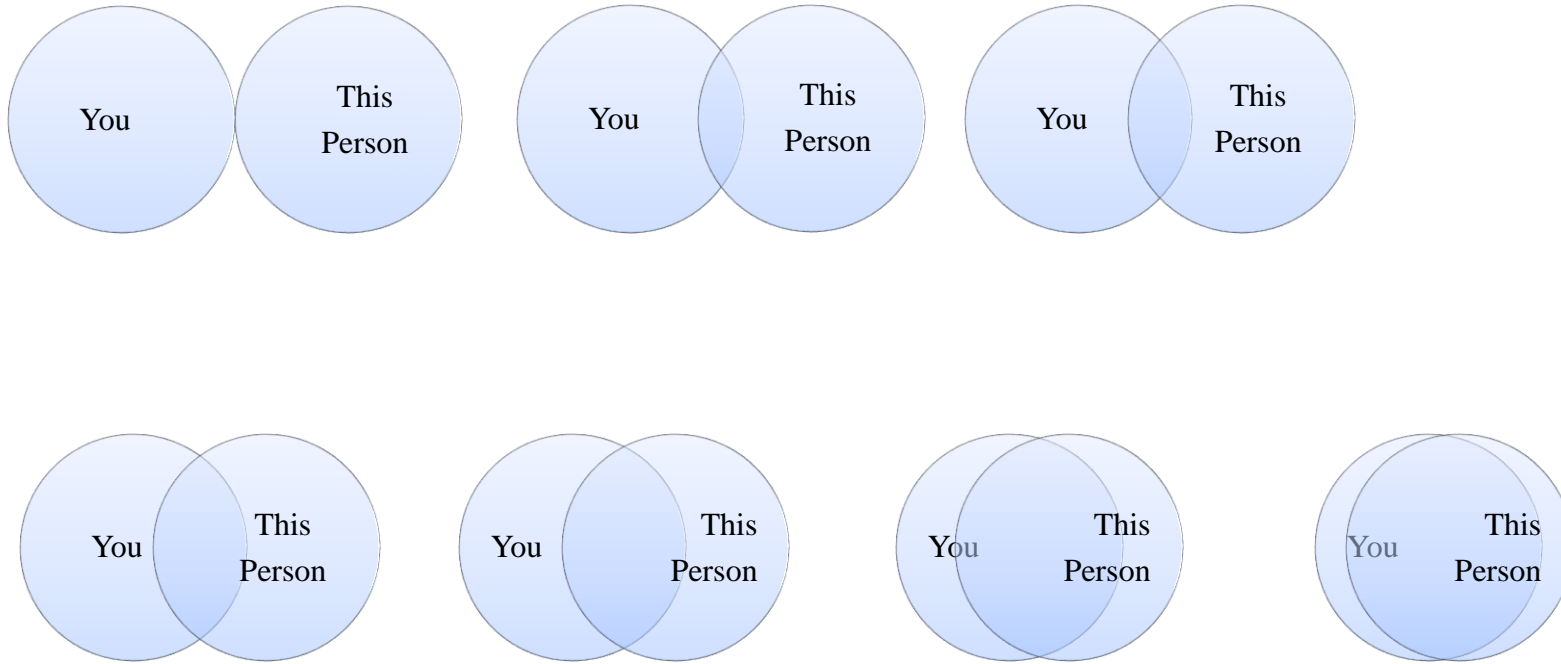
## Appendix E: Task Set #2 (Supervisor Condition; Study 1)

**NOTE:** During this task, you may leave the room to take a break or use the restroom at any time. If doing so, please place all your material back in the packet and bring both the (1) packet and the (2) pencil box to the researcher who is outside of the room. This is to maintain confidentiality of your responses. After you return to the lab, please receive from the researcher the packet you were working on and resume your work in the room.

**Instruction.** You will now be grading exams for a class. The purposes of this grading task is to exam the grading accuracy across two classes in different academic disciplines and determine whether or not one type of class content is more cognitively taxing than the other in grading. For this reason, *your subordinate* is also grading exams, but for a different class. Prior to starting the grading task, you will be asked to complete a short questionnaire.

**PLEASE PROCEED TO THE NEXT PAGE.**

**Instruction.** Please circle the picture below which best describes your relationship with the person sitting at the table.



**ONCE FINISHED, PLEASE PROCEED TO THE NEXT PAGE.**

**Instruction.** This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Using the following scale to record your answers:

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

_____ interested	_____ irritable
_____ distressed	_____ alert
_____ excited	_____ ashamed
_____ upset	_____ inspired
_____ strong	_____ nervous
_____ guilty	_____ determined
_____ scared	_____ attentive
_____ hostile	_____ jittery
_____ enthusiastic	_____ active
_____ proud	_____ afraid

**Instruction.** The spreadsheet below has names of 20 students from a class offered at the University of Minnesota. They have just finished taking an exam and you are to grade their exams based on the answer key provided on the next page. Please fill in the grades of the following students as you grade their exams (answer key is on the next page).

**Please do not mark on the exams.**

<b>Last Name</b>	<b>First Name</b>	<b>Number or Correct Answers</b>
Berg	Vanna	
Chien	Yi Min	
Danielsson	Joanna	
Faber	Doreen	
Fleetwood-Smith	Jenna	
Garza	Leandra	
Grunwald	Kristin	
Harry	Catherine	
Hayward	Philip	
Kaland	Kathy	
MacCormick	Ashley	
Mandal	Sylva	
Pai	Chung	
Reddy	James	
Rivera	Stanley	
Sabbagh	Bushra	
Sarraf	Sahar	
Sundberg	Richard	
Thuy	Vo	
Williams	Kerri	

### Answer Key

1. D	6. C	11. C	16. E
2. A	7. B	12. E	17. A, C, D
3. C	8. A, B	13. A	18. G
4. D	9. A	14. B, C, D	19. D
5. A	10. B, D	15. D	20. C

Name: \_\_\_\_\_

### Midterm Exam

1. Which of the following is NOT a major dependent variable (outcome that we seek to change in an individual) in studying organizational behavior?
  - a. Productivity
  - b. Organizational citizenship behavior
  - c. Job satisfaction
  - d. Asset Depreciation
  - e. Deviant work behavior
  
2. Which of the following theories is NOT commonly used in explaining how diversity manifests in organizations?
  - a. Self-determination theory
  - b. Social identity theory
  - c. Information/decision-making perspective
  - d. Self-categorization theory
  
3. Following describes the allocation of activities of which one of the following managers?

44%	Communication
26%	Human resource management
19%	Traditional management
11%	Networking

  - a. Average managers
  - b. Successful managers (those who were promoted faster)
  - c. Effective managers (those who did their job well)
  - d. Extraverted managers
  
4. Which of the following is positively associated with better physical health, midcareer income, and job prestige?
  - a. Age
  - b. Gender
  - c. Religion
  - d. General mental ability
  - e. Emotional intelligence

5. Which of these statements are true of biographical traits?
  - a. Older workers are less likely to quit their job.
  - b. Women are less likely to be absent at work.
  - c. There are significant differences between African-Americans and Whites in observed absence rates and accident rates.
  - d. Workers who have a longer tenure (higher seniority) are less satisfied with their job.
  
6. What does the following definition describe: The degree to which employees believe an organization values their contribution and cares about their well-being.
  - a. Job satisfaction
  - b. Organizational commitment
  - c. Perceived organizational support
  - d. Psychological empowerment
  
7. Organizational commitment has three dimensions. Which of the following commitments is described by this definition: An employee is committed to an organization because of the perceived economic value of remaining with the organization.
  - a. Affective commitment
  - b. Continuance commitment
  - c. Normative commitment
  - d. Occupational commitment
  
8. Circle all the TRUE statements (need to get all of them correct).
  - a. Positive mood improves task performance.
  - b. Displaying positive emotions leads to the customers experiencing more positive affect.
  - c. Surface acting leads to more positive mood and higher job satisfaction for the employee.
  - d. When nothing in particular is going on, most individuals experience a neutral mood.



9. Which of following statements about sources of emotion and mood is FALSE?
- a. Younger people experience longer positive moods and shorter negative moods than older people.
  - b. Weather affects people's moods and emotions.
  - c. Women are more emotionally expressive than men.
  - d. Exercise improves mood for depressed people.
  - e. Poor sleep quality increases negative affect.
  - f. All of the above.

10. Circle all the TRUE statements (need to get all of them correct).

- a. Individuals high in emotional stability (or low in neuroticism) do more negative thinking and experience more negative emotions.
- b. Individuals high in extraversion tend have greater social dominance.
- c. Individuals high in emotional stability are better organized and are better at planning.
- d. Individuals high in agreeableness are more compliant and conforming.

11. Which of following statements about individuals with high self-monitoring is FALSE?

- a. They pay closer attention to the behavior of others.
- b. They are sensitive to external cues and can behave differently in different situations.
- c. They are more committed to their organization.
- d. They receive better performance ratings.
- e. They are more mobile in their careers.
- f. None of the above.

12. Which of the following Big Five personality traits does the statement below describe?

Individuals who are high on this trait are "dependable, reliable, careful, thorough, able to plan, organized, hardworking, persistent and achievement-oriented and tend to have higher job performance in most if not all occupations."

- a. Emotional stability
- b. Extraversion
- c. Openness to experience
- d. Agreeableness
- e. Conscientiousness

13. Which of the following statements is TRUE regarding Geert Hofstede's study that assessed value dimensions of national culture across 40 countries?
- The United States is the most individualistic nation of all countries studied.
  - Chinese scored the highest in power distance.
  - South American countries tend to be higher than other countries on long-term orientation.
  - The United States scores relatively low on masculinity compared to Northern European countries (i.e., Denmark, Finland, Norway, and Sweden).
  - None of the above.
14. Circle all the TRUE statements regarding common biases and errors in decision making (need to get all of them correct).
- Individuals whose intellectual and interpersonal abilities are strongest are most likely to overestimate their performance and ability.
  - Individuals give a disproportionate amount of emphasis to the first information they receive.
  - Individuals tend to seek out information that affirms their past choices and discount information that contradicts them.
  - Individuals tend to base judgments on information readily available.
15. Which of the following is TRUE of how mental shortcuts are applied in organizations?
- If a manager expects big things from her people, they're likely to let her down.
  - In interviews, the interviewer's perceptual judgments are often highly accurate.
  - Performance evaluations are immune to biases.
  - In interviews, the interviewer forms impressions of the candidate within a tenth of a second.
  - All of the above.
16. Which of the following statements is TRUE regarding methods to reduce biases and errors in decision-making?
- Focus on intuition.
  - Look for information that confirms your beliefs.
  - Create meaning out of random events.
  - Decrease your options.
  - None of the above.

17. Vroom's expectancy theory (1965) is an important theory in motivation. Circle all the relationships that are critical to how this theory predicts an individual's motivation.
- a. Effort-performance relationship.
  - b. Performance-organization relationship.
  - c. Rewards-personal goal relationship.
  - d. Performance-reward relationship.
  - e. Effort-task relationship.
18. Which of the following statements is NOT a typical response of employees who perceive inequity (based on the equity theory)?
- a. Change their input.
  - b. Change their outcomes.
  - c. Distort perceptions of self.
  - d. Distort perceptions of others.
  - e. Choose a different referent.
  - f. Leave the field.
  - g. All of the above.
19. Which of the following FALSE regarding advantages and disadvantages of job rotation?
- a. It reduces boredom.
  - b. It helps employees better understand how their work contributes to the organization.
  - c. It gives management more flexibility in work scheduling.
  - d. It gives the company an immediate increase in productivity.
  - e. It allows management to fill vacancies.
20. Which of the following is NOT a way to enrich an employee's job?
- a. Combine tasks.
  - b. Form natural work units.
  - c. Hire more personnel.
  - d. Establish client relationships.
  - e. Expand job vertically.
  - f. Open feedback channels.

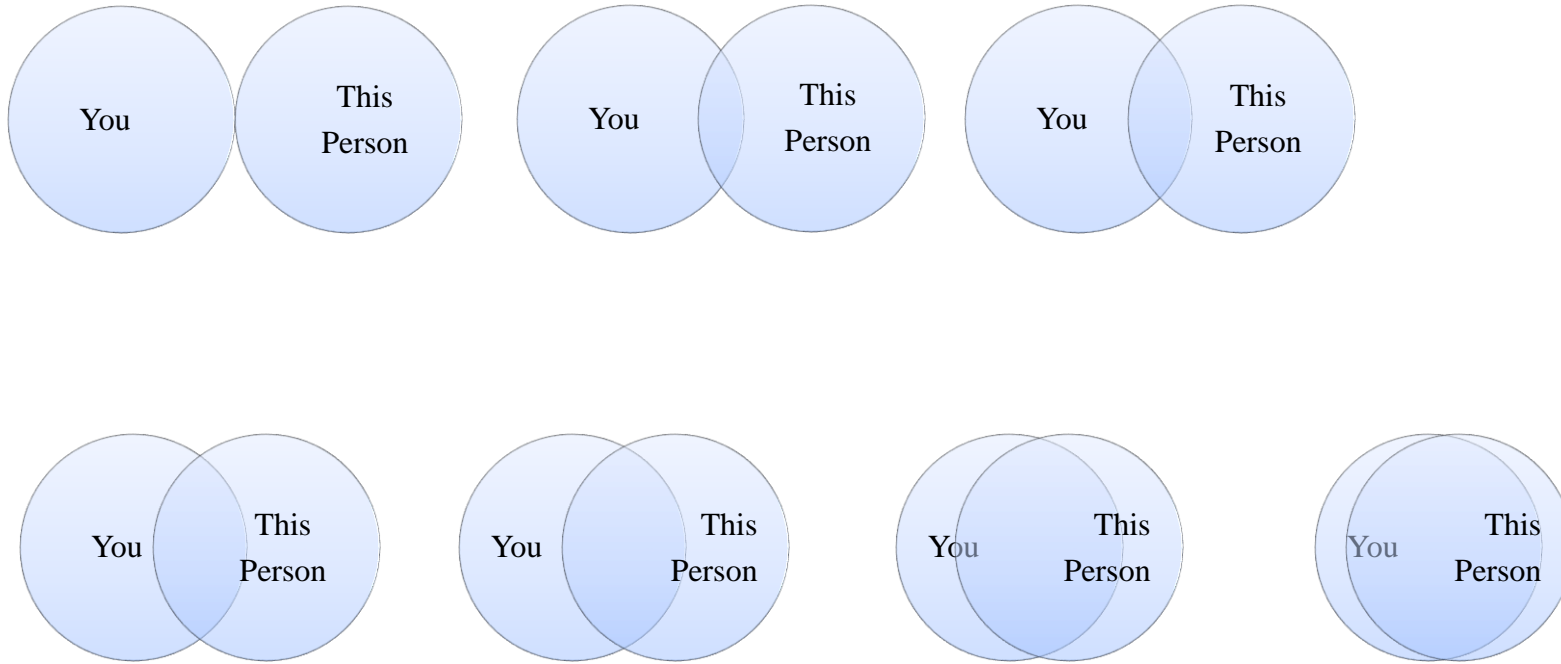
## Appendix F: Task Set #2 (Control Condition; Study 1)

**NOTE:** During this task, you may leave the room to take a break or use the restroom at any time. If doing so, please place all your material back in the packet and bring both the (1) packet and the (2) pencil box to the researcher who is outside of the room. This is to maintain confidentiality of your responses. After you return to the lab, please receive from the researcher the packet you were working on and resume your work in the room.

**Instruction.** You will now be grading exams for a class. The purposes of this grading task is to exam the grading accuracy across two classes in different academic disciplines and determine whether or not one type of class content is more cognitively taxing than the other in grading. For this reason, the other participant is also grading exams, but for a different class. Prior to starting the grading task, you will be asked to complete a short questionnaire.

**PLEASE PROCEED TO THE NEXT PAGE.**

**Instruction.** Please circle the picture below which best describes your relationship with the person sitting at the table.



**ONCE FINISHED, PLEASE PROCEED TO THE NEXT PAGE.**

**Instruction.** This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Using the following scale to record your answers:

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

_____ interested	_____ irritable
_____ distressed	_____ alert
_____ excited	_____ ashamed
_____ upset	_____ inspired
_____ strong	_____ nervous
_____ guilty	_____ determined
_____ scared	_____ attentive
_____ hostile	_____ jittery
_____ enthusiastic	_____ active
_____ proud	_____ afraid

**Instruction.** The spreadsheet below has names of 20 students from a class offered at the University of Minnesota. They have just finished taking an exam and you are to grade their exams based on the answer key provided on the next page. Please fill in the grades of the following students as you grade their exams (answer key is on the next page).

**Please do not mark on the exams.**

<b>Last Name</b>	<b>First Name</b>	<b>Number or Correct Answers</b>
Berg	Vanna	
Chien	Yi Min	
Danielsson	Joanna	
Faber	Doreen	
Fleetwood-Smith	Jenna	
Garza	Leandra	
Grunwald	Kristin	
Harry	Catherine	
Hayward	Philip	
Kaland	Kathy	
MacCormick	Ashley	
Mandal	Sylva	
Pai	Chung	
Reddy	James	
Rivera	Stanley	
Sabbagh	Bushra	
Sarraf	Sahar	
Sundberg	Richard	
Thuy	Vo	
Williams	Kerri	

### Answer Key

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2. A	7. B	12. E	17. A, C, D
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Name: \_\_\_\_\_

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- If a manager expects big things from her people, they're likely to let her down.
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- d. Distort perceptions of others.
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- f. Leave the field.
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19. Which of the following FALSE regarding advantages and disadvantages of job rotation?

- f. It reduces boredom.
- g. It helps employees better understand how their work contributes to the organization.
- h. It gives management more flexibility in work scheduling.
- i. It gives the company an immediate increase in productivity.
- j. It allows management to fill vacancies.

20. Which of the following is NOT a way to enrich an employee's job?

- a. Combine tasks.
- b. Form natural work units.
- c. Hire more personnel.
- d. Establish client relationships.
- e. Expand job vertically.
- f. Open feedback channels.

## Appendix G: Manipulation Check (Study 1)

**Instruction.** Please respond to the following questions by checking the appropriate number.

**Question 1.** Which of the following best represents your role in this study in relation to the other participant?

- |            |                   |             |
|------------|-------------------|-------------|
| ①          | ②                 | ③           |
| Supervisor | Coworker          | Subordinate |
|            | or Co-Participant |             |

**Question 2.** Based on your experience in everyday life, how much power do you think supervisors have over other their subordinates?

- |        |          |      |       |
|--------|----------|------|-------|
| ①      | ②        | ③    | ④     |
| None   | A little | Some | A lot |
| At all |          |      |       |

**Question 3.** Were there any activities related to the task instructions or the tasks themselves that made you suspicious of the purpose of the study? If so, please describe below what they were:

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---

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## Appendix H: Debrief Statement (Study 1)

The purpose of this study was to gauge whether having power vis-à-vis a partner impacts our perception of distance with that partner, leading to helping the partner less in time of need. This study also examined whether the physical distance that was set between you and the partner—far or close—affected how your power changed your perception of distance with the partner. Furthermore, this study also tested whether your self-construal (i.e., how you define yourself in relation to others) affected how power changed your perception of distance with the partner.

Given different power and physical distance, we were interested in how participants would react to a situation where another participant needed help. Thus, there were several aspects of the study that was undisclosed to you prior to or during the study. First, your partner in this study who was sitting in the same lab room as you was a confederate, meaning she was part of our research team and had a protocol as to how she conducted herself. The protocol involved creating a situation where participants could help another person in need. Thus, the confederate spilled the pencil in the lab room on purpose to determine the extent to which you would help her. Second, the survey item in the grading packet that asked you to mark the picture which best described how you viewed the confederate was the measure of psychological distance—a key variable in our study. Third, you were assigned either the power condition (being told to distribute the packet to the subordinate) or the control condition (being told to pick up the packet labeled “participant”), without your knowledge. Fourth, you were assigned either the low physical distance condition (sitting close to the confederate at the table) or high physical distance condition (sitting far from the confederate at the table), without your knowledge. Lastly, the names of the 20 students were fake and were randomly generated by [fakenamegenerator.com](http://fakenamegenerator.com)

Having considered these facts, would you still consent to us using the data gathered under the aforementioned deceptive conditions? Your response will not affect your compensation for participation. Please respond below:

\_\_\_\_\_ Yes, I consent to the researchers using the data.

\_\_\_\_\_ No, I do not consent to the researchers using the data.

**Appendix I: Study 2 Data Collection Schedule**

<b>Time 1</b>		<b>Time 2 (1 month after Time 1)</b>		<b>Time 3 (1 week after Time 2)</b>	
Variable	Source	Variable	Source	Variable	Source
Relational self-construal	Self-report	Helping behavior	Other-report	Physical distance	Onsite measurement
Psychological closeness	Self-report				
Control variables	Self-report				
Power	Organizational record				



**Appendix J: Time 1 Survey (Study 2)**

**Demographic Controls:**

**SECTION I.** Please complete the following information.

Name: \_\_\_\_\_

Gender:    \_\_\_ Male    \_\_\_ Female

Age (Years): \_\_\_\_\_

Ethnicity (check as many as it applies to you):

- \_\_\_ Asian or Pacific Islander
- \_\_\_ African or African-American (not of Hispanic origin)
- \_\_\_ Hispanic
- \_\_\_ Native American or Alaskan Native
- \_\_\_ Caucasian (not of Hispanic origin)

Highest level of education:

- \_\_\_ High School
- \_\_\_ Two-Year Degree or Some College Courses
- \_\_\_ Bachelor's Degree
- \_\_\_ Master's Degree or Other Professional Degree
- \_\_\_ Doctoral Degree

How long have you been employed at your current workplace?

\_\_\_\_\_ Years \_\_\_\_\_ Months

Who is your current supervisor that you report to on a daily basis? \_\_\_\_\_

How long have you worked directly under your current supervisor?

\_\_\_\_\_ Years \_\_\_\_\_ Months

How long have you worked with **[PERSON #1]**?

\_\_\_\_\_ Years \_\_\_\_\_ Months

How long have you worked with **[PERSON #2]**?

\_\_\_\_\_ Years \_\_\_\_\_ Months

**Other-Report Power (Bases of Social Power Scale; Hinkin & Schriesheim, 1989):**

**SECTION II.** Below is a list of statements which may be used in describing behaviors that employees in work organizations can direct toward other employees. First carefully read each descriptive statement, thinking in terms of [PERSON #1 or #2]. Then decide to what extent you agree that [PERSON #1 or #2] could do this to you. Mark the number which most closely represents how you feel. Use the following numbers for your answers and note that **your answers will remain strictly confidential:**

- 5 = Strongly Agree
- 4 = Agree
- 3 = Neither Agree Nor Disagree
- 2 = Disagree
- 1 = Strongly Disagree

**[PERSON #1 or #2] can . . .**

1. Increase my pay level. ① ② ③ ④ ⑤
2. Make me feel valued. ① ② ③ ④ ⑤
3. Give me undesirable job assignments. ① ② ③ ④ ⑤
4. Make me feel like he/she approves of me. ① ② ③ ④ ⑤
5. Make me feel that I have commitments to meet. ① ② ③ ④ ⑤
6. Make me feel personally accepted. ① ② ③ ④ ⑤
7. Make me feel important. ① ② ③ ④ ⑤
8. Give me good technical suggestions. ① ② ③ ④ ⑤
9. Make my work difficult for me. ① ② ③ ④ ⑤
10. Share with me his/her considerable experience and/or training. ① ② ③ ④ ⑤
11. Make things unpleasant here. ① ② ③ ④ ⑤
12. Make being at work distasteful. ① ② ③ ④ ⑤
13. Influence my getting a pay raise. ① ② ③ ④ ⑤
14. Make me feel like I should satisfy my job requirements. ① ② ③ ④ ⑤

15. Provide me with sound job-related advice. ① ② ③ ④ ⑤
16. Provide me with special benefits. ① ② ③ ④ ⑤
17. Influence my getting a promotion. ① ② ③ ④ ⑤
18. Give me the feeling I have responsibilities to fulfill. ① ② ③ ④ ⑤
19. Provide me with needed technical knowledge. ① ② ③ ④ ⑤
20. Make me recognize that I have tasks to accomplish. ① ② ③ ④ ⑤

**Self-Report Power (Personal Sense of Power Scale; Anderson, John, & Keltner, 2012):**

**SECTION III.** Below is a list of statement that describe possible roles and responsibilities of employees. Please indicate the extent to which each of these items applies to you in relation to [PERSON #1 or #2]. **Your answers will remain strictly confidential:**

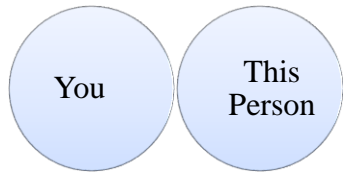
- |                                |                       |
|--------------------------------|-----------------------|
| 7 = Agree Strongly             | 3 = Disagree a Little |
| 6 = Agree                      | 2 = Disagree          |
| 5 = Agree a Little             | 1 = Disagree Strongly |
| 4 = Neither Agree Nor Disagree |                       |

**In my relationship with [PERSON #1 or #2] ...**

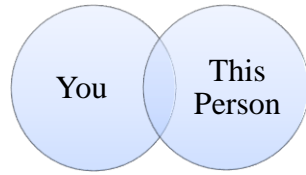
- |   |               |
|---|---------------|
| 1. I can get him/her to listen to what I say.       | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 2. My wishes do not carry much weight.              | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 3. I can get him/her to do what I want.             | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 4. Even if I voice them, my views have little sway. | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 5. I think I have a great deal of power.            | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 6. My ideas and opinions are often ignored.         | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 7. Even when I try, I am not able to get my way.    | ① ② ③ ④ ⑤ ⑥ ⑦ |
| 8. If I want to, I get to make the decisions.       | ① ② ③ ④ ⑤ ⑥ ⑦ |

**Psychological Closeness (Inclusion of Others in the Self Scale; Aron et al., 1992):**

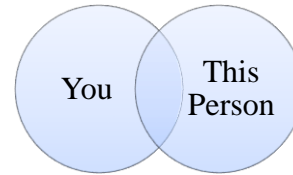
**SECTION IV.** Please circle the picture below which best describes your relationship with **[PERSON #1 or #2]:**



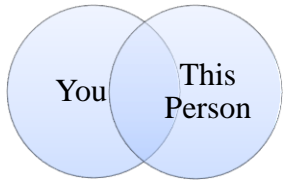
⑦



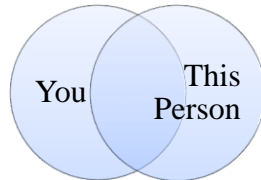
⑥



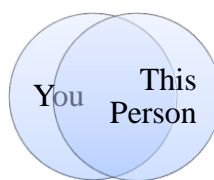
⑤



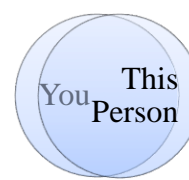
④



③



②



①

**Psychological Closeness (Communal Strength Scale; Mills, Clark, Ford, & Johnson, 2004):**

**SECTION V.** Below is a list of statements which may be used in describing your relationship with [PERSON #1 or #2]. Keeping in mind the specific person, answer the following questions Mark one answer for each question on the scale from 1 = *not at all* to 11 = *extremely* before going onto the next question. **Your answers will remain confidential.**

1. How far would you be willing to go to visit this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
2. How happy do you feel when doing something that helps this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
3. How large a benefit would you be likely to give this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
4. How large a cost would you incur to meet a need of this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
5. How readily can you put the needs of this person out of your thoughts?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
6. How high a priority for you is meeting the needs of this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
7. How reluctant would you be to sacrifice for this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
8. How much would you be willing to give up to benefit this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
9. How far would you go out of your way to do something for this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely
10. How easily could you accept not helping this person?  
Not at all (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) Extremely

**Psychological Closeness (Perceived Similarity; Schaubroeck & Lam, 2004):**

**SECTION VI.** Carefully read each descriptive statement, thinking in terms [PERSON #1]. Mark the number which most closely represents how you feel. Use the following numbers for your answers and note that **your answers will remain confidential:**

- 5 = Strongly Agree
- 4 = Agree
- 3 = Neither Agree Nor Disagree
- 2 = Disagree
- 1 = Strongly Disagree

**[PERSON #1 or #2] and I...**

- 1. Have a similar background. ① ② ③ ④ ⑤
- 2. Have similar work experiences. ① ② ③ ④ ⑤
- 3. Have similar work attitudes. ① ② ③ ④ ⑤
- 4. Have similar work performance. ① ② ③ ④ ⑤
- 5. Have a similar personality. ① ② ③ ④ ⑤
- 6. Have similar opinions on most issues. ① ② ③ ④ ⑤
- 7. In general, are similar persons. ① ② ③ ④ ⑤

**Relational Self-Construal (Relational-Interdependent Self-Construal Scale; Cross, Bacon, & Morris, 2000):**

**SECTION VII.** Please indicate your agreement with the following statements about you, using the following scale:

- |                                |                       |
|--------------------------------|-----------------------|
| 7 = Strongly Agree             | 3 = Somewhat Disagree |
| 6 = Agree                      | 2 = Disagree          |
| 5 = Somewhat Agree             | 1 = Strongly Disagree |
| 4 = Neither Agree Nor Disagree |                       |

1. My close relationships are an important reflection of who I am. ① ② ③ ④ ⑤ ⑥ ⑦
2. I usually feel a strong sense of pride when someone close to me has an important accomplishment. ① ② ③ ④ ⑤ ⑥ ⑦
3. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are. ① ② ③ ④ ⑤ ⑥ ⑦
4. When I think of myself, I often think of my close friends or family also. ① ② ③ ④ ⑤ ⑥ ⑦
5. If a person hurts someone close to me, I feel personally hurt as well. ① ② ③ ④ ⑤ ⑥ ⑦
6. In general, my close relationships are an important part of my self-image. ① ② ③ ④ ⑤ ⑥ ⑦
7. Overall, my close relationships have very little to do with how I feel about myself. ① ② ③ ④ ⑤ ⑥ ⑦
8. My close relationships are unimportant to my sense of what kind of person I am. ① ② ③ ④ ⑤ ⑥ ⑦



9. My sense of pride comes from knowing who I have as close friends. ① ② ③ ④ ⑤ ⑥ ⑦
10. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person. ① ② ③ ④ ⑤ ⑥ ⑦
11. When I feel very close to someone, it often feels to me that person is an important part of who I am. ① ② ③ ④ ⑤ ⑥ ⑦

## Appendix K: Time 2 Survey (Study 2)

### Interaction Frequency, Friendship, Auditory Copresence:

**SECTION I.** Please respond to the following questions by checking next to the appropriate number that denotes your relationship with [PERSON #1 or #2].

**Question:** On a given day, how often do you interact with [PERSON #1 or #2] during your normal work hours (including face-to-face, phone calls, and e-mail?).

- ⑦ Several times a day (4+)
- ⑥ 3-4 times per day
- ⑤ Twice a day
- ④ Once a day
- ③ 2-3 times in the last 4 weeks
- ② Once in the last 4 weeks
- ① Never in the last 4 weeks

**Question:** [PERSON #1 or #2] is someone you socialize with during your free time (e.g., lunch, happy hour, etc.).

- |          |          |           |       |          |
|----------|----------|-----------|-------|----------|
| ①        | ②        | ③         | ④     | ⑤        |
| Strongly | Disagree | Neither   | Agree | Strongly |
| Disagree |          | Agree Nor |       | Agree    |
|          |          | Disagree  |       |          |

**Question:** From where you normally work, can you hear [PERSON #1 or #2]'s voice?

- |     |    |
|-----|----|
| ①   | ②  |
| Yes | No |

**Workplace Altruism (Modified Prosocial Individual Behavior Scale; McNeely & Meglino, 1994):**

**SECTION II.** Below are statements that are representative of what a person might do for you at work. Please indicate the likelihood that [PERSON #1 or #2] would do this for you at work, using the following scale. Remember, we would like to know whether the person would be likely to engage in a behavior such as those below whether or not they have actually done the specific behavior. **Your answers will remain confidential:**

- 5 = Very likely
- 4 = Likely
- 3 = Neither likely nor unlikely
- 2 = Unlikely
- 1 = Not at all likely

**How likely WOULD [PERSON #1 or #2] be to...**

1. Send birthday greetings to me in the office. ① ② ③ ④ ⑤
2. Collect money for flowers or a gift for me for when I'm sick or for when I have a funeral for my loved one. ① ② ③ ④ ⑤
3. Bring in food or treats to share with me. ① ② ③ ④ ⑤
4. Coordinate a get-together with me. ① ② ③ ④ ⑤
5. Assist me with my personal problems. ① ② ③ ④ ⑤
6. Do a personal favor for me. ① ② ③ ④ ⑤
7. Provide me with helpful information on daily life (e.g., good restaurants, vacation planning, special deals). ① ② ③ ④ ⑤



**Appendix L: Time 3 Measure, Onsite Visit (Study 2)**

**Physical Distance (adapted from Sundstrom et al., 1980):**

<b>Onsite Researcher Observation</b>	
Is [PERSON #1] in a different room from [PERSON #2]?	Yes                  No
Does [PERSON #1] have a door on his/her room?	Yes                  No  N/A (does not have a separate room)
Number of sides of [PERSON #1]'s workspace that is enclosed by wall (glass/solid wall) or a partition (cubicle wall)	0    1    2    3    4
From where [PERSON #1] normally sits, can he/she see [PERSON #2] without standing?	Yes                  No
Approximately how many footsteps does it take to walk from [PERSON #1]'s workspace to [PERSON #2]'s workspace?	_____ footsteps
How many employees work in the same floor as [PERSON #1] (including [PERSON #1] and [PERSON #2])?	_____ employees
Does [PERSON #1] work on the same floor as [PERSON #2]?	Yes                  No
Does [PERSON #1] have a desk between him/her and a visitor in his/her office?	Yes                  No  N/A (does not have an office)
Does [PERSON #1] have a round table between him/her and a visitor in his/her office?	Yes                  No  N/A (does not have an office)
From where [PERSON #1] normally works, is he/she within 10 feet of anyone?	Yes                  No
From where [PERSON #1] normally works, is he/she within 10 feet of [PERSON #2]?	Yes                  No

## Appendix M: Moderated Mediation Equation

Please note that the term, psychological closeness instead of psychological distance is used to reflect the valence of the original measurement.

### Study 1 Equations

**Physical distance as the moderator.** The dependent variable (Y) in Equations 1 to 6 corresponds to helping behavior.

*Equation 1.*

$$Y = b_0 + b_1\text{Power} + b_2\text{Psychological Closeness} + e_Y$$

*Equation 2.*

$$\begin{aligned}\text{Psychological Closeness} = & a_0 + a_1\text{Power} + a_2\text{Physical Distance} \\ & + a_3\text{Power} \cdot \text{Physical Distance} \\ & + e_{\text{Psychological Closeness}}\end{aligned}$$

*Equation 3.* This equation is a reduced form equation from Equations 1 and 2 for the for the first stage moderated mediation model.

$$\begin{aligned}Y = & b_0 + b_1\text{Power} + b_2(a_0 + a_1\text{Power} + a_2\text{Physical Distance} + a_3\text{Power} \\ & \cdot \text{Physical Distance} + e_{\text{Psychological Closeness}}) + e_Y \\ = & b_0 + a_0b_2 + (b_1 + a_1b_2)\text{Power} + a_2b_2\text{Physical Distance} \\ & + a_3b_2\text{Power} \cdot \text{Physical Distance} + e_Y + b_2e_{\text{Psychological Closeness}}\end{aligned}$$

**Relational self-construal as the moderator.**

*Equation 4.*

$$Y = b_0 + b_1\text{Power} + b_2\text{Psychological Closeness} + e_Y$$

*Equation 5.*

$$\begin{aligned}\text{Psychological Closeness} = & a_0 + a_1\text{Power} + a_2\text{Relational Construal} \\ & + a_3\text{Power} \cdot \text{Relational Construal} \\ & + e_{\text{Psychological Closeness}}\end{aligned}$$

*Equation 6.* This equation is a reduced form equation from Equations 4 and 5 for the first stage moderated mediation model.

$$\begin{aligned}
 Y &= b_0 + b_1\text{Power} + b_2(a_0 + a_1\text{Power} + a_2\text{Relational Construal} \\
 &\quad + a_3\text{Power} \cdot \text{Relational Construal} + e_{\text{Psychological Closeness}}) + e_Y \\
 &= b_0 + a_0b_2 + (b_1 + a_1b_2)\text{Power} + a_2b_2\text{Relational Construal} \\
 &\quad + a_3b_2\text{Power} \cdot \text{Relational Construal} + e_Y + b_2e_{\text{Psychological Closeness}}
 \end{aligned}$$

## Study 2 Equations

**Physical distance as the moderator.** The dependent variable (Y) in Equations 1 to 6 corresponds to helping behavior. Unlike the equations in Study 1, the regression coefficients below will be  $\gamma$ 's to reflect the multilevel design. This information will be used to conduct the path analysis across the two moderators—far/close physical distance and high/low relational self-construal (please note that the term, psychological closeness instead of psychological distance is used to reflect the valence of the original measurement):

*Equation 1.*

$$\begin{aligned}
 Y &= b_0 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
 &\quad + b_4\text{Education} + b_5\text{Relationship Tenure} \\
 &\quad + b_6\text{Organizational Tenure} + b_7\text{Power} + b_8\text{Psychological Closeness} \\
 &\quad + e_Y
 \end{aligned}$$

*Equation 2.*

$$\begin{aligned}
 \text{Psychological Closeness} &= a_0 + a_1\text{Power} + a_2\text{Physical Distance} \\
 &\quad + a_3\text{Power} \cdot \text{Physical Distance} \\
 &\quad + e_{\text{Psychological Closeness}}
 \end{aligned}$$

*Equation 3.* This equation is a reduced form equation from Equations 1 and 2 for the for the first stage moderated mediation model.

$$\begin{aligned}
 Y &= b_0 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
 &\quad + b_4\text{Education} + b_5\text{Relationship Tenure}
 \end{aligned}$$

$$\begin{aligned}
& +b_6\text{Organizational Tenure} + b_7\text{Power} \\
& +b_8(a_0 + a_1\text{Power} + a_2\text{Physical Distance} + a_3\text{Power} \\
& \quad \cdot \text{Physical Distance} \\
& +e_{\text{Psychological Closeness}}) + e_Y \\
\\
= & b_0 + a_0b_8 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
& +b_4\text{Education} + b_5\text{Relationship Tenure} + b_6\text{Organizational Tenure} \\
& +(b_7 + a_1b_8)\text{Power} + a_2b_8\text{Physical Distance} \\
& +a_3b_8\text{Power} \cdot \text{Physical Distance} + e_Y + b_8e_{\text{Psychological Closeness}}
\end{aligned}$$

**Relational self-construal as the moderator.**

*Equation 4.*

$$\begin{aligned}
Y = & b_0 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
& + b_4\text{Education} + b_5\text{Relationship Tenure} \\
& +b_6\text{Organizational Tenure} + b_7\text{Power} + b_8\text{Psychological Closeness} \\
& + e_Y
\end{aligned}$$

*Equation 5.*

$$\begin{aligned}
\text{Psychological Closeness} = & a_0 + a_1\text{Power} + a_2\text{Relational Construal} \\
& +a_3\text{Power} \cdot \text{Relational Construal} \\
& + e_{\text{Psychological Closeness}}
\end{aligned}$$

*Equation 6.* This equation is a reduced form equation from Equations 4 and 5 for the first stage moderated mediation model.

$$\begin{aligned}
Y = & b_0 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
& + b_4\text{Education} + b_5\text{Relationship Tenure} \\
& +b_6\text{Organizational Tenure} + b_7\text{Power} \\
& +b_8(a_0 + a_1\text{Power} + a_2\text{Relational Construal} + a_3\text{Power} \\
& \quad \cdot \text{Physical Distance} \\
& +e_{\text{Psychological Closeness}}) + e_Y \\
\\
= & b_0 + a_0b_8 + b_1\text{Age} + b_2\text{Gender} + b_3\text{Race} \\
& +b_4\text{Education} + b_5\text{Relationship Tenure} + b_6\text{Organizational Tenure} \\
& +(b_7 + a_1b_8)\text{Power} + a_2b_8\text{Relational Construal} \\
& +a_3b_8\text{Power} \cdot \text{Relational Construal} + e_Y + b_8e_{\text{Psychological Closeness}}
\end{aligned}$$