BRIDGING TIME AND POWER: HOW CHANGES IN SOCIAL POWER INFLUENCE INDIVIDUALS' PROSOCIAL BEHAVIOR AT WORK

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ABSTRACT

Hanna Kalmanovich-Cohen: Bridging Time and Power: How Changes in Social Power Influence
Individuals' Prosocial Behavior at Work
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Social power is dynamic in nature and individuals experience changes in their power

throughout their careers (e.g., due to promotions or other changes in control over valuable

resources). Yet, how does gaining or losing power affects people's behavior? For example,

people who experience high power are less likely to help others. Will these effects change based

on whether current experience of power was preceded by an experience of low versus high

power? In this dissertation, I try to answer this question. I theorize and show using three

experimental studies, and one field study, that past power generates emotional and cognitive

reactions which in turn impact individuals' current prosocial behavior, in ways that depart from

behaviors observed when a traditional static view of power is taken into account. My work thus

challenges fundamental assumptions about how the experience of power shapes behavior and

highlights how taking the dynamics of power into account changes our understanding of its

effects on cognitions, emotions, and behaviors.

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CHAPTER 1: INTRODUCTION

Social power is an important concept in organizational research and management practice. There has been an increasing interest in social power by organizational behavior and social psychology researchers in the past decades. In fact, a recent analysis found that the number of articles about power published in social psychology journals over the past twenty years has almost doubled every five years (Galinsky, Rucker, & Magee, 2015). This research has found that power holders – as opposed to those with less power – tend to think more abstractly (Smith & Trope, 2006), have an enhanced view of the self (Tost, Gino, & Larrick, 2012; Wojciszke & Struzynska–Kujalowicz, 2007), and are less likely to be influenced by contextual influences (Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Pitesa & Thau, 2013). Indeed, compared to powerless counterparts, those who feel powerful are more likely to take the lead and change annoying situations (Galinsky, Gruenfeld, & Magee, 2003), more likely to rely on their preconceptions about the world when seeking new information (De Dreu & Van Kleef, 2004), and are more likely to take risks (Anderson & Galinsky, 2006; Pitesa & Thau, 2013). Power holders are more likely to obtain more profitable negotiation outcomes (Galinsky, Schaerer, & Magee, 2017; Schaerer, Swaab, & Galinsky, 2015) and are better able to perform under stressful conditions (Lammers, Dubois, Rucker, & Galinsky, 2013).

While current research has significantly advanced our understanding of social power, it under-emphasizes the dynamic nature of the power processes that most organizational actors must deal with during their careers. Individuals may gain power when they get promoted, associate themselves with powerful others (Goldstein & Hays, 2011), or gain control over other

valuable resources (Emerson, 1962). However, individuals may also lose power. For example, when they do not attend to their relationships and alliances (Brion & Anderson, 2013) or when their decision biases hurt their performance (Weick & Guinote, 2010). This raises the question of how the dynamic nature of social power influences the psychological experience and consequences of social power within organizations.

There are several studies that hint at the idea that dynamic social hierarchies may fundamentally alter the effects of power. For example, Sligte and colleagues (2011) demonstrated that when power positions are unstable, powerless individuals become more flexible thinkers and generate more creative insights. This contradicts the findings that powerful (rather than powerless individuals) are more likely to generate creative ideas (Galinsky et al., 2008). Similarly, research on power and risk-taking suggests that being powerful is associated with elevated risk-taking (Anderson & Galinsky, 2006). However, follow-up research demonstrates that the powerful may become more risk-averse when their position is threatened due to unstable hierarchies (Maner, Gailliot, Butz, & Peruche, 2007). Thus, I will argue that further research into the dynamic nature of social power is warranted.

In this dissertation, I argue that there are two important barriers which have impeded our understanding of how social power evolves in organizations. The first is the multi-disciplinary nature of power research which has led to little consensus over the definition of power. Power has been studied extensively in almost every domain of the social and behavioral sciences, including the political sciences, psychology, anthropology and economics (Fiske & Berdahl, 2007; Haslam, 2001; Pfeffer, 1981). However, each discipline brings a variety of different nuances to the way power is operationalized, which results in a diffusion of power definitions and arguments about what constitutes its measurement (Brass & Burkhardt, 1993). Therefore,

one purpose of this dissertation is to review current power classifications and propose an integrative definition. This will allow for a systematic integration of distinct, yet related findings, and will hopefully lead to a greater clarity regarding the effects of social power.

The second important barrier is that power research has been largely contemporaneous, focusing primarily on perceptions of social power in the present moment. While some argue that individuals maintain their social power over time (Gruenfeld & Tiedens, 2010; Magee & Galinsky, 2008), social power can and does change (Sivanathan, Pillutla, & Murnighan, 2008). Understanding how high and low-power individuals react to changes in social power (both experiences of power gain and power loss) is important because these reactions have important psychological and behavioral consequences. Some recent research has begun to investigate how individuals respond to changes in hierarchies (Pettit, Yong, & Spataro, 2010; Sivanathan et al., 2008). For example, Sivanathan and colleagues (2008) found that individuals overreact to gains in power, in that they markedly increase their demands following an increase in power. While this work starts to unveil how individuals respond to gains and losses in social power, it does not fully address the important mechanisms behind these changes and the vital role temporal elements play in power change. When the temporal context is ignored, we neglect the important role time plays in how people interpret, experience, and respond to power over time (Johns, 2006; Kozlowski, 2009; Rousseau & Fried, 2001).

To address these issues, this dissertation integrates time into the study of social power in organizations, investigating trajectories of social power over time, how changes in social power are perceived and experienced and how it relates to discretionary outcomes. I will investigate how actual and retrospected perceptions of social power can impact individuals' prosocial behaviors. Specifically, this dissertation will investigate the affective and cognitive responses to

changes in social power. On the affective side, I will investigate the emotional reactions that individuals might have due to changes in social power. On the cognitive side, I will argue that changes in social power can lead to two competing mechanisms: (1) assimilation effect and (2) contrast effect of power. The assimilation effect of power suggests that even after experiencing change in social power, individuals will assimilate their past self to their current power roles. In other words, the effect of past power on current behavior will be in the same direction as the effects of current power. The contrast effect of power, on the other hand, suggests that individuals will focus on the differences between their current and past power roles and thus will contrast their past self away from their current power. In other words, the effect of past power on current behavior is expected to be in the opposite direction from the effects of current power. In this dissertation, I will investigate how these cognitive processes will alter individuals' responses to changes in social power. Thus, the purpose of this dissertation is to investigate the dynamic nature of power processes, to understand the mechanisms behind individuals' reactions to changes in social power, and to examine the effects of past power on individuals' prosocial behavior at work.

CHAPTER 2: WHAT IS SOCIAL POWER?

Power is a universal phenomenon in all social relationships. It plays a critical role in economic, political, and social interactions and is a common force in organizations (Fehr, Herz, & Wilkening, 2013). Power is a very broad concept and thus has been defined in many different ways. It has been defined in terms of antecedents, units of analysis, actors' intentions, targets' responses, and outcomes of interest (Sturm & Antonakis, 2015). However, in order to capture the essence of this phenomenon, the many meanings of power need disentangling.

Social Power versus Personal Power

An important distinction between two interpretations of power is commonly based on the assumed relational nature of "power over" as opposed to the dispositional nature of attributions of "power to" (Göhler, 2009). The first group of definitions describes power as the ability of a person to exercise control over other people and make them do things they would not otherwise do (Weber, 1978). This type of power is often called social power (Van Dijke & Poppe, 2006). A second group of definitions describes power as individuals' ability to provoke desirable effects in their environment, without being influenced by others (Cartwright, 1959; Emerson, 1962; French & Raven, 1959). In this case, power provides control over one's own outcomes and thus independence from others. This type of power is often called personal power (Galinsky et al., 2008). In other words, social power refers to the *power over someone* and personal power refers to the *power to do something* (Lammers, Stoker, & Stapel, 2009; Overbeck, 2010; Van Dijke & Poppe, 2006).

In order to better understand what social power is, it is important to distinguish this concept from personal power. Power over other people, enforcement of one's own intentions over those of others, is only conceivable in a social relationship (Göhler, 2009). Thus, in order to understand the exercise of social power we first must establish who exercises it and who endures it. Exercising social power within a social relation narrows the field of action of those subjected to it. For instance, A's autonomy within a power relationship means relatively less power for B. However, power is not always a zero-sum game as there are power processes in which both sides may gain (Clegg, Courpasson, & Phillips, 2006; Luhmann, 1975, 2000). I will return to this point later in this chapter, when I present my definition of social power.

Personal power, on the other hand, emphasizes the individuals' ability to do or achieve something independent of others (Overbeck & Park, 2001; Van Dijke & Poppe, 2006). This type of power is not directed at others, but is held by the individual or the group. Thus, the focus is on power as the ability to act autonomously (Göhler, 2009). In order to control one's own outcomes, there must be the freedom and the ability to do so. However, given that social power often brings independence and autonomy, it may be an important source of personal power. If this is the case, personal power is confounded with social power. The extent to which individuals have freedom or independence to control their own outcomes is constrained by the social power others hold over them.

Defining Social Power

Social power is a multifaceted relational concept. Not surprisingly, various scientific traditions have offered different conceptualizations and have focused on different facets of social power (see Table 1). Social power has been defined as influencing another person's states, controlling the outcomes of that person, providing that person with rewards, imposing

punishments, or controlling the flow of resources to that person (Fiske & Berdahl, 2007; Galinsky, Magee, Inesi, & Gruenfeld, 2006; Keltner, Gruenfeld, & Anderson, 2003; Smith & Trope, 2006). Despite differences across definitions, social power has most frequently been conceptualized as social influence or outcome/resource control (Spears, Greenwood, de Lemus, & Sweetman, 2010).

Social power has been conceived as the ability to influence the beliefs, attitudes, or behaviors of others. For example, Simon (1957) defined "A" as having power over "B" when "A's behavior causes B's behavior" (p. 5). According to Dahl (1957), "A has power over B to the extent that [A] can get B to do something that B would not otherwise do" (p. 202). According to these definitions, power is defined by its effect. When an individual influences another to behave a certain way, the former has power over the latter (Dahl, 1957; Simon, 1957). Defining social power in terms of influence is problematic because it defines power in terms of what it does, not in terms of what it is (Fiske & Berdahl, 2007). These definitions do not address what it is about social power that might lead to influence in the first place.

By contrast, when social power is conceptualized as outcome or resource control, it can be defined as the control over resources and valued outcomes or the capacity to administer rewards and punishment (Fiske & Berdahl, 2007; Fiske & Dépret, 1996; Keltner et al., 2003). For example, Thibaut and Kelley (1959), defined power as the ability to affect the other person's quality of outcomes, and Emerson (1962), claimed that "the power to control or influence the other resides in control over the things he values" (p. 32). More recently, Magee and Galinsky (2008) defined social power as "asymmetric control over valued resources in social relations," and Keltner and colleagues (2003) defined power as "an individual's relative capacity to modify other's states by providing or withholding resources or administering punishments" (p. 265).

These conceptualizations of power identify social power in the structural properties of social relations and conceive it as separate from actual influence.

However, power is not simply the influence individuals exert over others or the control over resources within a social relation. Power can also be described as a psychological state, a perception of individual's ability to influence others (Bugental, Blue, & Cruzcosa, 1989; Galinsky et al., 2003). Galinsky and colleagues (2003) defined power as "perception of one's capacity to influence others" (p. 314). According to this definition, individuals' personal sense of power is distinct from individuals' influence or control over resources. In some cases, individuals' personal sense of social power coincides with their control over resources and sometimes it does not (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Fast & Chen, 2009). Interestingly, individuals' beliefs about their social power can shape their actual influence over others. Those who perceive themselves as powerful behave in more effective ways that increase their actual power (Bandura, 1999; Bugental & Lewis, 1999; Mowday, 1978). I will return to this point in the literature review section of this chapter.

Despite the numerous conceptualizations of social power (i.e. influence, outcome or resource control, psychological state), many current definitions do not address all the key features of this phenomenon. In the next section, I will describe seven key characteristics of social power and their importance for our understanding of this phenomenon.

Key Characteristics of Social Power

Exercise of Control: Actual versus Potential Power

While social power has most frequently been conceptualized as social influence or outcome/resource control, there is another important distinction of whether or not this influence or resource control is *actual* versus *potential*. Some scholars have defined social power as

potential influence. For example, Weber (1978) defined power as "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" and French and Raven (1959) defined power as the maximum potential ability of A to influence B. According to these definitions, social power can exist without actual influence.

The definitions themselves do not explain the origins of capacity to influence. But many researchers view this capacity as stemming from control over valued resources (Fiske & Berdahl, 2007). For instance, Cartwright (1965), argued that influence derives from "the possession, or control, of valued resources." More recently, Galinsky and colleagues (2003) defined power as "perception of one's capacity to influence others" and Goldstein and Hays (2011) define it as "the capacity to influence others through asymmetric control of valued resources and the ability to administer rewards and punishments." In short, these approaches all define social power as having *potential* as opposed to *actual* influence due to control over valued resources.

Potential ability and actual exercise of the capacity are theoretically distinct. While potential power remains unexercised it is latent, and only potential, not actual (Dowding, 1996; Morriss, 1987; Wrong, 1968). This potential power has to exist before it can be exercised. However, potential power does not need to be realized to be effective. If it is visible, for example, through earlier experiences, it can further influence actions even without being actualized. The evidence that a person or group possesses the capacity to control others may be, for instance, the frequency with which successful acts of control have been carried out in the past.

Intent of Control: Intended versus Unintended Effects of Power

We should also distinguish between someone having power and someone exercising power. According to Russell (1967) power is only exercised when an intended effect is secured. However, as Wrong (1968) pointed out, almost all actions have unintended, as well as intended effects. The intentional control of others is likely to create a relationship in which the power holder exercises unintended influence over others as well. For example, the mere presence of the power holder (e.g., a police officer wearing his uniform to a bar) can induce change in individuals' behaviors that coincides with the power holder's will (Sturm & Antonakis, 2015). Therefore, people who control others' outcomes have social power whether or not they intend to use it (Fiske & Berdahl, 2007). The control of valued outcomes or resources gives them the potential, but they do not necessarily need to utilize it in order to have social power over others.

Sources of Power

Social power was also defined in terms of diverse psychological forces that have the potential to direct a person's behavior. Based on this notion, French and Raven (1959) introduced a social power taxonomy comprised of five bases of power which include: reward power, coercive power, referent power, expert power, and legitimate power.

Reward power stems from the ability of a power holder to promise some form of compensation in exchange for a specific behavior. For example, a supervisor may provide a bonus payment to a subordinate in exchange for the subordinate completing a task. Coercive power is at use when the threat of punishment is made in order to gain compliance. For example, a manager may threaten to fire a subordinate should he or she not comply with a certain request. Referent power stems from the identification of one individual with another. For instance, an employee will likely comply with requests made by a manager, as he or she would like to gain

the manager's approval. Expert power is at use when one relies on his or her knowledge to promote one's agenda. For example, management may follow the advice of consultants because those consultants are perceived as possessing a high-level expertise in their field. Legitimate power stems from one having a justifiable right to request compliance from another individual. For instance, subordinates may comply with a supervisor's request simply because the supervisor has a right to ask them to do their work in a certain way. Later, Raven (1965) introduced information power as a sixth power base. An individual holds this form of power by having access to or control over information and thus can request compliance from another individual by providing or withholding this valuable information.

These types of power are related to each other and often used together (Podsakoff & Schriesheim, 1985). For example, the more legitimate power one has, the more reward and coercive power one typically possesses. However, reward and coercive power can be used to influence people to do what is desired, but people do it only because of the reward or fear of punishment. The result is compliance but not acceptance. These strategies are probably more useful to influence individuals' extrinsic motivation, but less valuable for changing intrinsic motivation.

Based on the examples above, Fiske (2010) argued that some bases of power confer social power as control (reward, coercion) and some bases of power confer status (i.e., recognition that someone is expert, informed, legitimate, or admired/referent). This is problematic as those are distinct constructs. Status relates to social power in that it yields control over social outcomes of value to others, namely, liking and respect. As such, high status individuals often have social power over others (Fiske, 2010). However, social power does not always correlate with status. For example, a respected senior employee controls no tangible

resource, but can provide advice and networking. Thus, status and power are distinguishable because only social power necessitates outcome control. Unfortunately, most current definitions of social power do not specify the source of control of the power holder.

Objects of Control

Researchers distinguish between four objects of control: oneself, one's outcomes, others' self, and other's outcomes (Dépret & Fiske, 1993). Control over self refers to having control over one's own cognitions or emotions (also refers to as mental control) or over one's behavior (also refers to as self-control). Own outcome control refers to having control over one's own outcomes. Thibaut and Kelley (1959) refer to this type of control as reflexive control, the ability to reward yourself and take responsibility for your own outcomes. In the context of social interactions, control over others or social control refers to having control over other's cognitions, affect or behaviors. Finally, other outcome control refers to having control over environmental events relevant to other people, what Thibaut and Kelley (1959) called fate control. Fate control is the ability to affect another's outcomes regardless of what he or she does. When social power is defined as influencing others, it corresponds to other control or social control (having control over other's cognitions, affect or behaviors). But according to Dépret and Fiske (1993), social power should only correspond to other's outcome control and therefore cognitive, affective and behavioral control is not part of their definition of social power ("asymmetrical control over another person's outcomes"). In other words, power can lead to influence but influence does not define social power (Dépret & Fiske, 1993).

While other's social control (cognitive, affective and behavioral control) and outcome control are the most dominant objects of control in the power literature, power can also be defined as control over resources. For example, Lammer and Stapel (2009) define social power

as "the ability to control resources, own and others." Social power can also be defined as control over goals, preferences or opportunities. For example, Kelman (1958) define social power as "the extent to which the influencing agent is perceived as instrumental to the achievement of the subject's goals" and Kuhn (1963) define social power as "the ability to satisfy one's wants through the control of preferences and/or opportunities." Furthermore, control over valued outcomes constitutes social power, even if the target chooses to resist. That is, the target may care about the outcomes, even while refusing to enact the power holder's conditions for obtaining these outcomes. Social power over someone persists, even without the power to make the person comply.

Nature of Control: Relative versus Absolute Power

While people exercise mutual influence and control over one another's behaviors in all social interactions (Wrong, 1968), current definitions of power do not always address the relative nature of power. For example, Fiske (2010) define social power as "controlling valued resources" and Anderson and Berdahl (2002) define it as "the ability to provide or withhold valued resources or administer punishments." These definitions do not address that individual's power depends on others' resources (Overbeck, 2010). That is, power is an inherently comparative construct, defined within a particular social relationship. Therefore, power is *relative* and not *absolute*. Since control over valued resources can comprise outcomes that are physical (e.g., office space), economic (e.g., salary), or social (e.g., inclusion), an individual may enjoy high power in some contexts and rather low power in others (Fiske & Berdahl, 2007).

The relative control an individual has over another's outcomes stems from his or her ability to administer or withhold rewards or punishments. This control can vary in how formal, stable, or legitimate it is (Fiske & Berdahl, 2007). The nature of a power holder's control over

another's outcomes affects the use and consequences of power. Therefore, social power relations are asymmetrical in that the power holder exercises greater control over the behavior of other individual than the reverse (Wrong, 1968). That is, individuals are powerful when their outcomes depend on others less than the others' outcomes depend on them. This relative nature of power is important since according to Blau (1964), "interdependence and mutual influence of *equal* strength indicate lack of power" (p. 118).

Proximity of Control: Direct versus Indirect Power

Social power may be realized through *direct* or *indirect* contact with the power holder. For example, an individual may induce behavior in another individual in the course of a face-to-face interaction or it may occur in the course of the target's exposure to the power holder's influence through various symbolic exchanges (Kelman, 1974). The dominant conceptualization of social power stresses that power is a social construct that emerges in interpersonal interactions and is exercised primarily via direct interpersonal influence. Unfortunately, most current definitions of social power do not specify the proximity of control between the power holder and his or her target.

Direct interpersonal contact has the potential to explain an array of interpersonal and intragroup phenomena. This conceptualization also explains some specific effects of social power at an intergroup level, namely those involving direct contact between people who belong to different social groups (Henry & Pratto, 2010; Vescio, Gervais, Snyder, & Hoover, 2005; Vescio, Sechrist, & Paolucci, 2003). However, because the dominant conceptualization of social power assumes a direct exercise of influence between individuals, it does not consider many indirect forms of power relevant to intergroup relations.

Valence of Control: Beneficial versus Harmful Power

The distinction between *beneficial* and *harmful* effects of social power is another important notion to consider. Power relations are often portrayed as based on negative sanctions and detrimental to the object of the influence attempt. For example, Blau (1964), defines social power in terms of negative sanctions – withholding rewards or imposing punishments. On the other hand, Cartwright (1965), for example, have shown that social power can be defined in a way that allows for influence attempts based on positive sanctions. Such a broad concept of power has an important advantage over one based only on negative sanctions, as it facilitates description of the full range of options available to an individual in making an influence attempt over another.

My Definition of Social Power

While social power has been defined in an array of possible ways, some of these definitions are limited as they do not articulate the nature of the phenomenon. Therefore, it is imperative to provide a clear and concise definition, which will determine what power is and how it should be measured (Sturm & Antonakis, 2015).

Social power is both potential and actual. Potential power has to exist before social power can be exercised. If an individual modifies his or her behavior due to another individual's capacity to control him or her, one individual has power over another. The control of valued outcomes gives this individual the *potential*, but he or she do not necessarily need to utilize it in order to have power over others (Fiske & Berdahl, 2007). While outcome control and behavioral control are the most dominant objects of control in the power literature, power can also be defined as control over resources, goals, preferences or opportunities. Therefore, a power holder

can control outcomes directly, have control over resources that are instrumental to outcomes, or have control over other factors that influence outcomes (e.g. ability, motivation, etc.).

An important point to emphasize is that social power is an inherently comparative construct, defined within a particular social relationship. Therefore, social power is *relative* and not absolute. That is, individuals are powerful when their outcomes depend on others less than the others' outcomes depend on them.

By considering the above key characteristics of power (see Table 2), I propose the following definition of social power that captures the essence of this phenomenon. For the purpose of this doctoral dissertation, social power is defined as *potential or actual relative control over outcomes, resources, preferences, or opportunities that are valued by another person*. This definition is built on the outcome control definitions proposed by Depert & Fiske (1993), Fiske & Berdahl (2007), and Magee (2009). Furthermore, this definition also includes the psychological state associate with having social power. Individuals may perceive having relative control over others' outcomes without possessing actual control over any valuable resources.

Summary

In this chapter, I first discussed the concept of social power. I distinguished this concept from personal power, and discussed its most commonly used definitions – social power as influence, social power as outcome/resource control, and social power as psychological state (Fiske & Berdahl, 2007; Galinsky et al., 2006; Keltner et al., 2003; Smith & Trope, 2006). Then, I identified seven key characteristics of social power: (1) exercise of control: actual versus potential power; (2) intent of control: intended versus unintended effects of power; (3) sources of power; (4) objects of control; (5) nature of control: relative versus absolute power; (6) proximity

of control: direct versus indirect power; (7) valence of control: beneficial versus harmful power. The chapter was concluded with my definition of social power. This definition will be used throughout this doctoral dissertation. In the next chapter, I will review the most relevant findings that deal with the cognitive, emotional, and behavioral effects of social power. I will also present four of the most important theories that have offered different explicative mechanism for these effects.

CHAPTER 3: REVIEW OF SOCIAL POWER RESEARCH

A number of perspectives have emerged over the years that describe the effects of power on judgments and behaviors. In recent years, research on cognitive, affective, and behavioral experiences of powerful individuals has been based on two extremely influential bodies of work: the link between power and social perception (Fiske, 1993), and the link between power and the behavioral approach and inhibition systems (Keltner et al., 2003). Later, this line of research was extended by examining the effects of power on basic cognition (Guinote, 2007). According to the situated focus theory of power (Guinote, 2007), power affects individuals' goals system by increasing the moment-to-moment attunement to goals and needs. Lastly, Magee and Smith (2013), by combining both motivation and cognitive elements, proposed an alternative mechanism for the effect of power on goal pursuit. This theory emphasized the relational nature of social power and highlights that power produces asymmetric social distance, with high-power individuals feeling more distant than low-power individuals (Magee & Smith, 2013). This chapter will discuss each of these theories in detail below and highlight conflicting findings in the literature.

Theories of Social Power

Power as Control (PAC) Theory

One of the first theoretical approaches aimed at explaining the consequences of social power was the power as control model (PAC), which mainly focused on consequences for social judgements (Fiske, 1993; Fiske & Dépret, 1996). According to this model, social power can alter both the motivation and the cognitive resources needed to form accurate, individuated impressions of subordinates.

As people have a basic need for control (White, 1959), powerful individuals are in a comfortable position because they already have control. As a consequence, the powerful pay less attention and thus are more vulnerable to judgement biases. Powerless individuals, on the other hand, have little control over their outcomes and are therefore motivated to restore control. They generally do this by carefully attending to the powerful (who control their outcomes). This is done by systematically processing of information about the social environment and by forming relatively complex and non-stereotypical impressions of others.

There are three main reasons for the increase use of stereotypes among the power holders. First, the powerful have no implicit motivation to expend mental energy to form accurate impressions of their subordinates. Unmotivated to attend to unexpected information, power holders ultimately rely on their default categorizations of subordinates. Second, the propensity to seek control over others may make power holders particularly unwilling to individuate those they control. For example, people high in dominance may stereotype or derogate subordinates to justify and protect their power (Van Knippenberg & Hogg, 2004). Third, due to heavy demands on their time and attention, power holders may therefore be unable to attend to subordinates because they lack the necessary cognitive resources. In sum, social power and stereotyping are mutually reinforcing. Stereotyping enables the powerful to confirm their expectations and maintain the status quo, thus maintaining their control over others (Goodwin & Fiske, 1995; Jost & Banaji, 1994).

In an extension of the PAC model, Goodwin and colleagues (2000) argued that power holders might engage in a more motivated form of social bias, stereotyping subordinates by design, as well as by default. It was argued that the powerful often make decisions that conform to social expectations that preclude snap judgments or imply accountability to others. When

people are held accountable for their judgments, they tend to engage in more effortful

information processing strategies (Tetlock, 1999). Thus, one would expect the powerful to be

less vulnerable to stereotyping subordinates. In contrast, social expectations regarding how

people achieve power may further encourage stereotyping behaviors. Specifically, powerful

individuals may be motivated to rely on stereotypes due to increased confidence in their own

expert beliefs, including their stereotypes. Thus, stereotyping subordinates justifies one's relative

power over others. Furthermore, stereotyping subordinates can reduce perceived threats to one's

role, as loss of power is psychologically aversive. Therefore, there is a tension between motives

to think carefully about subordinates and motives to stereotype them.

While highly influential, the power as control (PAC) model omit the dynamic social

components of power relations. Additionally, the model fails to address the motives for

stereotyping and merely focuses on the question of who stereotypes whom. While Fiske and her

colleagues (Dépret & Fiske, 1999; Fiske, 1993; Goodwin et al., 2000) discuss the cognitive load

as reasons for powerful individuals' reliance on stereotypes, they omit the aspect of motivation

when selectively attending to some but not other information. Furthermore, the assumption that

stereotypes are universally shared is questionable, since there is a growing body of evidence

noting that situational factors importantly influence whether stereotypic perception and behavior

ensues (Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995).

Approach/Inhibition Theory of Power

The approach/inhibition theory of power (Keltner et al., 2003) provides a broader

mechanism for how power transforms individuals' psychological states by referring to the

behavioral approach system (BAS) and the behavioral inhibition system (BIS; see Gray, 1994).

Approach and avoidance regulation differ in focus and action tendency. The BAS leads

individuals to attend to potential rewards and to initiate and maintain goal directed behavior. The

BIS, on the contrary, helps to identify novel stimuli (including threats), recognize goal conflict,

and interrupt ongoing behavior (Gray & McNaughton, 2000; Magee & Smith, 2013).

According to Keltner and colleagues (2003), power is associated with increased rewards

and freedom, and thereby activates approach-related tendencies. High power individuals are

assumed to experience positive affect, to construe others in terms of how they satisfy their own

goals, and to process information about their social environment in more automatic ways. They

also act in a more disinhibited manner and transgress social norms more often. In contrast,

powerlessness is associated with increased threat, punishment, and social constraint, which

activates inhibition behaviors. In other words, powerless individuals are assumed to experience

negative affect, to view the self as a means to others' ends, and to make controlled judgments

about others' intentions, attitudes, and behaviors. They also tend to behave in a more inhibited

manner, and their behavior is more contingent on the behaviors of others.

An enhanced sense of control over one's environment allows the power holder to attend

more closely to rewards, and thus engage in more goal directed behavior. An elevated sense of

control causes power holders to experience social situations as less constraining (Galinsky et al.,

2008), enabling to take action to meet goals and achieve desired outcomes. Having power is not

only about increasing one's approach tendencies, but also about decreasing inhibition tendencies.

Disinhibition involves acting on one's own desires in a social context without considering the

effects of one's actions. Keltner and colleagues (2003) argued that disinhibition is a byproduct of

approach tendencies, in which the balance of motivation shifts towards failure to inhibit

behaviors. In other words, those with power are more likely to go after what they want (i.e.,

approach rewards) and in doing so they are less likely to attend to others and thus may act in socially inappropriate ways.

Although the approach/inhibition theory of power focuses on when power potential may lead to power use, it does not predict which tactics will be chosen when power is used. Keltner and colleagues (2003) also present the BAS and BIS as having straightforward associations with positive emotion and negative emotion, respectively. However, this interpretation has been called into question (Carver & Harmon-Jones, 2009). For example, anger, frustration, and guilt have all been associated with the BAS (Amodio, Devine, & Harmon-Jones, 2007; Carver & Scheier, 2004; Harmon-Jones, 2003). Furthermore, researchers argue that direct evidence supporting Keltner and colleagues' proposed mechanisms is minimal (Magee & Smith, 2013).

Social Distance Theory of Power

Smith and Trope (2006) proposed a different mechanism, based on psychological distance, arguing that power creates asymmetric social distance. Specifically, they suggest that powerful individuals experience more social distance as compared to powerless individuals. Consistent with this principle, Lammers and colleagues (2012) demonstrated that powerful individuals had a stronger preference for independent, solitary activities that created or maintained social distance. This distance according to construal level theory (Trope & Liberman, 2003) leads to more abstract versus concrete information processing (Huang, Galinsky, Gruenfeld, & Guillory, 2011; Magee, Milliken, & Lurie, 2010; Smith & Trope, 2006; Stel, Dijk, Smith, Dijk, & Djalal, 2012). In other words, high power individuals prefer to describe actions in terms of the abstract goals they were trying to satisfy, relative to low power individuals (Smith & Trope, 2006). For example, high-ranking personnel described the terrorist attacks on 9/11 in more abstract terms than low-ranking personnel and victims (Magee et al., 2010).

More recently, Magee and Smith (2013) name this theory the social distance theory of power and proposed that it can explain much more than the relationship between power and construal level. Specifically, power holders demonstrated less assumed similarity in social comparison, less susceptibility to social influence, less interest in and responsiveness to others' mental states, less accuracy in mental state inference, and reduced likelihood of experiencing socially engaging versus disengaging emotions (Magee & Smith, 2013). Specifically, power is predicted to be positively related to the experience of emotions that result in social separation, such as anger.

Moreover, as a function of greater abstraction in their mental representations, power holders feel greater subjective certainty, because they neglect information that is incongruent with their attitudes. Power holders also behave more in line with their values, select and pursue goals more efficiently, and exhibit greater self-control due to their use of high-level construal of goals and situations (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Schmeichel, Vohs, & Duke, 2011). However, powerful individuals also perceive people more instrumentally and rely more on stereotypes, because their attention is drawn to aspects of others that are goal-relevant.

In addition to selecting goals more efficiently, power holders can also pursue goals more effectively, because they prioritize activities in line with their most important goals (Magee & Smith, 2013). According to the social distance theory, goals moderate the effects of power along two different pathways. First, goals determine what is central and superordinate in high-level construal, thus facilitating in goal pursuit. Second, goals can alter the social distance experienced within a relationship. For example, responsibility for another person's well-being would decrease a power holder's experience of social distance (Magee & Smith, 2013).

Situated Focus Theory of Power

The situated focus theory of power (Guinote, 2007) proposed that social power affects the individual's goals system (i.e., ability to attain desired outcomes), which affects information processing and motivation in ways that promote more situated judgement and behavior. Specifically, social power allows individuals to attain desired outcomes more easily. According to this theory, social power promotes a focus on whatever goal is currently being pursued. Thus, power holders can afford to focus their attention more exclusively on the goals they pursue (e.g. the task at hand) and the information relevant to it. In contrast, powerless individuals cannot easily attain their goals, and they live in more difficult environments, so they pay attention to multiple sources of information (even goal-irrelevant ones) to increase control over their outcomes. In other words, social power directly affects attention in ways that respond to the individual's immediate self-regulatory needs.

According to the situated focus theory of power (Guinote, 2007, 2010), the link between power and social behavior is influenced by moment-to-moment motivations. Compared to powerless individuals, the social attention of power holders is more variable and thus more easily influenced by attentional triggers (Guinote & Cai, 2016). By default, the attention of power holders is guided by regularly accessible knowledge structures stored in memory and the feelings of independence that arise from having power. Power holders use a wider range of processes to guide judgment and behavior and can rely on their internal states. For example, power holders display more genuine smiles that are determined by their levels of happiness, whereas those who lack power control their behavior more and feel obliged to smile regardless of their feelings (Hecht & LaFrance, 1998). Power holders also report their true attitudes more often than their powerless counterparts (Anderson & Berdahl, 2002), and more freely retaliate in response to

their partner's inappropriate displays of anger compared to powerless individuals (Van Kleef &

Côté, 2007). Therefore, power holders tend to engage in more authentic behaviors that are in line

with their inner feelings, which can change from one situation to another. As a consequence,

power holders will act in ways that are primarily driven by motivations of the self or by

organizational goals rather than by social concerns (Guinote & Cai, 2016).

However, attention is malleable and linked to current demands. If current goals call for

individuated attention, then power holders are capable of paying attention to others and engage

in prosocial behavior (Guinote & Cai, 2016). For instance, Galinsky and colleagues (2003)

demonstrated that power led participants to act more prosocially in the public dilemma, but more

selfishly in the commons dilemma. Since public dilemmas call for cooperation and prosocial

behavior (e.g., giving resources to a common good), whereas commons dilemmas activate the

goal of pursuing self-interest.

Comparison of Social Power Theories

Each of the above theoretical accounts of power have focused on one or more

mechanisms, depending on the behavior under scrutiny. Fiske's social attention theory (Fiske,

1993; Fiske & Dépret, 1996) has been applied to the understanding of power holders as social

actors, focusing specifically on how power holders make social judgments and relate to their

broader social context. The approach/inhibition theory of power focuses on disinhibition and

reward orientation of power holders (Keltner et al., 2003). The social distance theory (Magee &

Smith, 2013), emphasizes that power causes individuals to perceive themselves as

psychologically and socially distant from others. Last, the situated focus theory of power

(Guinote, 2007, 2010) argues that power affords situated and flexible information processing

depending on the primary constructs that come to mind on a moment-to-moment basis. Thus,

power holders are more selectively guided by the needs, goals, and affordances that are primary in a given situation.

While each of the four theories outlined above describe different aspects with regards to social power and its effects, there are a number of similarities between the models. For example, both the power as control (PAC) model (Fiske, 1993; Fiske & Dépret, 1996) and the approach/inhibition theory (Keltner et al., 2003) assume that social power can bias individual's judgements. While the PAC model focuses specifically on power's effect on impression formation processes, the approach/inhibition theory considers power's effects on a broad array of social phenomena.

There are also similarities and differences between the approach/inhibition theory (Keltner et al., 2003) and the social distance theory of power (Magee & Smith, 2013). The starting point for the approach/inhibition theory is the individual's tendency to experience reward versus threat as a function of power, based on a neurobiological mechanism (the BAS and BIS). In contrast, the social distance theory begins with the interpersonal dynamics of dependence, and based on an interpersonal mechanism (social distance) and a cognitive mechanism (construal level) explains the effects of power. While the starting point of each theory is different, in both theories, goals play a central role in regulating behavior. Goals focus attention and motivate behavior and thus are an important consideration in the dynamics of the BAS and BIS and in construal level theory. For example, power holders can focus their undivided attention on important goals (Guinote, 2007; Overbeck & Park, 2006). Typically, goals that are associated with power roles guide the behavior of power holders (Overbeck & Park, 2006; Vescio et al., 2003).

While both the approach/inhibition theory (Keltner et al., 2003) and the social distance theory (Magee & Smith, 2013) can explain some phenomenon described above, there are two phenomena –desirability/feasibility and self-control – that generate different predictions according to each theory. Desirability and feasibility are domains that represent qualitatively different kinds of information in decision-making (Magee & Smith, 2013). While desirability encompasses all issues related to the outcome of a decision (whether desirable or undesirable), feasibility involves both the feasibility and the unfeasibility of the means to achieve those outcomes. The approach/inhibition theory generates a valence-based prediction. Increased BAS activation makes high-power individuals more selectively attentive to positive than negative information in both the desirability and the feasibility domains. In the desirability domain, power would increase attention to which outcome appears most rewarding, disregarding unpleasant aspects of that outcome, and in the feasibility domain, power would increase attention to the reasons one could in fact attain that outcome, disregarding relevant constraints (Keltner et al., 2003; Magee & Smith, 2013). On the contrary, the social distance theory predicts that powerful individuals will be more likely to be influenced by desirability, relative to feasibility. As the outcome is more superordinate and central than the means used to obtain it (Trope & Liberman, 2010).

The two theories also make opposite predictions with regards to self-control. Powerful individuals, according to the approach/inhibition theory, are guided more by their drive toward experiencing immediate rewards, relative to any fear of punishment, and, thus, are more likely than powerless individuals to indulge in impulsive behaviors (Hirsh, Galinsky, & Zhong, 2011). In contrast, the social distance theory seems to offer the opposite prediction. Power is positively

associated with self-control because power holders prioritize central and superordinate goals and neglect peripheral temptations (Magee & Smith, 2013).

Similar to the approach/inhibition theory (Keltner et al., 2003), goal focus is also important in the situated focus theory of power (Guinote, 2007). Both theories agree that the powerful show more uninhibited approach-related or goal-directed action and are less likely to be distracted by the environment. For example, compared to low power individuals, powerful are less influenced by environmental cues (Galinsky et al., 2008) and are more focused on their goal striving (Guinote, 2007; Slabu & Guinote, 2010). Interestingly, the means used to pursue those goals are, however, more variable according to the situated focus theory, including not only action-related means but more flexible strategies in line with individuals' state or situational affordances (Guinote, 2007, 2010). Indeed, power results in more flexibility and more variable behavior which in turn enhances the amount of power individuals are granted by observers (Guinote, Judd, & Brauer, 2002).

Similar to the power as control model (Fiske, 1993; Fiske & Dépret, 1996), the situated focus theory of power (Guinote, 2007) also claims that given the fact that powerful individuals have a higher level of control over their environment, they do not need to pay close attention to the environment. Furthermore, the situated focus theory of power (Guinote, 2007, 2010) reconciles seemingly contradictory findings in the stereotyping domain. For example, when stereotypes are salient (Fiske & Dépret, 1996) or are accessible through inner states (Weick & Guinote, 2008), power holders construe other individuals primarily through the lens of stereotypes. However, when information about individual traits is relevant to power holders' goals (Gruenfeld, Inesi, Magee, & Galinsky, 2008) or to their inner states (Weick & Guinote, 2008), then power holders rely more on individuating attributes. Thus, the situated focus theory

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of power emphasizes the notion that power magnifies the active, situated self (Guinote & Chen, 2017).

After describing some important similarities and differences across the major theoretical accounts of social power, it is important to examine empirical findings associated with this line of research. Therefore, in the next section, I will review the most prevalent causes and consequences of social power.

Antecedents and Consequences of Social Power

Antecedents of Social Power

Research has investigated various predictors of power acquisition, focusing primarily on factors such as personal competence, social network position, physical characteristics, and personality (Anderson & Brion, 2014). Below, I review these demographics and personality factors, cognitive factors, as well as structural factors that facilitate power acquisition.

Demographics and Personality Factors

Individuals' demographic and physical characteristics can contribute to the attainment of social power. In other words, characteristics such as age, sex, and race impact power ascriptions (Berger, Cohen, & Zelditch, 1972; Nemeth, 1986), which contribute to the development of power in groups. For example, men emerge as leaders in small groups more often than women do (Eagly & Karau, 1991). Similarly, people often believe someone to be more competent when the person is older or male (Berger, Rosenholtz, & Zelditch, 1980). More recent research has also demonstrated that demographic features such as physical attractiveness (Anderson, John, Keltner, & Kring, 2001), height (Judge & Cable, 2004), and body weight (Klein, Snyder, & Gonzalez, 2009), also contribute to power acquisition. Similarly, several studies show that the executive ranks are over-represented by tall men (Herpin, 2005; Judge & Cable, 2004).

In addition to demographic predictors of power acquisition, research has demonstrated that individuals also differ in the extent to which they seek to control outcomes and to dominate other people. For example, individuals differ in need for power over others (McClelland, 1976). While individuals high in the need for power enjoy being in positions of control, individuals low in the need for power actively avoid it (Winter, 1988).

Another important antecedent of social power is trait dominance. Dominance refers to motivated behavior aimed at increasing power in relation to others (Guinote & Chen, 2017). The assertiveness of dominant people creates the impression of competence, which in turn, affords power to the dominant individual. For example, Anderson and Kilduff (2009) found that dominant individuals were perceived by teammates as more competent, which led them to achieve higher rank and influence. Perceived competence is a consistent predictor of rank within social groups. Both task-related abilities and social skills are important resources because they tend to be highly valuable for collective success (Driskell & Mullen, 1990; Van Vugt, 2006).

Stable personality traits also predict which individuals acquire power. Within the Big Five model of personality (Costa & McCrae, 1995), extroversion is the trait that most contributes to power emergence (Ellemers, De Gilder, & Haslam, 2004; Judge, Bono, Ilies, & Gerhardt, 2002). Extraversion refers to individuals' propensity to experience positive affect and to be sociable, assertive, and energized by social interactions (Costa & McCrae, 1995). The extroversion trait has two facets, increased activity level and assertiveness, related to approach-related activation and wanting (Costa & McCrae, 1995). As is the case for dominance, the high frequency of output (activation) and conviction in one's desires and opinions (wanting) affords power, though extroverts do not necessarily seek power (Guinote, 2017).

Cognitive Factors

Cognitive factors suggest that social power is embedded within individuals and can be psychologically activated (Rucker, Galinsky, & Dubois, 2012). For example, Galinsky and colleagues (2003) demonstrated that merely asking participants to write about a time they had or lacked power (i.e., an episodic recall task) influenced participants' experienced power. Similarly, power was cognitively activated through semantic priming, such as having individuals unscramble sentences containing words related to power (e.g., authority, controls, dominates) or lacking power (e.g., complied, obey, submits) affect their sense of power (Smith & Trope, 2006).

Structural Factors

Pfeffer (1981) and Brass (1984) have argued that power is primarily a structural phenomenon. According to these authors, social power largely results from formal and informal sources derived from structural components of social networks. For example, individuals who occupy managerial roles at work have more social power (Georgesen & Harris, 1998), and report feeling more powerful, than those occupying subordinate roles (Dubois, Denton, & Rucker, 2011; Kraus & Keltner, 2009). One of the classic conceptualizations of the sources of power is French and Raven's (1959) power taxonomy. For example, one's position in a formal hierarchy (i.e., legitimate authority) is a structural variable that can lead to power.

Research on social networks has also demonstrated that the ability to control information, a valuable resource in organizations, contributes to power acquisition (Brass & Krackhardt, 2012). Brass (1984), for instance, found that network centrality is positively related to perceptions of social power and likelihood of promotions for individuals. By having access to diverse sources of information and being relied on to pass resources and information to others, individuals' may acquire social power as a function of their structural position.

As discussed in this section, there are various predictors of power acquisition, such as physical characteristics, personality traits, personal competence and social network position. However, regardless of how power was acquired, it is important to understand its consequences. This will be the focus of the next section.

Consequences of Social Power

The cognitive, emotional, and behavioral effects of social power have been studies by numerous scholars and have been approached through different theoretical perspectives. In this section, I will focus on reviewing the main effects of social power.

Power Corrupts

Some have suggested that "power corrupts" (Acton, 1887), that power goes to one's head and that the powerful are willing to hurt others to get what they want. Because powerful individuals by definition depend less on others and because they may be personally motivated to dominate others, they are vulnerable to a host of unpleasant biases (Overbeck, 2010). Indeed, power holders appear self-oriented, rather than other-oriented, focusing on their own perspective (Galinsky et al., 2006). Research has also shown power to be associated with failure to recognize others' points of view (Galinsky et al., 2006), with self-serving behavior (Chen, Lee-Chai, & Bargh, 2001; Ng, 1982), and with less distress and compassion for others' suffering (Van Kleef et al., 2008).

Consistent with this notion, powerful individuals are prone to exploiting others. In other words, power holders tend to take credit for the contributions of subordinates (Kipnis, 1972) and perceive their interpersonal relationships in instrumental terms (Gruenfeld et al., 2008). For instance, power was demonstrated to increase objectification – the perception of others as "tools" that may be used to achieve individual's goals (Keltner, Gruenfeld, Galinsky, & Kraus, 2010).

Similarly, powerful individuals were shown to discriminate more effectively than the powerless (Sachdev & Bourhis, 1991). People with more power often give themselves a higher share of rewards, while reporting feeling comfortable and satisfied with their decisions (De Cremer & Van Dijk, 2005; Sachdev & Bourhis, 1985). Furthermore, in a recent examination of the effect of power on ethical behavior, Lammers, Stapel, and Galinsky (2010) have found that while power holders are stricter in their ethical judgments of how others should behave, they are more lenient in following ethical norms themselves. One explanation for this behavior is that power holders feel a sense of entitlement in both judging others' behaviors and in deviating from ethical norms themselves.

Research has also suggested that power may lead to increased aggression, both physical and nonphysical (Fiske, 1993; Keltner, Capps, Kring, Young, & Heerey, 2001). It was demonstrated that threats towards one's power increase the propensity with which power holders engage in aggressive behaviors (Fast & Chen, 2009; Morrison, Fast, & Ybarra, 2009). Similarly, research on abusive supervision (Tepper, 2007), suggests that power holders engage in non-physical forms of hostility against subordinates, including derogation, explosive outbursts, and undermining behaviors (Tepper, 2000). However, aggression among the powerful is often the result of a threatened ego. For instance, Fast and Chen (2009) demonstrated that individuals with power become aggressive when they feel incompetent in the domain of power. The need to appear competent may also influence how one chooses to treat others, at least to the degree that the performance of these others has implications for how others will view the power holder (Joshi & Fast, 2013).

Power Liberates

Power does not, however, simply lead to negative and socially inappropriate behaviors. Since power holders are relatively free to pursue their own goals, power provides relative independence from others. This independence allows powerful individuals to express their true attitudes more freely (Anderson & Berdahl, 2002; Berdahl & Martorana, 2006). For example, powerful individuals are more likely to speak their mind (Tost, Gino, & Larrick, 2013). High power individuals were also more likely, than low power individuals, to openly express their opinions during group discussion (Berdahl & Martorana, 2006). Similarly, power allows people to feel and express positive affect (Keltner et al., 2003). For instance, powerful individuals expressed more positive emotions and less anger than did the less powerful (Berdahl & Martorana, 2006).

Building upon Keltner and colleagues' (2003) theory, Galinsky and colleagues (2003) proposed a positive relationship between social power and action. The authors found that in ambiguous situations power holders were more likely to act than those without power, a reflection of approach tendencies. Power promotes action across situations in line with one's goals, presumably without considering social norms or the consequences of one's behavior (Galinsky et al., 2003). For example, power holders move the annoying fan that disrupt their current task and take action in a social dilemma regardless of the prosocial or antisocial consequences (Galinsky et al., 2003). Further evidence of the influence of power on action tendencies comes from Anderson and Galinsky's (2006) investigation of risk estimates. The results suggest that power holders engage in riskier behaviors as a function of an increased optimistic outlook on the potential outcomes of risky actions.

Power Focuses the Mind

Does power corrupt or liberate to act freely? Perhaps both. Power focuses people on whatever high-level goals they want to follow, for good or ill (Fiske & Berdahl, 2007). On one hand, power provides relative independence from others and implies increased opportunities for accomplishing one's own goals (Fiske, 1993; Guinote, 2007). On the other hand, power entails a certain level of responsibility for others as those low in power depend (at least to some extent) on the power holder (Overbeck & Park, 2001; Sassenberg, Ellemers, & Scheepers, 2012). Thus, power holders are confronted with a tension between having more opportunities to pursue personal goals and being responsible for others' outcomes (Fiske & Berdahl, 2007).

Relative control over valued resources affords independence to the powerful and enables rewards and freedom. Social power leads to increased goal setting and pursuit (Locke & Latham, 2002, 2006), and focuses attention on what action are necessary leading to improved performance on particular tasks (Guinote, 2007; Overbeck & Park, 2006). Specifically, social power allows individuals to focus their attention by goal relevance and avoid distractions, which enables them to act effectively. For instance, powerful individuals took a faster decision about their preferred plan of action and initiated a goal directed action earlier than powerless individuals (Guinote, 2007). Similarly, in a dual-task context, powerful individuals appear to be more flexible. When the tasks are easy, they deal with them as powerless individuals do, but when the tasks are demanding, they prioritize one goal over the other (Schmid, Schmid Mast, & Mast, 2015).

It was also shown that power holders focus on their own ideas, rather than being influenced by others. This provides them independence from conformity, allows them to rely on their own social values, and permits them to exercise greater choice in their behaviors (Galinsky

et al., 2008). When power holders are primed with responsibility or attuned to their internal values, high-power individuals, compared to low-power individuals, engage in more prosocial behaviors. For example, since power holders are free to express their personalities, those with a tendency to be communal (oriented to mutual needs) treat power as an occasion for social responsibility. On the other hand, exchange-oriented individuals treat power as an occasion for self-focused behaviors (Chen et al., 2001; Chen & Welland, 2002).

Summary

Social power can induce selfish tendencies and lower concern about the thoughts and motives of others (Galinsky et al., 2006; Gonzaga, Keltner, & Ward, 2008; Van Kleef et al., 2008; Woltin, Corneille, Yzerbyt, & Förster, 2011), which seem to result from the independence power provides and the tendency to uninhibited action (Fast & Chen, 2009; Gonzaga et al., 2008). More recent evidence, however, has revealed that the effects of power are not uniform. If individuals are oriented towards others, for example, power leads to more prosocial behaviors (Blader & Chen, 2012; Côté et al., 2011; DeCelles, DeRue, Margolis, & Ceranic, 2012). In other words, how power holders construe their power in a given situation can explain differential effects on their behavior towards other individuals (Sassenberg, Ellemers, Scheepers, & Scholl, 2014).

When power is primarily construed as opportunity, the elevated control implied by power can be used to pursue one's own goals and interests. These individuals focus on how their power enables them to do what they find important— to achieve specific goals (Guinote, 2007, 2010) or to make certain decisions (Overbeck & Park, 2001). When, on the other hand, power is construed as responsibility, the outcomes of lower-power others become a concern of the power holder (Sassenberg et al., 2014). In these situations, power holders construe their power predominantly

in terms of achieving specific goals or making decisions on behalf of themselves or others.

People who see power as a responsibility sacrifice their time and resources to benefit others

(Chen et al., 2001; Sassenberg et al., 2014). For instance, it was demonstrated that managers

display self-sacrificing behavior to serve the goals and mission of the group (Hoogervorst, De

Cremer, van Dijke, & Mayer, 2012; Ratcliff & Vescio, 2013).

One known factor that effects whether power is construed as opportunity or as

responsibility emerge from cultural views about the meaning and purpose of power (Torelli &

Shavitt, 2010). According to Torelli and Shavitt (2010), having an individualistic orientation is

correlated with using power to benefit oneself at the expense of others. Horizontal collectivism,

on the other hand, was associated with a conceptualization of power in socialized terms (i.e.,

power is for benefiting and helping others). These findings can explain why many studies using

power priming (i.e., spontaneous power construal) in Western samples find that power is

associated with selfish behaviors (Sassenberg et al., 2014).

However, construing power as opportunity or as responsibility are not mutually

exclusive. In principle, the construal of power as opportunity and responsibility can both be

salient at the same time and, thus, can be considered as two orthogonal constructs (De Wit,

Scheepers, Ellemers, Sassenberg, & Scholl, 2017). Social power offers an opportunity to reach

one's own goals, but it also elicits the responsibility to consider how this might impact others

(Sassenberg et al., 2014). Indeed, the experience of both – more opportunities and more

responsibilities – are likely to be heightened when being in power (Scheepers, Röell, & Ellemers,

2015). But social power does not necessarily raise perceptions of both implications to the same

extent. Furthermore, it was demonstrated that the power construed as opportunity is more

attractive than power construed as responsibility (Sassenberg et al., 2012). This suggests that

individuals usually try to attain power due to its potential positive impact for the achievement of their own goals, rather than for the benefits it affords others.

While the majority of power research so far has addressed social power in terms of the opportunities it provides, current knowledge of power as responsibility is still limited (Scheepers, Ellemers, & Sassenberg, 2013). Future research should not only manipulate the experience of power, but also consider the construal of power within a given situation. This will help scholars to gain insights into the understanding of the mechanisms underlying the impact of power on selfish and prosocial behavior.

While the way power is construed may explain some inconsistent findings in power research, another important factor to consider is the temporal component of social power. While individuals might prefer overall stability in social power because it makes situations more predictable and reduces conflict (Halevy, Chou, & Galinsky, 2011; Ronay, Greenaway, Anicich, & Galinsky, 2012), power may change for many reasons. For instance, changes in task demands (Aime, Humphrey, DeRue, & Paul, 2014; Klein, Ziegert, Knight, & Xiao, 2006) or turnover (DeRue, Hollenbeck, Johnson, Ilgen, & Jundt, 2008), may prompt a reshuffling of the existing rank ordering within a team. Social power can also change because individuals may actively strive to climb the corporate ladder (Anderson & Kilduff, 2009; Barrick, Stewart, & Piotrowski, 2002; Bendersky & Shah, 2012; Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013). As individual's position within the organization change, he or she might also experience changes in perceptions of social power. These changes may thus lead to cognitive, emotional and behavioral changes over time.

Before further examining the current state of the power research through the temporal lens (which is the focus of this dissertation), it is important to understand the conceptualization

of time as a construct in organizational research. Thus, in the next chapter, I will first provide a short overview of the conceptualization of time. Then, I review the current state of the temporal research literature by providing an overview of the existing temporal views that help scholars examine the concept of time in both its objective and subjective forms.

CHAPTER 4: REVIEW OF TEMPORAL RESEARCH

For more than a decade, management scholars have repeatedly suggested that the adoption of a temporal lens is essential for the advancement of organizational science (Ancona, Goodman, Lawrence, & Tushman, 2001; Bluedorn, 2002; George & Jones, 2000; Roe, 2008; Shipp & Cole, 2015). This is not surprising since organizational processes and structures are built around daily working hours, recurring phases of individual and team-based activities, deadlines, and so on. With the passage of time, the meaning of various constructs and the factors giving rise to them can change (Rousseau & Fried, 2001). Therefore, it is essential to examine how relationships among constructs change over time and how perceptions of time influence individuals' thoughts and behaviors (Ancona et al., 2001).

However, despite its importance, it appears that organizational science is slow to adopt a temporal lens. This is likely because there is no single theory of time (Shipp & Fried, 2014). Researchers who have studied time often do so independently as a specific research stream, and as a result, time has been applied haphazardly rather than systematically to organizational topics. Before synthesizing the current state of the field, I first provide a short overview of the conceptualization of time as a construct in organizational research. Mainly focusing on the premise that individuals experience time in both objective and subjective ways (Ancona et al., 2001; Bluedorn & Denhardt, 1988; Fried & Slowik, 2004; Shipp & Cole, 2015). Then, to better understand the principles of temporality, I provide an overview of the existing temporal views that help scholars examine the concept of time in both its objective and subjective forms.

Conceptions of Time

Time can be conceived and classified in many different ways (Ancona et al., 2001; Bluedorn, 2002; McGrath & Kelly, 1986). The major dividing line runs between objective, clock-based, homogeneous, linear, measurable Newtonian time, also called chronos, and subjective, event-based, heterogeneous, cyclical, experience time, also called kairos. Prior research employs different terms to show the essential conceptualization of time, such as objective versus subjective, clock-based versus event-based, linear versus cyclical, and chronos versus kairos (Orlikowski & Yates, 2002).

Time can be viewed as an external process that regulates our lives. In that view, time is a clock that ticks away seconds, minutes, and hours. The conception of *objective time* supposes that time flows in a unidirectional, homogeneous, predictable, quantitative, absolute and universal way (Ancona et al., 2001; Lee & Liebenau, 1999; Shipp & Cole, 2015). According to this view, time is unidirectional (progressing always from the past towards the future); homogenous, predictable and quantitative (each second is the same as any other second which is measured and expressed in divisible numerical units); and absolute and universal (time is the same across all situations and individuals).

The opposing view conceptualizes time as a psychological phenomenon, a product of the norms, beliefs, and customs of individuals and groups. *Subjective time* is a nonlinear, heterogeneous, discontinuous, relative, and social phenomenon (Lee & Liebenau, 1999; Orlikowski & Yates, 2002; Shipp & Cole, 2015). According to this view, time is cognitively cyclical (thoughts may move between past, present, and future in any direction); heterogeneous (some moments pass more quickly than others); discontinuous (temporal flow is marked by means of significant events rather than continual sequence of minutes, hours, days and years);

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and relative and social (experiences can only be understood in context, as time acquires meaning in passing through collective interpretations).

Clock-based time is another version of objective time, which is discrete and can be divided into measurable, standardized, and context-free units, such a minutes, days, months and years. Clock-based time is also linear, and advances in a single direction (Ancona et al., 2001; Earley & Mosakowski, 2000). This conceptualization of time allows the present moment to be detached from the past and future, and for any phenomena to be viewed as distinct and isolated entity (George & Jones, 2000). Clock time is most pervasive in organizational practices, as reflected in the timing of quarterly earnings reporting, budget cycles, and most manufacturing operations.

In contrast to clock-based time, event-based time is a theoretical concept of time that refers to the association of time to others' activities that take place or have taken place in the past. According to this view, time is not independent of events, processes or phenomena. Thus, temporal dimensions—past, present, and future— are not seen as isolable entities or indistinguishable elements. In other words, individuals engage with the present based on memories of the past and anticipations of the future (Gephart, Topal, & Zhang, 2010; Schultz & Hernes, 2013). In contrast to the linearity of clock time, event-based time is cyclical, as events are often viewed as repeating over time. Event-based time can be further characterized by its consequence, duration, temporal location and rate (Mumford, 1963; Sorokin, 1943; Sorokin & Merton, 1937; Zerubavel, 1981). In other words, event-based time is characterized by the order in which the events took place, how long each event lasted, when it took place and how often the event occurred. Although clock-based time and event-based time are inherently different, they

are not incompatible. Indeed, scholars have called for a greater understanding of the interplay

between clock and event-based time in organization studies (Reinecke & Ansari, 2015).

Another distinction can be made between linear and cyclical time. Linear time implies

that time is directional, and that it is uniform in its passage (Gould, 1987). Time is seen

sequentially, as a series of events that has a beginning and an end, separate from each other and

irreversible. Linear time includes a passage from point A to point B in a moment in time. These

points have no connection between them, unlike in the cyclical understanding of time (Kallio &

Marchand, 2012). Cyclical time, on the other hand, is about the circular repetition. Cyclical time

assumes that time involves repetitive patterns, which are non-directional and continually

repeating themselves (Baert, 1992). If individuals think of time in a subjective sense, they are apt

to view time as cyclical. For example, the day/night cycle regulates our lives, telling us when to

sleep and when to wake, often because of environmental clues. In many cultures, these kinds of

cyclical patterns are infinitely repeatable and part of a recurring overall cycle of time.

Another distinction was introduced by the ancient Greeks who had two words for

marking the differences between the experiences of time: chronos and kairos. The linear

measurement of time is called chronological time, from the Greek word kronos (or chronos in the

English spelling). Chronos is the sequential time of clocks and calendars; it can be quantified and

measured. Chronos is linear, moving inexorably out of the determinate past toward the

determined future (Jaques, 1982). The Greeks had another way of measuring time: kairological

measurement of time. Kairos time regulate people's attention through their recognition of special

social and natural events. Kairos is circular, dancing back and forth without beginning or ending.

The chronos time is equivalent to objective time, which can be used to measure time duration of

any action. The kairos time represents the time of intentions and goals, and thus is similar in meaning to subjective time (socially constructed time) or event-based time.

In sum, time as a physical-natural phenomenon is commonly labeled as objective time, clock-based time, linear time or chronological time. Alternatively, time as a psychosocial phenomenon is normally called subjective time, event-based time, cyclical time or social time. These dichotomies in essence present different forms of objective and subjective time. While objective time can be measured by chronometric devices, such as clocks, subjective time can be accessed only through experience, by means of people's verbal descriptions and artifacts.

While adopting one side or the other of this dichotomy may offer researchers analytic advantages in their temporal studies of organizations, focusing on one side or the other misses seeing how temporal structures emerge from and are embedded in the varied social processes. Despite the diverging views among the scholars on the conception of time, the two views are compatible in practice (Bluedorn, 2002). For example, individuals rely on their experiences, as well as on clocks and calendars, when making decisions and performing their everyday organizational roles and tasks. Recent publications have sought to overcome the simple dichotomy between the conceptions of time, attesting to their complementarity (Roe, 2008; Shipp & Cole, 2015; Shipp & Fried, 2014). Therefore, recognizing the two faces of the phenomenon contributes to our understanding of the temporal variables and constructs in the organizational context.

Temporal Comparisons

Individuals not only differ in how they perceive and think about time, but also in the ways they engage in temporal comparisons. One particular type of temporal comparison involves evaluating our current selves against ourselves at another point in time (Albert, 1977). Two main

types of temporal comparisons of the self may be distinguished: (1) temporal past compressions, when the past is compared to the present, and (2) temporal future comparisons, when the present is compared to the future.

Temporal comparisons are useful in reducing uncertainty and encouraging self-improvement, especially when the comparison target is similar to the present self (Albert, 1977). For instance, comparing the present self to an unappealing past self can make individuals feel positively about their current self (Wilson & Ross, 2001), assuming they believe that they have changed for the better (Higgins, Strauman, & Klein, 1986; Markman & McMullen, 2003). On the other hand, thinking about an unappealing past self can be deflating (Beike & Niedenthal, 1998; Tomkins, 1987). Thus, the motivation to enhance a positive self-regard can lead individuals to distance themselves from past failures. Temporal future comparisons can also encourage individuals to work harder towards their goals by comparing the present self to an imaginary future self (Peetz & Wilson, 2013).

Temporal comparisons can also be classified in terms of comparison direction (i.e., upward or downward). Upward comparison occurs when comparing oneself with superior past (or future) selves, whereas downward comparison occurs when comparing oneself with inferior past (of future) selves (Wilson & Ross, 2000). Wilson and Ross (2000) examined retrospective reports of frequency of comparative thought and found that past temporal comparisons were least likely to be upward ("I used to be better"), while future temporal comparisons were most likely to be in the upward direction (Roese, 2005).

Models of Assimilation and Contrast

The nature of self-evaluations following comparative thought is determined not only by the direction of the comparison (upward or downward), but also by the comparison process

invoked (assimilation or contrast). The terms assimilation and contrast describe the direction of contextual influences on evaluative judgment. Collins (1996) argued that upward comparison could lead to either contrast or assimilation, depending upon whether the comparison is construed as indicating similarity to, or difference from, the comparison target. In other words, assimilation requires a self-evaluative movement toward the comparison target on the comparison dimension. Thus, focusing on similarities, positive contextual information results in a more positive evaluation and negative contextual information results in a more negative evaluation. On the other hand, when positive contextual information results in a more negative evaluation or negative contextual information results in a more positive evaluation, this leads to contrast effects. Both assimilation and contrast can occur at the same time, and the resulting subjective judgment will depend upon which process is stronger. Next, I describe assimilation and contrast effects in more detail, focusing on three models that are most relevant for making predictions about temporal changes in social power.

Inclusion/Exclusion Model (IEM)

Assimilation and contrast effects can be understood in terms of the inclusion/exclusion model (Schwarz & Bless, 1992). Evaluative judgements require a mental representation of a target and of a standard, against which the target is evaluated (Kahneman & Miller, 1986). According to this model, how descriptions of the target and standard are mentally represented determines whether assimilation or contrast effects occur. Specifically, information that is used in forming a representation of the target results in assimilation effects (including positive features in the representation of the target results in a more positive representation) and hence a more positive judgment, whereas including negative features results in more negative judgment. For example, thinking of a domain of life in which we are particularly happy increases general

life satisfaction, whereas thinking of a domain in which are particularly unhappy decreases general life satisfaction (Schwarz, Strack, & Mai, 1991).

Conversely, information that is excluded from the representation formed of the target results in contrast effects. There are two types of contrast effects: subtraction-based and comparison-based contrast effects (Schwarz & Bless, 2007). In subtraction-based contrast effect, information is excluded from the representation of the target. Excluding a positive attribute results in a less positive representation of the target and hence in a less positive judgment; conversely, excluding a negative attribute results in a less negative representation and hence a less negative judgment. Comparison-based contrast effects, on the other hand, rely on information that is included in the representation of the standard of comparison. If this information is positive, it results in a more positive representation of the standard, relative to which the target is evaluated less positively. For example, watching a TV show with highly attractive actors decreases the perceived attractiveness of one's own significant other (Kenrick & Gutierres, 1980). In contrast, if the information is negative, it results in a more negative standard, relative to which the target is evaluated more positively (Bless & Schwarz, 2010).

The factors that facilitate inclusion and exclusion are varied. According to Schwarz and Bless (2007), there are three main determinants of information use. In general, whether the information came to mind for irrelevant reasons, whether it represents features of the target, and whether the use of the information is conversationally appropriate, determines how it will be used (Schwarz & Bless, 2007). Some of the information that comes to mind may clearly be irrelevant to the judgment. If so, this information is not used in forming a representation of the target.

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Once the information was determined to come to mind for relevant reasons, whether it represents features of the target is considered. This decision is driven by the numerous variables known to influence categorization of information, including for example, the information's extremity (Herr, 1986) and typicality (Wänke & Bless, 2000), the malleability of the category (Hilton & Von Hippel, 1990) and the salience of category boundaries (Strack, Schwarz, & Gschneidinger, 1985). For example, numerous studies demonstrated that "non-distinct" information (high feature overlap) elicits assimilation effects, whereas "distinct" information (low feature overlap) elicits contrast effects (Stapel & Koomen, 2000; Stapel & Winkielman, 1998). Assigning the target to a category results in the inclusion of category consistent features in the representation of the target. Accordingly, the resulting target representation is more positive when the target is assigned to a positive rather than negative category. For example, Stapel and Koomen (2000) showed that cooperation gives rise to assimilation effects by imposing a shared categorization ("we"), whereas competition gives rise to contrast effects.

The final determinant of information use is conversational norms. Conversational norms prohibit redundancy, as people generally expect new information to be relevant and meaningful when communicating with others (Grice, 1975; Schwarz, 1994). Thus, information that has been previously reported is excluded from the representation of the target, resulting in contrast effects (Schwarz, 1994; Schwarz et al., 1991).

Information that passes all three of these "filters" is included in the representation of the target and results in assimilation effects. In contrast, information that fails any one of these filters is excluded from the representation of the target. However, this "left out" information may be used in forming a representation of the standard, resulting in contrast effects. This model involves a relatively automatic assimilation mode and a more effortful correction process

(Biernat, 2005). In this model, inclusion is the default mode, as long as the context includes information that is potentially relevant to the representation of the target.

In sum, the IEM describes assimilation and contrast effects as resulting from how people use contextual information. If the contextual information is determined to be irrelevant to the judgment at hand, it is simply ignored and not used as a standard of comparison. However, when the target and standard are part of the same superordinate category, standard-consistent information is included in representations of the target and assimilation occurs. On the other hand, if the target and standard are not part of the same category, standard-consistent information is excluded, and, assuming the standard is relevant in the comparison domain, representations of the target will contrast away from that standard-consistent information.

Building upon the inclusion/exclusion model (Schwarz & Bless, 1992, 2007), a number of researchers suggest that temporal comparison may also result from how people use contextual information (Broemer, Grabowski, Gebauer, Ermel, & Diehl, 2008; Gebauer, Broemer, Haddock, & Von Hecker, 2008). These scholars hypothesized that recent past selves are included in the current self-representation, leading to assimilation, whereas distant past selves are excluded from the current self-representation, leading to contrast effects. For example, Broemer and colleagues (2008) manipulated the subjective temporal distance between the present and a past self and demonstrated that people assimilated the current self to past selves they perceived to be recent, but contrasted the current self away from past selves they perceived to be distant.

Selective Accessibility Model (SAM)

The selective accessibility model (SAM) highlights how knowledge made accessible through comparison processes influence judgements (Mussweiler, 2003). According to this model, comparative thought involves three steps: (1) selection of a comparison standard, (2)

comparison of the standard and the self, and (3) evaluation of the self. After a standard has been

selected, the individual begins the comparison step by forming a quick automatic assessment of

similarities and dissimilarities between the self and the comparison standard. If the individual

initially views the standard as being similar to the self, he or she is likely to think of self-relevant

information that confirms their similarity to the target (i.e. similarity testing). On the other hand,

if the self and the comparison standard are initially perceived as different, then standard

inconsistent information about the self is more accessible (i.e. dissimilarity testing). In the final

evaluation stage, the individual makes a judgement about his or her own attributes, based on the

type of information about the self that was activated in the second stage. In other words, the

individual assimilates toward the comparison standard after accessing standard consistent

information, and contrast away from the comparison standard after accessing standard

inconsistent information (Mussweiler, 2003).

Selective accessibility mechanism depends on how knowledge of the target and standard

is categorized (Mussweiler, 2007). When the target and the standard are perceived as belonging

to the same category, similarity testing is more likely to occur. On the other hand, when the

target and the standard are perceived to belong to different categories, dissimilarity testing is

more likely to occur. Inducing participants to focus on similarities versus differences determines

whether they assimilate their judgements, feelings and behaviors toward context stimuli or

whether they contrast away from them. For example, Mussweiler, Rüter and Epstude (2004)

observed assimilation effects on self-evaluations when participants searched for similarities

between the self and a comparison other, but contrast effects when they searched for

dissimilarities.

While the selective accessibility model was specifically designed to explain social comparison processes (Festinger, 1954), scholars suggest that temporal comparison may also involve assimilation and contrast. Specifically, Markman and McMullen (2003) demonstrate that assimilation occurs when the past self is considered to overlap with the present self, and thus perceived as similar to the present self. Likewise, contrast effect occurs when the individual views the present self as fundamentally different from the past self. More recently, Hanko and colleagues (2010) showed that comparisons with past or possible future selves shape current self-evaluation and that the direction of this influence is determined by one's current comparison focus. Specifically, participants who focused on similarities assimilated current self-evaluations to the past self, whereas those who focused on dissimilarities contrasted current self-evaluations away from the past self. Thus, providing empirical support for the relevance of the selective accessibility model in temporal comparisons.

Reflection and Evaluation Model (REM)

The reflection and evaluation model (Markman & McMullen, 2003) was developed to assess assimilation and contrast effects following social, counterfactual and temporal comparisons. According to this model, two psychologically distinct modes of mental simulation operate in parallel during comparative thinking. The first is *reflection* mode which involves the individual vividly stimulating that information about the comparison standard is part of the individual's present standing. The likely outcome of this process is assimilation. The second process is *evaluation* mode, which is characterized by the use of information about the standard as a reference point against which to evaluate oneself or one's present standing. The likely outcome of this process is contrast.

The outcome of these parallel, yet independent, processes depends on the relative strength of these processes and is based on "the extent to which contextual features encourage one to think about the self and the standard together, as a single unit or entity (i.e. inclusion), or the extent to which one thinks about the self and the standard separately, as two distinct entities (i.e. exclusion)" (Markman & McMullen, 2003; p. 249). Similar to the contextual features described earlier, similarity between standard and target (or temporal closeness) will prompt the reflection process and assimilation, while distinctness of the standard will prompt evaluation and contrast.

Another key feature of the REM is that motivation and behavior are affected through the affective consequences of comparisons. Comparing the self to a distinct, upward target, might put one in "evaluation" model and generate negative affect. According to this model, the motivation to act, or not to act, is mediated by one's affective state and also depends on the goal that has been adopted for performing a given task (Markman & McMullen, 2007). Specifically, negative affect produces more persistence for task pursued to satisfy achievement goals, but lead to less persistence on tasks pursued merely for enjoyment. In contrast, positive affect creates more persistence for enjoyment tasks, but leads to less persistence for achievement tasks (Markman & McMullen, 2007).

Comparison of Assimilation and Contrast Models

The three models outlined above describe the basic processes that lead to assimilation and contrast effects. The inclusion/exclusion model (IEM) is concerned with how contextual information is used. Inclusion and exclusion are determined, primarily, by whether the target and the standard belong to the same superordinate category. The selective accessibility model (SAM), on the other hand, is concerned not with how information is used, but instead with what

kind of information about the target is made accessible by comparison processes. When a target

and standard are determined to be similar, observers seek further evidence that is consistent with

that initial observation. Last, the reflection and evaluation model (REM) integrates aspects of

both the inclusion-exclusion model (IEM) and the selective accessibility model (SAM) and is

focused primarily on describing how assimilation and contrast arise from two parallel modes of

thinking: reflection and evaluation. These processes, in turn, make different kinds of information

accessible and result in assimilation or contrast, which prompt particular patterns of motivation

and behaviors.

      While there are a number of similarities between the inclusion/exclusion model (IEM)

and the selective accessibility model (SAM), the models diverge regarding the interpretation of

how target representations come about. The IEM posits that mental representations of the target

or standard are constructed on the spot by either including or excluding salient contextual

information. However, according to the SAM, target representations are based on accessible

features of the target that are made salient by direct comparison to the standard and subsequent

hypothesis testing processes (i.e. similarity or dissimilarity testing).

      When comparing REM and SAM, there are similarities between the reflection mode of

REM and the similarity testing notion in SAM, as both processes are likely to lead to

assimilation. However, one important distinction between the two processes is that the

information the individual comes up with in reflection mode of REM may be imaginary rather

than selected from an assortment of facts about the self.

      Unlike the IEM and the SAM, the REM attempts to explain how assimilation and

contrast effects can occur simultaneously and was particularly developed to assess assimilation

and contrast effects following both social, counterfactual and temporal comparisons. For

example, evaluating one's own success in college compared to another student who is similar to the self would activate knowledge of one's own success (Mussweiler, 2003). However, engaging in this comparison also makes the other student an upward comparison standard, which could bring to mind that an individual did not live up to the other student's success. In this example, both similar and dissimilar information is accessible via competing hypothesis testing processes. While the SAM is not completely clear on how assimilation and contrast can occur when both kinds of information are equally available, the REM would suggest that assimilation or contrast will result from the tendency to engage in one of two parallel simulation styles: the tendency to vividly simulate being like the successful student or the tendency to "step back" and compare the imagined self to the present self. Interestingly, these mental simulation styles can operate independently of selective accessibility mechanisms.

Summary

There are two predominant conceptualizations of time: *objective time* (most commonly represented by the passage of clock time) and *subjective time* (experience based on psychological representation of time). That is, individuals' retrospections of the past and anticipations of the future provide a context for their current experiences. Next, I discussed temporal comparisons and how the nature of self-evaluations following comparative thought is determined not only by the direction of the comparison (upward or downward), but also by the comparison process invoked (assimilation or contrast). Last, I focused on three main models of assimilation and contrast that are most relevant for making predictions about temporal changes. In the next chapter, I will examine the current state of the social power research through the temporal lens.

CHAPTER 5: VIEWING SOCIAL POWER THROUGH A TEMPORAL LENS

Given increasing awareness of time's critical role in organizational phenomena, it is essential to assess the current position of time in the social power literature. While the phenomenon of social power is inherently dynamic (individuals experience both objective and subjective changes in social power throughout their career), the vast majority of power research to date examined this dynamic phenomenon at a point in time. This can be problematic because it can lead to ambiguous results and questionable inferences in our accumulated knowledge in this important area of research (Ployhart & Vandenberg, 2010).

Current State of the Power Research

In order to further understand the current state of the power literature, I first examined existing studies and determined the extent to which prior research on social power has accounted for time when testing theoretical predictions. Objective time, for instance, can be incorporated into power research by repeatedly evaluating both social power and the outcome of interest at two or more points in time. Such a study would be considered as having adopted a temporal lens because it uses the objective passage of clock time as the medium through which dynamic relationships are explored (Cole, Shipp, & Taylor, 2016). Similarly, a subjective time lens can be incorporated into power research, for example, by considering individual's current power perceptions, as well as recollected past power experiences or anticipations regarding future power roles.

To locate all relevant studies on social power, I employed a comprehensive search strategy (up until October 2018). I searched major academic databases (e.g., PsycINFO, Google

Scholar, Web of Science) for peer-reviewed manuscripts that included the term social power in their title or abstract. I complemented this broad search with several targeted strategies including a backward search of reference lists of recent review articles and meta-analyses on power (e.g., Anderson & Brion, 2014; Bunderson & Reagans, 2011; Fiske, 2010; Galinsky, Chou, Halevy, & Van Kleef, 2012; Galinsky et al., 2015; Hirsh, Galinsky, & Zhong, 2011; Sturm & Antonakis, 2015), as well as a forward search of citations to highly-cited papers on power (e.g., Keltner et al., 2003; Magee & Galinsky, 2008; Magee & Smith, 2013).

My review indicates that the power literature has yet to adopt a temporal lens, with only seven academic papers (7 of 189) directly accounting for temporal factors. Of these seven studies, three studies examined longitudinal relationships (Liu & Srivastava, 2015; Sivanathan et al., 2008; Wood & Harms, 2017) through an objective time lens. For example, Sivanathan and colleagues (2008) demonstrated the people over-react to an increase in power, but that they react appropriately to a loss in power. Liu and Srivastava (2015) demonstrated that cognitive and behavioral shifts arising from the experience of power are more likely to have lasting consequences when they originate right after entry to a new organization, than when they occur during more stable career periods. Last, Wood and colleagues (2017) examined how personality traits could forecast changes in social power and how social power could forecast changes in personality traits over the course of a year in social fraternities and sororities. They found that communal, other-serving characteristics, predicted increases in power over time, but did not seem to increase in response to having power.

My review also identified four studies that addressed the passage of subjective time to some degree (Moon & Chen, 2014; Pettit et al., 2010; Scheepers et al., 2015; Weick & Guinote, 2010). For example, Pettit and colleagues (2010) examined the effects of prospective gain and

loss in status. Weick and Guinote (2010) studied the effect of power on time predictions, demonstrating that power consistently led to more optimistic and less accurate time predictions. Similarly, Moon and Chen (2014) demonstrated that power increases perceptions of available time, and that perceived control over time underlies this effect. Last, Scheepers and colleagues (2015) examined cardiovascular markers of motivation and demonstrated that when power holders could possibly lose their privileged position, they showed a maladaptive cardiovascular response pattern. While those studies provide some interesting insights, no research to date directly examined how the recollection of past social power or the anticipation of future social power influenced current power perceptions and subsequent behaviors.

Based on the review above, the power literature has yet to adopt a temporal lens. This is surprising, as numerous scholars stated that explicit consideration of time-related issues will result in better theory building and a richer understanding of the phenomena of interest (George & Jones, 2000; Maxwell & Cole, 2007; Mitchell & James, 2001; Ployhart & Vandenberg, 2010). Thus, I believe that incorporating objective and subjective time can change the way social power is studied, offering interesting new research perspectives. Next, I describe *how* the study of time can be incorporated into other content areas, such as social power, focusing on theoretical and methodological choices that should be carefully considered.

Incorporating the Study of Time into the Social Power Research

While there is no overarching theory of time (Shipp & Fried, 2014), there are a number of existing temporal views that can help incorporate the study of time into the social power research. One way to incorporate the objective passage of time into the power research is by employing a longitudinal design. A study is considered longitudinal when it emphasizes construct change and contains a minimum of two repeated observations (Chan, 1998; Ployhart &

Vandenberg, 2010; Ployhart & Ward, 2011). Using a longitudinal design incorporates the objective time component into the research, which helps establish time sequence. However, in order to establish causal inference both the independent and the dependent variables need to be measured in multiple time points (Mitchell & James, 2001).

Another article on time and theory building outlined specific dimensions of time to consider in theory building (George & Jones, 2000). The authors argue that the past, present and future are not isolated, but are artificial constructs as people's experiences in the present are connected to their past and future and cannot be separated from them. Furthermore, the recollected past and the anticipated future may have direct effects on a current outcome. For example, when assimilation occurs, an expectation of an upcoming event leads people to be happier in the present moment, even before the event occurs (Loewenstein & Elster, 1992; Mitchell, Thompson, Peterson, & Cronk, 1997). Therefore, given that the subjective experience of time often differs from objective clock time, people's experiences at work are also influenced by their subjective perception of time. When considering changes in social power, it is thus important to note that while an actual change in social power (i.e. promotion) might already occurred in the past, the subjective experience that is associated with this change might have effect beyond the objective time of the change.

Another aspect of time experience is that of time aggregations, which are the ways people choose to aggregate their experience of time in order to give it meaning. The length of time a person chooses to bracket the phenomenon in question will affect the meaning attributed to it, and its relationships to other phenomena. For example, when considering changes in social power, an individual might aggregate time based on when the individual actually experienced change in his or her social power. In other words, the individual can think of his or her job

satisfaction before or after receiving a promotion. Furthermore, promotion expectations can also affect job satisfaction as individuals who believe a promotion is possible in the future report higher levels of current job satisfaction (Kosteas, 2011).

The dimension addressing the duration of steady states and rates of change pertains to how long a particular state lasts or is stable over time (i.e. duration), and how long it takes to change from one state to another (i.e., rate of change; George & Jones, 2000). Depending on these characteristics of the change, individual's expectations and behaviors under investigation might be affected. For example, the frequency with which individuals experience change in social power will affect how they feel about the change or how they choose to react to anticipated changes going forward (Kosteas, 2011).

Summary

In the present chapter, I first demonstrated that the power literature has yet to adopt a temporal lens, with only seven studies incorporating elements of objective or subjective passage of time into their study designs. Next, I discussed how the study of time can be incorporated into other content areas in general and social power in particular, focusing on theoretical choices that should be carefully considered. In the next chapter, I will move to the discussion of temporal model of social power, the focus of this dissertation.

CHAPTER 6: A TEMPORAL MODEL OF SOCIAL POWER

A temporal model of social power incorporates time in two ways. First, by considering the objective passage of time, the model allows the basic relationships of social power and the outcomes of interest (Figure 1a) to be replicated in each time period (past, present, and future; Figure 1b). Second, by considering the subjective passage of time (individuals' current recollections of the past and anticipations of the future), the relationships between social power and the outcomes of interest can be extended to incorporate perceptions of other time periods (Figure 1c). Taking these two extensions together, we obtain a temporal model of social power that incorporates both the actual passage of time and the subjective passage of time in past, present, and future time periods (Figure 2). To illustrate the temporal social power model, I focus on one behavioral outcome of interest: prosocial behavior. As I will discuss later, the temporal model of social power can be extended to include other cognitive, affective and behavioral outcomes.

Before introducing the temporal model of social power, we need to establish the basic relationships within the model. First, we will verify the relationship between objective and subjective power. Second, we will confirm the relationship between social power and prosocial behavior. Once these relationships are established, I will illustrate the temporal model of social power by focusing on the affective and the cognitive responses that individuals engage in after experiencing change in social power. Due to the scope and the complexity of the relationships examined in this model, the main focus of this dissertation is going to be on individuals' *subjective* reactions to *objective change* in social power.

Social Power: Objective and Subjective Phenomenon

Research has suggested that social power impacts individuals' thoughts and behaviors through the psychological experience of power it produces (Galinsky et al., 2003; Galinsky et al., 2015; Rucker & Galinsky, 2017). Indeed, researchers differentiate between the objective experience of power and the psychological experience of power. Objective experience of power refers to "relative control over outcomes, resources, preferences, or opportunities that are valued by another person" (see Chapter 2). Psychological experience of power, on the other hand, refers to a power holder's *subjective feelings* of potential relative control over these outcomes, resources, preferences or opportunities that are valued by others.

Many studies consider the consequences of objective levels of power. These objective levels of power are, in fact, external indicators of the actual social power a person possesses. Power researchers have also studied how the subjective feelings of power influences individuals' behavior (Anderson & Berdahl, 2002; Galinsky et al., 2003; Keltner et al., 2003). Perceptions of social power can operate independently of actual levels of social power. That is, perceptions of one's own power might be an imperfect match with these external power indicators (Anderson & Spataro, 2005). It was demonstrated that subjective feelings of power may diverge from the individual's structural power (Proell & Sauer, 2011). For instance, investment choices were affected by individual's subjective perceptions of power, but not by his or her objective levels of power (Proell & Sauer, 2011). These results demonstrate that when objective power and subjective perceptions of power diverge, subjective perceptions of power are a more significant predictor of action. However, Tost and colleagues (2013) found that the effects of subjective power only emerged when leaders held a formal leadership role (Tost et al., 2013). Therefore, to

reliably understand how social power impacts behavior, we must look not only at actual power, but also at individuals' perceptions of his or her social power.

As the evidence above indicates, the relationship between objective social power and subjective perceptions of social power is complex. According to Anderson and colleagues (2012), although individuals in low power positions may often have a relatively low perceptions of power, this may not always be the case (e.g., security guards and reimbursement clerks). However, based on the evidence above, I would argue that there is an overall positive relationship between individual's objective social power and his or her subjective perceptions of social power (Anderson & Berdahl, 2002). Therefore, I hypothesize the following:

> **Hypothesis 1:** *Current social power is positively related to individuals' current perceptions of social power.*

Social Power and Prosocial Behavior

Prosocial behaviors are acts that promote or protect the welfare of individuals, groups, or organizations (Brief & Motowidlo, 1986). These behaviors may be intended to benefit coworkers, customers, or the organization as a whole. In organizations, prosocial behavior may be either role-prescribed (i.e. in-role behavior) or discretionary (i.e. extra-role behavior), and there may or may not be rewards for engaging in prosocial behavior (Bolino & Grant, 2016; Organ, 1997; Van Dyne & LePine, 1998).

Organizational scholars have traditionally focused on organizational citizenship behaviors (OCBs) as prototypical prosocial actions. OCBs describe extra-role behaviors that contribute to effective organizational functioning, but are not explicitly required (Organ, 1988). It includes behaviors such as voluntarily helping one's supervisor or coworkers or speaking up to improve the way in which organizational work is organized. OCBs can be classified into two

different categories: affiliative versus challenging behaviors (Van Dyne, Cummings, & Parks, 1995). Affiliative citizenship behaviors are actions seeking to maintain the status quo by promoting and supporting existing relationships at work. This includes providing help to coworkers and taking initiative during overtime work (Van Dyne et al., 1995). In contrast, challenging citizenship behaviors are actions aimed at modifying the status quo by voicing problems and taking charge by implementing change within the organization (Van Dyne & LePine, 1998).

In addition to OCBs, there are other prosocial behaviors that are studied by organizational scholars: mentoring, knowledge sharing, and brokering introductions (Bolino & Grant, 2016). Mentoring qualifies as a prosocial behavior because it represents a contribution to the protégé's learning and development (Allen, 2003; Bear & Hwang, 2015; Noe, Greenberger, & Wang, 2002). Knowledge sharing focuses on providing information to facilitate problem-solving, creativity, and innovation (Gagné, 2009; Wang & Noe, 2010). Last, brokering introductions enables employees to help others expand their networks, opportunities, and perspectives (Obstfeld, 2005; Van Hoye, 2013).

However, engaging in prosocial behaviors are often characterized by promoting power inequalities. Relative to individuals with high power, low power individuals have fewer resources and opportunities and thus might be expected to be more focused on their own welfare, prioritizing their own needs over the needs of others. Yet, research has shown that lower power individuals are *more* cognizant of others in their social environment and more likely to display other-oriented nonverbal behaviors (Kraus & Keltner, 2009; Kraus, Piff, & Keltner, 2009). This is because low power individuals are more attuned to the social context and invested in their interactions with others (Piff, Kraus, Côté, Cheng, & Keltner, 2010). For example, low power

individuals reported greater investment in a relationship with a stranger and higher levels of compassion in response to that stranger's disclosure of suffering (Van Kleef et al., 2008). These findings suggest that lower power individuals will act in a more prosocial fashion and do so because of an increased orientation to the needs of others.

Furthermore, research on cross cultural cooperation also supports the idea that low power individuals will demonstrate more prosocial tendencies than individuals with high power. Henrich and colleagues (2001) showed that cultural variation in generosity, derived from differences in interdependence, increases people's generosity (Henrich et al., 2001; Oyserman & Lee, 2008). In other words, individuals from more dependent cultures, where resources are scarce, gave more money to an anonymous stranger than did individuals from more independent cultures. Since lower power individuals have fewer resources and are more dependent on others, they should engage in more prosocial behavior than their high-power counterparts. That is, whereas high power individuals can use their control over resources to buffer themselves against life's disruptions, low power individuals are more reliant on the strength of their social bonds and, as a consequence, are more prosocial.

While the majority of research has focused on antisocial consequences of social power, experiencing power can also be associated with relatively more positive and even prosocial consequences, such as altruism (Chen et al., 2001) and OCBs (Seppälä, Lipponen, Bardi, & Pirttilä-Backman, 2012). However, these positive outcomes are contingent on whether power holders focus their attention on others (e.g., communally oriented) or identify with their work units, respectively. In a recent paper, Tost and Johnson (2019) further demonstrated that power can be construed as responsibility, rather than as opportunity. According to this research, sense of responsibility was driven by two mechanisms: (1) norms about the benevolent use of power in

organizations and (2) awareness that subordinates are dependent on the powerholder. Under these circumstances, power can induce feelings of solidarity, which in turn leads powerholders to engage in behavioral solidarity (behaviors that prioritize subordinates' interests over self-interests). However, these assumptions might not apply equally to all individuals. According to Torelli and Shavitt (2010), vertical individualistic cultures (e.g. United States) are characterized by people attempting to be unique and seeking power through competition. Therefore, having a vertical individualistic orientation is correlated with using power to benefit oneself at the expense of others. These findings can explain why many studies using power priming (i.e., spontaneous power construal) in Western samples find that power is associated with selfish behaviors (Sassenberg et al., 2014). Therefore, for the purposes of this dissertation, I will assume that power is construed as opportunity and thus is more likely to exhibit a negative relationship with prosocial behavior. Therefore, I hypothesize the following:

> **Hypothesis 2**: *Current social power is negatively related to individuals' current prosocial behavior.*

Temporal Model of Social Power

Social Power and the Objective Passage of Time

Viewing social power over the actual passage of time portrays changes in objective levels of social power, changes in subjective perceptions of social power and different levels of outcomes of interest in the past, present, and future. Specifically, individuals have a present level of control that dictates their current social power, but this power is within the context of past and future power. Similarly, perceptions of current power affect the individual in the present time period, but these perceptions are within the context of past and future evaluations of the

individual's power. Finally, outcomes such as prosocial behavior are the result of social power in the present, but these outcomes are within the context of past behaviors and future behaviors.

By examining the effects of social power over time, researchers can provide a deeper understanding of the psychological processes involved. For example, the effect of social interaction between a manager and a subordinate could be examined during the time it takes to evoke a behavioral response from the subordinate. However, this approach ignores that the individual's willingness to behave in a certain way towards each other is built on multiple interactions between the individuals over time. By widening the temporal lens, we can observe how the relationship might take on a broader range of aims and develop beyond the initial organizational roles (i.e. manager and subordinate).

Furthermore, events that seem to have ended may live on in subjective experience. The perceptions of individual's social power from previous time periods might influence how these individuals currently perceive their power role within the organization (see Figure 1b). For example, Wilson and Ross (2001) argue that subjectively close past selves continue to have direct implications for present identity. In contrast, subjectively distant past selves are remembered more critically (Ross & Wilson, 2002; Wilson & Ross, 2001, 2003). Those psychologically distant past selves no longer have the power to directly flatter or taint current selves, thus individuals are motivated to downplay those distant selves and highlight the degree to which one has improved. Therefore, current subjective perceptions of power are more likely to be influenced by more recent past perceptions.

Social Power and the Subjective Passage of Time

Viewing social power over the subjective passage of time portrays the effect of other time periods on current behavior. Specifically, viewing social power over the subjective passage of

time adds another level of complexity by introducing retrospected and anticipated versions of social power (see Figure 1c). That is, within any given moment, individuals have current perceptions of their social power (i.e. subjective perceptions of social power), but also recall their perceptions of power in the past (i.e. retrospected perceptions of social power) and what they expect their power to be in the future (i.e. anticipated perceptions of social power).

While individual's subjective perceptions of social power are his or her current perceptions of social power at that moment in time, retrospected perceptions of social power are the perceptions than the individual recalls from the past. However, these recollections are experienced in the present moment. When considering retrospected perceptions of social power, it is important to emphasize that these retrospected perceptions might not give an objective representation of individual's actual social power or even individual's actual perception of his or her social power during that time period. In fact, these reconstructions of past events might be influenced by: idealizations, mood-congruent recollections or even social representation of how individuals believe they are expected to feel or act in similar situations (Bower, 1981; Flick, 1998). As mentioned earlier, any remembrance of past events is colored by the present situation and thus continually subject to cognitive revisions. Nevertheless, this type of recollection signifies the present meaning a person's earlier experience has for him or her in the current moment.

Anticipated perceptions of social power, on the other hand, are the social power that an individual expects to have in the future. Similar to retrospected perceptions of social power, anticipated perceptions of social power are experienced in the present moment and can influence the individual's present behavior. Thus, anticipation of social power can influence individual's current behavior even before the actual change in social power occurs. This is based on the idea

that individuals draw benefits not only through direct experiences, but also through anticipation

of future events (Loewenstein & Elster, 1992). Further discussion of the effects of *anticipated*

perceptions of social power is beyond the scope of this dissertation.

Since social power can change over time, individuals can experience changes in their

subjective perceptions of social power. These changes, in turn, might trigger modifications to the

retrospected and/or anticipated perceptions of social power at any moment in time. Therefore,

focusing only on individual's current social power, without also considering a recent change in

individual's perceptions of social power (both retrospected and anticipated), would provide an

incomplete picture of how social power affects current behavior. One way to examine changes in

social power is by examining whether or not an individual has arrived at their current power

level through a previous gain or loss in social power.

Changes in Social Power: Power Gain and Power Loss

Research suggests that people generally find it attractive to be in a position of power.

Powerful individuals are more motivated, have greater confidence, and achieve more (Brehm &

Self, 1989; Henry & Sniezek, 1993). The sense of control afforded by social power was

demonstrated to reduce levels of the stress hormone, cortisol, and was associated with

lower reports of anxiety (Sherman et al., 2012). Therefore, individuals are motivated to work

hard in order to achieve these benefits of power gain.

Although power is often self-reinforcing, individuals frequently lose power (Anderson &

Brion, 2014). The ability of power holders to maintain control over resources is in part a function

of the scarcity of the resources available to individuals (Bacharach & Lawler, 1980; Pfeffer &

Salancik, 1978). For instance, in resource-rich environments, power holders retain their power

for longer (Harcourt & de Waal, 1992). However, power holders can also lose their power due to

conflict within the team (Greer, Caruso, & Jehn, 2011) or personal characteristics, such as gender (Koenig, Eagly, Mitchell, & Ristikari, 2011). Similarly, Brion and Anderson (2013) demonstrated that power holders lost power when they experience difficulty in managing their interpersonal relationships. These authors found that power holders who overestimated the strength of their relationships with others (i.e., held illusions of alliance) acquired fewer resources and ultimately lost their power (Brion & Anderson, 2013). Furthermore, low power can contribute to a sense of distrust (Ross & Wilson, 2002) and reduce attentional flexibility (Guinote, 2007). Therefore, individuals are reluctant to admit that they have lost power (Sivanathan et al., 2008), suggesting that they will resist power losses and persist in believing that they have social power, even when they do not.

Therefore, previously held power can act as a reference point for temporal comparisons. Temporal comparison involves evaluating our current selves against ourselves at another point in time (Albert, 1977). Temporal comparisons are useful in reducing uncertainty and encouraging self-improvement, especially when the comparison target is similar to the present self (Albert, 1977). For instance, comparing the present self to an unappealing past self can make individuals feel positively about their current self (Wilson & Ross, 2001), assuming they believe that they have changed for the better (Higgins et al., 1986; Markman & McMullen, 2003). On the other hand, thinking about an unappealing past self can be deflating (Beike & Niedenthal, 1998; Tomkins, 1987). Thus, the motivation to enhance a positive self-regard can lead individuals to distance themselves from past failures.

The Effect of Past Power on Current Power Perceptions

After experiencing power gain, transitioning from low power to high power, the individual will compare his or her current *high* power to a past self, when he or she had lower

power. This comparison process activates an information search regarding the similarity or dissimilarity of the current and past selves (Mussweiler, 2003; 2007). If the current self and the past self are determined to be *similar*, the individual will access information about the past self that is consistent with the current self. If the current self and the past self are determined to be *dissimilar*, the individual will attempt to confirm this hypothesis by accessing information about the past self that is inconsistent with the current self. This accessible information thus becomes the basis of judgment. As previously discussed, assimilation will occur when the accessible information is consistent with the current self, and contrast will occur when the information is inconsistent with the current self (Mussweiler, 2003; 2007).

When the individual views the current self as fundamentally *different* from the past self, it results in contrast judgments. Focusing on how the current high-power situation is different from the past low-power situation will prompt using the recalled memory as a reference point for evaluating the present (Baldwin, Biernat, & Landau, 2015). One of the psychosocial functions of autobiographical remembering is to direct current and future behavior (Bluck, Alea, & Demiray, 2010; Bluck, Alea, Habermas, & Rubin, 2005). This directive function involves making sense of the past information by providing flexibility in the construction and updating of rules that allow individuals to comprehend the past and to predict present and future outcomes (Bluck et al., 2005). As a result, by focusing on the differences, the individual will imagine low overlap between his or her current and past self, and bring to mind self-attributes that are inconsistent with the current self. By remembering past situations in which the individual had low power or perceived his or her power to be lower, the individual will contrast his or her past self away from current self. Thus, I theorize that the contrast effect of *low* past power will result in higher perceptions of current power (see Figure 3b).

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On the other hand, individuals can focus on the similarities between their current and past selves. Focusing on how the current high-power situation is *similar* to the past low-power situation will produce assimilation judgments (Hanko et al., 2010; Mussweiler, 2003). Specifically, assimilation occurs when the past self is considered to overlap with the current self, and thus perceived as similar to the current self (Markman & McMullen, 2003). As a result, individuals only bring to mind information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves. Furthermore, since the past memories that are activated are similar to the current power level, the resulting effect on individuals' perceptions of his or her current power is consistent with what we would expect of individuals with the same power level. In other words, individuals who assimilate their past self to their current power role have no reason to adjust their perceptions away from what is expected of them, and thus low past power will lead to lower perceptions of current power (see Figure 3a).

Similar logic can be applied to power loss. After experiencing power loss, the individual will compare his or her current *low* power to a past self, when he or she had higher power. By focusing on how the current low-power situation is *different* from the past high-power situation, the individual will engage in contrast judgements (Hanko et al., 2010). As a result, the individual will imagine low overlap between his or her current and past self, and bring to mind self-attributes that are inconsistent with the current self. By remembering past situations in which the individual had high power or perceived his or her power to be higher, it will lead to lower current power perceptions in comparison. Therefore, I theorize that the contrast effect of high past power will lead to lower current power perceptions (see Figure 3b).

On the other hand, assimilating the past self to low-power current self would result in focusing on the similarities between the past and the current situation (Hanko et al., 2010). As a

result, individuals only bring to mind information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves. The resulting effect on individuals' perceptions of his or her current power is consistent with what we would expect of individuals with the same power level. Therefore, I theorize that the assimilation effect of high past power will lead to higher perceptions of current power (see Figure 3a).

To summarize, I hypothesize a two-way interaction between past power and contrast versus assimilation judgements. By assimilating, individuals recall information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves (Markman & McMullen, 2003; Mussweiler, 2003; 2007). Thus, individuals who assimilate have no reason to adjust their perceptions away from what is expected of them given their current power level. Therefore, assimilation judgements drive the effect of past power to be in the same direction as the effects of current power (see Figure 3a). On the other hand, when individuals engage in contrast judgments, they recall information that is inconsistent with their current power level and imagine a low degree of overlap between their current and past selves. As a result, perceptions are inconsistent with their current power level will be activated and further influence current perceptions. Therefore, contrast judgements drive the effect of past power to be in the opposite direction compared to the effects of current power (see Figure 3b).

The Effect of Past Power on Current Emotions

Changes in social power not only affect how powerful the individual feels, but also has a direct effect on his or her emotional reactions. Research has shown that recall of past events can influence individual's current emotional experiences (e.g., LeDoux , 1992; Schwartz , Weinberger, & Singer, 1981). In other words, remembering the circumstances in which an emotion was experienced may cause individuals to experience a similar, but new emotion in the

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present. For example, Andersen and Baum (1994) illustrated this process in a study showing that people experienced negative emotions when they were about to meet a stranger who looked slightly similar to a past significant other with whom they had had negative experiences. This past experience influence people's current appraisal and emotional experience because the new and the old person shared some similar characteristics.

According to the appraisal theory (e.g., Scherer, Schorr, & Johnstone, 2001), emotions provide essential information about the relation between environmental events and people's goals. Remembering past emotions can help individuals to make decisions about the future (Levine, Safer, & Lench, 2006). For example, people choose to seek out or avoid particular experiences based in part on their memories of how similar experiences made them feel. In general, individuals try to maintain or reinstate circumstances that evoked positive emotions and to change or avoid circumstances that evoked negative emotions (Breckler, 1994).

According to Keltner and colleagues (2003), elevated social power activates the approach system, which in turn is associated with positive emotions. Berdahl and Martorana (2006) provided an empirical support for Keltner's propositions by demonstrating that elevated power increases positive emotions (such as happiness). Similarly, Smith and Hoffmann (2016) demonstrated that participants were happier and in a better mood when in high-power positions, and less happy and in a worse mood when in low-power positions. However, after experiencing power gain, if individuals contrast their past low-power away from their current high power, this might not only affect how powerful they feel, but also directly affect their emotional response to power gain. In other words, as individuals recall past situations in which they had low power or perceived their power to be lower, their current perceptions of power will be higher in comparison. Furthermore, current high power is associated with high level of positive emotions,

such as happiness. Therefore, I theorize that the contrast effect of low past power will be associated with more happiness in the present (see Figure 3b).

On the other hand, after experiencing power gain, individuals can focus on the similarities between their current power and their past power. As a result, individuals only bring to mind information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves. Furthermore, since the past memories that are activated are similar to the current power level, the resulting effect on individuals' positive emotions is consistent with what we would expect of individuals with the same power level. In other words, individuals who assimilate their past self to their current power role have no reason to adjust their emotions away from what is expected of them. Thus, I theorize that the assimilation effect of low past power will lead to lower perceptions of current happiness (see Figure 3a).

Since reduced social power activates the inhibition system and is associated with negative emotions (Keltner et al., 2003), it was demonstrated to lead to higher reports of anxiety (Sherman et al., 2012) and increase in experience and expression of anger (Berdahl & Martorana, 2006). Furthermore, according to the social distance theory, power should be positively related to the experience of emotions that result in social separation, such as anger (Magee & Smith, 2013). After experiencing power loss, individuals who choose to focus on the differences between their current and past power are more likely to bring to mind situations in which they experienced high power in the past. As individuals recall past situations in which they had high power or perceived their power to be higher, their current perceptions of power will be lower in comparison. Furthermore, low power is associated with high level of negative emotions, such as

anger. Thus, the contrast effect of high past power will be associated with more anger in the present (see Figure 3b).

On the other hand, assimilating the past self to current low-power would result in focusing on the similarities between the past and the current situation (Hanko et al., 2010). As a result, individuals only bring to mind information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves. The resulting effect on individuals' negative emotions is consistent with what we would expect of individuals with the same current power level. In other words, individuals who assimilate their past self to their current power role have no reason to adjust their emotions away from what is expected of them. Thus, the assimilation effect of high past power will lead to lower levels of current anger (see Figure 3a).

To summarize, I hypothesize a two-way interaction between past power and contrast versus assimilation judgements. By assimilating, individuals recall information that is consistent with their current power level and imagine a high degree of overlap between their current and past selves (Markman & McMullen, 2003; Mussweiler, 2003; 2007). Thus, individuals who assimilate have no reason to adjust their emotional reactions away from what is expected of them given their current power level. Therefore, assimilation judgements drive the effect of past power to be in the same direction as the effects of current power (see Figure 3a). On the other hand, when individuals engage in contrast judgments, they recall information that is inconsistent with their current power level and imagine a low degree of overlap between their current and past selves. As a result, individuals' emotional reactions are inconsistent with their current power level will be activated and further influence current behavior. Therefore, contrast judgements

drive the effect of past power to be in the opposite direction compared to the effects of current power (see Figure 3b).

The Effect of Past Power on Current Prosocial Behavior

While changes in social power directly impact individuals' perceptions and emotions, the effect of power change on behavior is even more complex. Power facilitates goal directed behavior and focuses attention (Guinote, 2007, 2008). That is, powerful tend to focus on their own needs and to act in ways that are attentive to personal goals and actions (e.g., Keltner et al., 2003; Galinsky et al., 2006; Magee & Smith, 2013; Rucker, Galinsky, & Dubois, 2012). Since powerful individuals process information more selectively in line with their currently active goals (Guinote, 2007), these goals are likely to guide subsequent behavior.

Among the various goals that people in power have, those related to their roles tend to have priority (Guinote, 2017). However, when an employee is promoted to a managerial position, his or her goals might change. For example, whereas previously the employee may have criticized any cost-cutting efforts, now as a manager the employee might be in charge of enforcing those initiatives. Moreover, once people have power, they can direct their efforts toward the pursuit of other goals. However, after experiencing power change, the individual needs to adjust his or her goals and subsequent behavior.

If goals adjustment occurs instantaneously, the individual's behavior should be a direct result of his or her current power level. By assimilating their past self to current self, the individuals should focus on the similarities and recall goal information that is consistent with their current power level. The resulting effect on individuals' behavior is consistent with what we would expect of individuals with the same power level. Individuals who assimilate have no reason to adjust their behaviors away from what is expected of them. Since low power

individuals have fewer resources and are more dependent on others, I hypothesize that they should engage in more prosocial behavior than their high-power counterparts. Therefore, the assimilation effect of low past power will lead to higher levels of current prosocial behavior (see Figure 3a).

On the other hand, adjusting to novel circumstances might be challenging. This inflexibility may relate to the degree to which individuals perform tasks in a habitual manner. One important component of habitual action is past behavior. Past behavior that is frequently performed might have a strong influence on future behavior, largely due to habit (e.g., Hull 1943; Skinner, 1938; Watson, 1914). Habits are goal-directed automatic behaviors that are mentally represented as associations between goals and actions. These associations are shaped by frequent performance of actions and require the activation of the goal to become manifest (Aarts & Dijksterhuis, 2000). The more frequently one engages in a certain goal-directed behavior, the stronger the association becomes and, hence, the easier it is to automatically elicit the behavior by activating the goal.

The direct relationship between past and future action shows that people simply do things as they did them before. Even when individuals recognize that their habitual responses are incompatible with the new situation, their ability to immediately alter these habits may be limited. Indeed, research demonstrates that existing habits can hinder the pursuit of modified goals (Betsch, Haberstroh, Glöckner, Haar, & Fiedler, 2001; Verplanken & Faes, 1999). In other words, when a routine is frequently selected, it is more likely to be chosen later in a new, but similar decision environment.

Similar logic can be applied to goal pursuit following power change. Individuals might be heavily influenced by their past experiences and goals and thus perpetuate their habitual

responses. Specifically, since power facilitates goal attainment (Overbeck & Park, 2006), individuals' goals must be taken into account when considering the effect of power change on subsequent behavior. After experiencing power change, powerful individuals will demonstrate increased prioritization of the focal goal, and decreased prioritization in responses to alternative goals (Guinote, 2008). However, since it takes time to update the focal goal, individuals might be heavily influence by their past goals. Thus, in the case of power gain, by focusing on the differences between the current and past selves, the individual should recall goal information that is inconsistent with his or her current power level. As a result, the goals that are associated with low power are activated. Therefore, an individual who did not control valuable resources before might use his or her newly acquired power to benefit others, since his or her goals were more prosocial in the past. By acting in a habitual manner, individuals not only rely on their past goals, but also not internalize their new goals. Thus, these individuals cannot use their newly available resources—including attention and ability to act—in service of those new goals.

Similar logic can be applied to goal pursuit following power loss. By contrasting away from his or her current low power, the individual should recall goal information that is inconsistent with his or her current power level and imagine a low degree of goal overlap between his or her current and past selves. As a result, the goals that are associated with high power are activated. Therefore, an individual who construed power as an opportunity to achieve his or her own goals will still try to exert power for his or her own profit, even after experiencing power loss. That is, the individual's goals do not correspond to his or her current power level because it takes time for the goals to be updated accordingly. Therefore, the contrast effect of high past power will lead to higher levels of current prosocial behavior and vice versa (see Figure 3b).

To summarize, I hypothesize a two-way interaction between past power and contrast versus assimilation judgements. By assimilating, individuals have no reason to adjust their behavior away from what is expected of them. Therefore, assimilation judgements drive the effect of past power to be in the same direction as the effects of current power (see Figure 3a). On the other hand, when individuals engage in contrast judgments, they recall information that is inconsistent with their current power level. As a result, contrast judgements drive the effect of past power to be in the opposite direction compared to the effect of current power (see Figure 3b).

Thus far, I have discussed several hypotheses regarding the emotional responses individuals should experience as a result of changes in social power. Next, I will argue that these emotional responses will mediate the effects of social power on prosocial behavior.

The Mediating Role of Positive and Negative Emotions

Affect is a valuable source of information that allows individuals to quickly evaluate the environment and adaptively guide their subsequent actions. While negative emotions often prompt specific and immediate responses to aid an individual's survival, positive emotions are thought to illicit a more general response that promotes the ability to manage future threats (Fredrickson, 2001). For example, participants induced with negative emotions are more careful and detailed, as compared to those who are induced with positive emotions (Bohner, Crow, Erb, & Schwarz, 1992). Since positive emotions can broaden individuals' mindset, these emotions can also shift individuals' attention away from themselves and toward others. For example, individuals reporting greater well-being spend more time volunteering (Thoits & Hewitt, 2001), were more likely to be organ donors (Brethel-Haurwitz & Marsh, 2014), and donate blood (O'Malley & Andrews, 1983). Therefore, I hypothesize that positive emotions, such as

happiness, should mediate the relationship between social power and prosocial behavior. When individuals are happy, they should engage in higher levels of prosocial behavior (see Figure 4).

Negative emotions can also increase helping behavior. According to the negative state relief model (Cialdini, Darby, & Vincent, 1973), people engage in helping behaviors in order to alleviate the discomfort caused by negative emotions. For example, guilty participants donated more blood and reported a significant reduction in their guilty feelings after the donation (O'Malley & Andrews, 1983). Similarly, Bagozzi and Moore (1994) showed that negative emotions were related to empathy and individuals' decisions to help. However, other studies have failed to find any effects for negative emotions (Holloway, Tucker, & Hornstein, 1977) or found that negative emotions even decrease helpfulness (Underwood et al., 1976).

These conflicting findings suggest that the relationship might not be uniform for all types of negative emotions. For example, sadness and empathy can lead to increase in helping behavior for egoistical or altruistic reasons, respectively (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Anger, on the other hand, was shown to reduce the tendency to help others (Terwogt, 2002). This is the case because angry individuals tend to blame others for their own misfortunes (Olthof, Ferguson, & Luiten, 1989). Furthermore, anger not only promotes self-focused attitudes (Frijda, 1986), but also does not highlight other people's needs. Therefore, I hypothesize that negative emotions, such as anger, should mediate the relationship between social power and prosocial behavior. When individuals are angry, they should engage in lower levels of prosocial behavior (see Figure 4).

The Moderating Role of Past Power on Contrast versus Assimilation Judgements

Thus far, I have discussed the effect of past power on perceptions of power, emotional reactions and prosocial behavior when individuals assimilate or contrast away from their current

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power. However, when individuals engage in temporal comparisons, they need to evaluate the extremity of the current situation as compared to the past situation. Extreme change, by definition, makes the current situation more remote from the past and are thus more likely to lead to contrast effects, than a more moderate change. Supporting this notion, contrast was found after extreme exemplar priming, whereas assimilation was found after moderate exemplar priming (Herr, 1986; Mussweiler et al., 2004). Similarly, Mussweiler and colleagues (2000) showed that priming people with moderate standards of drug consumption leads to assimilation and indicating how extensive one's drug consumption is produces tendency towards contrast.

Applying similar logic, I hypothesize that when experiencing a moderate change in power individuals might be more likely to focus on the similarities between the two roles and search their memory for confirming factual information on how the roles were similar. On the other hand, I hypothesize that experiencing an extreme change in power will result in focusing on the dissimilarities between the two roles. For example, after being promoted two levels up, from an intern to a manager (i.e. extreme power gain), the individual might focus on how his or her current role is different from his or her previous role. Therefore, individuals who experienced extreme power gain should be more likely to focus on the differences between their current high power and past low-power roles, as compared to individuals who experienced moderate power gain. Similarly, I hypothesize that individuals who experienced extreme power loss should be more likely to focus on the differences between their current low power and past high-power roles, as compared to individuals who experienced moderate power loss.

Summary

The temporal model of social power presented in this chapter integrates time into the study of social power in organizations. The model focuses on how changes in social power are

perceived and experienced by investigating how past power impacts individuals' current

perceptions of power, emotional responses and prosocial behavior. Specifically, reactions that

individuals have due to the perceived changes in social power depend on whether individuals

engage in assimilation or contrast judgements. The assimilation effect of power suggests that

even after experiencing change in social power, individuals will assimilate their past self to their

current power roles. In other words, the effect of past power on current perceptions, emotions

and behaviors will be in the same direction as the effects of current power (see Figure 3a). The

contrast effect of power, on the other hand, suggests that individuals will focus on the differences

between their current and past power roles and thus will contrast their past self away from their

current power. In other words, the effect of past power on current perceptions, emotions and

behaviors is expected to be in the opposite direction from the effects of current power (see Figure

3b). The model also explores how past and current power levels can help determine when

similarity or dissimilarity testing are more likely to occur. While extreme change should lead to

contrast judgements, a more moderate change in social power should lead to assimilation

judgements. Therefore, past power moderates the relationship between current power and

contrast/assimilation judgements. In the next chapters, I will provide initial empirical support for

this model. The studies described in the next chapters will test different parts of the overall

model (see Figure 4).

CHAPTER 7: PILOT STUDY

Research Questions & Hypotheses

The first aim of the pilot study was to replicate the established relationships between current social power, current perceptions of power and current prosocial behavior. As previously discussed, powerful individuals are more likely to feel powerful than do powerless individuals, leading them to approach more and inhibit less (Anderson & Berdahl, 2002). Furthermore, research has also shown that since lower power individuals have fewer resources and are more dependent on others, they should engage in more prosocial behavior than their high-power counterparts (Piff et al., 2010). Therefore, I hypothesize the following:

> **Hypothesis 1:** *Current social power is positively related to individuals' current perceptions of social power.*
>
> **Hypothesis 2**: *Current social power is negatively related to individuals' current prosocial behavior.*

The second aim of the pilot study was to demonstrate the initial effect of *past power* on prosocial behavior. If the effects of social power on prosocial behavior are contemporaneous, individuals with high power, regardless of whether or not they have experienced power gain, should engage in *low* levels of prosocial behavior. This is the case because these individuals currently have *high* power. Similarly, individuals with low power, regardless of whether or not they have experienced power loss, should engage in high levels of prosocial behavior since currently they have *low* power. However, I hypothesize that the effects of social power go beyond the current power role and experience of power change (i.e. power gain or power loss)

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can significantly challenge the previously established negative relationship between social power and prosocial behavior.

In line with my previous theorizing, I hypothesize that individuals who experience power change (i.e. power gain or power loss) will not adjust their current behavior to correspond with their *current* power level, as previously discussed. In other words, while individuals who experience power gain currently have high power, their behavior will not be identical to individuals who have the same current power level, but did not experience power gain. After experiencing power gain, individuals might be heavily influence by their past experiences and thus perpetuate their habitual responses. For example, an individual who did not control valuable resources in the past might use his or her newly acquired power to benefit others, since his or her goals were more prosocial in the past.

Similarly, individuals who lost power and thus currently have low power level will not behave consistently with their current low power role. For example, an individual who construed power as an opportunity to achieve his or her own goals in the past will still try to exert power for his or her own profit, even after experiencing power loss. That is, the individual's goals might not correspond to his or her current power level because it takes time for the goals to be updated accordingly. Thus, individuals' past power level can influence the negative relationship between social power and prosocial behavior. Therefore, I hypothesize the following:

> **Hypothesis 3:** *Past social power is negatively related to individuals' current prosocial behavior.*

Method

Sample

Participants included 158 students from an introductory management course at a large southeastern university in the United States. Of the 158 students, 79 participants (50%) were male. As part of their course requirement, students participated in an hour-long laboratory session for course credit.

Procedure

Upon arriving at the lab, participants were asked to complete a short questionnaire that assessed leadership experiences and general knowledge. While participants were led to believe that the combined results of these tests would determine their role in subsequent tasks, each participant was randomly assigned to one of four experimental conditions: (1) constant high power; (2) constant low power; (3) power loss; and (4) power gain condition. These conditions were implemented using a two-round computer-based simulation. During each round, participants were randomly assigned to either the high-power role ("manager") or the low-power role ("employee"). The managers were told that they would work with various employees, and in each task, they would have the final decision regarding the rewards that the employee receives. The employees, on the other hand, were told that they will have little control in the tasks, performing tasks assigned to them by their manager.

During the first round of the simulation, participants completed a number of filler tasks consistent with their power role. Prior to starting the second round of the simulation, participants were informed that, based on their performance in the first round, they would either continue to play the same role (constant high and constant low power conditions) or play the opposite role (power loss and power gain conditions). At the end of the study, participants were asked to report

their perceptions of social power, and completed the prosocial behavior measure (see more details below).

Measures

Unless otherwise indicated, all items had a 7-point Likert-type response scale anchored at 1= strongly disagree and 7 = strongly agree.

Power manipulation. Participants were randomly assigned to one of four experimental conditions: (1) constant high power; (2) constant low power; (3) power loss; and (4) power gain condition. These conditions were implemented using a two-round computer-based simulation. During each round, participants were randomly assigned to either the high-power role ("manager") or the low-power role ("employee").

Perceptions of social power. Participants' current perceptions of social power were assessed during each round through three items adapted from past research (Dubois, Rucker, & Galinsky, 2010; Rucker & Galinsky, 2008). Specifically, participants reported the extent they felt powerful, in control, and "in charge" along a 5-point Likert-type response scale anchored at 1= not at all and 5 = a great deal.

Prosocial behavior. Throughout the study, participants had multiple opportunities to earn lottery tickets based on their performance on the different tasks. Participants were told that these lottery tickets will increase their chances of winning a $50 Amazon gift card. Participants were asked to indicate the percentage of lottery tickets they would like to donate (from 0%- 100%) to a charity of their choice.

Control variables: Demographic Variables: Age and gender.

Prosocial motivation. Prosocial motivation was assessed with a five-item scale developed by Grant and colleagues (Grant, 2008; Grant & Sumanth, 2009). The scale is composed of the following items: "I get energized by working on tasks that have the potential to benefit others," "It is important to me to have the opportunity to use my abilities to benefit others," "I prefer to work on tasks that allow me to have a positive impact on others," "I do my best when I'm working on a task that contributes to the well-being of others," and "I like to work on tasks that have the potential to benefit others."

Positive and Negative Affect. Participants completed the 20-item state version of the Positive and Negative Affect Schedule – PANAS (Watson, Clark, & Tellegen, 1988), which has 10 items each for positive affect (e.g., active, alert, enthusiastic, inspired, interested) and negative affect (e.g., afraid, hostile, irritable, jittery, upset). Participants were asked to indicate the extent to which they experienced each affect in general on a 5-point Likert-type response scale anchored at 1= very slightly or not at all and 7 = very much.

Results

Means, standard deviations, and intercorrelations among the key variables are included in Table 3. As expected, perceptions of social power were positively correlated with experiencing high power across each round and power was negatively related to prosocial behavior. Furthermore, prosocial motivation was positively related to prosocial behavior.

Manipulation check: Overall perceptions of power during Round 1 were significantly different based on power condition ($F(3, 154) = 216.53$, $p < .001$). Specifically, perceptions of power were lower in the conditions where power was initially low (constant low power: M = 1.59, SD = 0.58; power gain: M = 1.57, SD = 0.63) rather than high (constant high power: M = 4.24, SD = 0.64; power loss: M = 4.17, SD = 0.72). Similarly, the overall perceptions of

power during Round 2 were significantly different based on power condition (F (3, 154) = 78.72, $p < .001$). Perceptions of power were lower in the conditions where power was low (constant low power: M = 1.95, SD = 0.98; power loss: M = 1.88, SD = 0.79) than when it was high (constant high power: M = 4.03, SD = 0.89; power gain: M = 4.18, SD = 0.88). These results provide initial support for Hypothesis 1.

Hypotheses Testing: A mixed-effects ANOVA using OLS regression was estimated to predict donation rates based on power condition. The power condition predictor variable consisted of four categories and was modeled as a set of three dummy variables. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the three dummy variables in Model 2 (see Table 4). In this analysis, the constant high-power condition was the reference group. The findings suggest that the four power conditions are statistically different in terms of donation rates across both rounds (Round 1: F (3,154) = 6.72, $p < 0.001$; Round 2: F (3,154) = 6.55, $p < 0.001$).

Hypothesis 2 predicted that participants in the constant low-power condition would engage in more prosocial behavior relative to constant high-power participants. The results indicate that participants who initially experienced low power (i.e., the constant low and power gain conditions) had higher donation rates (Round 1: $b = 19.79$, $p < 0.05$) than participants who initially experienced high power (i.e., the constant high and power loss conditions). As predicted, participants with low power donated more (M = 59.97, SD = 38.18) to a charity of their choice than did participants with high power (M = 34.52, SD = 34.66; t (156) = 4.38, $p < .001$). Similar results were obtained among participants with constant power level during Round 2. Specifically, individuals in the constant low power condition had higher donation rates ($b = 20.19$, $p < 0.05$) as compared to individuals in the constant high-power condition. As predicted, constant low-

power participants donated more (M = 54.28, SD = 38.60) to a charity of their choice than did participants with constant high power (M = 34.75, SD = 35.29; t (78) = 2.36, $p < .05$). Together, these findings provide support for Hypothesis 2.

The results also indicate that individuals who experienced power gain had higher donation rates ($b = 23.51$, $p < 0.01$) as compared to individuals in the constant high-power condition. Moreover, individuals who experienced power loss had lower donation rates ($b = -27.22$, $p < 0.01$) as compared to individuals in the constant low power condition (see Figure 5). These results provide support for Hypothesis 3.

Discussion

Based on the results above, participants who initially experienced low power (i.e., the constant low and power gain conditions) engaged in higher levels of prosocial behavior than participants who initially experienced high power (i.e., the constant high and power loss conditions). These results demonstrate some initial support for the temporal effects of power. In other words, individuals who experienced power gain engaged in more prosocial behaviors and individuals who experienced power loss engaged in less prosocial behaviors following power change. These results demonstrate that the effects of initial social power are carried over even when an individual experience changes in his or her power. Thus, these preliminary results demonstrate that individuals' power does not affect behavior only through contemporaneous manners, as previously examined in the power literature. These findings contribute to our understanding of the temporal effect social power has in predicting individual's prosocial behavior. In the next study, I will investigate what might be the psychological processes that drive these changes in behavior.

CHAPTER 8: STUDY 1 (LABORATORY STUDY)

Research Questions & Hypotheses

This study was designed to reexamine the effects of past power on prosocial behavior and further investigate the psychological processes that might explain how experience of power change might affect individuals' behavior. First, I sought to test whether the results of the pilot study would generalize to a different sample and measures. Second, I sought to examine the psychological processes of contrast and assimilation judgements, as a moderating variable of the effect of past power on current prosocial behavior. Last, I sought to investigate the emotional response that individuals might have to changes in social power and its mediating role in driving changes in prosocial behavior.

As previously discussed, the first aim of this study is to test the previously established relationships between current power, current perceptions of power and current prosocial behavior. Therefore, I hypothesize the following:

> **Hypothesis 1:** *Current social power is positively related to individuals' current perceptions of social power.*
>
> **Hypothesis 2**: *Current social power is negatively related to individuals' current prosocial behavior.*

The second aim is to examine the psychological processes of contrast and assimilation judgements. In line with my previous theorizing, I hypothesize a two-way interaction between past power and contrast versus assimilation judgements. By assimilating, the individual recalls information that is consistent with his or her current power level and imagines a high degree of

overlap between his or her current and past selves (Markman & McMullen, 2003; Mussweiler, 2003; 2007). Thus, individuals who assimilate have no reason to adjust their perceptions, feelings or behaviors away from what is expected of them. Therefore, assimilation judgements drive the effect of past power to be in the same direction as the effect of current power (see Figure 3a). As previously discussed, powerful individuals are more likely to feel higher in power than do powerless individuals (Anderson & Berdahl, 2002). Furthermore, research has also shown that since lower power individuals have fewer resources and are more dependent on others, they engage in more prosocial behavior than their high-power counterparts (Piff et al., 2010). Therefore, I hypothesize the following:

>*Hypothesis 3a: Under assimilation, past social power is negatively related to individuals' current prosocial behavior.*
>
>*Hypothesis 4a: Under assimilation, past social power is positively related to individuals' current perceptions of power.*

Similar logic can be applied to the relationship between past power and positive and negative emotions. Since power is associated with more positive emotions (such as happiness) and less negative emotions (such as anger), I expect these relationships to hold under assimilation effect. Therefore, I hypothesize the following:

>*Hypothesis 5a: Under assimilation, past social power is positively related to individuals' current positive emotions (such as happiness).*
>
>*Hypothesis 6a: Under assimilation, past social power is negatively related to individuals' current negative emotions (such as anger).*

Conversely, adjusting to novel circumstances might be challenging as individuals might be heavily influence by their past experiences. When individuals engage in contrast judgments, they recall information that is inconsistent with their current power level and imagine a low degree of overlap between their current and past selves. As a result, perceptions, feelings and behaviors that are inconsistent with their current power level will be activated and further influence current behaviors. Therefore, contrast judgements drive the effect of past power to be in the opposite direction compared to the effects of current power. In the case of power gain, the individual who did not control valuable resources before might use his or her newly acquired power to benefit others, since his or her goals were more prosocial in the past. Similar logic can be applied to goal pursuit following power loss. An individual might still try to exert power for his or her own benefit rather than to benefit others, even after experiencing power loss. Therefore, I hypothesize the following (see Figure 3b):

Hypothesis 3b: *Under contrast, past social power is positively related to individuals' current prosocial behavior.*

After experiencing power change, individuals' current perceptions of power might also be heavily influence by past experiences. By remembering past situations in which the individual had low power or perceived his or her power to be lower, the individual will contrast his or her past self away from current self. Thus, the contrast effect of *low* past power will result in higher perceptions of current power. Similar logic can be applied to goal pursuit following power loss. By remembering past situations in which the individual had high power or perceived his or her power to be higher, it will lead to lower current power perceptions in comparison. In other words, individual's high past power will lead to lower current power perceptions. Therefore, for individuals who engage in contrast judgement, the effect of past power on current perceptions

will be in the opposite direction compared to the effects of current power. Therefore, I hypothesize the following (see Figure 3b):

Hypothesis 4b: *Under contrast, past social power is negatively related to individuals'*

current perceptions of power.

After experiencing power change, individuals' emotional reactions might also be heavily influence by past experiences. For example, after experiencing power gain, if individuals contrast their past low-power away from their current high power, they might recall past situations in which they had low power or perceived their power to be lower. Thus, their current perceptions of power will be higher in comparison. Since current high power is associated with high level of positive emotions, such as happiness, recalling past circumstances when the individual had low power should be associated with more happiness in the present. Similar logic can be applied to emotional reactions following power loss. By recalling past situations in which they had high power or perceived their power to be higher, their current perceptions of power will be lower in comparison. Since low power is associated with high level of negative emotions, such as anger, recalling past circumstances when the individual had high power should be associated with more anger in the present. Thus, I hypothesize the following (see Figure 3b):

Hypothesis 5b: *Under contrast, past social power is negatively related to individuals'*

current positive emotions (such as happiness).

Hypothesis 6b: *Under contrast, past social power is positively related to individuals'*

current negative emotions (such as anger).

Thus far, I have discussed several hypotheses regarding the emotional responses individuals should experience as a result of changes in social power. Next, I will argue that these emotional responses will mediate the relationship between past power and prosocial behavior.

Since positive emotions can broaden individuals' mindset, these emotions can also shift individuals' attention away from themselves and toward others. For example, individuals reporting greater well-being spend more time volunteering (Thoits & Hewitt, 2001), were more likely to be organ donors (Brethel-Haurwitz & Marsh, 2014), and donated blood (O'Malley & Andrews, 1983). Thus, when individuals are happy, they should engage in higher levels of prosocial behavior. Therefore, I hypothesize the following (see Figure 4):

>*Hypothesis 7: Positive emotions, such as happiness, mediate the relationship between past power and current prosocial behavior.*

Anger, on the other hand, was shown to reduce the tendency to help others (Terwogt, 2002). This is the case because angry individuals tend to blame others for their own misfortunes (Olthof et al., 1989). Furthermore, anger not only promotes self-focused attitudes (Frijda, 1986), but also does not highlight other people's needs. Thus, when individuals are angry, they should engage in lower levels of prosocial behavior. Therefore, I hypothesize the following:

>*Hypothesis 8: Negative emotions, such as anger, mediate the relationship between past power and current prosocial behavior.*

Method

Sample

Participants included 163 students from an introductory management course at a large southeastern university in the United States. Of the 163 students, 90 participants (55.2%) were male. As part of their course requirement, students participated in an hour-long laboratory session for course credit.

Procedure

Similar to the pilot study design, upon arriving at the lab, participants were asked to complete a short questionnaire that assessed leadership experiences and general knowledge. While participants were led to believe that the combined results of these tests would determine their role in subsequent tasks, each participant was randomly assigned to one of two experimental conditions: (1) high power; (2) low power. During each round, participants were randomly assigned to either the high-power role ("manager") or the low-power role ("employee"). Similar to the pilot study, the managers were told that they would work with various employees, and in each task, they would have the final decision regarding the rewards that the employee receives. The employees, on the other hand, were told that they will have little control in the tasks, performing tasks assigned to them by their manager.

All study materials were presented on separate computers, and participants did not interact face to face. Instead, participants interacted by sending each other instant messages using a chat interface called ChatPlat. ChatPlat is an online software application that enables experimenters to pair participants based on a specific characteristic (in this case a specific role – manager versus employee) and allow them to chat with each other within an online survey. ChatPlat has been used and validated in previous research (e.g., Brooks & Schweitzer, 2011; Huang et al., 2017). The experimenter told participants that they would be paired with another participant and that they should try to get to know each other before beginning the tasks. Upon arriving at the chat window, participants were matched with another active participant of the opposite role to create manager-employee chat dyads.

During each round of the simulation, participants completed a number of filler tasks consistent with their assigned role. Prior to starting the second round of the simulation,

participants were once again randomly assigned to one of two experimental conditions: (1) high power; (2) low power. In other words, participants were randomly assigned to either the high-power role ("manager") or the low-power role ("employee"). Participants were informed that, due to structural changes in the virtual organization, they would either continue to play the same role or play the opposite role. Once the role change was implemented, the participants engaged in tasks associated with their new role (similar to Round 1).

Next, each participant was randomly assigned to one of two experimental conditions: (1) assimilation judgement; (2) contrast judgement condition. In the assimilation judgement condition, participants were asked to list the similarities between their past and current power (based on their role in the experiment). In the contrast judgement condition, participants were asked to list the differences between their past and current power (based on their role in the experiment). This manipulation is intended to induce a focus on similarities versus differences (Mussweiler & Crusius, 2008). At the end of the study, participants were asked to report their perceptions of social power, and completed the prosocial behavior measures (see more details below).

Measures

Unless otherwise indicated, all items had a 7-point Likert-type response scale anchored at 1= strongly disagree and 7 = strongly agree.

Power manipulation. Participants were randomly assigned to one of two experimental conditions: (1) high power; (2) low power. Participants were randomly assigned to either the high-power role ("manager") or the low-power role ("employee") before the beginning of each round. Regardless of condition, participants read descriptions of both roles to ensure that they perceived differences in social power associated with each role.

Contrast/assimilation judgement manipulation. Participants were randomly assigned to one of two experimental conditions: (1) assimilation judgement; (2) contrast judgement condition. In the assimilation judgement condition, participants were asked to list the *similarities* between their past and current power (based on their role in the experiment). In the contrast judgement condition, participants were asked to list the *differences* between their past and current power (based on their role in the experiment).

Perceptions of social power. Participants' current perceptions of social power were assessed during each round through two items adapted from past research (Dubois et al., 2010; Rucker & Galinsky, 2008). Specifically, participants reported the extent they feel powerful and in control along a 7-point Likert-type response scale anchored at 1= powerless; lacking control and 7 = powerful; in control.

Emotional experience. Participants rated the degree to which they are currently experiencing each of the following emotions along a 7-point Likert-type response scale anchored at 1= not at all and 7 = very strongly. The list of emotions included three items to represent happiness (i.e. joyful, happy, pleased) and three items to represent anger (i.e. angry, annoyed, irritated). These items were adapted from the State Anger Scale (Spielberger, 1983), which was design to measure the experience of anger as an emotional state (e.g. "I feel angry").

Prosocial behavior. At the end of the study, participants had the opportunity to participate in letter collection for two charitable organizations: (1) "Operation Gratitude" – a charitable organization that collect letters for deployed troops, veterans, new recruits and first responders; and (2) "Love for the Elderly" – a charitable organization that collects letters for senior citizens living in nursing facilities. Prosocial behavior was operationalized in two different ways: (1) the number of seconds participants voluntarily spent writing these letters (participants

could choose to write multiple letters for more than one organization), and (2) the total number of characters participants wrote (i.e. the total length of the letters). Participants were led to believe that writing these letters is not part of their main task and is not required in order to get participation credit. These letters were not read by the experimenter and will be delivered to the above-mentioned organizations upon completion of the study.

Control variables: Demographic Variables: Age and gender.

Prosocial motivation. Prosocial motivation was assessed with a five-item scale developed by Grant and colleagues (Grant, 2008; Grant & Sumanth, 2009). The scale is composed of the following items: "I get energized by working on tasks that have the potential to benefit others," "It is important to me to have the opportunity to use my abilities to benefit others," "I prefer to work on tasks that allow me to have a positive impact on others," "I do my best when I'm working on a task that contributes to the well-being of others," and "I like to work on tasks that have the potential to benefit others."

Positive and Negative Affect. Participants completed the 20-item state version of the Positive and Negative Affect Schedule – PANAS (Watson et al., 1988), which has 10 items each for positive affect (e.g., active, alert, enthusiastic, inspired, interested) and negative affect (e.g., afraid, hostile, irritable, jittery, upset). Participants were asked to indicate the extent to which they experienced each affect in general on a 5-point Likert-type response scale anchored at 1= very slightly or not at all and 7 = very much.

Results

Means, standard deviations, and intercorrelations among the key variables are included in Table 5. As expected, perceptions of social power were positively correlated with experiencing high power across each round and power in Round 1 was negatively related to prosocial

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behavior. Furthermore, positive emotions (such as happiness) were positively related to power, while negative emotions (such as anger) were negatively related to power in Round 2.

Manipulation checks

Power manipulation check: A significant effect of the power manipulation on perceived social power was observed across both rounds. During Round 1, participants in the high-power condition reported higher perceptions of social power (M=5.14; SD=1.04) than participants in the low-power condition (M=2.13; SD=0.63; t (161) = 475.78, p < .0001). Similarly, during Round 2, participants in the high-power condition reported higher perceptions of social power (M=5.21; SD=1.09) than participants in the low-power condition (M=2.01; SD=0.63; t (161) = 522.93, p < .0001). Together, these findings provide support for Hypothesis 1.

Contrast/assimilation judgement manipulation check: The effect of contrast manipulation on perceived differences between past and current power was *not* statistically significant (F (1, 161) = .206, p = ns). Participants in the contrast judgement condition reported only slightly higher perceptions of differences between past and current power (M=3.13; SD=2.28) than participants in the assimilation judgement condition (M=2.97; SD=2.02; t (161) = .453, p = ns). Therefore, I used the manipulation check measure (i.e. individuals' perceptions of power differences between past power and current power), instead of the experimental assignment, as the moderating variable in my analysis. In other words, the manipulation check measure represented the degree of contrast (+1 SD) versus the degree of assimilation (-1 SD) participants experienced during the experiment. While we might still observe the predicted relationship between the manipulation check measure and the dependent measure, it is important to note that the relationship between the manipulation check and the dependent variable is merely correlational (Hauser, Ellsworth, & Gonzalez, 2018).

Hypotheses Testing: Hypothesis 2 predicted that participants in the constant lower power condition would engage in more prosocial behavior relative to constant high-power participants. As predicted, constant lower power participants spend more time writing (M=248.69 seconds, SD=118.16) and wrote longer letters (M=678.43 characters, SD=500.37) to the above mentioned charitable organizations than did participants with constant high power (time spent: M=183.43 seconds, SD=111.15; $t(85)= 2.65$, $p < .01$; length of letters: M=457.15 characters, SD=384.98; $t(85)= 2.32$, $p < .05$). Together, these findings provide support for Hypothesis 2.

However, I hypothesized that past power will also have an effect on current prosocial behavior and that this affect will be moderated by contrast/assimilation judgements. Therefore, I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 6). Regression results demonstrate that past power has a strong negative effect on prosocial behavior (time spent: $b = -51.86$, $p < .01$; length of letters: $b = -190.69$, $p < .01$; Model 2). However, the interaction between past power and contrast perceptions was not a significant predictor of prosocial behavior (time spent: $b = -13.49$, $p = $ ns; length of letters: $b = -68.05$, $p = $ ns). These results indicate that past power has an effect on current behavior, even after controlling for the effects of current power. However, it appears that perceptions of assimilation or contrast judgements are not driving this effect. Therefore, these results do not support Hypothesis 3a or Hypothesis 3b.

Next, I examined how past power effects individuals' current perceptions of power. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the

main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction

between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 7).

As expected, regression results illustrate that current power has a strong positive effect

($b = 2.945$, $p < .001$) on individuals' current perceptions of power. Furthermore, contrast

perceptions are also positively related ($b = .116$, $p < .05$) to individuals' perceptions of current

power. The effects of past power ($b = .615$, $p = .06$) and the interaction between past power and

perceptions of contrast judgements ($b = -.18$, $p = .054$) were trending towards significance. I

plotted this interaction at $+/-1$ SD from the mean of contrast judgements (Figure 6; Aiken &

West, 1991). For the low levels of contrast perceptions, assimilation judgements (i.e., -1 SD),

past power was positively but not significantly related to individuals' current perceptions of

power (simple slope $b = .434$, $p = .07$); whereas for the high levels of contrast perceptions (i.e.,

$+1$ SD), the relationship was negative but also not significant (simple slope $b = -.325$, $p = ns$).

The positive relationship between past power and perceptions of current power observed under

assimilation judgements appears to have been reduced under contrast judgements. However,

since the interaction was not statistically significant these results do not support Hypothesis 4a or

Hypothesis 4b.

Next, I examined how past power effects individuals' emotional reactions. First, I

examined how contrast perceptions moderate the effect of past power on current positive

emotions, such as happiness. I included controls in Model 1 (i.e., age, gender, prosocial

motivation, PANAS) and added the main effects (i.e., current power, past power, contrast

perceptions) and the two-way interaction between past power and contract perceptions in

Model 2 and Model 3, respectively (see Table 8). Regression results demonstrate that only

current power has a strong positive effect ($b = .68$, $p < .05$) on positive emotions, such as

happiness. Past power, contrast perceptions and the interaction term were not significant predictors of positive emotions, such as happiness. Therefore, these results do not provide support for Hypothesis 5a or Hypothesis 5b.

Next, I examined how past power and contrast perceptions moderate the effect of past power on current negative emotions, such as anger. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 8). Regression results demonstrate that both current power ($b = -.634$, $p < .001$) and contrast perceptions ($b = -.097$, $p < .05$) have a significant negative effect on negative emotions, such as anger. However, past power and the interaction term were not significant predictors of negative emotions, such as anger. Therefore, these results do not support Hypothesis 6a or Hypothesis 6b.

Finally, mediation hypotheses were tested using a bootstrapping procedure (n = 5000 bootstrap resamples; Preacher & Hayes, 2004; Preacher & Hayes, 2008). These analyses examine the indirect effects of past power on prosocial behavior through two potential mediators: (1) positive emptions (i.e. happiness) and (2) negative emotions (i.e. anger). Estimates of indirect effects of power on prosocial behavior through each mediator is shown in Table 9. The first mediation analysis tested the extent to which happiness mediated the relationship between past power and current prosocial behavior. For individuals who engage in assimilation judgements, the indirect effect was not significant, indicating that, happiness did not mediate the effect of past power on prosocial behavior. Similar results were obtained for individuals who engage in contrast judgements, indicating once again that happiness did not mediate the effect of past power on prosocial behavior. Therefore, these results do not support Hypothesis 7, since

positive emotions (such as happiness) did not mediate the relationship between past power and prosocial behavior.

The second mediation analysis tested the extent to which anger mediated the relationship between past power and current prosocial behavior. For individuals who engage in assimilation judgements, the indirect effect was not significant, indicating that, anger did not mediate the effect of past power on current prosocial behavior. Similar results were obtained for individuals who engage in contrast judgements, indicating once again that anger did not mediate the effect of past power on current prosocial behavior. Therefore, these results do not provide support for Hypothesis 8.

Supplementary Analyses

To further understand the relationship between current power, past power and contrast versus assimilation judgements, multiple regression analyses were conducted to predict prosocial behavior from fully saturated models including all possible higher order effects between current power, past power and contrast judgments. These models included all main effects and interactions. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) in Model 2 (see results for these models in Table 6). Next, I explored whether contrast judgements moderated the effect of current power on prosocial behavior, in the same way I predicted it will moderate the effects of past power. Therefore, the two-way interaction between current power and contract perceptions were included in Model 3 (see Table 10). Last, in Model 4, I explored whether current power moderates the previously examined two-way interaction between past power and contrast judgement perceptions when predicting current prosocial behavior. Thus, a three-way

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interaction among current power, past power, and contrast versus assimilation judgements were examined (see Table 10).

Regression results demonstrate that the interaction between current power and contrast perceptions was not a significant predictor of prosocial behavior (time spent: $b = 9.103$, $p = $ ns; length of letters: $b = -16.322$, $p = $ ns). These results indicate that contrast perceptions did not moderate the effect of current power on prosocial behavior.

Next, I examined the three-way interaction between current power, past power and contrast perceptions. Supplementary analyses revealed that once all possible higher order effects were added to the model, the overall explanatory power of the model significantly improves. The results demonstrate that current power negatively effects prosocial behavior (time spent: $b = -200.44$, $p < 0.01$; length of letters: $b = -651.91$, $p < 0.01$), and the interaction between current power and past power is significantly positive when predicting prosocial behavior (time spent: $b = 252.51$, $p < 0.01$; length of letters: $b = 871.29$, $p < 0.01$). Furthermore, the three-way interaction is negative and significant when examining time individuals spent engaging in prosocial behavior ($b = -58.50$, $p < 0.05$), and trending towards significance when prosocial behavior is measured as length of letters individuals wrote ($b = -173.92$, $p = 0.065$). I plotted both interactions for individuals in the high current power condition and individuals in the low current power condition (see Figure 7a and Figure 7b). For individuals in the high current power condition, past power was negatively related to individuals' prosocial behavior (simple slope time spent: $b = -43.78$, $p < .05$; length of letters: $b = -161.34$, $p < 0.05$); whereas for individuals in low current power condition, the relationship was weaker (simple slope time spent: $b = 14.72$, $p = $ ns; length of letters: $b = 12.58$, $p = $ ns). Next, I tested the difference between these slopes, to directly assess whether the groups are different from one another. While for individuals in the

low current power condition, the relationship between past power and prosocial behavior was not significant different from zero, this relationship was significantly different from individuals in the high current power condition (simple slope time spent: $b = -58.5$, $p < 0.05$; length of letters: $b = -173.92$, $p = 0.065$). The negative relationship between past power and prosocial behavior observed when current power is high appears to have been reduced when current power is low. Overall, these results demonstrate that current power level might have an important effect on the relationship between past power and prosocial behavior, for individuals who engage in assimilation versus contrast judgement perceptions.

Discussion

This study investigated the moderating role of contrast and assimilation judgements when examining the relationship between past power and current engagement in prosocial behavior. Overall, these results indicate that past power has a strong effect on current behavior, even after controlling for the effects of current power. However, the results demonstrate that contrast perceptions did not moderate the effect of past power on individuals' behaviors. In other words, it appears that contrast and assimilation judgements were not driving the effect of past power on prosocial behavior.

Interestingly, supplementary analyses demonstrate that there is a three-way interaction between current power, past power and contrast and assimilation judgements when predicting current prosocial behavior. When current power is *high*, but not when it is low, the relationship between past power and current prosocial behavior is moderated by contrast judgements. In other words, when individuals engage in contrast judgements the relationship between past power and prosocial behavior is negative, however when individuals engage in assimilation judgments the relationship becomes positive. On the other hand, when current power is *low*, the relationship

between past power and current prosocial behavior is negative for both individuals who engage in assimilation and in contrast judgements. These results demonstrate that individuals' reaction to *power gain* are different from individuals' reaction to *power loss*. Individuals who gain power and engaged in contrast judgements, perform similar level of prosocial behavior as individuals who have low power and did not experience power change. Thus, the differences between how individuals' experience power gain versus power loss should be further investigated.

When examining the effects of past power on perceptions of current power, the results are more promising. Contrast perceptions positively influence perceptions of current power and the interaction between past power and contrast perceptions was trending towards significance. These results demonstrate that when individuals focus on the differences between their current and past power level (i.e. engaging in contrast judgments), they are more likely to feel powerful in the present.

This study also investigated the effects of past power on positive and negative emotions. However, the results demonstrate that only current power is driving the effect for both happiness and anger. For anger, contrast perceptions had a negative effect, but the interaction was not significant predictor of neither happiness nor anger. These results demonstrate that when individuals focus on the differences between their current and past power level (i.e. engaging in contrast judgments), they are more likely to feel less angry in the present. This study also investigated the mediating role of positive and negative emotions in driving the relationship between past power and prosocial behavior. The results demonstrate that neither happiness not anger mediated the relationship between past power and prosocial behavior.

The reason for the lack of support for my hypotheses might be due to the fact that the effect of contrast manipulation on perceived differences between past and current power was *not*

statistically significant. Therefore, the manipulation check measure, instead of the experimental

assignment, was used as the moderating variable in my analysis. Thus, any observed

relationships between the manipulation check and the dependent variables are merely

correlational. Thus, in the next study, I will further investigate the effect of past power on current

power perceptions, emotions and behaviors and focus on properly manipulating contrast

judgments.

CHAPTER 9: STUDY 2 (MTURK STUDY)

Research Questions & Hypotheses

This study was designed to investigate the role of past power and the psychological processes that might explain how past power effects current prosocial behavior. First, I sought to test whether the results of the first two studies would generalize to a different sample and measures. Second, I sought to examine the psychological processes of contrast and assimilation judgements as a moderating variable. This was particularly important since the contrast manipulation was not effective in Study 1. Third, I sought to investigate the effect of extreme versus moderate change in power and its effect on the likelihood that individuals will engage in contrast versus assimilation judgments. Thus, in this study, there were multiple power levels at each round to allow for moderate versus extreme power changes.

The first aim of this study was to test the previously established relationships between current power, current perceptions of power and current prosocial behavior. Therefore, I hypothesize the following:

> **Hypothesis 1:** *Current social power is positively related to individuals' current perceptions of social power.*
>
> **Hypothesis 2**: *Current social power is negatively related to individuals' current prosocial behavior.*

Similar to Study 1, the second aim was to examine the psychological processes of contrast and assimilation judgements as a moderating variable. In line with my previous theorizing, I hypothesize a two-way interaction between past power and contrast judgements.

As previously discussed, when individuals focus on the *similarities* between their past and current power level, these assimilation judgements drive the effect of past power to be in the same direction as the effect of current power (see Figure 3a). Therefore, similar to Study 1, I hypothesize the following:

> ***Hypothesis 3a:*** *Under assimilation, past social power is negatively related to individuals' current prosocial behavior.*

> ***Hypothesis 4a:*** *Under assimilation, past social power is positively related to individuals' current perceptions of power.*

> ***Hypothesis 5a:*** *Under assimilation, past social power is positively related to individuals' current positive emotions (such as happiness).*

> ***Hypothesis 6a:*** *Under assimilation, past social power is negatively related to individuals' current negative emotions (such as anger).*

On the other hand, when individuals focus on the *differences* between their past and current power level, these contrast judgements drive the effect of past power to be in the opposite direction, as compared to the effect of current power (see Figure 3b). Therefore, similar to Study 1, I hypothesize the following

> ***Hypothesis 3b:*** *Under contrast, past social power is positively related to individuals' current prosocial behavior.*

> ***Hypothesis 4b:*** *Under contrast, past social power is negatively related to individuals' current perceptions of power.*

> ***Hypothesis 5b:*** *Under contrast, past social power is negatively related to individuals' current positive emotions (such as happiness).*

Hypothesis 6b: *Under contrast, past social power is positively related to individuals'*
current negative emotions (such as anger).

Similar to Study 1, this study will also investigate the mediating role of happiness and
anger in driving changes in prosocial behavior. Since positive emotions can broaden individuals'
mindset, these emotions can also shift individuals' attention away from themselves and toward
others. Anger, on the other hand, was shown to reduce the tendency to help others (Terwogt,
2002). Thus, when individuals are angry, they should engage in lower levels of prosocial
behavior. Therefore, I hypothesize the following:

> ***Hypothesis 7:*** *Positive emotions, such as happiness, mediate the relationship between*
> *past power and current prosocial behavior.*

> ***Hypothesis 8:*** *Negative emotions, such as anger, mediate the relationship between past*
> *power and current prosocial behavior.*

Thus far, I have discussed the effect of past power on current perceptions of power,
current emotional reactions and current prosocial behavior when individuals engage in contrast
versus assimilation judgements. However, when individuals engage in temporal comparisons,
they need to evaluate the extremity of the current situation as compared to the past situation.
Extreme change, by definition, makes the current situation more remote from the past and are
thus more likely to lead to contrast effects, than a more moderate change (Herr, 1986;
Mussweiler et al., 2004). Therefore, experiencing a moderate change in power is more likely to
lead the individuals to focus on the similarities between the two roles (i.e. engaging in
assimilation judgements). Conversely, experiencing an extreme change in power is more likely
to result in focusing on the differences between the two roles (i.e. engaging in contrast
judgements). Therefore, I hypothesize the following:

Hypothesis 9: *Past power moderates the effect of current power on contrast judgements. When past power is low, current power is positively related to individuals' contrast judgements. When past power is high, current power is negatively related to individuals' contrast judgements.*

Method

Sample

Participants were recruited from Amazon's crowd sourcing pool, Mechanical Turk (MTurk). MTurk samples are previously used in work-related studies (e.g., Kaufmann, Schulze, & Veit, 2011). All 1019 participants who successfully completed the survey were each compensated for their time. Participants' average age was 37.70 years (SD 12.56) and 64.9% (662 participants) were female.

Procedure

Participants were randomly assigned to play a role in a virtual organization. Each role had a certain level of power (certain level of control over the budget, ranging from $0 to $100,000). Participants were asked to make allocation decisions, while taking into account the budget constraints imposed by their power role. After completing the first round of the simulation, participants were informed that due to corporate changes within the virtual organization they will either gain, loss, or experience no change in their current power. Once again, participants were randomly assigned to play a role for the second round (similar to Round 1). Thus, participants either had the same level of power at the end of the experiment, gained or lost power based on their original power role. Furthermore, the degree of power gain or power loss was different across participants, depending on their original power level in Round 1.

Next, participants completed a number of filler tasks consistent with their power role and reported their current perceptions of social power. Participants were also randomly assigned to either the assimilation or the contrast judgement condition. In the assimilation condition, participants were asked to describe how their current power level is *similar to* their past power level (in the experiment). In the contrast condition, on the other hand, participants were asked to describe how their current power level is *different from* their past power level. Last, participants had an opportunity to engage in prosocial behavior.

Measures

Unless otherwise indicated, all items had a 7-point Likert-type response scale anchored at 1= strongly disagree and 7 = strongly agree.

Power manipulation. First, participants were randomly assigned to one of six power roles: (1) Intern; (2) Analyst; (3) Manager; (4) Director; (5) VP of Sales or (6) CEO; each role had a certain level of control over the budget, ranging from $0 to $100,000. Participants were informed that due to corporate changes, they might experience change in their power going forward. By design, participants experiences power gain, power loss or no change in power based on their role in Round 1. Regardless of condition, participants read descriptions of all roles to ensure that they perceived differences in social power. Furthermore, the degree of power gain or power loss was thus randomly manipulated across participants, depending on their original power level in Round 1.

Contrast/assimilation judgement manipulation. Participants were randomly assigned to one of two experimental conditions: (1) assimilation judgement; (2) contrast judgement condition. In the assimilation judgement condition, participants were asked to list the *similarities* between their past and current power (based on their role in the experiment). In the contrast

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judgement condition, participants were asked to list the *differences* between their past and current power (based on their role in the experiment).

Perceptions of social power. Participants' current perceptions of social power were assessed during each round through two items adapted from past research (Dubois et al., 2010; Rucker & Galinsky, 2008). Specifically, participants reported the extent they feel powerful and in control along a 7-point Likert-type response scale anchored at 1= powerless; lacking control and 7 = powerful; in control.

Prosocial behavior. At the end of the study, participants had the opportunity to engage in prosocial behavior by providing feedback on an unrelated project. Prosocial behavior was operationalized as the length of the feedback individuals provided (i.e. the number of characters written as a response to help). Participants were told that their feedback and suggestions will be used in designing future studies and will greatly benefit research conducted at the university. Participants were told that providing feedback is not part of their main task and is not required in order to get paid for participating in the study.

Control variables: Same as in Study 1 (gender, age, prosocial motivation and PANAS).

Results

Means, standard deviations, and intercorrelations among the key variables are included in Table 11. As expected, perceptions of social power were positively correlated with experiencing high power across each round. Furthermore, positive emotions (such as happiness) were positively related to power and perceptions of current power. As expected, current power and current perceptions of power were negative correlated with prosocial behavior. Interestingly, contrast perceptions were negatively correlated with past and current power, as well as past and current perceptions of power.

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Manipulation checks

    Power manipulation check: A significant effect of current power level on perceived social power was observed across both rounds. Regression analyses revealed that the power manipulation across each round positively predicted participants' perceptions of power during that round (Round 1: $b = 1.008$, $p < .001$; Round 2: $b = 0.979$, $p < .001$). Together, these findings provide support for Hypothesis 1.

    Contrast/assimilation judgments manipulation check: The effect of assimilation manipulation on perceived similarities between past and current power was significant ($F(1, 1017) = 25.79$, $p < .001$). Participants in the contrast judgement condition, who were asked to focus on the differences between their current and past power, reported higher perceptions of power difference (M= 4.403, SD= 2.245). Participants in the assimilation judgement condition, who were asked to focus on the similarities between their current and past power roles, reported lower level of power difference (M= 3.696, SD=2.191; $t(1017) = 5.078$, $p < .001$).

    Hypotheses Testing: Hypothesis 2 predicted that participants with low current power would engage in more prosocial behavior relative to their high-power counterparts. Regression results demonstrate that powerful individuals provided shorter feedback on the unrelated task ($b= -2.163$, $p < .05$), relative to their low-power counterparts. These results provide support for Hypothesis 2.

    However, I hypothesized that past power will also have an effect on current prosocial behavior and that this affect will be moderated by contrast/assimilation judgements. Therefore, I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast condition) and the two-way interaction between past power and contract condition in Model 2 and Model 3, respectively (Table 12).

Regression results demonstrate that current power was negatively associated with prosocial behavior ($b = -2.035$, $p = .058$). However, past power, contrast judgments condition and the interaction were not significant predictors of prosocial behavior. These results indicate that past power does not have an effect on current behavior, after controlling for the effect of current power. Therefore, these results do not support Hypothesis 3a or Hypothesis 3b.

Next, I examined how past power effects individuals' current perceptions of power. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast condition) and the two-way interaction between past power and contract judgements condition in Model 2 and Model 3, respectively (see Table 13). As expected, regression results illustrate that current power had a strong positive effect ($b = .98$, $p < .001$) on individuals' current perceptions of power. Furthermore, past power ($b = -.108$, $p < .001$) and contrast condition ($b = -.485$, $p < .01$) had a strong negative effect on individuals' perceptions of current power. Moreover, the interaction between past power and contrast condition was significant ($b = .144$, $p < 0.001$). I plotted this significant interaction for individuals in the assimilation condition and individuals in the contrast condition (see Figure 8). For individuals in the assimilation condition, past power was negatively related to individuals' current perceptions of social power (simple slope $b = -.107$, $p < .001$); whereas for individuals in the contrast condition, the relationship was weaker (simple slope $b = .036$, $p = $ ns). Next, I tested the difference between these slopes, to directly assess whether the groups are different from one another. While for individuals in the contrast condition, the relationship between past power and current perceptions of power was not significant different from zero, this relationship was significantly different from individuals in the assimilation condition (simple slope $b = .144$, $p < .001$). The negative relationship between past power and perceptions of current power

observed under assimilation condition appears to have been reduced under contrast condition. However, these results do not support Hypothesis 4a or Hypothesis 4b, as the predicted effects are in the opposite direction.

Next, I examined how past power effects individuals' emotional reactions. First, I examined how contrast judgement condition moderate the effect of past power on current positive emotions, such as happiness. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast condition) and the two-way interaction between past power and contract condition in Model 2 and Model 3, respectively (see Table 14). Regression results demonstrate that only current power has a strong positive effect ($b = .279$, $p < .001$) on positive emotions, such as happiness. Past power, contrast judgement condition and the interaction term were not significant predictors of positive emotions, such as happiness. Therefore, these results do not support Hypothesis 5a or Hypothesis 5b.

Next, I examined how contrast judgements moderate the effect of past power on current negative emotions, such as anger. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast condition) and the two-way interaction between past power and contract condition in Model 2 and Model 3, respectively (see Table 14). Regression results demonstrate that both current power ($b = -.152$, $p < .001$) and past power ($b = .050$, $p < .05$) have a significant effect on negative emotions, such as anger. However, once the interaction term was added to the model, only current power remained a strong predictor of negative emotions, and the interaction term was not significant. Therefore, these results do not support Hypothesis 6a or Hypothesis 6b.

Next, mediation hypotheses were tested using a bootstrapping procedure (n = 5000 bootstrap resamples; Preacher & Hayes, 2004; Preacher & Hayes, 2008). These analyses examine the indirect effects of past power on prosocial behavior through two potential mediators: (1) happiness and (2) anger. Estimates of indirect effects of past power on current prosocial behavior through each mediator is shown in Table 15.

The first mediation analysis tested the extent to which happiness mediated the relationship between past power and current prosocial behavior. For individuals in the assimilation judgements condition, the indirect effect was not significant, indicating that, happiness did not mediate the effect of past power on prosocial behavior. Similar results were obtained for individuals in the contrast condition, indicating once again that happiness did not mediate the effect of past power on current prosocial behavior. Therefore, these results do not provide support for Hypothesis 7, since positive emotions, such as happiness, did not mediate the relationship between past power and current prosocial behavior.

The second mediation analysis tested the extent to which anger mediated the relationship between past power and current prosocial behavior. For individuals in the assimilation condition, the indirect effect was not significant, indicating that, anger did not mediate the effect of past power on current prosocial behavior. Similar results were obtained for individuals in the contrast condition, indicating once again that anger did not mediate the effect of past power on current prosocial behavior. Therefore, these results do not provide support for Hypothesis 8.

Last, I examined how the degree of power change effects individuals' perceptions of assimilation versus contrast. According to Hypothesis 9, there is an interaction between current and past power when predicting individuals' likelihood to engage in contrast judgements. In other words, when past power is low, current power should be positively related to individuals'

contrast judgements. But when past power is high, this relationship should be negative. As shown in Table 16, regression results indicate that both current power ($b = .933$, $p < .001$) and past power ($b = .982$, $p < .001$) positively predicted individuals' contrast judgements. Furthermore, there was a significant interaction between current power and past power. The interaction negatively predicted individuals' contrast judgements ($b = -.350$, $p < .001$). I plotted this significant interaction at $+/-1$ SD from the mean of past power (Figure 9; Aiken & West, 1991). For the low levels of past power (i.e., -1 SD), current power was positively related to individuals' contrast judgements (simple slope $b = .281$, $p < .001$); whereas for the high levels of past power (i.e., $+1$ SD), the relationship was negative (simple slope $b = -.895$, $p < .001$). Therefore, the positive relationship between current power and contrast judgements observed when past power is low appears to have been significantly reduced, and even became negative, when past power was high. These results provide support for Hypothesis 9.

Supplementary Analyses

Similar to Study 1, to further understand the relationship between current power, past power and contrast versus assimilation judgements, multiple regression analyses were conducted to predict current prosocial behavior from fully saturated models, including all possible higher order effects between current power, past power and contrast judgments. These models included all main effects and interactions. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) in Model 2 (see results for these models in Table 12). Next, I explored whether contrast judgements moderated the effect of current power on prosocial behavior, in the same way I predicted that it moderates the effects of past power. Therefore, the two-way interaction between current power and contract perceptions were included in Model 3 (see Table 17). Last,

in Model 4, I explored whether current power level moderates the previously examined two-way interaction between past power and contrast judgement perceptions, when predicting current prosocial behavior. Thus, a three-way interaction among current power, past power, and contrast versus assimilation judgements were examined (see Table 17).

Regression results demonstrate that the interaction between current power and contrast perceptions was not a significant predictor of current prosocial behavior ($b = 1.47$, $p = $ ns). These results indicate that contrast perceptions did not moderate the effect of current power on prosocial behavior. Next, I examined the three-way interaction between current power, past power and contrast perceptions. Supplementary analyses revealed that once all possible higher order effects were added to the model, the overall explanatory power of the model does not significantly improve. The results demonstrate that only current power significantly predicts prosocial behavior ($b = -8.424$, $p < 0.05$), and none of the two-way interactions were significant. Furthermore, the three-way interaction was also not a significant predictor of prosocial behavior. Overall, these results demonstrate that only current power level might be important in understanding the relationship between social power and prosocial behavior.

Discussion

This study investigated the role of past power and the psychological processes of contrast and assimilation that can explain how past power effects individuals' current perceptions, emotions and behaviors. Overall, the results demonstrate that, after controlling for the effects of current power, past power did not affect individuals' current behavior. Furthermore, the results demonstrate that contrast judgements did not moderate the effect of past power on individuals' current behaviors.

When examining the effects of past power on perceptions of current power, the results were surprising. Both past power and contrast judgments negatively influenced perceptions of current power and the interaction was significant, after taking the effects of current power into account. The negative relationship between past power and perceptions of current power observed under assimilation appears to have been reduced under contrast judgements. However, these results are in the opposite direction of my predictions.

This study also investigated the effect of past power on positive and negative emotions. However, the results demonstrate that only current power is driving the effect on current levels of happiness. For anger, on the other hand, past power had a significant positive effect, after controlling for the effect of current power. However, once the interaction term was added to the model, only the current power remained a strong predictor of negative emotions, and the interaction term was not significant. This study also investigated the mediating role of positive and negative emotions in driving the relationship between past power and prosocial behavior. The results demonstrate that neither happiness nor anger mediate the relationship between past power and prosocial behavior.

While the results of this study did not support most of my hypotheses, the study demonstrated the important role past power plays in predicting contrast judgements. To summarize, the positive relationship between current power and contrast judgements observed when past power was low, was significantly reduced when past power was high. In the next study, I will further investigate the effect of past power on individuals' current perceptions, feelings and behaviors, and the role of contrast judgments. The next study will examine these relationships among a sample of working professionals, who experienced actual change in power throughout their careers.

CHAPTER 10: STUDY 3 (FIELD STUDY)

Research Questions & Hypotheses

This study was designed to further investigate the role of past power and the psychological processes that explain how past power effects current prosocial behavior among working professionals, who experienced power change throughout their careers. First, I sought to investigate whether the results of the previous studies would generalize to a different sample and measures. Second, I sought to examine the role of past power, after experiencing an actual change in power and the psychological processes that might moderate individuals' reaction to these changes. I further investigated the role of assimilation and contrast judgements in reactions to power change.

The first aim of this study was to test the previously established relationships between current power, current perceptions of power and current prosocial behavior. Therefore, I hypothesize the following:

> **Hypothesis 1:** *Current social power is positively related to individuals' current perceptions of social power.*
>
> **Hypothesis 2**: *Current social power is negatively related to individuals' current prosocial behavior.*

Similar to Study 2, the second aim was to examine the psychological processes of contrast and assimilation judgements as a moderating variable. Thus, the hypotheses tested in this study are parallel to the hypotheses examined in Study 2. The main difference is that contrast perceptions were measured and not manipulated. In order to examine individuals' tendencies to

assimilate versus contrast, I used the individuals' perceptions of power similarities between past and current power roles as the moderating variable in my analysis. This measure represented the degree of contrast (+1 SD) versus the degree of assimilation (-1 SD) participants reported to experience when comparing their current power role and their previous power role.

As previously discussed, when individuals focus on the *similarities* between their past and current power level, these assimilation judgements drive the effects of past power to be in the same direction as the effects of current power (see Figure 3a). Therefore, similar to Study 2, I hypothesize the following:

> ***Hypothesis 3a:*** *Under assimilation, past social power is negatively related to individuals' current prosocial behavior.*
>
> ***Hypothesis 4a:*** *Under assimilation, past social power is positively related to individuals' current perceptions of power.*
>
> ***Hypothesis 5a:*** *Under assimilation, past social power is positively related to individuals' current positive emotions (such as happiness).*
>
> ***Hypothesis 6a:*** *Under assimilation, past social power is negatively related to individuals' current negative emotions (such as anger).*

On the other hand, when individuals focus on the *differences* between their past and current power level, these contrast judgements drive the effect of past power to be in the opposite direction, as compared to the effects of current power (see Figure 3b). Therefore, similar to Study 2, I hypothesize the following

> ***Hypothesis 3b:*** *Under contrast, past social power is positively related to individuals' current prosocial behavior.*

Hypothesis 4b: *Under contrast, past social power is negatively related to individuals'*
current perceptions of power.

Hypothesis 5b: *Under contrast, past social power is negatively related to individuals'*
current positive emotions (such as happiness).

Hypothesis 6b: *Under contrast, past social power is positively related to individuals'*
current negative emotions (such as anger).

Similar to Study 2, this study also investigated the mediating role of happiness and anger
in driving changes in prosocial behavior. Since positive emotions can broaden individuals'
mindset, these emotions can also shift individuals' attention away from themselves and toward
others. Anger, on the other hand, was shown to reduce the tendency to help others (Terwogt,
2002). Thus, when individuals are angry, they should engage in lower levels of prosocial
behavior. Therefore, I hypothesize the following:

Hypothesis 7: *Positive emotions, such as happiness, mediate the relationship between*
past power and current prosocial behavior.

Hypothesis 8: *Negative emotions, such as anger, mediate the relationship between past*
power and current prosocial behavior.

Similar to Study 2, this study also investigated the effect of past power on the
individuals' likelihood to engage in assimilation versus contrast judgements. As previously
discussed, when individuals engage in temporal comparisons, they need to evaluate the extremity
of the current situation as compared to the past situation. Experiencing a moderate change in
power is more likely to lead the individuals to focus on the similarities between the two roles
(i.e. assimilation judgements), while experiencing an extreme change is more likely to result in

focusing on the differences between the two roles (i.e. contrast judgements). Therefore, I hypothesize the following:

> **Hypothesis 9:** *Past power moderates the effect of current power on contrast judgements. When past power is low, current power is positively related to individuals' contrast judgements. When past power is high, current power is negatively related to individuals' contrast judgements.*

Method

Sample

An invitation e-mail to an online survey was sent to approximately 2,000 alumni from an MBA program from a large southeastern university in the United States. I received 183 completed surveys (response rate 9.15%) for the first wave and 150 of these participants (about 81.96%) also recalled information about their past role. The second survey was sent a month later to participants who completed the first wave. I received 33 completed surveys (response rate 18.13%) for the second wave. The third survey was sent another month later to all participants who completed the first or second wave. I received 20 completed surveys (response rate 10.92%) for the third and final wave of the study.

Due to the low overall response rate, the main analysis is focused on the data from the first wave of the study. The final sample size was 183 participants (69.7% were male), average age was 41.47 years (SD 6.16), and participants had on average 5.86 years of work experience at their current company. These participants are currently employed full-time by various organizations and occupy different managerial and non-managerial roles at their respective organizations.

Procedure

Participants were asked to complete 3 online surveys over the course of three months. Participants were given a chance to win a $100 gift certificate from a lottery drawing for completing all three surveys. Each survey asked participants to identify their current role, access participants' perceptions of social power (current and retrospected), provide information about power change and their emotional response to change, as well as report their prosocial behaviors at work. The first wave of the survey asked participants to report about their current role (Time 1), as well as recall their last role (prior to their current role) and report information about their past role (Time 0). The second (Time 2) and the third (Time 3) waves of the survey only asked participants to report any changes in their current power role, perceptions of power and current prosocial behavior measures.

Measures

Unless otherwise indicated, all items had a 7-point Likert-type response scale anchored at 1= strongly disagree and 7 = strongly agree.

Power level. Participants' power was assessed by asking participants to identify their current power rank within the organization. Participants indicated their current power by choosing one of the following options: (1) Intern; (2) Entry-level individual contributor (i.e. Associate); (3) Intermediate or Experienced-level individual contributor (i.e. Senior Associate); (4) First-level management (i.e. Manager); (5) Experienced first-level management (i.e. Senior Manager); (6) Middle-level management (i.e. Director); (7) Experienced middle-level management (i.e. Senior Director); (8) Executive-level (i.e. VP); (9) Experienced executive-level (i.e. Senior VP); (10) Top-level management and Chiefs (i.e. CEO).

Perceptions of power. Participants' current and retrospected perceptions of social power were assessed through two items adapted from past research (Dubois et al., 2010; Rucker & Galinsky, 2008). Specifically, participants reported the extent they feel powerful and in control (i.e. current perceptions of power), and felt powerful and in control (i.e. retrospected perceptions of power) along a 7-point Likert-type response scale anchored at 1= powerless; lacking control and 7 = powerful; in control.

Perceptions of contrast. Participants reported the extent they perceive power differences between their past and current power roles along a 7-point Likert-type response scale anchored at 1= very different and 7 = very similar.

Emotional experience. Participants rated the degree to which they are currently experiencing each of the following emotions along a 7-point Likert-type response scale anchored at 1= not at all and 7 = very strongly. The list of emotions included three items to represent happiness (i.e. joyful, happy, pleased) and three items to represent anger (i.e. angry, annoyed, irritated). These items were adapted from the State Anger Scale (Spielberger, 1983), which was designed to measure the experience of anger as an emotional state (e.g. "I feel angry").

Prosocial behavior. Prosocial behavior was measured by assessing the frequency with which participants engaged in the following affiliative and challenging organizational citizenship behaviors (OCBs). Affiliative behaviors include the following four items (adapted from Grant & Mayer, 2009): "Lend a helping hand to those around me," "Helped orient new people even though it was not required," "Took steps to try to prevent problems with other employees" and "Considered the impact of my actions on coworkers." Challenging behaviors include the following three items (adapted from Cardador & Wrzesniewski, 2015): "Made recommendations concerning issues that affect my work group," "Spoke up and encouraged others in my group to

get involved in issues that affect the group," and "Spoke up with ideas for new projects or changes in procedures."

Control variables: Same as in Study 2 (gender, age, prosocial motivation and PANAS).

Results

Means, standard deviations, and intercorrelations among the key variables are included in Table 18. As expected, perceptions of social power were positively correlated with experiencing high power across each time period. Furthermore, positive emotions (such as happiness) were positively related to perceptions of current power, while negative emotions (such as anger) were negatively related to perceptions of current power. Interestingly, past power, current power and the perceptions of power across each time period were positively correlated with affiliative OCBs.

Hypotheses Testing: Hypothesis 1 predicted that participants with high power would perceive their social power to be higher relative to individuals with low power. Regression analyses revealed that individuals with high power reported higher perceptions of social power across each time period (past power: $b= .268, p < .001$; current power: $b= .223, p < .001$). These results demonstrate a positive relationship between power and perceptions of social power. Thus, providing support for Hypothesis 1.

Hypothesis 2 predicted that participants with high power would engage in less prosocial behavior relative to their low-power counterparts. Regression analyses revealed that the relationship between power level and prosocial behavior was not uniform. For Time 0, when participants *recalled* their prosocial behavior at their previous role, the results indicate that high past power was associated with higher levels of both affiliative ($b= .278, p < .001$) and challenging OCBs ($b= .361, p < .01$). However, for Time 1, when participants reported their

current engagement in prosocial behavior, the results indicate that current power level was not a significant predictor for affiliative or challenging OCBs. These findings do not provide support for Hypothesis 2.

Next, I examined the experience of power change (i.e. power gain or power loss) among the participants. Out of 150 participants who reported about their past and current power roles, 102 participants (about 68%) reported experiencing some type of power change between their past role (Time 0) and current role (Time 1). The majority of these participants (about 52.9%) experienced a moderate power gain, moving from one level to the next level within the organizational power hierarchy. About 24.07% moved to a senior management role, 22.22% moved to a director level role, and about 29.62% moved to a senior director or an executive level role. A smaller portion of participants (about 17.64%) reported experiencing a more extreme power gain, moving 2 levels up within the hierarchy. Only 13 participants (about 12.74%) reported experience of power loss of any kind.

Since I hypothesized that past power can influence individuals' current behaviors, I will next examine the effect of past power (power at Time 0) on the relationship between current power (Time 1) and current engagement in challenging and affiliative OCBs. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 19). Regression results demonstrate that past power ($b = .342$, $p < .05$) has a significant positive effect on affiliative OCBs. However, once the interaction term was added to the model, past power was no longer a significant predictor, and the interaction term was also not significant. These results provide some indication that past power has an effect on current behavior, after controlling for the effects

of current power. However, these results are not driven by contrast judgments as previously hypothesized. Therefore, these results do not support Hypothesis 3a or Hypothesis 3b.

Next, I examined how past power effects individuals' current perceptions of power. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (Table 20). As expected, regression results illustrate that current power had a strong positive effect ($b = .282$, $p < .001$) on individuals' current perceptions of power. However, both past power, contrast condition, and the interaction were not significant. These results do not support Hypothesis 4a or Hypothesis 4b.

Next, I examined how past power effects individuals' current emotional reactions. First, I examined how contrast judgement perceptions moderate the effect of past power on current positive emotions, such as happiness. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 21). Regression results demonstrate that past power ($b = -.235$, $p < .001$) had a significant negative effect on individual's current happiness levels. However, the interaction term was not significant. These results provide some indication that past power has an effect on current happiness, after controlling for the effects of current power. However, these results are not driven by contrast judgments as previously hypothesized. Therefore, these results do not support Hypothesis 5a or Hypothesis 5b.

Next, I examined how contrast judgements moderate the effect of past power on current negative emotions, such as anger. I included controls in Model 1 (i.e., age, gender, prosocial

motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and contract perceptions in Model 2 and Model 3, respectively (see Table 21). Regression results demonstrate that past or current power did not have an effect on individuals' current level of negative emotions. Moreover, contrast perceptions ($b = -.099$, $p < .05$) had a significant negative effect on negative emotions, such as anger. However, the interaction term was not significant. These results provide some indication that contrast perceptions had an effect on current levels of negative emotions. However, these results do not support Hypothesis 6a or Hypothesis 6b.

Next, mediation hypotheses were tested using a bootstrapping procedure (n = 5000 bootstrap resamples; Preacher & Hayes, 2004; Preacher & Hayes, 2008). These analyses examine the indirect effects of past power on current prosocial behavior through two potential mediators: (1) happiness and (2) anger. Estimates of indirect effects of past power on current prosocial behavior through each mediator is shown in Table 22.

The first mediation analysis tested the extent to which happiness mediated the relationship between past power and current prosocial behavior. For individuals who engaged in assimilation judgements perceptions, the indirect effect was not significant, indicating that, happiness did not mediate the effect of past power on current prosocial behavior. Similar results were obtained for individuals with contrast perceptions, indicating once again that happiness did not mediate the effect of past power on prosocial behavior. Therefore, these results do not provide support for Hypothesis 7.

The second mediation analysis tested the extent to which anger mediated the relationship between past power and current prosocial behavior. For individuals who engaged in assimilation perceptions, the indirect effect was not significant, indicating that, anger did not mediate the

effect of past power on current prosocial behavior. Similar results were obtained for individuals with contrast perceptions, indicating once again that anger did not mediate the effect of past power on current prosocial behavior. Therefore, these results do not provide support for Hypothesis 8.

Last, I examined how the degree of power change effects individuals' perceptions of assimilation versus contrast judgments. According to Hypothesis 9, there should be an interaction between current and past power level when predicting individuals' likelihood to engage in contrast judgements. In other words, when past power is low, current power should be positively related to individuals' contrast judgements. But when past power is high, this relationship should be negative. As shown in Table 23, regression results indicate that current power, past power, and the interaction were not significant predictors of individuals' contrast perceptions. These results do not provide support for Hypothesis 9.

Supplementary Analyses

Similar to Study 1 and Study 2, to further understand the relationship between current power, past power and contrast versus assimilation judgements, multiple regression analyses were conducted to predict prosocial behavior from fully saturated models, including all possible higher order effects between current power, past power and contrast judgments. These models included all main effects and interactions. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) in Model 2 (see results for these models in Table 19). Next, I explored whether contrast judgements moderated the effect of current power on prosocial behavior, in the same way I predicted that it should moderate the effect of past power. Therefore, the two-way interaction between current power and contract perceptions were included in Model 3 (see

Table 24). Last, in Model 4, I explored whether current power level moderates the previously examined two-way interaction between past power and contrast judgement perceptions when predicting prosocial behavior. Thus, a three-way interaction among current power, past power, and contrast versus assimilation judgements were examined (see Table 24).

Regression results demonstrate that past power ($b = .320$, $p < .05$) had a significant positive effect on affiliative OCBs. However, the interaction term was not significant. These results indicate that contrast perceptions did not moderate the effect of current power on current prosocial behavior. For challenging OCBs, current power, past power and contrast judgements were not significant predictors.

Next, I examined the three-way interaction between current power, past power and contrast perceptions. For affiliative OCBs, supplementary analyses revealed that once all possible higher order effects were added to the model, the overall explanatory power of the model significantly improves. However, the three-way interaction between current power, past power and contrast judgements was not significant and none of the two-way interactions were significant. For challenging OCBs, the overall explanatory power of the model did not improve and none of the variables significantly predicted the outcome of interest.

Last, to further understand how the relationship between past and current power effects individuals' perceptions of assimilation versus contrast, multiple regression analysis was conducted to include not only the objective level of power, but also the subjective perceptions of individuals' current and past power. Similar to Hypothesis 9, but this time focusing on perceptions rather than actual power levels, I predict that when individuals' perceptions of their past power are low, perceptions of current power should be positively related to individuals' contrast judgements. But when past power perceptions are high, this relationship should be

negative. I included controls in Model 1 (i.e., age, gender, prosocial motivation, PANAS) and added the main effects (i.e., current power, past power, contrast perceptions) and the two-way interaction between past power and current power in Model 2 and Model 3, respectively (see results for these models in Table 24). Next, I explored whether perceptions of current and past power also have explanatory power above the objective power level at each time period. Thus, perceptions of current power and perceptions of past power were included in Model 4. Last, the two-way interaction between current power perceptions and past power perceptions were included in Model 5 (see Table 25).

Regression results indicate that perceptions of current power ($b = 1.09$, $p < .01$) positively predicted individuals' contrast judgements, after controlling for objective power levels. Furthermore, there was a significant interaction between perceptions of current power and perceptions of past power. The interaction negatively predicted individuals' contrast judgements ($b = -.259$, $p < .01$). I plotted this significant interaction at $+/-1$ SD from the mean of perceptions of past power (Figure 10). For the low levels of past power perceptions (i.e., -1 SD), perceptions of current power were positively related to individuals' contrast judgements (simple slope $b= .414$, $p = .057$); whereas for the high levels of past power perceptions (i.e., $+1$ SD), the relationship was negative (simple slope $b= -.396$, $p = .095$). Thus, the positive relationship between current power perceptions and contrast judgements observed when past power perceptions were low appears to have been reduced when past power perceptions were high. While these results are not statistically significance, they are pointing in a similar direction as what was hypothesized.

Discussion

This study was designed to further investigate the role of past power and the psychological processes that explain how past power effects prosocial behavior among working professionals, who undergone power changes throughout their careers. Due to low response rate, the analysis mainly focused on the first wave of the data collection, where individuals reported their current power level and recalled experience of power change in the past. While participants exhibit differences in the degree to which they engaged in assimilation versus contrast judgements, due to low sample size the majority of my hypotheses were not supported.

Overall, the results demonstrate that individuals with high power reported higher perceptions of social power across each time period, thus providing support for the positive relationship between current power and current perceptions of social power. However, the relationship between social power and prosocial behavior was not uniform. When individuals recalled their prosocial behaviors during their previous role, high power individuals indicated *higher l*evels of both affiliative and challenging OCBs. However, when individuals reported their current levels of prosocial behavior across all three survey waves, power was not a significant predictor of affiliative or challenging OCBs.

I also examined the experience of power change among the participants. While the majority of participants reported experiencing some type of power change in the past, the survey did not capture any "real time" changes in power. Only one individual across the sample reported changing roles over the 3 months period of my data collection. This was probably the case due to overall low sample size. Therefore, the majority of my results focused on data obtained at the first wave, where individuals recalled past power role and compared it to their current power role.

Individuals' tendencies to engage in assimilation and contrast judgements were also examined. However, regression results indicate that current power, past power, and the interaction were not significant predictors of individuals' likelihood to engage in contrast perceptions. These results were somewhat surprising, and therefore in supplementary analyses, I investigated the role of power *perceptions*, after controlling for the actual power level, and examined its effect on the likelihood to engage in contrast versus assimilation judgements. While these results are not statistically significance, there were pointing in a similar direction as what was hypothesized. The positive relationship between current power perceptions and contrast judgements observed when past power perceptions were low appears to have been reduced when past power perceptions were high. In the next chapter, I will provide an overall discussion of my results and their contribution to the power literature.

CHAPTER 11: GENERAL DISCUSSION

By examining the effects of social power over time, researchers can provide a deeper understanding of the psychological processes involved. Events that seem to have ended may live on in subjective experience. Perceptions of one's work environment are shaped by prior attitudes and behaviors (Meyer & Allen, 1988; O'Reilly & Caldwell, 1981) and "remembered experiences" (Schwarz, 2007). Specifically, perceptions of individual's social power from previous time periods influence how these individuals currently perceive their power roles within the organization and how they choose to behave towards others. These dynamic effects are important to study because they represent the reality of individuals' experiences, as social power can change over time.

This dissertation proposed an integration between research on social power and research on time. It demonstrated that recollections of past power experiences provide a context in which current social power is evaluated. The results of this dissertation provide initial support to the idea that individuals' power does not affect behavior only through contemporaneous manners. Specifically, the results of the pilot study demonstrate that the effects of initial social power are carried over, even when the individual experiences changes in his or her power. Additional support for this idea was established in Study 1 and Study 3. These studies indicate that past power has a strong effect on current behavior, even after controlling for the effects of current power. However, it appears that contrast and assimilation judgements were not the drivers of this effect across both studies. Interestingly, the supplementary analyses for Study 1 revealed a three-way interaction between current power, past power and contrast/assimilation judgements when

predicting current prosocial behavior. These results demonstrated that individuals' reaction to power *gain* were different from individuals' reaction to *power loss*. Individuals who gain power and engaged in contrast judgements, performed similar levels of prosocial behavior as individuals who have low power and did not experience power change. This work supports an important role of the dynamic nature of social power, and its consequences to prosocial behavior. However, the differences between how individuals' experience power gain versus power loss should be further investigated.

When examining the effects of past power on current power perceptions, the results of both Study 1 and Study 2 demonstrated a negative relationship under assimilation that appears to have been reduced under contrast. This is interesting because the opposite effect was hypothesized. However, supplementary analyses revealed that there is no three-way interaction between past power, current power and contrast judgements. Thus, the role of contrast and assimilation judgements should be further investigated.

Furthermore, for Study 3, only current power effected current perceptions of power. This might be driven by the passage of time between past and current power levels. In Study 3, individuals experienced power change on average 2.56 years ago. As previously discussed, psychologically distant past selves no longer have the same power to directly flatter or taint current selves, as subjectively close past selves do (Ross & Wilson, 2002; Wilson & Ross, 2003). Therefore, current perceptions of social power are less influenced by more distant past perceptions.

When examining the effects of past power on current emotions, the results of both Study 1 and Study 2 demonstrated that only current power is driving the effect for both happiness and anger. Furthermore, the results demonstrated that neither happiness nor anger mediate the relationship between past power and current prosocial behavior. However, the results

of Study 3, provide some indication that past power has an effect on current happiness, after controlling for the effects of current power.

Last, Study 2 and Study 3 examined the relationship between current power and past power when predicting engagement in contrast versus assimilation judgements. The results of Study 2 demonstrate that the positive relationship between current power and contrast judgements observed when past power was low appears to have been significantly reduced, and even became negative, when past power was high. However, the results of Study 3 demonstrate that current power, past power, and the interaction were not significant predictors of individuals' contrast perceptions. In supplementary analysis, I also examined the subjective perceptions of power and demonstrated that the positive relationship between current power *perceptions* and contrast judgements observed when past power *perceptions* were low appears to have been reduced when past power *perceptions* were high (controlling for both current and past power level). These results provide some initial support that perceptions of power might be even more influential than actual power level when it comes to contrast and assimilation judgments.

Theoretical Contributions

First, this work contributes to research on social power by extending the literature to include the critical role of past power. These findings provide initial support for the argument that past power directly affect perception of individuals' current power and subsequent prosocial behaviors. Although some prior research has considered the dynamic aspects of power, based on my review, the power literature has yet to adopt a temporal lens. This is surprising, as numerous scholars stated that explicit consideration of time-related issues will result in better theory building and a richer understanding of the phenomena of interest (George & Jones, 2000; Maxwell & Cole, 2007; Mitchell & James, 2001; Ployhart & Vandenberg, 2010). Thus, I believe

that incorporating objective and subjective time can change the way social power is studied, offering interesting new research perspectives.

This work also integrates time into the study of social power by adding a temporal context. Temporal context is important because different experiences over time impact current outcomes. For example, according to the temporal comparison theory (Albert, 1977) individuals evaluate current experiences based on their current standing relative to past or future experiences. Thus, the difference between individuals' present standing and a past or future experience impacts current behavior. In this dissertation, I examined the assimilation and contrast effects following power change. Unfortunately, the results only partially support the effect of contrast and assimilation judgements after experiencing power change. Supplementary analyses support the idea that depending on whether the individual engages in assimilation versus contrast judgements, he or she can perceive the same power change fundamentally different, which can lead to differences in subsequent behaviors. This work sheds light on the complexity of the cognitive processes' employees engage in when adapting to changes in their environment. Further work is needed to understand the role contrast and assimilation judgements play in our understanding and experience of power change.

Finally, this work adds to a growing literature demonstrating the importance of comparison processes for a variety of judgments and behaviors (Corcoran, Hundhammer, & Mussweiler, 2008; Corneille, Yzerbyt, Pleyers, & Mussweiler, 2009; Crusius & Mussweiler, 2008; Epstude & Mussweiler, 2009; Mussweiler & Damisch, 2008; Mussweiler & Epstude, 2009). The present research contributes to this literature by showing that in the domain of social power, assimilation versus contrast plays a role in how individuals react to changes in power and adjust their subsequent behaviors.

Practical Implications

This research offers important practical implications for managers and organizations. First, this dissertation heeds calls for greater precision in assessing changes in workplace phenomena as well as the important role of time more generally (e.g., Bluedorn & Denhardt, 1988; George & Jones, 2000; McGrath, 1988; Mitchell & James, 2001). By recognizing that employees view their current power within their past experiences and their current behaviors are directly influences by these past goals and expectations, managers can anticipate how experiencing change in power might influence individuals' behaviors.

Since past social power generates current influence through vicarious effects and also provides a standard against which current social power is evaluated, understanding that employees naturally consider experiences at another point in time should help managers making decisions with regards to promotions or job redesign. For example, when promoted to another role, an individual is likely to consider his or her past experiences and past perceptions of social power. These past experiences might directly influence the individuals' current goals and subsequent behaviors. By taking these effects into account, managers can anticipate behavior and adjust expectations and goals accordingly.

Second, managers must also consider that individuals have differing reactions to situations over time. Individuals might focus on the differences or the similarities between their current and past power roles. Whether the situation induces contrast or assimilation judgements might further affect how powerful the individual might feel and the subsequent prosocial actions of the individual. Therefore, managers should consider how contrast versus assimilation judgements might affect individuals' perceptions and experiences at work.

Furthermore, even if individuals display prosocial actions following a power change, managers cannot assume that this behavior will persist. Some employees might engage in prosocial behavior because of excitement about their new environment and this might be driven by previous prosocial goals. A subset of these employees may markedly decrease prosocial behavior once the honeymoon phase is over and the individual had the chance to update his or her goals accordingly. If an organization consistently hires individuals who are willing to perform prosocial acts, but who will diminish these prosocial behaviors over time, the organizational benefits will be substantially reduced.

In conclusion, this work contributes to the understanding of the temporal nature of social power by examining the effect of past power on current perceptions of power and subsequent prosocial behavior. A temporal perspective is critical to the understanding of the complexities of organizational phenomena (George & Jones, 2000; Mitchell & James, 2001). Consistent with this, these findings demonstrate how experience of power change directly influence current perceptions, emotions and behaviors. Furthermore, this work highlights the important role past experiences have in explaining individual's reaction to change, thus providing important theoretical and practical insights.

Future Directions

The findings of these studies offer initial evidence that individuals think about experiences beyond the present moment. The results of my work are valuable to social power research by demonstrating that individuals rely on past power to generate current perceptions of power and these in turn influence subsequent behavior. The results of my work are also valuable to temporal research by demonstrating that individuals contrast or assimilate when experiencing change in power, and this may alter important work behaviors.

Future research should also consider whether the arguments outlined throughout this dissertation apply differently for various bases of power (e.g., reward power, coercive power, referent power, expert power, and legitimate power) or different types of prosocial behavior. Perhaps, for example, decisions to modify prosocial behaviors may occur faster because individuals feel greater goal alignment with organizationally directed behaviors.

Future research should also consider potential differences in the impact of retrospected versus anticipated changes in power. While past temporal comparisons are bounded by what actually has been observed and what is believed to be true, future temporal comparisons are less bounded in reality and can include wider range of possibilities. On one hand, the effects of past power should be stronger than anticipations of future power because retrospections are based on actual experiences whereas anticipations of power change are based on the yet-to-occur future. On the other hand, the potential of future power changes should motivate individuals to take actions for achieving positive future goals and avoiding negative ones (Carrera, Caballero, & Munoz, 2012). Furthermore, when anticipating future events, individuals might experience intense emotional reactions (Van Boven & Ashworth, 2007), which in turn might influence motivation, behavioral intentions, and ultimately behavior (Baumgartner, Pieters, & Bagozzi, 2008). Therefore, future research should try to address the fundamental differences between retrospected and anticipated changes in social power and their effect on current behaviors.

Future research should also consider how long a particular state lasts or is stable over time (i.e. duration), and how long it takes to change from one state to another (i.e., rate of change; George & Jones, 2000). Depending on these characteristics of the power change, individual's expectations and behaviors under investigation might be affected. For example, the frequency with which individuals experience change in social power will affect how they feel

about the change or how they choose to react to anticipated changes going forward (Kosteas, 2011).

Finally, the findings of this dissertation may be suitable for integration with existing research which considers individuals' prior expectations and previous experiences. Research on topics such as realistic job previews (e.g., Hom et al., 1999), socialization (e.g., Ashforth & Saks, 1996), or psychological contracts (e.g., Lambert, Edwards, & Cable, 2003) may benefit from the principles established in this temporal power model. Utilizing a temporal lens by applying this theory to other research is a natural next step for this research.

TABLE 1: Definitions of Power

Source	Date	Power Definition
Russell	1938	The ability to produce intended effects. A has more power than B, if A achieves many intended effects and B only a few
Lewin	1944	The possibility of inducing forces
Weber	1947	The probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests
Bierstedt	1950	The ability to employ force
French	1956	The maximum force which A can induce on B minus the maximum resisting force which B can mobilize in the opposite direction
Dahl	1957	A has power over B to the extent that he can get B to do something that B would not otherwise do
Simon	1957	"A" is having power over "B" when "A's behavior causes B's behavior"
Kelman	1958	The extent to which the influencing agent is perceived as instrumental to the achievement of the subject's goals
Cartwright	1959	...the induction of (psychological) forces by one entity b upon another a and to the resistance to this induction set up by a
French & Raven	1959	The strength of power of O/P in some system a is defined as the maximum potential ability of O to influence P in a
Thibaut & Kelley	1959	The power of A over B increases with A's ability to affect the quality of outcomes attained by B
Schermerhorn	1961	The processual relation between two parties modally characterized by (1) asymmetric influence, in which a perceptible probability of decision rests in one of the two parties, even over the resistance of the other party; and (2) the predominance of negative sanctions (threatened or actual) as a feature of behavior in the dominant party
Mechanic	1962	Any force that results in behavior that would not have occurred if the force had not been present
Emerson	1962	The power to control or influence the other resides in control over the thing he values
Kuhn	1963	The ability to satisfy one's wants through the control of preferences and/or opportunities

TABLE 1: Definitions of Power (Continued)

Source	Date	Power Definition
Blau	1964	All kinds of influence between persons or groups, including those exercised in exchange transactions, where one induces others to accede to his wishes by rewarding them for doing so
Cartwright	1965	If O had the capacity of influence P, we say that O has power over P
Etzioni	1965	Holding preferences of followers in "abeyance"
Hickson, Hinings, Lee, Schneck, and Pennings	1971	The ability of a subunit to influence organizational decisions that produce outcomes favored by that subunit
Salancik & Pfeffer	1971	The ability of those who possess power to bring about the outcomes they desire
May	1972	The ability to cause or prevent change
Homans	1974	When A's net reward-compared, that is, which his alternatives-in taking action that will reward B is less, at least as perceived by B, than B's net reward in taking action that will reward A, and B as a result changes his behavior in a way favorable to A, than A as exerted power over B
McClelland	1975	Having impact on others or systems
Pruitt	1976	Person A has power over person B when A has the capacity to influence B in a direction desired by A
Kipnis	1976	...access to resources needed by others
Hart	1976	Three forms of "control" -- control over resources, actors and events and outcomes.
Pfeffer & Salancik	1978	A relationship among social actors in which one social actor A, can get another social actor B, to do something that B would not otherwise have done
Siu	1979	The intentional influence over the beliefs, emotions, and behaviors of people
Giddens	1979	The capacity to achieve outcomes
Pfeffer	1981	The capacity (or potential) of an individual to exert influence to change the behavior of a person or group in some intended fashion
Burke	1982	The potential for influence... The potential must be acted upon
Mintzberg	1983	The capacity to effect organizational outcomes… to have power is to be able to get desired things done, to effect outcomes - actions and the decisions that precede them

TABLE 1: Definitions of Power (Continued)

Source	Date	Power Definition
Manz & Gioia	1983	The ability or potential to influence others
Huston	1983	The ability to achieve ends through influence
Bugental, Blue, & Cruzcosa	1989	A perception of one's capacity to influence others
Dépret & Fiske	1993	…asymmetrical control over another person's outcomes
Wrong	1995	The capacity of some persons to produce intended and foreseen effects on others
Fiske & Dépret	1996	Fate control: person A has power over person B when A controls B's outcomes, regardless of influence processes.
Sidanius & Pratto	1999	The ability to control another's outcomes
Goodwin, Gubin, Fiske, & Yzerbyt	2000	Unilateral outcome control
Overbeck & Park	2001	Deliberate exercise of one's ability to influence
Fiol et al.	2001	The ability or potential to influence
Anderson & Berdahl	2002	The ability to provide or withhold valued resources or administer punishments
Keltner, Gruenfeld, & Anderson	2003	An individual's relative capacity to modify others' states by providing or withholding resources or administering punishments
Galinsky, Gruenfeld, & Magee	2003	Perception of one's capacity to influence others
Lukes	2005	A exercises power over B when A affects B in a manner contrary to B's interests.
Turner	2005	The capacity to affect the world, including others, through influencing and controlling people to carry out one's will, to act on one's behalf, as an extension of oneself
van Dijke & Poppe	2006	A possibility or capacity to affect others, even if these others would resist such influence attempt
Berdahl & Martorana	2006	Relative control over another's valued outcomes
Simon & Oakes	2006	A has power insofar as it recruits human agency in the service of its agenda
Maner, Gailliot, Butz, & Peruche	2007	Possessing the relatively unconstrained capacity to provide (or to withhold) resources, rewards, and punishments to other people

Source	Date	Power Definition
Fiske & Berdahl	2007	Relative control over another's valued outcomes
Magee & Galinsky	2008	Asymmetric control over valued resources in social relations
Langner & Keltner	2008	The influence an individual exerts over his or her partner's outcomes through the allocation of resources and punishments
Sivanathan, Pillutla & Murnighan	2008	Individual's intentional and effective capacity to control, modify, or influence others by providing or withholding resources or administering punishments'
Fast, Gruenfeld, Sivanathan, & Galinsky	2009	Asymmetric control over valuable resources
Magee	2009	The capacity to control others' outcomes
Lammers & Stapel	2009	The ability to control resources, own and others
Guinote & Vescio	2010	Power confers the ability to control completely outcomes that are valued by others
Fiske	2010	Controlling valued resources
Goldstein & Hays	2011	The capacity to influence others through asymmetric control of valued resources and the ability to administer rewards and punishments
Malhotra & Gino	2011	The capacity to control one's own resources and outcomes, as well as those of others
Jordan, Sivanathan, & Galinsky	2011	The asymmetric control over valued resources by one or more parties in a social relationship
Rucker, Dubois, & Galinsky	2011	Asymmetric control over other people or valued resources
Anderson, John, & Keltner	2011	An individual's ability to influence another person or other people
Rucker Galinsky & Dubois	2012	Perceived asymmetric control over valued resources in social relations
Strum & Antonakis	2015	Power is having the discretion and the means to asymmetrically enforce one's will over entities.

TABLE 2: Key Characteristics of Power

Source	Date	Power Conceptualization (Influence, Control, or Psychological state)	Exercise of Control (Actual vs. Potential)	Intent of Control (Intended vs. Unintended)	Sources of Power (Position, Expertise, Referent, etc.)	Entity of Control (Individuals, Teams, Organizations)
Russell	1938	Influence	Actual	Intended	N/A	Individuals or Groups
Lewin	1944	Influence	Potential	Intended	N/A	Individuals
Weber	1947	Influence	Potential	Intended	N/A	Individuals
Bierstedt	1950	Influence	Potential	Intended	N/A	Individuals
French	1956	Influence	Actual	Intended	N/A	Individuals or Groups
Dahl	1957	Influence	Potential	Intended	N/A	Individuals
Simon	1957	Influence	Actual	Intended	N/A	Individuals
Kelman	1958	Influence	Actual	Unintended	Means control, attractiveness, credibility	Individuals
Cartwright	1959	Influence	Potential	Intended	N/A	Individuals or Groups
French & Raven	1959	Influence	Potential	Intended	N/A	Individuals
Thibaut & Kelley	1959	Control	Actual	Intended	Dependency	Individuals
Schermerhorn	1961	Influence	Potential	Intended	N/A	Individuals or Groups
Mechanic	1962	Influence	Actual	Intended	Dependency	Individuals
Emerson	1962	Control	Potential	Intended	Property of the social relationship	Individuals or Groups
Kuhn	1963	Control	Potential	Intended	N/A	Individuals
Blau	1964	Influence	Actual	Intended	N/A	Individuals or Groups

Source	Date	Power Conceptualization (Influence, Control, or Psychological state)	Exercise of Control (Actual vs. Potential)	Intent of Control (Intended vs. Unintended)	Sources of Power (Position, Expertise, Referent, etc.)	Entity of Control (Individuals, Teams, Organizations)
Cartwright	1965	Influence	Potential	Intended	N/A	Individuals
Etzioni	1965	Control	Actual	Intended	N/A	Individuals or Groups
Hickson, Hinings, Lee, Schneck, and Pennings	1971	Influence	Potential	Intended	N/A	Individuals or Groups
Salancik & Pfeffer	1971	Influence	Actual	Intended	N/A	Individuals
May	1972	Influence	Potential	Intended	N/A	Individuals
Homans	1974	Influence	Potential	Intended	N/A	Individuals
McClelland	1975	Influence	Actual	Intended	N/A	Individuals, Groups, or Organizations
Pruitt	1976	Influence	Potential	Intended	N/A	Individuals
Kipnis	1976	Control	Actual	Intended	N/A	Individuals
Hart	1976	Control	Actual	Intended	N/A	Individuals
Pfeffer & Salancik	1978	Influence	Actual	Intended	N/A	Individuals
Siu	1979	Influence	Actual	Intended	N/A	Individuals or Groups
Giddens	1979	Control	Potential	Intended	N/A	Individuals
Pfeffer	1981	Influence	Potential	Intended	N/A	Individuals or Groups
Burke	1982	Influence	Potential	Intended	N/A	Individuals
Mintzberg	1983	Influence	Potential	Intended	N/A	Individuals
Manz & Gioia	1983	Influence	Potential	Intended	N/A	Individuals

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Power Conceptualization (Influence, Control, or Psychological state)	Exercise of Control (Actual vs. Potential)	Intent of Control (Intended vs. Unintended)	Sources of Power (Position, Expertise, Referent, etc.)	Entity of Control (Individuals, Teams, Organizations)
Huston	1983	Influence	Potential	Intended	N/A	Individuals
Bugental, Blue, & Cruzcosa	1989	Psychological state	Potential	Intended	N/A	Individuals
Dépret & Fiske	1993	Control	Actual	Intended	N/A	Individuals
Wrong	1995	Influence	Potential	Intended	N/A	Individuals
Fiske & Dépret	1996	Control	Potential	Unintended	N/A	Individuals
Sidanius & Pratto	1999	Control	Actual	Intended	N/A	Individuals or Groups
Goodwin, Gubin, Fiske, & Yzerbyt	2000	Control	Actual	Intended	Dependency	Individuals
Overbeck & Park	2001	Influence	Actual	Intended	N/A	Individuals or Groups
Fiol et al.	2001	Influence	Potential	Intended	N/A	Individuals or Groups
Anderson & Berdahl	2002	Control	Potential	Intended	N/A	Individuals
Keltner, Gruenfeld, & Anderson	2003	Control	Actual	Intended	N/A	Individuals
Galinsky, Gruenfeld, & Magee	2003	Psychological state	Potential	Intended	N/A	Individuals
Lukes	2005	Control	Actual	Intended	N/A	Individuals or Groups
Turner	2005	Influence	Actual	Intended	N/A	Individuals or Groups

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Power Conceptualization (Influence, Control, or Psychological state)	Exercise of Control (Actual vs. Potential)	Intent of Control (Intended vs. Unintended)	Sources of Power (Position, Expertise, Referent, etc.)	Entity of Control (Individuals, Teams, Organizations)
van Dijke & Poppe	2006	Influence	Potential	Intended	Dependency	Individuals
Berdahl & Martorana	2006	Control	Actual	Intended	N/A	Individuals
Simon & Oakes	2006	Influence	Actual	Intended	N/A	Individuals or Groups
Maner, Gailliot, Butz, & Peruche	2007	Control	Actual	Intended	N/A	Individuals
Fiske & Berdahl	2007	Control	Actual	Intended	N/A	Individuals
Magee & Galinsky	2008	Control	Actual	Intended	N/A	Individuals or Groups
Langner & Keltner	2008	Influence	Actual	Intended	N/A	Individuals
Sivanathan, Pillutla & Murnighan	2008	Control/Influence	Actual	Intended	N/A	Individuals
Fast, Gruenfeld, Sivanathan, & Galinsky	2009	Control	Actual	Intended	N/A	Individuals
Magee	2009	Control	Potential	Intended	N/A	Individuals
Lammers & Stapel	2009	Control	Potential	Intended	N/A	Individuals
Guinote & Vescio	2010	Control/Influence	Potential	Intended	N/A	Individuals or Groups
Fiske	2010	Control	Actual	Intended	N/A	Individuals

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Power Conceptualization (Influence, Control, or Psychological state)	Exercise of Control (Actual vs. Potential)	Intent of Control (Intended vs. Unintended)	Sources of Power (Position, Expertise, Referent, etc.)	Entity of Control (Individuals, Teams, Organizations)
Goldstein & Hays	2011	Control	Potential	Intended	N/A	Individuals
Malhotra & Gino	2011	Control	Potential	Intended	N/A	Individuals
Jordan, Sivanathan, & Galinsky	2011	Control	Actual	Intended	N/A	Individuals or Groups
Rucker, Dubois, & Galinsky	2011	Control	Actual	Intended	N/A	Individuals
Anderson, John, & Keltner	2011	Influence	Actual	Intended	N/A	Individuals or Groups
Rucker Galinsky & Dubois	2012	Control	Actual	Intended	N/A	Individuals
Strum & Antonakis	2015	Influence	Actual	Intended	Charisma, incentives, expertise, punishment, etc.	Individuals, Groups, or Organizations

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Objects of Control (Outcomes, Resources, Behavior, Other factors (e.g., ability, motivation, etc.)	Value of Objects of Control (One party or Both)	Proximity of Control (Direct vs Indirect)	Valence of Control (Beneficial vs. Harmful)
Russell	1938	Behavior	Both	Direct	N/A
Lewin	1944	Behavior	One party	N/A	Harmful
Weber	1947	Behavior	One party	Direct	Harmful
Bierstedt	1950	Behavior	One party	Direct	N/A
French	1956	N/A	Both	Direct	Harmful
Dahl	1957	Behavior	Both	Direct	Beneficial
Simon	1957	Behavior	Both	Direct	N/A
Kelman	1958	Goals	One party	Direct	N/A
Cartwright	1959	N/A	Both	Direct	N/A
French & Raven	1959	Behavior	One party	Direct	N/A
Thibaut & Kelley	1959	Outcomes	One party	Direct	N/A
Schermerhorn	1961	Behavior	Both	Direct	Harmful
Mechanic	1962	Behavior	One party	Direct	N/A
Emerson	1962	Outcomes	One party	Direct	N/A
Kuhn	1963	Preferences	One party	N/A	Both
Blau	1964	Behavior	One party	Direct	Harmful
Cartwright	1965	Behavior	One party	Direct	Beneficial
Etzioni	1965	Preferences	Both	Direct	N/A
Hickson, Hinings, Lee, Schneck, and Pennings	1971	Behavior	One party	Direct	N/A
Salancik & Pfeffer	1971	Outcomes	One party	Direct	N/A
May	1972	Behavior	One party	Direct	N/A

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Objects of Control (Outcomes, Resources, Behavior, Other factors (e.g., ability, motivation, etc.)	Value of Objects of Control (One party or Both)	Proximity of Control (Direct vs Indirect)	Valence of Control (Beneficial vs. Harmful)
Homans	1974	Behavior	Both	Direct	N/A
McClelland	1975	Behavior	One party	N/A	N/A
Pruitt	1976	Behavior	One party	Direct	N/A
Kipnis	1976	Outcomes	One party	Direct	N/A
Hart	1976	Outcomes	One party	N/A	N/A
Pfeffer & Salancik	1978	Behavior	Both	Direct	Harmful
Siu	1979	Behavior	One party	Direct	N/A
Giddens	1979	Outcomes	One party	N/A	N/A
Pfeffer	1981	Behavior	One party	Direct	N/A
Burke	1982	Behavior	One party	Direct	N/A
Mintzberg	1983	Outcomes	One party	Direct	N/A
Manz & Gioia	1983	Behavior	One party	N/A	N/A
Huston	1983	Behavior	One party	N/A	N/A
Bugental, Blue, & Cruzcosa	1989	Behavior	One party	Direct	N/A
Dépret & Fiske	1993	Outcomes	Both	Direct	N/A
Wrong	1995	Behavior	One party	N/A	N/A
Fiske & Dépret	1996	Outcomes	Both	Direct	N/A
Sidanius & Pratto	1999	Outcomes	One party	Direct	N/A
Goodwin, Gubin, Fiske, & Yzerbyt	2000	Outcomes	One party	Direct	N/A
Overbeck & Park	2001	Behavior	Both	Direct	N/A
Fiol et al.	2001	Behavior	Both	Direct	N/A

TABLE 2: Key Characteristics of Power (Continued)

Source	Date	Objects of Control (Outcomes, Resources, Behavior, Other factors (e.g., ability, motivation, etc.)	Value of Objects of Control (One party or Both)	Proximity of Control (Direct vs Indirect)	Valence of Control (Beneficial vs. Harmful)
Anderson & Berdahl	2002	Resources	One party	N/A	Both
Keltner, Gruenfeld, & Anderson	2003	Resources/Punishments	Both	Direct	Both
Galinsky, Gruenfeld, & Magee	2003	Behavior	One party	Direct	N/A
Lukes	2005	Behavior	Both	Direct	N/A
Turner	2005	Behavior	One party	Direct	N/A
van Dijke & Poppe	2006	Behavior	Both	Direct	Harmful
Berdahl & Martorana	2006	Outcomes	Both	Direct	N/A
Simon & Oakes	2006	Behavior	One party	Direct	N/A
Maner, Gailliot, Butz, & Peruche	2007	Resources/Punishments	Both	Direct	Both
Fiske & Berdahl	2007	Outcomes	Both	Direct	N/A
Magee & Galinsky	2008	Resources	Both	Direct	Both
Langner & Keltner	2008	Outcomes	One party	Direct	Both
Sivanathan, Pillutla & Murnighan	2008	Resources/Punishments	One party	Direct	Both
Fast, Gruenfeld, Sivanathan, & Galinsky	2009	Resources	Both	Direct	N/A
Magee	2009	Outcomes	One party	Direct	N/A
Lammers & Stapel	2009	Resources	One party	Direct	N/A
Guinote & Vescio	2010	Outcomes and Behaviors	One party	Direct	N/A

Source	Date	Objects of Control (Outcomes, Resources, Behavior, Other factors (e.g., ability, motivation, etc.)	Value of Objects of Control (One party or Both)	Proximity of Control (Direct vs Indirect)	Valence of Control (Beneficial vs. Harmful)
Fiske	2010	Resources	One party	Direct	N/A
Goldstein & Hays	2011	Resources/Punishments	Both	Direct	Both
Malhotra & Gino	2011	Outcomes	Both	Direct	N/A
Jordan, Sivanathan, & Galinsky	2011	Resources	Both	Direct	N/A
Rucker, Dubois, & Galinsky	2011	Resources/People	Both	Direct	N/A
Anderson, John, & Keltner	2011	Behavior	One party	Direct	N/A
Rucker Galinsky & Dubois	2012	Resources	Both	Direct	N/A
Strum & Antonakis	2015	Resources/People	One party	N/A	N/A

TABLE 3: Pilot Study Means, Standard Deviations, and Intercorrelations Among Variables of Interest

	Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1	Past Power (Round 1)	.500	.502	1								
2	Current Power (Round 2)	.500	.502	.013	1							
3	Past Power Perceptions	2.897	1.467	.899**	.019	1						
4	Current Power Perceptions	3.019	1.409	-.035	.777**	.030	1					
5	Prosocial Behavior (Donations)	44.867	38.424	-.328**	.070	-.300**	.112	1				
6	Age	20.867	.938	.129	-.047	.172*	-.136	.051	1			
7	Gender	.500	.502	-.063	.038	-.039	-.026	-.030	.196*	1		
8	Prosocial Motivation	5.776	1.040	-.094	.116	-.095	.165*	.209**	-.144	-.275**	1	
9	PA	3.473	.602	-.026	-.064	.008	.155	.105	-.109	-.028	.261**	1
10	NA	2.066	.553	.026	-.013	.073	-.003	-.089	-.125	.160*	-.207**	-.183*

Note. N= 158; Gender: Male =1

$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

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TABLE 4: Pilot Study Regression Results

TABLE 4: Pilot Study Regression Results

Variable	Prosocial Behavior Donation Rates (%) Round 1			Prosocial Behavior Donation Rates (%) Round 2		
	b	*SE*	*t*	*b*	*SE*	*t*
Model 1						
Age	3.007	3.374	.891	3.247	3.387	.959
Gender	3.609	6.430	.561	1.267	6.455	.196
Prosocial Motivation	6.882	3.171	2.170*	7.555	3.183	2.373*
PA	7.838	5.289	1.482	3.542	5.309	.667
NA	-3.053	5.784	-.528	-1.994	5.805	-.344
ΔR^2			.067			.055
Model 2						
Age	5.437	3.271	1.662	5.543	3.290	1.685
Gender	-.393	6.182	-.064	-2.574	6.219	-.414
Prosocial Motivation	5.233	3.057	1.712	5.928	3.075	1.928
PA	8.678	5.055	1.717	4.397	5.085	.865
NA	-2.357	5.573	-.423	-1.091	5.607	-.195
Constant Low Power Condition	19.793	8.057	2.457*	20.198	8.105	2.492*
Power Gain Condition	22.261	8.227	2.706**	23.506	8.277	2.840**
Power Loss Condition	-8.941	8.284	-1.079	-7.018	8.333	-.842
R^2			.177***			.163***
ΔR^2			.111***			.108***

Note. N= 158; Gender: Male =1

Unstandardized regression coefficients are reported.

*$p < .05$. **$p < .01$. ***$p < .001$

TABLE 5: Study 1 Means, Standard Deviations, and Intercorrelations Among Variables of Interest

TABLE 5: Study 1 Means, Standard Deviations, and Intercorrelations Among Variables of Interest

	Variable	Mean	SD	1	2	3	4
1	Past Power (Round 1)	.530	.500	1			
2	Current Power (Round 2)	.500	.502	0.068	1		
3	Past Power Perceptions	3.738	1.742	.864**	0.103	1	
4	Current Power Perceptions	3.603	1.836	0.068	.874**	.157*	1
5	Contrast Condition	.527	.500	-0.096	0.056	-0.093	0.104
6	Contrast Perceptions	3.055	2.158	-0.056	-0.031	-0.062	0.007
7	Prosocial Behavior (Length)	520.564	432.828	-.218**	-0.050	-.155*	-0.010
8	Prosocial Behavior (Seconds)	203.697	120.119	-.205**	-0.080	-.191*	-0.050
9	Happiness	2.707	1.556	0.112	.251**	0.140	.344**
10	Anger	2.114	1.364	-0.150	-.234**	-0.133	-.185*
11	Age	20.440	.988	-0.043	0.090	-0.034	0.054
12	Gender	.550	.499	-0.001	-0.043	0.047	-0.042
13	Prosocial Motivation	5.700	1.033	0.034	0.020	0.040	0.055
14	PA	4.560	1.269	0.012	-0.056	0.049	0.013
15	NA	2.300	.823	-0.106	-0.004	-0.125	0.039

Note. N= 163; Gender: Male =1; Contrast Condition: Contrast =1, Assimilation = 0;
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 5 (Continued)

	5	6	7	8	9	10	11	12	13	14
1										
2										
3										
4										
5	1									
6	0.036	1								
7	.279**	0.009	1							
8	.216**	0.006	.832**	1						
9	0.072	-0.124	0.046	-0.017	1					
10	-0.074	-0.122	0.046	0.010	-0.100	1				
11	0.075	0.032	0.031	-0.033	0.026	-0.019	1			
12	0.112	0.000	-0.049	0.003	0.117	-0.027	.216**	1		
13	-0.017	0.102	0.125	.191*	0.110	-0.053	0.070	-.276**	1	
14	-0.011	0.035	0.069	0.029	.365**	0.126	-0.042	-0.027	.366**	1
15	0.023	0.035	0.001	-0.048	0.061	.449**	-0.087	-0.061	-0.148	.159*

Note. N= 163; Gender: Male =1; Contrast Condition: Contrast =1, Assimilation = 0;
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 6: Study 1 Regression Results for Current Prosocial Behavior

TABLE 6: Study 1 Regression Results for Current Prosocial Behavior

Variable	Prosocial Behavior (Length of Letters)			Prosocial Behavior (Time Spent)		
	b	*SE*	*t*	*b*	*SE*	*t*
Model 1						
Age	13.411	36.012	.372	-8.633	9.842	-.877
Gender	-20.768	74.596	-.278	19.950	20.388	.979
Prosocial Motivation	45.195	38.824	1.164	27.901	10.611	2.629**
PA	9.521	30.086	.316	-5.560	8.223	-.676
NA	7.316	43.614	.168	-.695	11.920	-.058
ΔR^2			.018			.047
Model 2						
Age	9.986	35.651	.280	-9.223	9.727	-.948
Gender	-20.489	73.506	-.279	19.745	20.055	.985
Prosocial Motivation	47.956	38.418	1.248	28.874	10.482	2.755**
PA	10.180	29.650	.343	-5.557	8.090	-.687
NA	-4.684	43.203	-.108	-3.809	11.787	-.323
Current Power	-33.494	67.888	-.493	-15.328	18.522	-.828
Past Power	-190.692	68.076	-2.801**	-51.858	18.574	-2.792**
Contrast Perceptions	-3.515	15.750	-.223	-1.548	4.297	-.360
ΔR^2			.050*			.052*
Model 3						
Age	11.937	35.518	.336	-8.836	9.726	-.909
Gender	-18.779	73.194	-.257	20.084	20.042	1.002
Prosocial Motivation	43.305	38.370	1.129	27.952	10.507	2.660**
PA	11.890	29.542	.402	-5.218	8.089	-.645
NA	-6.504	43.031	-.151	-4.170	11.783	-.354
Current Power	-137.281	95.641	-1.435	-35.901	26.189	-1.371
Past Power	24.998	156.103	.160	-9.104	42.745	-.213
Contrast Perceptions	30.637	27.234	1.125	5.222	7.457	.700
Past Power X Contrast Perceptions	-68.048	44.364	-1.534	-13.488	12.148	-1.110
R^2			.082			.106*
ΔR^2			.014			.007

Note. N= 163; Gender: Male =1; Unstandardized regression coefficients are reported.
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 7: Study 1 Regression Results for Current Power Perceptions

TABLE 7: Study 1 Regression Results for Current Power Perceptions

Variable	Current Power Perceptions		
	b	SE	t
Model 1			
Age	.116	.153	.759
Gender	-.142	.318	-.447
Prosocial Motivation	.094	.165	.567
PA	-.019	.128	-.147
NA	.115	.186	.622
ΔR^2			.010
Model 2			
Age	-.046	.075	-.620
Gender	.044	.154	.286
Prosocial Motivation	.052	.081	.646
PA	.063	.062	1.019
NA	.085	.091	.940
Current Power	3.220	.143	22.589***
Past Power	.043	.143	.301
Contrast Perceptions	.026	.033	.775
ΔR^2			.762***
Model 3			
Age	-.041	.074	-.555
Gender	.049	.153	.318
Prosocial Motivation	.040	.080	.496
PA	.068	.062	1.101
NA	.080	.090	.894
Current Power	2.945	.200	14.732***
Past Power	.615	.326	1.884†
Contrast Perceptions	.116	.057	2.041*
Past Power X Contrast Perceptions	-.180	.093	-1.945†
R^2			.777***
ΔR^2			.006†

Note. N= 163; Gender: Male =1;
Unstandardized regression coefficients are reported.
† $p < .07$ * $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 8: Study 1 Regression Results for Current Positive and Negative Emotions

TABLE 8: Study 1 Regression Results for Current Positive and Negative Emotions

Variable	Positive Emotions (Happiness)			Negative Emotions (Anger)		
	b	SE	t	b	SE	t
Model 1						
Age	.021	.120	.172	.033	.102	.324
Gender	.401	.250	1.606	-.021	.212	-.100
Prosocial Motivation	.023	.130	.176	-.019	.110	-.173
PA	.442	.101	4.396***	.067	.085	.790
NA	.027	.146	.187	.727	.124	5.878***
ΔR^2			.149***			.205***
Model 2						
Age	-.010	.115	-.088	.062	.098	.634
Gender	.461	.237	1.945†	-.042	.202	-.208
Prosocial Motivation	.036	.124	.290	.015	.106	.144
PA	.459	.096	4.796***	.051	.082	.619
NA	.052	.139	.371	.730	.119	6.144***
Current Power	.833	.219	3.806***	-.634	.187	-3.393***
Past Power	.261	.220	1.189	-.261	.187	-1.392
Contrast Perceptions	-.092	.051	-1.806	-.097	.043	-2.245*
ΔR^2			.101***			.085**
Model 3						
Age	-.007	.115	-.064	.066	.098	.671
Gender	.463	.238	1.951†	-.039	.202	-.192
Prosocial Motivation	.029	.125	.235	.007	.106	.062
PA	.461	.096	4.809***	.054	.082	.658
NA	.049	.140	.352	.727	.119	6.115***
Current Power	.687	.310	2.212*	-.827	.264	-3.130***
Past Power	.566	.507	1.117	.141	.431	.326
Contrast Perceptions	-.043	.088	-.492	-.034	.075	-.448
Past Power X Contrast Perceptions	-.096	.144	-.668	-.127	.123	-1.033
R^2			.252***			.295***
ΔR^2			.002			.005

Note. N= 163; Gender: Male =1; Unstandardized regression coefficients are reported.
† $p < .07$ * $p < .05.$ ** $p < .01.$ *** $p < .001$

TABLE 9: Study 1 Summary of Mediation Results

| | Prosocial Behavior (Length of Letters) | | | | Prosocial Behavior (Time Spent) | | | |
| | | | 95% Confidence Interval | | | | 95% Confidence Interval | |
	Indirect Effect	SE	LL	UL	Indirect Effect	SE	LL	UL
Cond. Indirect Effects: Happiness								
Contrast Perceptions (+1SD)	1.4	14.2218	-32.614	29.5591	0.0703	3.1427	-7.8003	5.671
Assimilation Perceptions (-1SD)	10.1899	20.9523	-22.7962	63.6265	0.5116	5.0477	-8.9395	12.5578
Cond. Indirect Effects: Anger								
Contrast Perceptions (+1SD)	-2.3001	19.8763	-53.3569	31.802	0.2159	5.1034	-12.649	9.0855
Assimilation Perceptions (-1SD)	0.0623	11.4577	-23.6327	27.3313	-0.0058	3.0431	-6.1502	7.3906

N*ote.* LL = lower limit; UL= upper limit. Unstandardized regression coefficients are reported. Bootstrap sample size 5,000.

TABLE 10: Study 1 Supplementary Analyses Regression Results for Current Prosocial Behavior

TABLE 10: Study 1 Supplementary Analyses Regression Results for Current Prosocial Behavior

Variable	Prosocial Behavior (Length of Letters)			Prosocial Behavior (Time Spent)		
	b	SE	t	b	SE	t
Model 3						
Age	10.257	35.761	.287	-9.072	9.744	-.931
Gender	-15.870	74.831	-.212	22.321	20.389	1.095
Prosocial Motivation	48.030	38.528	1.247	28.915	10.498	2.754**
PA	9.430	29.808	.316	-5.976	8.122	-.736
NA	-2.791	43.646	-.064	-2.753	11.892	-.232
Current Power	-85.041	158.994	-.535	-44.077	43.321	-1.017
Past Power	-165.404	98.129	-1.686	-37.754	26.738	-1.412
Contrast Perceptions	-11.812	28.005	-.422	-6.175	7.631	-.809
Current Power X Contrast Perceptions	16.322	45.495	.359	9.103	12.396	.734
ΔR^2			.001			.003
Model 4						
Age	17.572	36.387	.483	-5.810	9.931	-.585
Gender	-43.242	74.004	-.584	14.800	20.199	.733
Prosocial Motivation	32.618	38.377	.850	25.696	10.475	2.453*
PA	17.865	29.666	.602	-4.447	8.097	-.549
NA	13.392	44.107	.304	3.199	12.039	.266
Current Power	-651.915	249.938	-2.608**	-200.440	68.218	-2.938**
Past Power	-351.040	218.443	-1.607	-112.881	59.622	-1.893†
Contrast Perceptions	5.686	48.810	.116	-9.370	13.322	-.703
Current Power X Contrast Perceptions	102.111	65.996	1.547	38.794	18.013	2.154*
Past Power X Contrast Perceptions	12.586	62.671	.201	14.719	17.105	.860
Past Power X Current Power	871.299	333.736	2.611**	252.508	91.090	2.772**
Past Power X Current Power X Contrast Perceptions	-173.926	93.444	-1.861†	-58.500	25.504	-2.294*
R^2			.123†			.152*
ΔR^2			.054*			.049*

Note. N= 163; Gender: Male =1; Unstandardized regression coefficients are reported.
† $p < .07$ * $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 11: Study 2 Means, Standard Deviations, and Intercorrelations Among Variables of Interest

TABLE 11: Study 2 Means, Standard Deviations, and Intercorrelations Among Variables of Interest

	Variable	Mean	SD	1	2	3	4	5
1	Past Power (Round 1)	3.540	1.679	1				
2	Current Power (Round 2)	3.503	1.711	0.033	1			
3	Past Power Perceptions	4.288	2.046	.831**	-0.005	1		
4	Current Power Perceptions	3.979	2.009	0.004	.833**	.099**	1	
5	Contrast Condition	0.502	0.500	-0.009	0.043	0.020	0.046	1
6	Contrast Perceptions	4.051	2.246	-.182**	-.266**	-.174**	-.240**	.157**
7	Prosocial Behavior	22.700	58.586	0.007	-.062*	0.002	-.064*	-0.005
8	Happiness	3.853	1.852	0.032	.278**	.127**	.390**	-0.004
9	Anger	1.745	1.295	0.045	-.201**	0.049	-.190**	0.009
10	Age	37.705	12.559	-0.028	0.026	-0.018	0.010	0.001
11	Gender	0.348	0.477	0.042	.080*	-0.006	0.053	0.003
12	Prosocial Motivation	5.593	1.105	0.056	-0.040	.126**	0.042	0.020
13	PA	4.540	1.213	0.046	0.020	.149**	.139**	0.031
14	NA	2.380	1.139	-0.039	-0.033	-0.026	0.005	-0.012

Note. N= 1019; Gender: Male =1; Contrast Condition: Contrast =1, Assimilation = 0;
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 11 (Continued)

	6	7	8	9	10	11	12	13
1								
2								
3								
4								
5								
6	1							
7	-0.042	1						
8	-.120**	-0.046	1					
9	0.038	-0.032	-.206**	1				
10	-0.038	.099**	.104**	-.134**	1			
11	-.069*	-0.060	.064*	.128**	-0.027	1		
12	0.048	.071*	.165**	-.123**	-0.035	-.135**	1	
13	-0.040	0.022	.577**	-.063*	.128**	-0.029	.441**	1
14	-0.037	-0.046	-.085**	.463**	-.237**	0.018	-.138**	-.142**

Note. N= 1019; Gender: Male =1; Contrast Condition: Contrast =1, Assimilation = 0;
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 12: Study 2 Regression Results for Current Prosocial Behavior

	Prosocial Behavior		
Variable	*b*	*SE*	*t*
Model 1			
Age	.475	.151	3.136**
Gender	-5.739	3.873	-1.482
Prosocial Motivation	4.231	1.880	2.250*
PA	-1.310	1.704	-.769
NA	-.848	1.679	-.505
ΔR^2			.019**
Model 2			
Age	.481	.152	3.172**
Gender	-5.253	3.886	-1.352
Prosocial Motivation	4.050	1.883	2.151*
PA	-1.209	1.705	-.709
NA	-.922	1.680	-.549
Current Power	-2.036	1.073	-1.898†
Past Power	.384	1.091	.352
Contrast Condition	-.644	3.654	-.176
ΔR^2			.004
Model 3			
Age	.484	.152	3.190**
Gender	-5.260	3.887	-1.353
Prosocial Motivation	4.015	1.884	2.131*
PA	-1.226	1.705	-.719
NA	-.932	1.681	-.555
Current Power	-2.035	1.073	-1.896†
Past Power	1.095	1.549	.707
Contrast Condition	4.347	8.536	.509
Past Power X Contrast Condition	-1.407	2.176	-.647
R^2			.023**
ΔR^2			.000

Note. N= 1015; Gender: Male =1;
Unstandardized regression coefficients are reported.
† $p < .06$ * $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 13: Study 2 Regression Results for Current Power Perceptions

TABLE 13: Study 2 Regression Results for Current Power Perceptions

Variable	Current Power Perceptions		
	b	SE	t
Model 1			
Age	.000	.005	-.064
Gender	.233	.133	1.754
Prosocial Motivation	-.023	.064	-.365
PA	.248	.058	4.243***
NA	.047	.057	.811
ΔR^2			.023***
Model 2			
Age	-.002	.003	-.821
Gender	-.025	.072	-.351
Prosocial Motivation	.054	.035	1.555
PA	.197	.032	6.211***
NA	.089	.031	2.846**
Current Power	.980	.020	49.075***
Past Power	-.035	.020	-1.713
Contrast Condition	.027	.068	.395
ΔR^2			.689***
Model 3			
Age	-.003	.003	-.939
Gender	-.025	.072	-.344
Prosocial Motivation	.058	.035	1.667
PA	.199	.032	6.301***
NA	.090	.031	2.896**
Current Power	.980	.020	49.356***
Past Power	-.108	.029	-3.759***
Contrast Condition	-.485	.158	-3.070**
Past Power X Contrast Condition	.144	.040	3.586***
R^2			.716***
ΔR^2			.004***

Note. N= 1015; Gender: Male =1;
Unstandardized regression coefficients are reported.
† $p < .06$ * $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 14: Study 2 Regression Results for Current Positive and Negative Emotions

TABLE 14: Study 2 Regression Results for Current Positive and Negative Emotions

Variable	Positive Emotions (Happiness)			Negative Emotions (Anger)		
	b	SE	t	b	SE	t
Model 1						
Age	.003	.004	.807	-.003	.003	-1.110
Gender	.269	.100	2.690**	.304	.076	4.005***
Prosocial Motivation	-.166	.048	-3.430***	-.073	.037	-1.992*
PA	.943	.044	21.477***	.037	.033	1.101
NA	-.008	.043	-.187	.511	.033	15.542***
ΔR^2			.346***			.230***
Model 2						
Age	.003	.004	.703	-.003	.003	-.951
Gender	.194	.095	2.043*	.336	.074	4.535***
Prosocial Motivation	-.144	.046	-3.128**	-.089	.036	-2.470*
PA	.930	.042	22.288***	.042	.032	1.299
NA	.004	.041	.096	.507	.032	15.835***
Current Power	.279	.026	10.633***	-.152	.020	-7.431***
Past Power	-.002	.027	-.077	.050	.021	2.407*
Contrast Condition	-.125	.089	-1.403	.066	.070	.949
ΔR^2			.067***			.044***
Model 3						
Age	.003	.004	.696	-.003	.003	-.967
Gender	.194	.095	2.042*	.336	.074	4.535***
Prosocial Motivation	-.144	.046	-3.120**	-.088	.036	-2.453*
PA	.930	.042	22.278***	.042	.032	1.307
NA	.004	.041	.098	.507	.032	15.834***
Current Power	.279	.026	10.628***	-.152	.020	-7.430***
Past Power	-.008	.038	-.204	.039	.030	1.308
Contrast Condition	-.165	.209	-.791	-.014	.163	-.087
Past Power X Contrast Condition	.011	.053	.210	.023	.041	.546
R^2			.413***			.274***
ΔR^2			.000			.000

Note. N= 1015; Gender: Male =1; Unstandardized regression coefficients are reported.
† $p < .06$ * $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 15: Study 2 Summary of Mediation Results

TABLE 15: Study 2 Summary of Mediation Results

| | Prosocial Behavior | | | |
| | | | 95% Confidence Interval | |
	Indirect Effect	SE	LL	UL
Cond. Indirect Effects: Happiness				
Contrast Condition	-0.0064	0.0918	-0.2183	0.175
Assimilation Condition	0.0142	0.085	-0.161	0.2004
Cond. Indirect Effects: Anger				
Contrast Condition	-0.0311	0.1177	-0.3026	0.1841
Assimilation Condition	-0.0196	0.0865	-0.2144	0.1562

N*ote.* LL = lower limit; UL= upper limit. Unstandardized regression coefficients are reported. Bootstrap sample size 5,000.

TABLE 16: Study 2 Regression Results for Contrast Perceptions

TABLE 16: Study 2 Regression Results for Contrast Perceptions

	Contrast Perceptions		
Variable	*b*	*SE*	*t*
Model 1			
Age	-.008	.006	-1.293
Gender	-.299	.149	-2.007*
Prosocial Motivation	.127	.072	1.751
PA	-.141	.065	-2.160*
NA	-.086	.065	-1.337
ΔR^2			.014*
Model 2			
Age	-.008	.006	-1.471
Gender	-.168	.142	-1.185
Prosocial Motivation	.117	.069	1.698
PA	-.115	.062	-1.854
NA	-.114	.061	-1.852
Current Power	-.334	.039	-8.546***
Past Power	-.239	.040	-6.001***
ΔR^2			.099***
Model 3			
Age	-.003	.005	-.670
Gender	-.217	.125	-1.731
Prosocial Motivation	.115	.061	1.902
PA	-.151	.055	-2.752***
NA	-.072	.054	-1.320
Current Power	.933	.083	11.296***
Past Power	.982	.080	12.221***
Current Power X Past Power	-.350	.021	-16.896***
R^2			.309***
ΔR^2			.196***

Note. N= 1015; Gender: Male =1;
Unstandardized regression coefficients are reported.
*$p < .05.$ ** $p < .01.$ *** $p < .001$

TABLE 17: Study 2 Supplementary Analyses Regression Results for Current Prosocial Behavior

| | Prosocial Behavior | | |
Variable	b	SE	t
Model 3			
Age	.483	.152	3.184***
Gender	-5.187	3.888	-1.334
Prosocial Motivation	4.057	1.884	2.154*
PA	-1.197	1.705	-.702
NA	-.927	1.681	-.551
Current Power	-2.790	1.532	-1.821
Past Power	.381	1.091	.349
Contrast Condition	-5.804	8.330	-.697
Current Power X Contrast Condition	1.473	2.137	.689
ΔR^2			.000
Model 4			
Age	.462	.152	3.046**
Gender	-4.927	3.884	-1.269
Prosocial Motivation	4.016	1.881	2.136*
PA	-1.028	1.706	-.603
NA	-1.135	1.679	-.676
Current Power	-8.424	3.658	-2.303*
Past Power	-4.080	3.436	-1.188
Contrast Condition	2.838	19.533	.145
Current Power X Contrast Condition	.760	5.114	.149
Past Power X Contrast Condition	-2.641	4.965	-.532
Past Power X Current Power	1.528	.906	1.686
Past Power X Current Power X Contrast Condition	.254	1.284	.198
R^2			.030**
ΔR^2			.007

Note. N= 1015; Gender: Male =1; Unstandardized regression coefficients are reported.
$^\dagger p < .06$ $^* p < .05.$ $^{**} p < .01.$ $^{***} p < .001$

TABLE 18: Study 3 Means, Standard Deviations, and Intercorrelations Among Variables of Interest

	Variable	Mean	SD	1	2	3	4	5
1	Past Power (Time 0)	5.603	1.990	1				
2	Current Power (Time 1)	6.473	2.153	.666**	1			
3	Past Power Perceptions	4.145	1.480	.419**	0.141	1		
4	Current Power Perceptions	4.801	1.369	.190*	.487**	.282**	1	
5	Contrast Perceptions	5.023	2.060	-0.105	-0.043	-.336**	-0.017	1
6	Affiliative OCBs	5.836	2.317	.209**	.195**	.278**	.289**	-0.026
7	Challenging OCBs	5.931	2.708	0.149	.172*	.198*	.283**	-0.132
8	Happiness	5.456	1.415	-0.154	0.036	0.006	.353**	0.036
9	Anger	1.520	1.041	-0.014	-0.079	0.005	-.218*	-.220*
10	Age	41.467	6.162	.251**	.236**	0.131	0.056	0.002
11	Gender	0.697	0.461	0.127	.208*	0.052	0.110	-0.152
12	Prosocial Motivation	6.176	0.774	0.125	0.016	0.103	0.108	0.041
13	PA	3.698	0.738	0.090	.193*	.280**	.514**	0.070
14	NA	1.686	0.590	0.005	-0.020	-0.123	-0.095	-0.111

Note. N= 183; Gender: Male =1
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 18 (Continued)

	6	7	8	9	10	11	12	13
1								
2								
3								
4								
5								
6	1							
7	.737**	1						
8	.186*	0.136	1					
9	-0.052	0.027	-.528**	1				
10	-0.089	0.005	0.008	0.058	1			
11	0.028	0.077	0.077	0.096	0.110	1		
12	0.145	0.158	.350**	-0.123	0.026	0.039	1	
13	.286**	.215*	.593**	-.266**	0.132	0.097	.395**	1
14	-0.074	0.077	-.274**	.297**	0.011	0.018	-0.159	-.263**

Note. N= 183; Gender: Male =1
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 19: Study 3 Regression Results for Current Affiliative and Challenging OCBs

Variable	Affiliative OCBs			Challenging OCBs		
	b	SE	t	b	SE	t
Model 1						
Age	-.041	.034	-1.219	-.012	.039	-.316
Gender	-.007	.452	-.016	.258	.526	.491
Prosocial Motivation	-.164	.299	-.549	.101	.347	.292
PA	1.049	.314	3.337**	.916	.366	2.505*
NA	.176	.362	.486	.757	.421	1.799
ΔR^2			.102*			.082
Model 2						
Age	-.067	.034	-1.979*	-.034	.040	-.854
Gender	-.084	.452	-.185	.099	.536	.185
Prosocial Motivation	-.242	.293	-.825	.058	.348	.168
PA	1.046	.313	3.338**	.897	.371	2.418*
NA	.139	.354	.392	.689	.419	1.645
Current Power	-.031	.135	-.230	.023	.160	.147
Past Power	.342	.138	2.487*	.247	.163	1.515
Contrast Perceptions	.021	.099	.215	-.082	.117	-.703
ΔR^2			.073*			.044
Model 3						
Age	-.069	.034	-2.028*	-.036	.041	-.897
Gender	-.121	.456	-.266	.062	.540	.116
Prosocial Motivation	-.245	.294	-.832	.056	.349	.161
PA	1.023	.315	3.243**	.875	.374	2.340*
NA	.167	.357	.469	.717	.423	1.697
Current Power	-.037	.136	-.275	.017	.161	.108
Past Power	.533	.292	1.826	.435	.346	1.257
Contrast Perceptions	.236	.305	.773	.129	.361	.357
Past Power X Contrast Perceptions	-.036	.048	-.743	-.035	.057	-.618
R^2			.180**			.128
ΔR^2			.004			.003

Note. N= 116; Gender: Male =1; Unstandardized regression coefficients are reported.
*$p < .05$. **$p < .01$. ***$p < .001$

TABLE 20: Study 3 Regression Results for Current Power Perceptions

Variable	Current Power Perceptions		
	b	SE	t
Model 1			
Age	-.005	.017	-.295
Gender	.200	.230	.873
Prosocial Motivation	-.150	.152	-.990
PA	.982	.160	6.148***
NA	.044	.184	.240
ΔR^2			.287***
Model 2			
Age	-.017	.016	-1.061
Gender	-.009	.218	-.042
Prosocial Motivation	-.089	.142	-.628
PA	.839	.151	5.549***
NA	.026	.171	.154
Current Power	.278	.065	4.253***
Past Power	-.095	.066	-1.431
Contrast Perceptions	-.036	.048	-.750
ΔR^2			.121***
Model 3			
Age	-.016	.016	-.981
Gender	.015	.220	.067
Prosocial Motivation	-.087	.142	-.617
PA	.854	.152	5.618***
NA	.008	.172	.048
Current Power	.282	.065	4.305***
Past Power	-.217	.141	-1.543
Contrast Perceptions	-.172	.147	-1.174
Past Power X Contrast Perceptions	.023	.023	.984
R^2			.413***
ΔR^2			.005

Note. N= 116; Gender: Male =1;
Unstandardized regression coefficients are reported.
 $^{*}p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 21: Study 3 Regression Results for Current Positive and Negative Emotions

Variable	Positive Emotions (Happiness)			Negative Emotions (Anger)		
	b	SE	t	b	SE	t
Model 1						
Age	-.014	.018	-.827	.008	.015	.527
Gender	.051	.235	.219	.346	.200	1.730
Prosocial Motivation	.186	.155	1.200	.083	.132	.627
PA	1.011	.163	6.204***	-.336	.139	-2.420*
NA	-.260	.188	-1.387	.377	.160	2.356*
ΔR^2			.373***			.143**
Model 2						
Age	-.004	.018	-.220	.011	.015	.715
Gender	.028	.233	.121	.322	.203	1.589
Prosocial Motivation	.253	.151	1.675	.074	.131	.566
PA	.959	.161	5.952***	-.291	.140	-2.077*
NA	-.239	.182	-1.316	.339	.158	2.138*
Current Power	.121	.070	1.745	-.069	.061	-1.147
Past Power	-.235	.071	-3.317***	.028	.062	.455
Contrast Perceptions	-.011	.051	-.220	-.099	.044	-2.230*
ΔR^2			.060*			.049
Model 3						
Age	-.006	.017	-.355	.010	.015	.627
Gender	-.015	.232	-.067	.297	.204	1.459
Prosocial Motivation	.250	.150	1.671	.073	.131	.554
PA	.933	.161	5.811***	-.307	.141	-2.177*
NA	-.206	.181	-1.136	.358	.159	2.247*
Current Power	.114	.069	1.651	-.074	.061	-1.214
Past Power	-.011	.149	-.076	.156	.130	1.193
Contrast Perceptions	.239	.155	1.539	.044	.136	.325
Past Power X Contrast Perceptions	-.042	.025	-1.703	-.024	.022	-1.109
R^2			.448***			.200**
ΔR^2			.015			.009

Note. N= 116; Gender: Male =1; Unstandardized regression coefficients are reported.
*$p < .05$. **$p < .01$. ***$p < .001$

TABLE 22: Study 3 Summary of Mediation Results

	Affiliative OCBs			
			95% Confidence Interval	
	Indirect Effect	SE	LL	UL
Cond. Indirect Effects: Happiness				
Contrast Condition	-0.0442	0.0516	-0.1529	0.0487
Assimilation Condition	-0.0194	0.0281	-0.0843	0.0277
Cond. Indirect Effects: Anger				
Contrast Condition	-0.002	0.0213	-0.0596	0.0304
Assimilation Condition	0.0146	0.0397	-0.0566	0.1133

N*ote.* LL = lower limit; UL= upper limit. Unstandardized regression coefficients are reported. Bootstrap sample size 5,000.

TABLE 22 (Continued)

	Challenging OCBs			
			95% Confidence Interval	
	Indirect Effect	SE	LL	UL
Cond. Indirect Effects: Happiness				
Contrast Condition	-0.0259	0.0649	-0.1563	0.103
Assimilation Condition	-0.0114	0.0321	-0.0836	0.0524
Cond. Indirect Effects: Anger				
Contrast Condition	-0.0029	0.0255	-0.0519	0.0581
Assimilation Condition	0.0208	0.0492	-0.0734	0.1334

N*ote.* LL = lower limit; UL= upper limit. Unstandardized regression coefficients are reported. Bootstrap sample size 5,000.

TABLE 23: Study 3 Regression Results for Contrast Perceptions

TABLE 23: Study 3 Regression Results for Contrast Perceptions

Variable	Contrast Perceptions		
	b	SE	t
Model 1			
Age	.003	.032	.086
Gender	-.696	.426	-1.633
Prosocial Motivation	.073	.281	.259
PA	.089	.296	.300
NA	-.389	.341	-1.140
ΔR^2			.041
Model 2			
Age	.010	.033	.313
Gender	-.678	.436	-1.556
Prosocial Motivation	.101	.286	.354
PA	.080	.305	.263
NA	-.374	.343	-1.092
Current Power	.028	.132	.209
Past Power	-.116	.134	-.870
ΔR^2			.009
Model 3			
Age	.009	.034	.271
Gender	-.669	.439	-1.522
Prosocial Motivation	.101	.287	.351
PA	.086	.307	.280
NA	-.375	.344	-1.090
Current Power	.099	.285	.347
Past Power	-.026	.347	-.074
Past Power X Current Power	-.013	.045	-.283
R^2			.050
ΔR^2			.001

Note. N= 116; Gender: Male =1;
Unstandardized regression coefficients are reported.
$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001$

TABLE 24: Study 3 Supplementary Analyses Regression Results for Current Affiliative and Challenging OCBs

Variable	Affiliative OCBs			Challenging OCBs		
	b	SE	t	b	SE	t
Model 3						
Age	-.070	.034	-2.046*	-.034	.041	-.846
Gender	-.097	.453	-.214	.099	.539	.184
Prosocial Motivation	-.241	.294	-.820	.058	.349	.167
PA	1.024	.315	3.251**	.897	.374	2.397*
NA	.134	.354	.378	.689	.421	1.637
Current Power	.197	.321	.613	.025	.382	.066
Past Power	.320	.141	2.278*	.247	.167	1.477
Contrast Perceptions	.287	.353	.812	-.080	.420	-.191
Current Power X Contrast Perceptions	-.040	.051	-.783	.000	.060	-.005
ΔR^2			.005			.000
Model 4						
Age	-.051	.034	-1.482	-.023	.042	-.546
Gender	-.189	.445	-.425	-.014	.542	-.026
Prosocial Motivation	-.216	.286	-.756	.061	.349	.175
PA	.964	.307	3.137**	.847	.374	2.265*
NA	.134	.351	.382	.752	.427	1.759
Current Power	.280	.963	.291	-.652	1.172	-.556
Past Power	.318	1.315	.242	.164	1.601	.102
Contrast Perceptions	1.167	1.102	1.059	.119	1.341	.088
Current Power X Contrast Perceptions	-.187	.164	-1.140	.022	.200	.109
Past Power X Contrast Perceptions	-.009	.154	-.060	.060	.188	.318
Past Power X Current Power	-.160	.213	-.753	-.102	.259	-.393
Past Power X Current Power X	.025	.026	.968	.006	.031	.199
Contrast Perceptions						
R^2			.248**			.157
ΔR^2			.068*			.032

Note. N= 116; Gender: Male =1; Unstandardized regression coefficients are reported.
*$p < .05$. **$p < .01$. ***$p < .001$

TABLE 25: Study 3 Supplementary Analyses Regression Results for Contrast Perceptions

Variable	Contrast Perceptions		
	b	*SE*	*t*
Model 4			
Age	.011	.032	.351
Gender	-.566	.412	-1.376
Prosocial Motivation	-.021	.270	-.078
PA	.476	.332	1.431
NA	-.469	.323	-1.450
Current Power	.129	.273	.474
Past Power	.513	.352	1.457
Past Power X Current Power	-.049	.043	-1.152
Current Power Perceptions	.069	.191	.362
Past Power Perceptions	-.622	.153	-4.067***
ΔR^2			.134***
Model 5			
Age	.016	.031	.511
Gender	-.499	.399	-1.253
Prosocial Motivation	.086	.264	.325
PA	.241	.331	.727
NA	-.525	.313	-1.676
Current Power	.045	.265	.169
Past Power	.275	.350	.785
Past Power X Current Power	-.024	.042	-.555
Current Power Perceptions	1.091	.397	2.748**
Past Power Perceptions	.631	.456	1.385
Current Power Perceptions X Past Power Perceptions	-.259	.089	-2.906**
R^2			.245***
ΔR^2			.061**

Note. N= 116; Gender: Male =1; Unstandardized regression coefficients are reported.
*$p < .05$. **$p < .01$. ***$p < .001$

FIGURE 1: Extending Social Power with the Objective and Subjective Passage of Time

a. Social Power in a Moment in Time
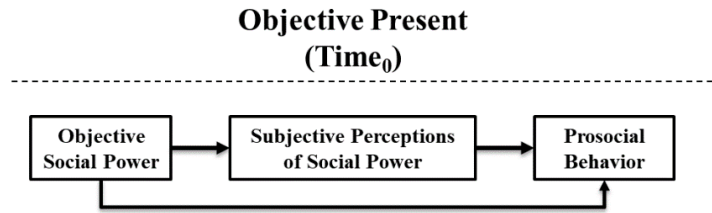
b. Social Power in the Objective Passage of Time
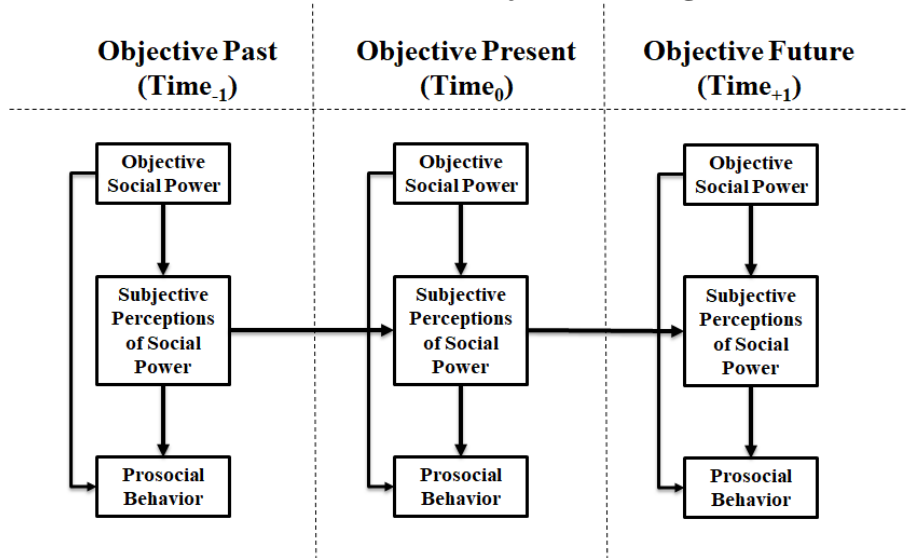
c. Social Power in the Subjective Passage of Time
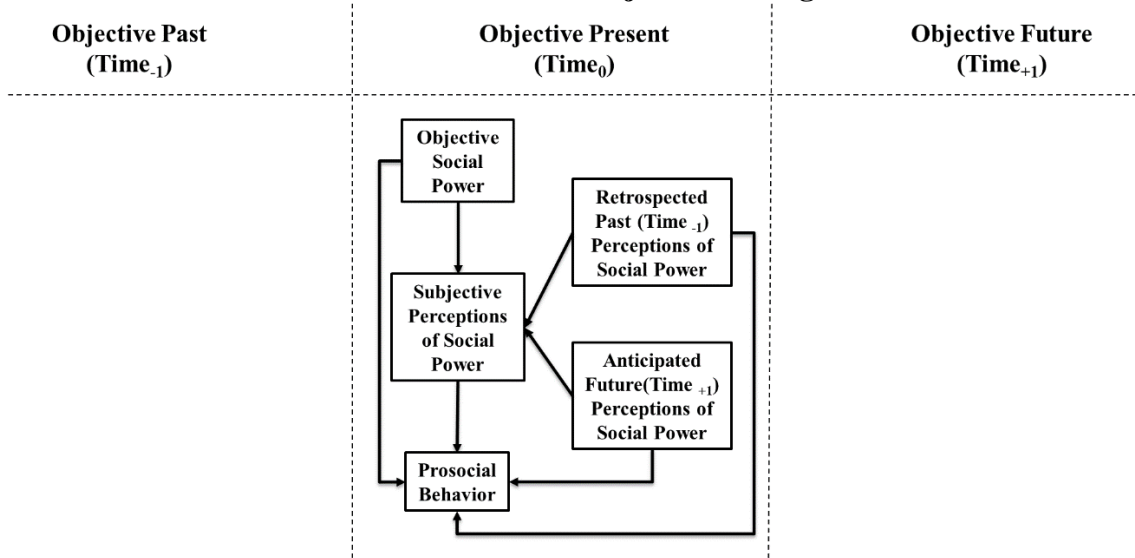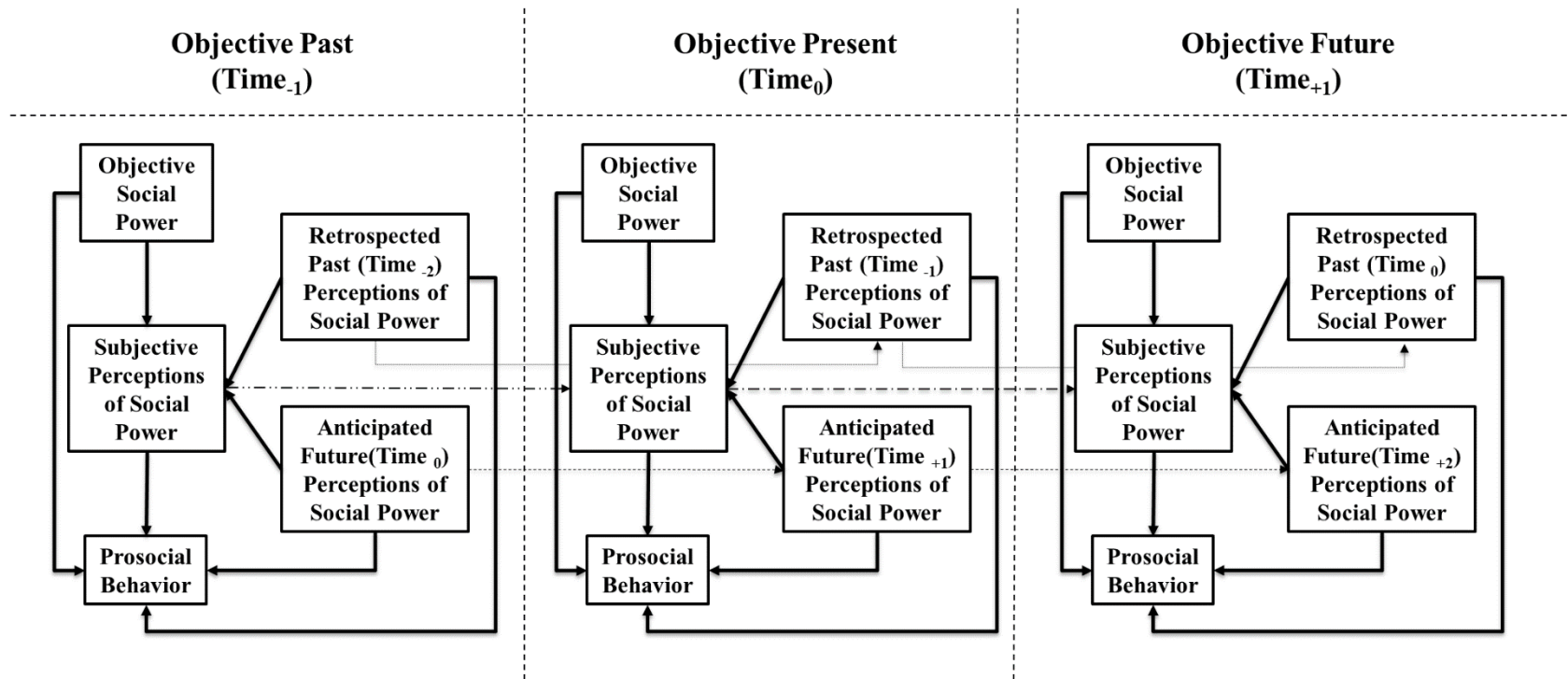
FIGURE 2: A Temporal Model of Social Power

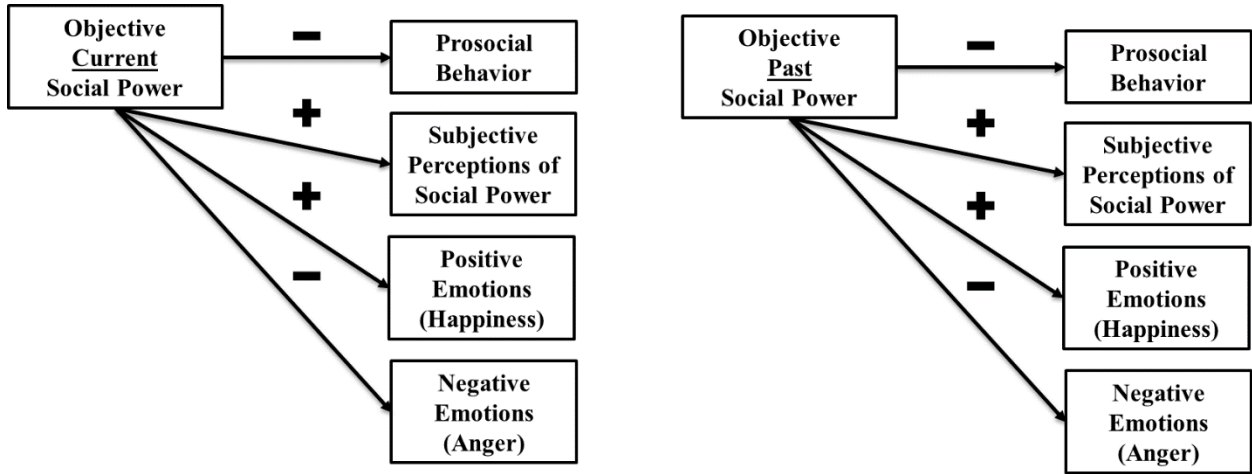**FIGURE 3a: A Temporal Model of Social Power Change (Assimilation Effects)**

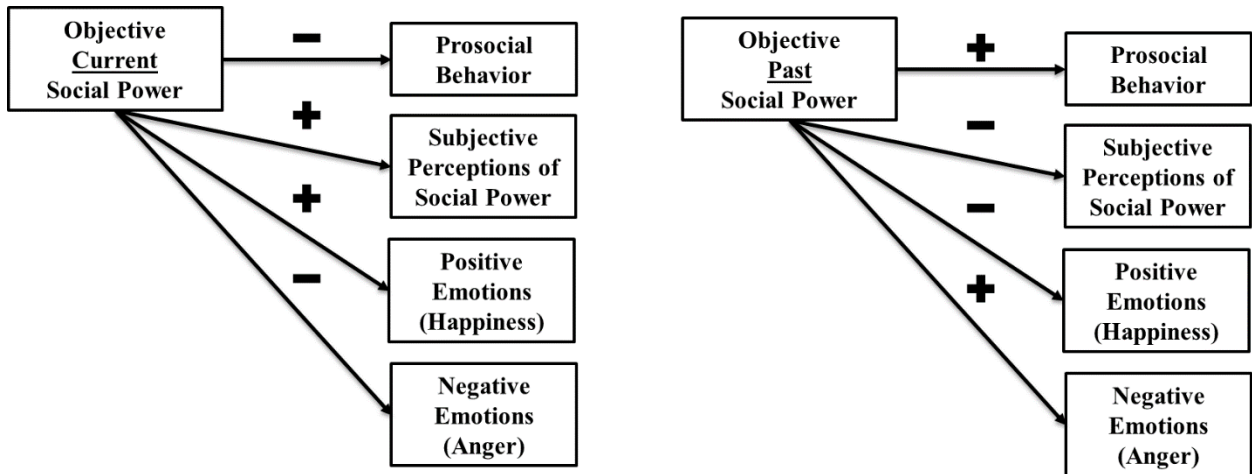**FIGURE 3b: A Temporal Model of Social Power Change (Contrast Effects)**

FIGURE 4: Extending the Temporal Model of Social Power (Full Model)
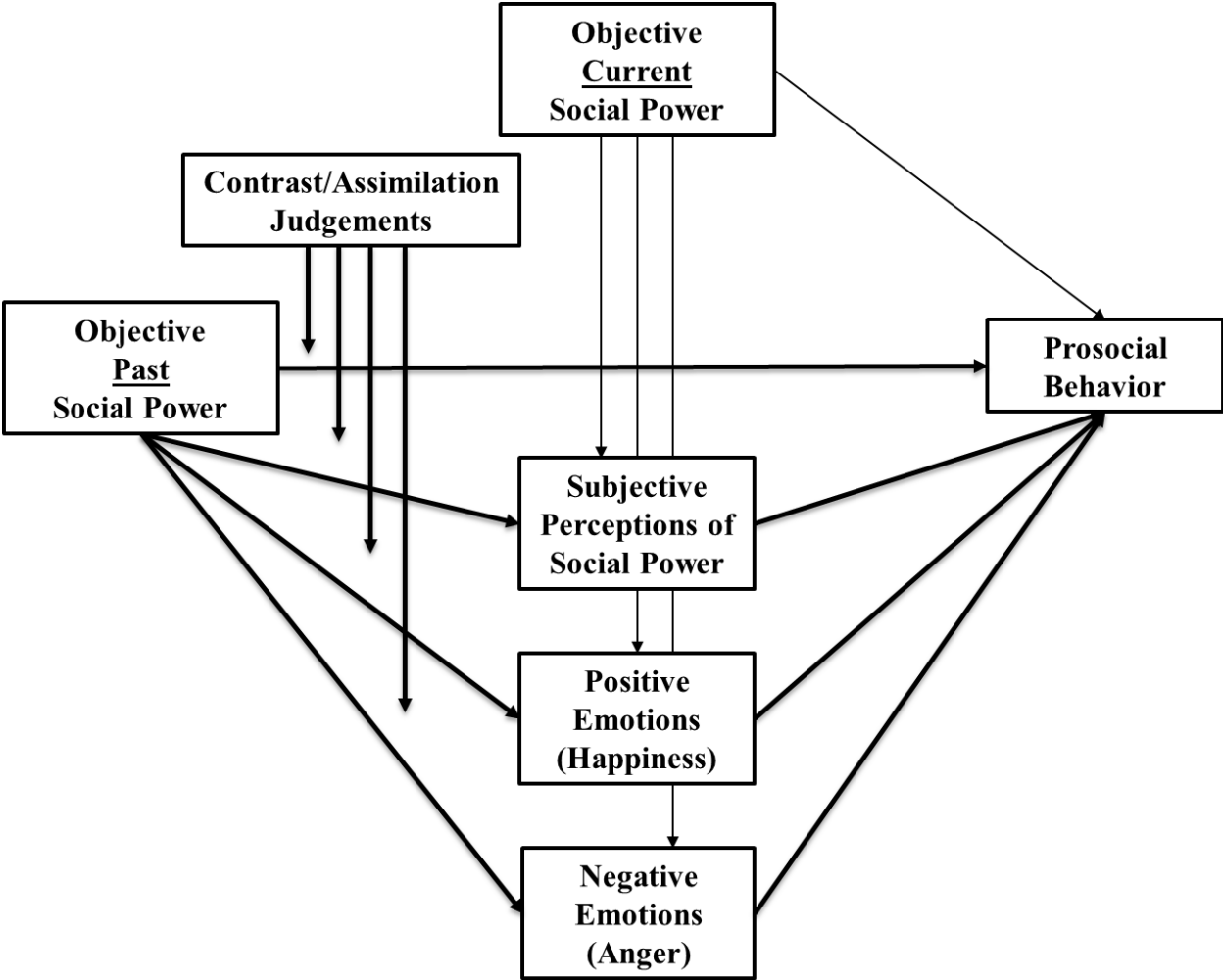
FIGURE 5: Pilot Study Results Predicting Prosocial Behavior
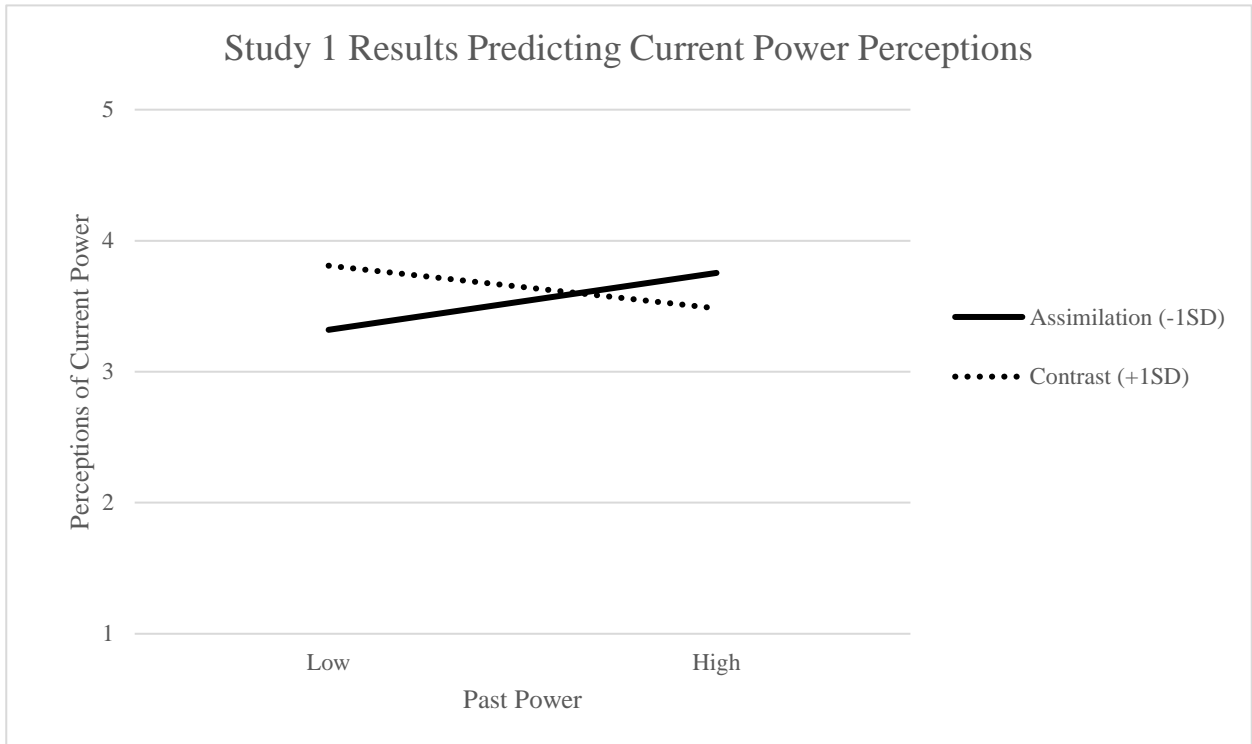

Pliot Study Results Predicting Prosocial Behavior
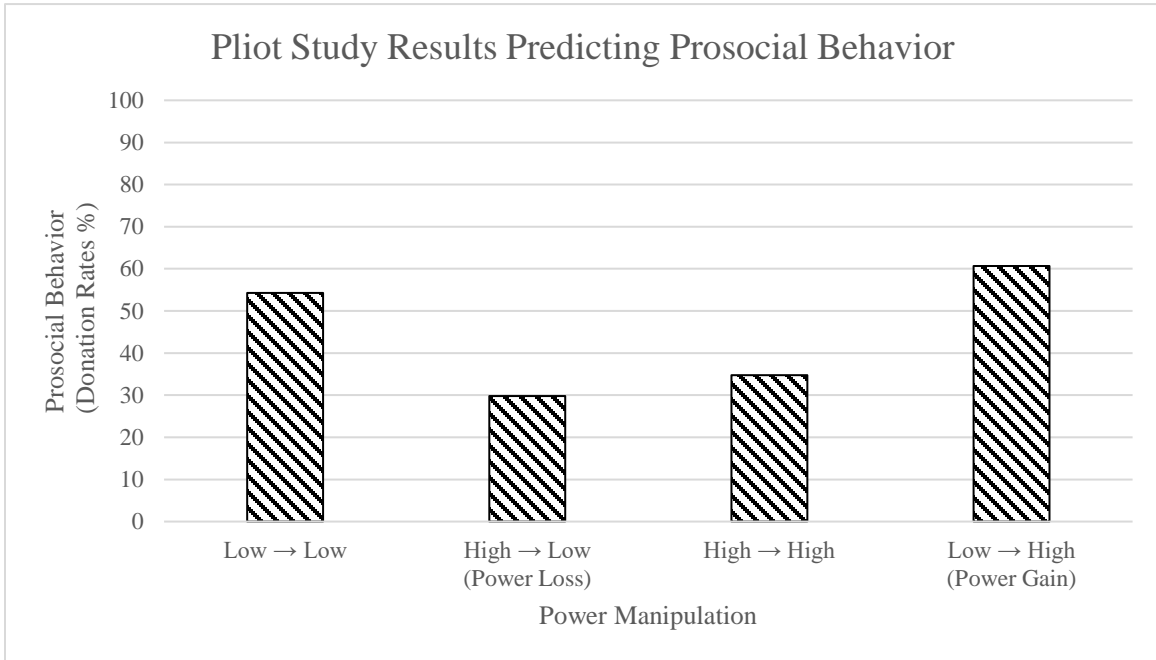
FIGURE 6: Study 1 Results Predicting Current Power Perceptions

Study 1 Results Predicting Current Power Perceptions

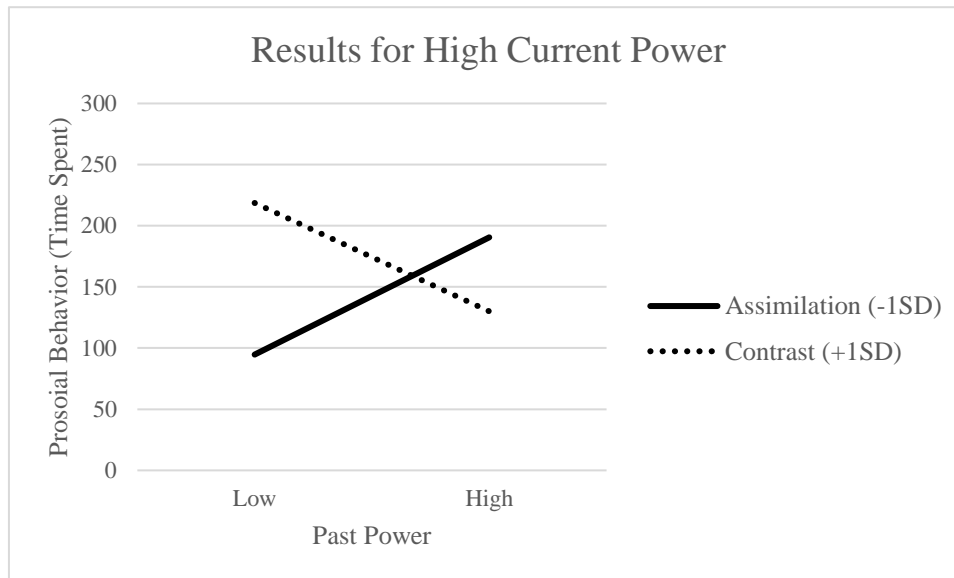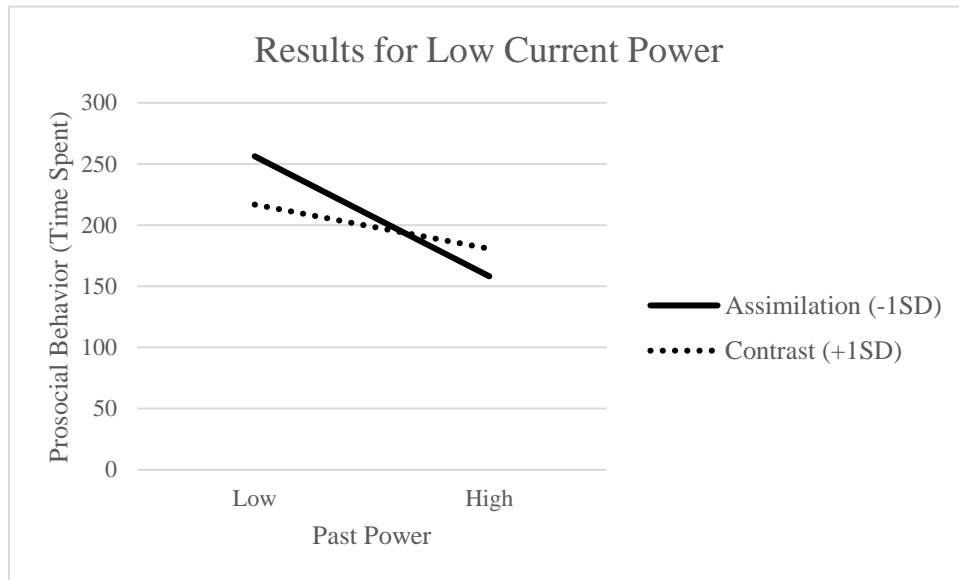**FIGURE 7a: Study 1 Supplementary Analyses Results Predicting Prosocial Behavior (Time Spent)**

Results for Low Current Power

Results for High Current Power

**FIGURE 7b: Study 1 Supplementary Analyses Results Predicting Prosocial Behavior
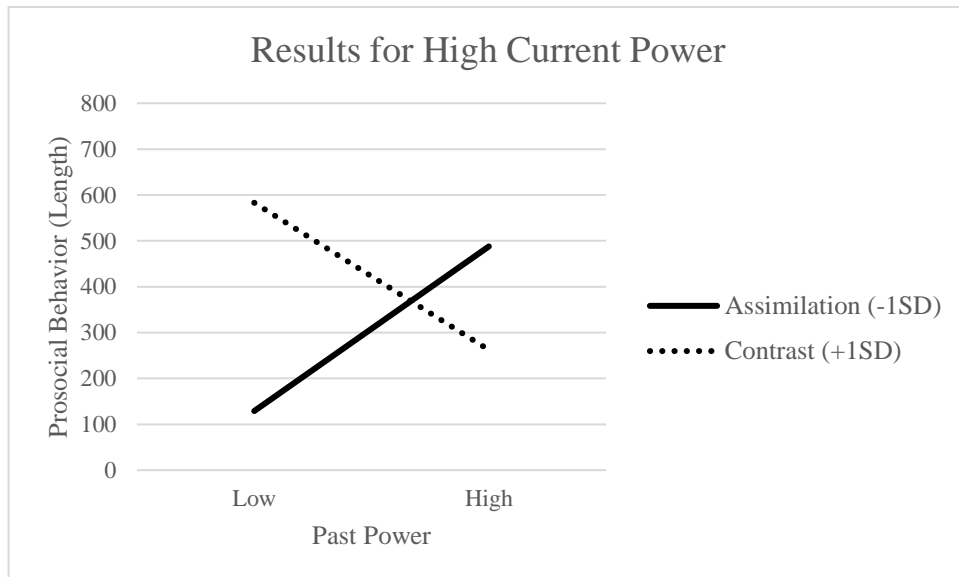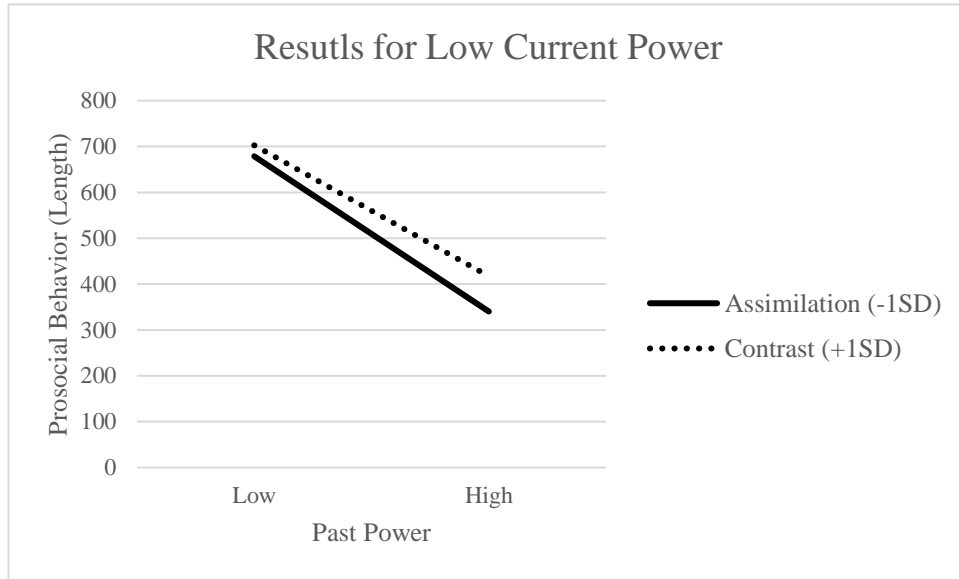(Length of Letters)**

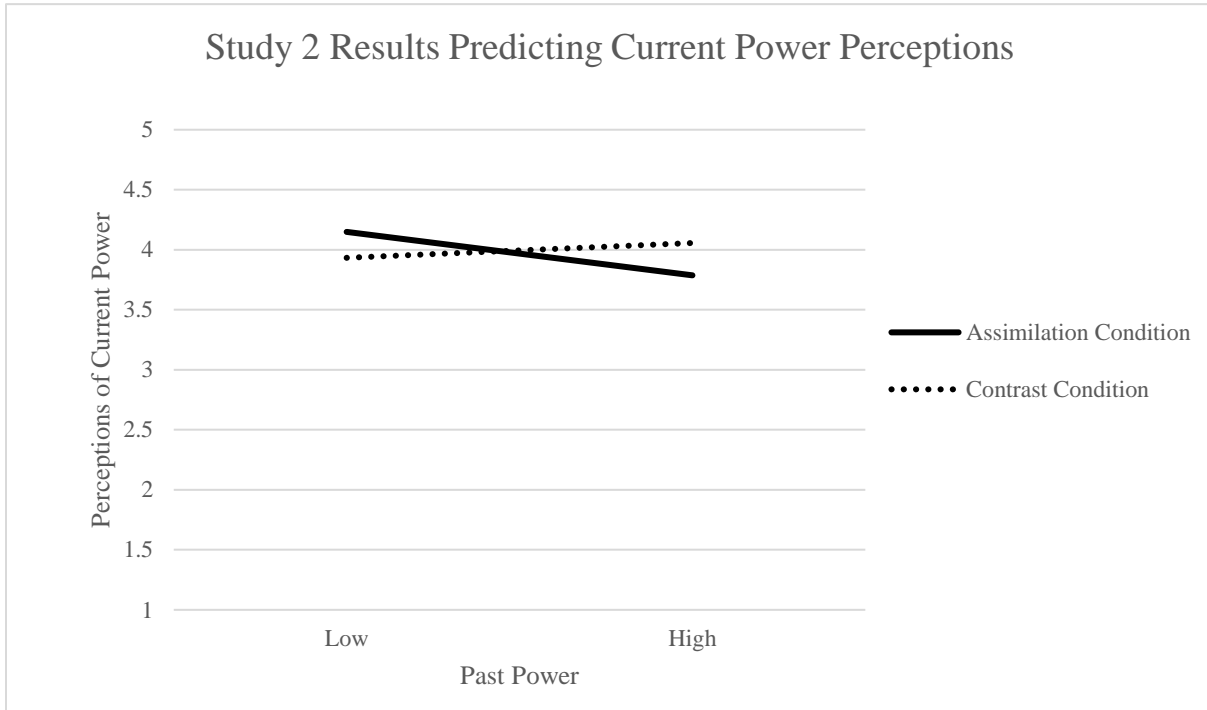**FIGURE 8: Study 2 Results Predicting Current Power Perceptions**

Study 2 Results Predicting Current Power Perceptions

Perceptions of Current Power

Assimilation Condition

Contrast Condition

Past Power

FIGURE 9: Study 2 Results Predicting Contrast Perceptions

Study 2 Results Predicting Contrast Perceptions
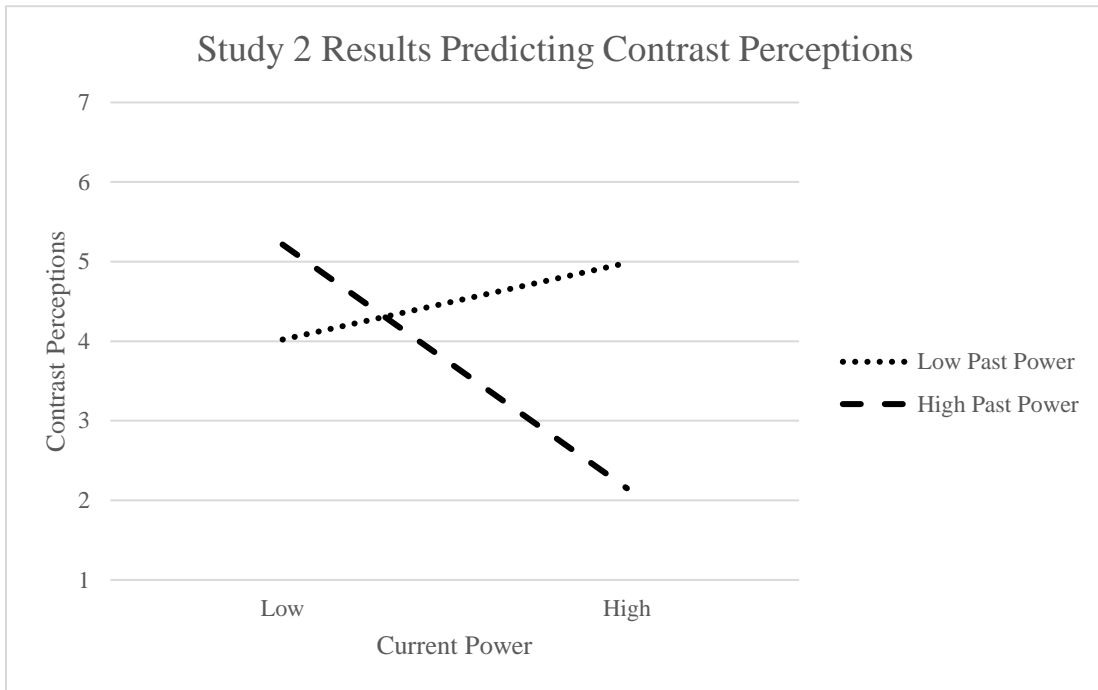
FIGURE 10: Study 3 Supplementary Analyses Results Predicting Contrast Perceptions

Study 3 Results Predicting Contrast Perceptions
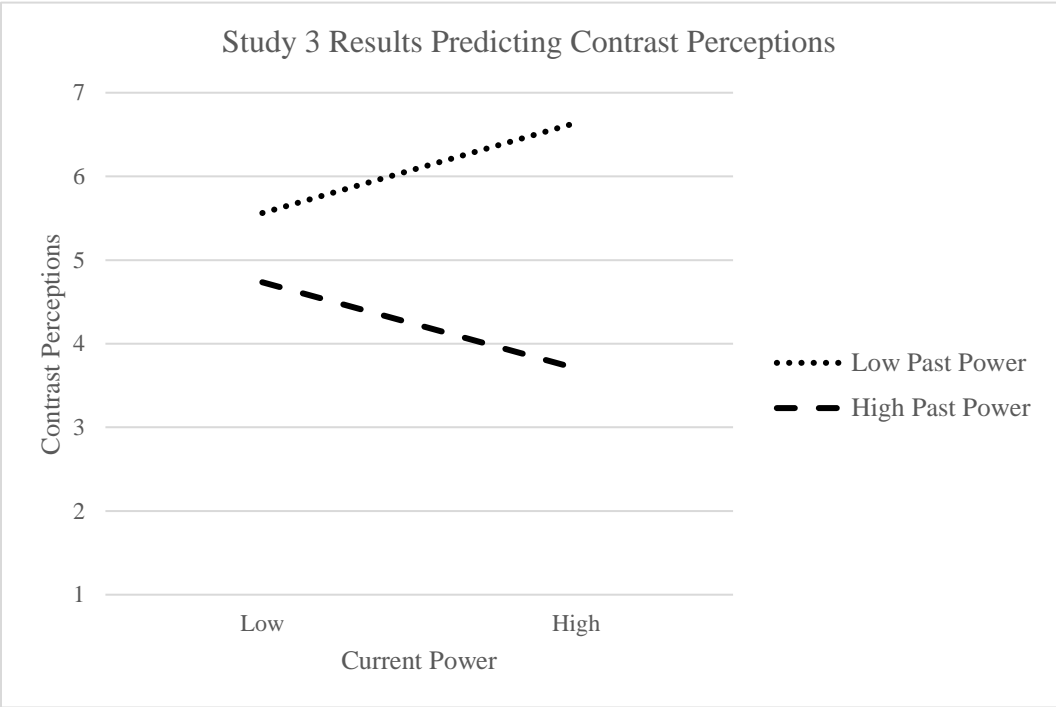
APPENDIX A: PILOT STUDY MATEIRALS

Instructions:

Today, you will become part of a hypothetical organization, during which you will complete decision-making tasks. Every participant today will be given a position in this organization based on his or her performance on a general knowledge test and a leadership questionnaire. Your score will be calculated from each of these measures and then combined in order to assign you to a position in the organization.

You will earn your position - either <u>MANAGER</u> or <u>EMPLOYEE</u> - based on how well you score relative to the other members of the organization; that is, your performance will be compared to those individuals who are in this session with you.

Once you have earned your position, you will make several decisions, some of which will give you the opportunity to earn tickets into a drawing of **one of four $50 Amazon gift card**, awarded at the end of the study. Throughout the session, you will have <u>opportunities to earn extra lottery tickets to increase your chances of winning the prize.</u>

For some of the decision-making situations, you will be matched with another participant. However, no one will ever know the identity of the person with whom he or she is matched. <u>To emphasize:</u> *the identity of who you are matched with will never be revealed* <u>(either during or after the session).</u>

Test 1: General Knowledge Pretest

The test contains general knowledge questions, similar to those found on a standardized test, like the GRE or GMAT. Performance on these types of tests is correlated with many different measures of success, including success on the tasks that you will complete today. Since it is timed, it will also test your mental agility. It is for this reason that we use this pretest as a basis for assigning you to either a MANAGER or EMPLOYEE position.

Please continue to begin the pretest.

Please answer the following questions to the best of your ability.
Remember, your score will be calculated based on time and accuracy. You will have a total of 2 minutes to answer 10 multiple choice questions.

1. **What is the most popular first name in the world?**
   o Muhammad
   o John
   o James

2. **What is the capital of Azerbaijan?**
   o Baku
   o Tashkent
   o Yerevan

3. **How many countries were members of the European Union as of May 2004?**
   o 22
   o 46
   o 15

4. **In the original 1965 musical production of My Fair Lady, which actress played Eliza Doolittle?**
   o Julie Andrews
   o Patrick Campbell
   o Wendy Hiller

5. **Which animated movie is the only one to be nominated for an Oscar Best Picture Award?**
   o Beauty and the Beast
   o The Lion King
   o Bambi

6. **Martha Argerich is a famous pianist. Where is she originally from?**
   o Argentina
   o Spain
   o USA

7. **Which US state instituted the nation's first mandatory seat belt law in 1984?**
   o New York
   o California
   o Massachusetts

8. **Which North American city has the following subway stops: Kendall Square, Central Square, and Porter Square?**
   o Boston
   o New York City
   o Chicago

9. **Which Greek god is the god of harvest, wine and festivity?**
   o Dionysus
   o Attis
   o Hesperus

10. **Before it was named Vancouver, what was the name of this city in BC, Canada?**
    o Granville
    o Gastown
    o Raincouver

Test 2: Leadership Questionnaire

This questionnaire will be used to look at your experiences as a leader. Your answers to this questionnaire will be combined with your speed and accuracy on the General Knowledge Pretest to assign you to either a MANAGER or EMPLOYEE position.

[Response scale: 1 = strongly disagree; 7 = strongly agree]

Please indicate how much you agree with each statement below using the rating scale provided:

- I have a high level of experience managing people
- My experience managing others is extensive
- I have had a position that involved primarily managing others
- I have been responsible for subordinates
- I have managed large teams of people

Power Manipulation: High Power Condition

[Manager Role]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, for the first round of the game you will play the role of a **MANAGER**.

As a **manager**, you will have a great deal of control in the tasks today. You will work with various employees across different tasks, and in each task you, as the manager, will have the final decision and have control over the rewards that employees receive. You will determine how many lottery tickets will be allocated to your employees for the Amazon gift card drawing at the end of each task.

[Employee role]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, for the first round of the game you will play the role of an **EMPLOYEE**.

As an **employee**, you will have little control in the tasks today. You will perform different tasks assigned to you by your manager. For each task you perform, the manager will have the final decision and will also have control over the rewards you receive. In addition, the manager will determine how many lottery tickets will be allocated to you for the Amazon gift card drawing at the end of each task.

Power Perceptions Scale

[Response scale: 1 = None at all; 5 = A great deal]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent will you be given control in the first round of the game?
- To what extent will you have power in the first round of the game?
- To what extent will you be "in charge" in the first round of the game?

[Manager Role]

Instructions:

Next, you will be randomly paired with another participant who will play the role of your employee. You and your employee will engage in a number of different tasks. During these tasks, both of you will have a chance to win additional lottery tickets for the Amazon gift card drawing.

You, as a manager, will be first asked to complete a number of remote association tasks.
For each correct answer, you and your employee will earn 10 lottery tickets.
You will have a total of *2 minutes* to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Your employee will be asked to complete a similar remote association task. Once your employee completes this part, you will receive your employee's answers. **Your task, as a manager will be to evaluate your employee's responses.** You will have *1 minute* to do so. You will be able to submit any corrections as you deem necessary before the computer will score these responses. For each correct answer, you and your employee will earn 10 lottery tickets. Lastly, **your task, as a manager,** will be to allocate the percentage of winning tickets between yourself and your employee.

Please make sure you fully understand these instructions before going to the next page.

[Employee Role]

Instructions:

Next, you will be randomly paired with another participant who will play the role of your manager. You and your manager will engage in a number of different tasks. During these tasks, both of you will have a chance to win additional lottery tickets for the Amazon gift card drawing.

You, as an employee, will be asked to complete a number of remote association tasks.
For each correct answer, you and your manager will each earn 10 lottery tickets.
You will have a total of 2 minutes to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Once you complete your part of the task, *your manager* will receive your answers and will be asked to evaluate your responses. He or she will be able to submit any corrections (as he or she deems necessary) before the computer will score your responses. Your manager will also be asked to allocate the percentage of winning tickets he or she wants to share with you based on your performance.

Please make sure you fully understand these instructions before going to the next page.

<u>**Words Association Game:**</u>

Instructions:

As part of this game, you will be given 3 words. The goal in this game is to find another word that is logically linked to all 3 of the words provided.

For example: Manners / Round / Tennis
Solution: <u>table</u>
The word "table" is a solution because it links the words manners / round / tennis (i.e. table manners, round table, table tennis).

For each correct answer, you can earn <u>10 lottery tickets </u>for the *$50 Amazon gift card drawing*.

Please make sure you fully understand the instructions before continuing.

Words Association Game (Round 1):

In the space below, try to solve as many items as you can.
Work as fast as you can without sacrificing accuracy.

You have 2 MINUTES to work on this.

Please do not use any help other than your own knowledge.

Blank / White / Lines

Magic / Plush / Floor

Thread / Pine / Pain

Stop / Petty / Sneak

Envy / Golf / Beans

Chocolate / Fortune / Tin

Barrel / Root / Belly

Broken / Clear / Eye

Pure / Blue / Fall

Widow / Bite / Monkey

Chamber / Staff / Box

Mouse / Sharp / Blue

Hall / Car / Swimming

Square / Cardboard / Open

Ticket / Shop / Broker

High / Book / Sour

Gold / Stool / Tender

Please make sure you are ready to submit your answers before continuing.

[Manager Role]

Next, you will be given the responses of your employee for a similar set of tasks. **Your goal as a manager is to evaluate these responses and provide any corrections (if necessary).** You will have 1 minute to make your final decision.
Please remember, the computer will *ONLY* score your final responses.
You and your employee will earn 10 lottery tickets for each correct answer you submit.

Below you can find your employee's answers from the first round of the game.
Please review each answer carefully and indicate whether you would like to make any corrections.

If you choose to change any of these answers, please provide your solution in the box below.

Cracker / Union / Rabbit   **Answer:** hole

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

High / District / House   **Answer:** school

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Light / Birthday / Stick   **Answer:** candle

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Aid / Rubber / Wagon   **Answer:** I don't know

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Print / Berry / Bird   **Answer:** black

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Sense/ Courtesy / Place   **Answer:** public

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

What percentage of the winning tickets in this round would you like to share with your employee? [0-100%]

[Second Round - Random Role Assignment]

[Manager Role]

Based on your performance in the first round, for the second round you will play the role of a <u>MANAGER</u>.

As a manager, you will have a great deal of control in the task. You will work with another employee, and you, as the manager, will have the final decision and have control over the rewards that your employee receives. You will determine how many lottery tickets will be allocated to your employee for the Amazon gift card drawing at the end of the task.

[Employee Role]

Based on your performance in the first round, for the second round you will play the role of an <u>EMPLOYEE</u>.

As an **employee**, you will have little control in the tasks today. You will perform different tasks assigned to you by your manager. For each task you perform, the manager will have the final decision and will also have control over the rewards you receive. In addition, the manager will determine how many lottery tickets will be allocated to you for the Amazon gift card drawing at the end of each task.

Power Perceptions Scale

[Response scale: 1 = None at all; 5 = A great deal]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent will you be given control in the second round of the game?
- To what extent will you have power in the second round of the game?
- To what extent will you be "in charge" in the second round of the game?

[Manager Role]

Instructions:

You, as a manager, will be first asked to complete a number of remote association tasks.
For each correct answer, you and your employee will earn 10 lottery tickets.
You will have a total of *2 minutes* to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Your employee will be asked to complete a similar remote association task. Once your employee completes this part, you will receive your employee's answers. **Your task, as a manager will be to evaluate your employee's responses.** You will have *1 minute* to do so. You will be able to submit any corrections as you deem necessary before the computer will score these responses. For each correct answer, you and your employee will earn 10 lottery tickets. Lastly, **your task, as a manager,** will be to allocate the percentage of winning tickets between yourself and your employee.

Please make sure you fully understand these instructions before going to the next page.

[Employee Role]

Instructions:

You, as an employee, will be asked to complete a number of remote association tasks.
For each correct answer, you and your manager will each earn 10 lottery tickets.
You will have a total of 2 minutes to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Once you complete your part of the task, *your manager* will receive your answers and will be asked to evaluate your responses. He or she will be able to submit any corrections (as he or she deems necessary) before the computer will score your responses. Your manager will also be asked to allocate the percentage of winning tickets he or she wants to share with you based on your performance.

Please make sure you fully understand these instructions before going to the next page.

Words Association Game (Round 2):

In the space below, try to solve as many items as you can.
Work as fast as you can without sacrificing accuracy.

You have 2 MINUTES to work on this.

Please do not use any help other than your own knowledge.

Nose / Stone / Bear

Stick / Light / Birthday

Lift / Card / Mask

Color / Numbers / Oil

Test / Runner / Map

Oil / Bar / Tuna

Blood/ Music / Cheese

Fountain / Baking / Pop

Playing / Credit / Report

Time / Hair / Stretch

Way / Broad / Sleep

Big / Leaf / Shade

Spoon / Cloth / Card

Down / Question / Check

Flower / Friend / Scout

Eight / Skate / Stick

Dream / Break / Light

Please make sure you are ready to submit your answers before continuing.

[Manager Role]

Next, you will be given the responses of your employee for a similar set of tasks. **Your goal as a manager is to evaluate these responses and provide any corrections (if necessary).** You will have 1 minute to make your final decision.
Please remember, the computer will *ONLY* score your final responses.
You and your employee will earn 10 lottery tickets for each correct answer you submit.

Below you can find your employee's answers from the second round of the game.

Please review each answer carefully and indicate whether you would like to make any corrections.

If you choose to change any of these answers, please provide your solution in the box below.

Hound / Pressure / Shot   **Answer:** blood

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Cut / Cream / War   **Answer:** paper

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Right / Cat / Carbon   **Answer:** copy

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Fish / Mine / Rush   **Answer:** GOLD

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Knife/ Light / Pal   **Answer:** pay

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Cadet/ Capsule / Ship   **Answer:** space

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

What percentage of the winning tickets in this round would you like to share with your employee? [0-100%]

[Dependent Variables – Donation Rates]

How likely are you to **donate** any of your lottery tickets earnings from the study today to a charity of your choice?

[Response scale: 1 = Extremely unlikely; 7 = Extremely likely]

What percentage of your lottery tickets would you like to **donate** to a charity of your choice?

[Response scale: 0-100%]

Please specify the charity name: _____

[Prosocial Motivation Scale]

Please indicate your degree of agreement or disagreement with each of the following statements using the scale provided.

[Response scale: 1 = Strongly Disagree; 7 = Strongly Agree]

- I get energized by working on tasks that have the potential to benefit others
- I like to work on tasks that have the potential to benefit others
- I prefer to work on tasks that allow me to have a positive impact on others
- I do my best when I'm working on a task that contributes to the well-being of others
- It is important to me to have the opportunity to use my abilities to benefit others

[PANAS]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you **generally feel this way**, that is, <u>how you feel on average</u>, using this scale:

[Response scale: 1 = Never; 7 = Always]

- Active
- Ashamed
- Nervous
- Proud
- Alert
- Upset
- Interested
- Strong
- Afraid
- Guilty
- Excited
- Jittery
- Determined
- Enthusiastic
- Irritable
- Attentive
- Hostile
- Inspired
- Scared
- Distressed

[Demographics]

Please answer the following demographics questions:

- What is your age?
- What is your gender?

APPENDIX B: STUDY 1 MATEIRALS

Instructions:

Today, you will become part of a virtual organization, during which you will complete decision-making tasks. Every participant today will be given a position in this organization based on his or her performance on a General Knowledge Test and a Leadership Questionnaire. Your score will be calculated from each of these measures and then combined in order to assign you to a position in the organization.

You will earn your position - either a <u>MANAGER</u> or an <u>EMPLOYEE</u> - based on how well you score relative to the other members of the organization; that is, your performance will be compared to those individuals who are in this session with you.

Once you have earned your position, you will make several decisions, some of which will give you the opportunity to earn tickets into a drawing of **one of four $25 Amazon gift card**, awarded at the end of the study. Throughout the session, you will have <u>opportunities to earn extra lottery tickets to increase your chance of winning the prize</u>.

For some of the decision-making situations, you will be matched with another participant. However, no one will ever know the identity of the person with whom he or she is matched. <u>To emphasize:</u> *the identity of who you are matched with will never be revealed* (either during or after the session).

Test 1: General Knowledge Pretest

The test contains general knowledge questions, similar to those found on a standardized test, like the GRE or GMAT. Performance on these types of tests is correlated with many different measures of success, including success on the tasks that you will complete today. Since it is timed, it will also test your mental agility. It is for this reason that we use this pretest as a basis for assigning you to either a MANAGER or EMPLOYEE position.

Please continue to begin the pretest.

Please answer the following questions to the best of your ability.
Remember, your score will be calculated based on time and accuracy. You will have a total of 2 minutes to answer 10 multiple choice questions.

1. **What is the most popular first name in the world?**
   o Muhammad
   o John
   o James

2. **What is the capital of Azerbaijan?**
   o Baku
   o Tashkent
   o Yerevan

3. **How many countries were members of the European Union as of May 2004?**
   o 22
   o 46
   o 15

4. **In the original 1965 musical production of My Fair Lady, which actress played Eliza Doolittle?**
   o Julie Andrews
   o Patrick Campbell
   o Wendy Hiller

5. **Which animated movie is the only one to be nominated for an Oscar Best Picture Award?**
   o Beauty and the Beast
   o The Lion King
   o Bambi

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6. **Martha Argerich is a famous pianist. Where is she originally from?**
   - o Argentina
   - o Spain
   - o USA

7. **Which US state instituted the nation's first mandatory seat belt law in 1984?**
   - o New York
   - o California
   - o Massachusetts

8. **Which North American city has the following subway stops: Kendall Square, Central Square, and Porter Square?**
   - o Boston
   - o New York City
   - o Chicago

9. **Which Greek god is the god of harvest, wine and festivity?**
   - o Dionysus
   - o Attis
   - o Hesperus

10. **Before it was named Vancouver, what was the name of this city in BC, Canada?**
    - o Granville
    - o Gastown
    - o Raincouver

Test 2: Leadership Questionnaire

This questionnaire will be used to look at your experiences as a leader. Your answers to this questionnaire will be combined with your speed and accuracy on the General Knowledge Pretest to assign you to either a MANAGER or EMPLOYEE position.

[Response scale: 1 = strongly disagree; 7 = strongly agree]

Please indicate how much you agree with each statement below using the rating scale provided:

- I have a high level of experience managing people
- My experience managing others is extensive
- I have had a position that involved primarily managing others
- I have been responsible for subordinates
- I have managed large teams of people

Power Manipulation: High Power Condition

[Manager Role]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, for the first round of the game you will play the role of a **MANAGER**.

As a **manager**, you will have a great deal of control in the tasks today. You will work with various employees across different tasks, and in each task you, as the manager, will have the final decision and have control over the rewards that employees receive. You will determine how many lottery tickets will be allocated to your employees for the Amazon gift card drawing at the end of each task.

[Employee role]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, for the first round of the game you will play the role of an **EMPLOYEE**.

As an **employee**, you will have little control in the tasks today. You will perform different tasks assigned to you by your manager. For each task you perform, the manager will have the final decision and will also have control over the rewards you receive. In addition, the manager will determine how many lottery tickets will be allocated to you for the Amazon gift card drawing at the end of each task.

Power Perceptions Scale:

[Response scale: 1 = None at all; 5 = A great deal]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent will you be given control in the first round of the game?
- To what extent will you have power in the first round of the game?
- To what extent will you be "in charge" in the first round of the game?

[Manager Role]

Instructions:
Next, you will be randomly paired with another participant who will play the role of your employee. You and your employee will engage in a number of different tasks. During these tasks, both of you will have a chance to win additional lottery tickets for the $25 Amazon gift card drawing.

You, as a manager, will be first asked to complete a number of association tasks.
For each correct answer, you and your employee will earn 1 lottery ticket.
You will have a total of 2 minutes to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Your employee will be asked to complete a similar association task. Once your employee completes this part, you will receive your employee's answers. Your task, as a manager will be to evaluate your employee's responses. You will have 1 minute to do so. You will be able to submit any corrections as you deem necessary before the computer will score these responses. For each correct answer, you and your employee will earn additional lottery tickets. Lastly, your task, as a manager, will be to allocate the winning tickets between yourself and your employee.

Please make sure you fully understand these instructions before going to the next page.

[CHATPLAT INSTRUCTIONS]

PLEASE READ THE FOLLOWING INSTRUCTIONS VERY CAREFULLY!

As this study requires you to work together in a virtual environment, you will be interacting with your employee using an instant messaging system.
To practice using the instant messaging system, please send a short one or two-word greeting. If you do not receive a greeting from your employee within two minutes, please raise your hand and inform the lab administrator.

Please keep your messages short and do not include any personal details to maintain anonymity. Example messages include "Hi!", "Hello", "Nice to meet you" and so on.

After you receive the initial greeting, please use the instant messaging system to introduce yourself to your employee. Feel free to share your major, your hobbies, and so forth, but DO NOT share your name, email address, gender or any other private information.

When you click the NEXT button, you will be taken to the Chat Interface.

[Employee Role]

Instructions:
Next, you will be randomly paired with another participant who will play the role of your manager. You and your manager will engage in a number of different tasks. During these tasks, both of you will have a chance to win additional lottery tickets for the $25 Amazon gift card drawing.

You, as an employee, will be asked to complete a number of association tasks.
For each correct answer, you and your manager will each earn 1 lottery ticket.
You will have a total of 2 minutes to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Once you complete your part of the task, *your manager* will receive your answers and will be asked to evaluate your responses. He or she will be able to submit any corrections (as he or she deems necessary) before the computer will score your responses. Your manager will also be asked to allocate the percentage of winning tickets he or she wants to share with you based on your performance.

Please make sure you fully understand these instructions before going to the next page.

[CHATPLAT INSTRUCTIONS]

PLEASE READ THE FOLLOWING INSTRUCTIONS VERY CAREFULLY!

As this study requires you to work together in a virtual environment, you will be interacting with your manager using an instant messaging system.
To practice using the instant messaging system, please send a short one or two-word greeting. If you do not receive a greeting from your manager within two minutes, please raise your hand and inform the lab administrator.

Please keep your messages short and do not include any personal details to maintain anonymity. Example messages include "Hi!", "Hello", "Nice to meet you" and so on.

After you receive the initial greeting, please use the instant messaging system to introduce yourself to your manager. Feel free to share your major, your hobbies, and so forth, but <u>DO NOT</u> share your name, email address, gender or any other private information.

When you click the NEXT button, you will be taken to the Chat Interface.

You should see **an instant messaging window** below.
Please send a message to the "Group chat". If you do not receive a greeting from the other participant within a couple of minutes, please raise your hand and inform the lab administrator.

Words Association Game:

Instructions:

As part of this game, you will be given 3 words. The goal in this game is to find another word that is logically linked to all 3 of the words provided.

For example: Manners / Round / Tennis
Solution: table
The word "table" is a solution because it links the words manners / round / tennis (i.e. table manners, round table, table tennis).

For each correct answer, you can earn 1 lottery ticket for the *$25 Amazon gift card drawing*.

Please make sure you fully understand the instructions before continuing.

Words Association Game (Round 1):

<u>In the space below, try to solve as many items as you can.</u>
Work as fast as you can without sacrificing accuracy.

You have <u>2 MINUTES</u> to work on this.

Please do not use any help other than your own knowledge.

Blank / White / Lines

Magic / Plush / Floor

Thread / Pine / Pain

Stop / Petty / Sneak

Envy / Golf / Beans

Chocolate / Fortune / Tin

Barrel / Root / Belly

Broken / Clear / Eye

Pure / Blue / Fall

Widow / Bite / Monkey

Chamber / Staff / Box

Mouse / Sharp / Blue

Hall / Car / Swimming

Square / Cardboard / Open

Ticket / Shop / Broker

High / Book / Sour

Gold / Stool / Tender

Please make sure you are ready to submit your answers before continuing.

[Manager Role]

Next, you will be given the responses of your employee for a similar set of tasks. **Your goal as a manager is to evaluate these responses and provide any corrections (if necessary).** You will have 1 minute to make your final decision.

Please remember, the computer will *ONLY* score your final responses.
You and your employee will earn 1 lottery ticket for each correct answer you submit.

Below you can find your employee's answers from the first round of the game.
Please review each answer carefully and indicate whether you would like to make any corrections.

If you choose to change any of these answers, please provide your solution in the box below.

Cracker / Union / Rabbit   **Answer:** hole

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

High / District / House   **Answer:** school

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Light / Birthday / Stick   **Answer:** candle

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Aid / Rubber / Wagon   **Answer:** I don't know

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Print / Berry / Bird   **Answer:** black

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

Sense/ Courtesy / Place   **Answer:** public

- o   This is CORRECT
- o   This is INCORRECT; here is the correct word: _____

What percentage of the winning tickets in this round would you like to share with your employee? [0-100%]

[Employee Role]

Thanks for completing the associations tasks.

Now, your manager will receive your answers and will be asked to evaluate your responses.

Your manager will be able to submit any corrections before the computer will score these responses. For each correct answer, you and your manager will earn additional lottery tickets.

You manager will also have control over the rewards you receive. Your manager will determine how many lottery tickets to allocate to you for the $25 Amazon gift card drawing.

[POWER CHANGE]

The lab experimenter is about to announce some **companywide managerial changes** for this virtual organization that you are part of. **These changes may or may not affect your position going forward.**

Please click next to find more information about your position and how these changes will affect your role.

[Manager Role]

The lab experimenter made the decision that going forward you will play the role of the **MANAGER**.

As a manager, you will have a great deal of control in the task. You will work with another participant who will play the role of your employee, and you, as the manager, will have the final decision and have control over the rewards that your employee receives. You will determine how many lottery tickets will be allocated to your employee for the $25 Amazon gift card drawing at the end of the task.

[Employee Role]

The lab experimenter made the decision that going forward you will play the role of the EMPLOYEE.

As an employee, you will have little control in the tasks today. You will perform different tasks assigned to you by your manager. For each task you perform, the manager will have the final decision and will also have control over the rewards you receive. In addition, the manager will determine how many lottery tickets will be allocated to you for the $25 Amazon gift card drawing at the end of each task.

Power Perceptions Scale:

[Response scale: 1 = None at all; 5 = A great deal]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent will you be given control in the second round of the game?
- To what extent will you have power in the second round of the game?
- To what extent will you be "in charge" in the second round of the game?

Instructions:

Next, you will participate in a second round of the Words Association Game. Once again, you can earn additional lottery tickets based on your performance for the $25 Amazon gift cards drawing.

Please review the instructions once again before continuing...

[Manager Role]

You, as a manager, will be first asked to complete a number of association tasks.
For each correct answer, you and your employee will earn 1 lottery ticket.
You will have a total of *2 minutes* to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Your employee will be asked to complete a similar association task. Once your employee completes this part, you will receive your employee's answers. **Your task, as a manager will be to evaluate your employee's responses.** You will have *1 minute* to do so. You will be able to submit any corrections as you deem necessary before the computer will score these responses. For each correct answer, you and your employee will earn additional lottery ticket. Lastly, **your task, as a manager,** will be to allocate the winning tickets between yourself and your employee.

Please make sure you fully understand these instructions before going to the next page.

[Employee Role]

You, as an employee, will be asked to complete a number of association tasks.
For each correct answer, you and your manager will each earn 1 lottery ticket.
You will have a total of 2 minutes to solve as many tasks as possible.
You will receive more instructions before you begin the task.

Once you complete your part of the task, your manager will receive your answers and will be asked to evaluate your responses. He or she will be able to submit any corrections (as he or she deems necessary) before the computer will score your responses. Your manager will also be asked to allocate the percentage of winning tickets he or she wants to share with you based on your performance.

Please make sure you fully understand these instructions before going to the next page.

Words Association Game (Round 2):

In the space below, try to solve as many items as you can.
Work as fast as you can without sacrificing accuracy.

You have 2 MINUTES to work on this.

Please do not use any help other than your own knowledge.

Nose / Stone / Bear

 Stick / Light / Birthday

Lift / Card / Mask

Color / Numbers / Oil

Test / Runner / Map

Oil / Bar / Tuna

Blood/ Music / Cheese

Fountain / Baking / Pop

Playing / Credit / Report

Time / Hair / Stretch

Way / Broad / Sleep

Big / Leaf / Shade

Spoon / Cloth / Card

Down / Question / Check

Flower / Friend / Scout

Eight / Skate / Stick

Dream / Break / Light

Please make sure you are ready to submit your answers before continuing.

[Manager Role]

Next, you will be given the responses of your employee for a similar set of tasks. **Your goal as a manager is to evaluate these responses and provide any corrections (if necessary).** You will have 1 minute to make your final decision.

Please remember, the computer will *ONLY* score your final responses.
You and your employee will earn 1 lottery tickets for each correct answer you submit.

Below you can find your employee's answers from the second round of the game.

Please review each answer carefully and indicate whether you would like to make any corrections.

If you choose to change any of these answers, please provide your solution in the box below.

Hound / Pressure / Shot   **Answer:** blood

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

Cut / Cream / War   **Answer:** paper

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

Right / Cat / Carbon   **Answer:** copy

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

Fish / Mine / Rush   **Answer:** GOLD

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

Knife/ Light / Pal   **Answer:** pay

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

Cadet/ Capsule / Ship   **Answer:** space

- o This is CORRECT
- o This is INCORRECT; here is the correct word: _____

What percentage of the winning tickets in this round would you like to share with your employee? [0-100%]

[Emotions Scale]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you **CURRENTLY feel this way**, that is, <u>how you feel at the present moment</u>, using this scale:

[Response scale: 1 = strongly disagree; 7 = strongly agree]

- Joyful
- Happy
- Pleased
- Angry
- Annoyed
- Irritated

[Assimilation]

Please describe how your power in your **previous role** in the experiment (**//Field/R1_Role}** during Round 1) was **SIMILAR** to your power in your **current role** (**//Field/R2_Role}** during Round 2) in the experiment:

[Contrast]

Please describe how your power in your **previous role** in the experiment (**//Field/R1_Role}** during Round 1) was **DIFFERENT** from your power in your **current role** (**//Field/R2_Role}** during Round 2) in the experiment:

[Contrast/Assimilation Scale]

How would you compare your power during your **previous role** in the experiment (**//Field/R1_Role}** during Round 1) and your power during your **current role** (**//Field/R2_Role}** during Round 2) in the experiment?

[Response scale: 1 = Very different; 7 = Very similar]

[Power Gain/Loss Scale]

Please indicate how your <u>current</u> power role (**//Field/R2_Role}** during Round 2) is compared with your <u>past</u> power role (**//Field/R1_Role}** from round 1)?

[Response scale: 1 = Current power is at a much LOWER level than what I had in the first round; 7 = Current power is at much HIGHER level than what I had in the first round]

Instructions:

The instructions for the next task will be given by the **lab experimenter.**

Once again, the lab experimenter is currently working on additional <u>changes</u> for this virtual organization that you are part of. Please wait to receive more information about these changes before continuing with the experiment.

While waiting, you can choose to participate in a letter writing program.

We are currently collecting letters for the following non-profit organizations:

- "Operation Gratitude" – you can choose to write a letter to a deployed troop, a veteran, a new recruit or a first responder.
- "Love for the Elderly" – you can choose to write a letter to a senior citizen living in a nursing facility.

[Dependent Variable – Prosocial Behavior]

How likely are you to participate in the letter collection efforts for each of those organizations today?

[Response scale: 1 = Extremely unlikely; 7 = Extremely likely]

- Operation Gratitude
- Love for the Elderly

Instructions:

You have an opportunity to write a letter to a deployed troop, a veteran, a new recruit or a first responder <u>right now</u>.

Please follow the instructions below so we can <u>deliver</u> you letter to "Operation Gratitude":

- Start with a generic salutation, such as "Dear Hero" or "Dear Brave One."
- Express your thanks for their selfless service.
- Avoid politics completely and religion in excess; however, saying you will pray for them is wonderful.
- Share a little about yourself: Family, Hobbies, Work, School, Pets, Travel, etc.
- Talk about life and interests: Sports, Weather, Music, Movies, Food, Books, etc.
- Please do not include a date or year on your letter. Please don't date your letters, sometimes it can take up to a few months for our Care Packages to be received after they are sent.

<u>Feel free to write multiple letters. These letters will **NOT BE READ by the lab experimenters** and will be delivered directly to "Operation Gratitude".</u>

Instructions:

You have an opportunity to write a letter to a senior citizen living in a nursing facility right now.

Please follow the instructions below so we can <u>deliver</u> you letter to "Love for the Elderly":

- They accept letters in any of the following languages: **English, Italian, German, French, Spanish**
- **Avoid religion**. Please refrain from including anything religious in your letters, such as religious quotes, words like "God," etc.
- **Don't include the date (day, month, or year)** in your letters. Since it can take over a month from when you write the letter to when it actually is read by the recipient*.*
- ***Try and make your letters as creative as possible****! The recipients love it when the letters are more personalized! We encourage you to make your letters detailed, thoughtful, and heartfelt*.

<u>Feel free to write multiple letters. These letters will</u> **NOT BE READ by the lab experimenters** <u>and will be delivered directly to "Love for the Elderly".</u>

Once you are done, just go to the next page to continue with the study.

[Temporal Focus Scale]

Please indicate how often (in general) do you engage in each of the following:

[Response scale: 1 = Never; 7 = Constantly]

- I replay memories of the past in my mind
- I reflect on what has happened in my life
- I think about things from my past
- I think back to my earlier days
- I focus on what is currently happening in my life
- My mind is on the here and now
- I think about where I am today
- I live my life in the present
- I think about what my future has in store
- I think about times to come
- I focus on my future
- I imagine what tomorrow will bring for me

[Prosocial Motivation Scale]

Please indicate your degree of agreement or disagreement with each of the following statements using the scale provided.

[Response scale: 1 = Strongly Disagree; 7 = Strongly Agree]

- I get energized by working on tasks that have the potential to benefit others
- I like to work on tasks that have the potential to benefit others
- I prefer to work on tasks that allow me to have a positive impact on others
- I do my best when I'm working on a task that contributes to the well-being of others
- It is important to me to have the opportunity to use my abilities to benefit others

[PANAS]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you **generally feel this way**, that is, <u>how you feel on average</u>, using this scale:

[Response scale: 1 = Never; 7 = Always]

- Active
- Ashamed
- Nervous
- Proud
- Alert
- Upset
- Interested
- Strong
- Afraid
- Guilty
- Excited
- Jittery
- Determined
- Enthusiastic
- Irritable
- Attentive
- Hostile
- Inspired
- Scared
- Distressed

[Demographics]

Please answer the following demographics questions:

- What is your age?
- What is your gender?

APPENDIX C: STUDY 2 MATEIRALS

Instructions:

Today, you will become part of a virtual organization, during which you will complete decision-making tasks. Every participant today will be given one of the following positions: Intern, Analyst, Manager, Sales Director, VP of Sales or CEO.

Each position is associated with a certain level of control over valuable resources:

As the **<u>Intern</u>** you will have **NO control** over the team's budget

As the **<u>Analyst</u>** you will have control over **$20,000** of the team's budget

As the **<u>Manager</u>** you will have control over **$40,000** of the team's budget

As the **<u>Sales Director</u>** you will have control over **$60,000** of the team's budget

As the **<u>VP of Sales</u>** you will have control over **$80,000** of the team's budget

As the **<u>CEO</u>** you will have control over **$100,000** of the team's budget

Every participant today will be given a position in this organization based on his or her performance on a general knowledge test and a leadership questionnaire. Your score will be calculated from each of these measures and then combined in order to assign you to a position in the organization.

You will earn your position based on how well you score relative to the other members of the organization; that is, your performance will be compared to other individuals who also participate in this study.

Test 1: General Knowledge Pretest

The test contains general knowledge questions, similar to those found on a standardized test, like the GRE or GMAT. Performance on these types of tests is correlated with many different measures of success, including success on the tasks that you will complete today. Since it is timed, it will also test your mental agility. It is for this reason that we use this pretest as a basis for assigning you to your role/position within this virtual organization.

Please continue to begin the pretest.

Please answer the following questions to the best of your ability.
Remember, your score will be calculated based on time and accuracy. You will have a total of 2 minutes to answer 10 multiple choice questions.

1. **What is the most popular first name in the world?**
   o Muhammad
   o John
   o James

2. **What is the capital of Azerbaijan?**
   o Baku
   o Tashkent
   o Yerevan

3. **How many countries were members of the European Union as of May 2004?**
   o 22
   o 46
   o 15

4. **In the original 1965 musical production of My Fair Lady, which actress played Eliza Doolittle?**
   o Julie Andrews
   o Patrick Campbell
   o Wendy Hiller

5. **Which animated movie is the only one to be nominated for an Oscar Best Picture Award?**
   o Beauty and the Beast
   o The Lion King
   o Bambi

6. **Martha Argerich is a famous pianist. Where is she originally from?**
   o Argentina
   o Spain
   o USA

7. **Which US state instituted the nation's first mandatory seat belt law in 1984?**
   o New York
   o California
   o Massachusetts

8. **Which North American city has the following subway stops: Kendall Square, Central Square, and Porter Square?**
   o Boston
   o New York City
   o Chicago

9. **Which Greek god is the god of harvest, wine and festivity?**
   o Dionysus
   o Attis
   o Hesperus

10. **Before it was named Vancouver, what was the name of this city in BC, Canada?**
   o Granville
   o Gastown
   o Raincouver

Test 2: Leadership Questionnaire

This questionnaire will be used to look at your experiences as a leader. Your answers to this questionnaire will be combined with your speed and accuracy on the General Knowledge Pretest to assign you to your role/position.

[Response scale: 1 = strongly disagree; 7 = strongly agree]

Please indicate how much you agree with each statement below using the rating scale provided:

- I have a high level of experience managing people
- My experience managing others is extensive
- I have had a position that involved primarily managing others
- I have been responsible for subordinates
- I have managed large teams of people

[Power Manipulation Round 1]

[Condition: Power = CEO]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the CEO.
As the CEO, you will have ***all the control* in** the tasks today. You will have control over 100% of your team's budget. You will determine how to allocate <u>$100,000</u>.

As the CEO, you have control over **100%** of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the CEO, you can allocate up to **$100,000** on various tasks listed below.

[Condition: Power = VP of Sales]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the VP of Sales.
As the **VP of Sales**, you will have ***a great deal of control*** in the tasks today. You will have control over **80%** of your team's budget. You will determine how to allocate **<u>$80,000</u>**.

As the VP of Sales, you have control over 80% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the VP of Sales, you can allocate up to $80,000 on various tasks listed below.

[Condition: Power = Sales Director]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the Sales Director.
As the **Sales Director**, you will have ***quite a bit control*** in the tasks today. You will have control over **60%** of your team's budget. You will determine how to allocate **<u>$60,000</u>**.

As the Sales Director, you have control over 60% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the Sales Director, you can allocate up to $60,000 on various tasks listed below.

[Condition: Power = Manager]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the Manager.
As the **Manager**, you will have *some control* in the tasks today. You will have control over **40%** of your team's budget. You will determine how to allocate **$40,000**.

As the Manager, you have control over 40% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the Manager, you can allocate up to $40,000 on various tasks listed below.

[Condition: Power = Analyst]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the Analyst.
As the **Analyst**, you will have *very little control* in the tasks today. You will have control over **20%** of your team's budget. You will determine how to allocate **$20,000**.

As the Analyst, you have control over 20% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the Analyst, you can allocate up to $20,000 on various tasks listed below.

[Condition: Power =Intern]

Based on your responses to the General Knowledge Pretest and the Leadership Questionnaire, today you will play the role of the **Intern.**
As the **Intern**, you will have *no control* in the tasks today. You will have control over **0%** of your team's budget. You will determine how to allocate **$0**.

As the Intern, you have control over 0% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the Intern, you can allocate up to $0 on various tasks listed below.

[Condition: Power = CEO]

As the **CEO**, you can allocate up to **$100,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = VP of Sales]

As the **VP of Sales**, you can allocate up to **$80,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Sales Director]

As the **Sales Director**, you can allocate up to **$60,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Manager]

As the **Manager**, you can allocate up to **$40,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Analyst]

As the **Analyst**, you can allocate up to **$20,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power =Intern]

As the **Intern**, you can allocate up to **$0** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

Instructions:

Your goal is to select from the list below which tasks you would like for your team to perform in order to increase product awareness and sales.

Please keep in mind that each task has an associated cost of implementation.
Please stay within your budget!

Selected Tasks

- o Establish a new product development team (Cost: $40,000)
- o Introduce a new subscription management system that will enable to better track performance (Cost: $40,000)
- o Set up a suggestion program so everyone can submit new ideas (Cost: $0)
- o Attend the American International Toy Fair (Cost: $15,000)
- o Conduct a survey to understand who your target customers are and what they want from your company (Cost: $15,000)
- o Build your Twitter following to increase awareness (Cost: $5,000)
- o Reward and recognize the sales team publicly (Cost: $30,000)
- o Create a customer referral program (Cost: $25,000)
- o Run a social media contest in which current customers submit a photo of your product, with other users voting for their favorites (Cost: $5,000)
- o Start your own industry podcast where you interview industry experts (Cost: $25,000)

Which role were you assigned to play today in this virtual organization?

- o Intern
- o Analyst
- o Manager
- o Sales Director
- o VP of Sales
- o CEO
- o Other

Power Perceptions Scale:

[Response scale: 1 = None at all; 7 = Completely]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent were you given **control** in the tasks today?
- To what extent did you have **power** in the tasks today?
- To what extent were you "**in charge**" in the tasks today?

[POWER CHANGE]

During the most recent meeting, the Board decided to implement some companywide _managerial changes_.
Below you will find more information about your position within the organization and how these changes will affect your role going forward.

[Condition: Power = CEO]

The Board of Directors made the decision that going forward you will play the role of the CEO. As the CEO, you will have **_all the control_** in the tasks today. You will have control over 100% of your team's budget. You will determine how to allocate $100,000.

As the CEO, you have control over **100%** of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the CEO, you can allocate up to **$100,000** on various tasks listed below.

[Condition: Power = VP of Sales]

The Board of Directors made the decision that going forward you will play the role of the VP of Sales. As the **VP of Sales**, you will have ***a great deal of control*** in the tasks today. You will have control over **80%** of your team's budget. You will determine how to allocate **$80,000**.

As the VP of Sales, you have control over 80% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the VP of Sales, you can allocate up to $80,000 on various tasks listed below.

[Condition: Power = Sales Director]

The Board of Directors made the decision that going forward you will play the role of the Sales Director. As the **Sales Director**, you will have ***quite a bit control*** in the tasks today. You will have control over **60%** of your team's budget. You will determine how to allocate **$60,000**.

As the Sales Director, you have control over 60% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys.
As the Sales Director, you can allocate up to $60,000 on various tasks listed below.

[Condition: Power = Manager]

The Board of Directors made the decision that going forward you will play the role of the Manager. As the **Manager**, you will have *some control* in the tasks today. You will have control over **40%** of your team's budget. You will determine how to allocate **$40,000**.

As the Manager, you have control over 40% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys. As the Manager, you can allocate up to $40,000 on various tasks listed below.

[Condition: Power = Analyst]

The Board of Directors made the decision that going forward you will play the role of the Analyst. As the **Analyst**, you will have *very little control* in the tasks today. You will have control over **20%** of your team's budget. You will determine how to allocate **$20,000**.

As the Analyst, you have control over 20% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys. As the Analyst, you can allocate up to $20,000 on various tasks listed below.

[Condition: Power =Intern]

The Board of Directors made the decision that going forward you will play the role of the **Intern.** As the **Intern**, you will have *no control* in the tasks today. You will have control over **0%** of your team's budget. You will determine how to allocate **$0**.

As the Intern, you have control over 0% of your team's budget.
The team is responsible for manufacturing and selling children toys through a monthly subscription model. The idea is simple, each month the customer receives a box with new toys for their kids to enjoy. At the end of the month, the customer can return any unwanted toys. As the Intern, you can allocate up to $0 on various tasks listed below.

Instructions:

Your goal is to select from the list below which tasks you would like for your team to perform in order to increase product awareness and sales.

Please keep in mind that each task has an associated cost of implementation.
Please stay within your budget!

Selected Tasks

- o Establish a new product development team (Cost: $40,000)
- o Introduce a new subscription management system that will enable to better track performance (Cost: $40,000)
- o Set up a suggestion program so everyone can submit new ideas (Cost: $0)
- o Attend the American International Toy Fair (Cost: $15,000)
- o Conduct a survey to understand who your target customers are and what they want from your company (Cost: $15,000)
- o Build your Twitter following to increase awareness (Cost: $5,000)
- o Reward and recognize the sales team publicly (Cost: $30,000)
- o Create a customer referral program (Cost: $25,000)
- o Run a social media contest in which current customers submit a photo of your product, with other users voting for their favorites (Cost: $5,000)
- o Start your own industry podcast where you interview industry experts (Cost: $25,000)

[Condition: Power = CEO]

As the **CEO**, you can allocate up to **$100,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = VP of Sales]

As the **VP of Sales**, you can allocate up to **$80,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Sales Director]

As the **Sales Director**, you can allocate up to **$60,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Manager]

As the **Manager**, you can allocate up to **$40,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power = Analyst]

As the **Analyst**, you can allocate up to **$20,000** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

[Condition: Power =Intern]

As the **Intern**, you can allocate up to **$0** <u>total</u> on these various tasks:
Please note, the cost associated with each task is a <u>predetermined fixed amount</u> and may not be reduced. Tasks that will NOT receive the minimum $ amount will NOT be implemented.

Which role were you assigned to play for the second round of the game today?

- o Intern
- o Analyst
- o Manager
- o Sales Director
- o VP of Sales
- o CEO
- o Other

[Power Perceptions Scale]

[Response scale: 1 = None at all; 7 = Completely]

Please indicate how much you agree with each statement below using the rating scale provided:

- To what extent were you given **control** in the tasks during the second round of the game today?
- To what extent did you have **power** in the tasks during the second round of the game today?
- To what extent were you "**in charge**" in the tasks during the second round of the game today?

[Emotions Scale]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you **CURRENTLY feel this way**, that is, <u>how you feel at the present moment</u>, using this scale:

[Response scale: 1 = strongly disagree; 7 = strongly agree]

- Joyful
- Happy
- Pleased
- Angry
- Annoyed
- Irritated

[Assimilation Manipulation]

Please describe how your power in your **previous role** in the experiment
(**//Field/R1_Role}** during Round 1) was **SIMILAR** to your power in your **current role**
(**//Field/R2_Role}** during Round 2) in the experiment:

[Contrast Manipulation]

Please describe how your power in your **previous role** in the experiment
(**//Field/R1_Role}** during Round 1) was **DIFFERENT** from your power in your **current role**
(**//Field/R2_Role}** during Round 2) in the experiment:

[Contrast/Assimilation Manipulation Check]

How would you compare your power during your **previous role** in the experiment
(**//Field/R1_Role}** during Round 1) and your power during your **current role**
(**//Field/R2_Role}** during Round 2) in the experiment?

[Response scale: 1 = Very different; 7 = Very similar]

[Power Gain/Loss Scale]

Please indicate how your <u>current</u> power role (**//Field/R2_Role}** during Round 2) is compared
with your <u>past</u> power role (**//Field/R1_Role}** from round 1)?

[Response scale: 1 = Current power is at a much LOWER level than what I had in the first
round; 7 = Current power is at much HIGHER level than what I had in the first round

[Helping Behavior]

Thank you for participating in our study. You've completed the last part of the study!

Before moving on, we would like to ask for your help with a pilot testing for another project. This is totally voluntary and is NOT part of the original experiment you are currently part of.

Would you be interested in helping us with this extra task? (It will only take a couple of minutes)

[Response scale: 1 = Extremely uninterested; 7 = Extremely interested]

Thank you for your interest helping us with this pilot study!
Our pilot study is about meeting cancellations.

We would like you to answer the questions below and then provide feedback on how we can improve this study (to make it more concise and clearer).

When was the last time you **cancelled** a <u>work-related meeting</u>?

- Earlier today
- Earlier this week
- Last week
- 3 weeks ago
- About a month ago

What was your reason for cancelling the meeting?

_____

Did you tell the other person a reason for cancelling the meeting?

- Yes
- No

Did you give the *actual* reason for cancelling the meeting to the person(s) with whom you had been scheduled to meet?

- Yes
- No

Why didn't you give a reason for cancelling the meeting? Please be as specific as possible.

_____

How far in advance did you cancel the meeting?

- Same day
- 1 day before
- 3 days before
- 6-10 days
- A week before or more

How far in advance did you change the meeting?

- Less than an hour before
- 1 hour before
- 2 hours before
- 4 hours before
- 5 hours before
- 4 hours or more

Please use the space below to provide your feedback about the survey above:
Please let us know if anything is unclear, if something is missing, if you find any
typos/errors, etc.

General comments are also welcome.

APPENDIX D: STUDY 3 MATEIRALS

Time 1 Survey:

Instructions
Thank you for participating in this study. It will take approximately 15 minutes to complete. We hope to follow up with you in about 1-2 months, to get any updates about your career development. You will also have a chance to win $50 Amazon Gift Cards for each survey you complete (there will be 3 surveys total over the next 6 months, including this one). Please provide your name and email address.

All responses will be kept completely confidential and we will discard names once we receive all the data. This information will be used to link your responses across the surveys.

First Name:
Last Name:
Email Address (where you received the survey invite):

What best describes your current employment status?
- I am employed full time (30 hours per week or more)
- I am employed part time (under 30 hours per week)
- I am not employed currently, but I am not retired
- I am a full-time student and not employed currently
- I am a full-time student and employed full or part time
- I am retired
- Other (please specify): _____

What is your current job title?

_____

How long have you been working at your current role/job title (with your current organization)?
- Less than 3 months
- 3-6 months
- 6-12 months
- 1-2 years
- 2-4 years
- 4-6 years
- 6-8 years
- 8-10 years
- More than 10 years

How long have you been working with your current organization (in total across multiple roles, if applicable)?
- Less than 3 months
- 3-6 months
- 6-12 months
- 1-2 years
- 2-4 years
- 4-6 years
- 6-8 years
- 8-10 years
- More than 10 years

How would you describe your current rank within the organization at your current role/job title?
- Intern
- Entry-level individual contributor (i.e. Associate)
- Intermediate or Experienced level individual contributor (i.e. Senior Associate)
- First-level management (i.e. Manager)
- Experienced first-level management (i.e. Senior Manager)
- Middle-level management (i.e. Director)
- Experienced middle-level management (i.e. Senior Director)
- Executive-level (i.e. VP)
- Experienced executive-level (i.e. Senior VP)
- Top-level management and Chiefs (i.e. CEO)
- Other (please specify)

At your current role, how many employees directly report to you?
- No direct reports
- 1 employee
- 2 employees
- 3 employees
- 4 employees
- 5 employees
- 6 employees
- 7 employees
- 8 employees
- 9 employees
- 10 or more employees

How much control do you currently have over your subordinates' _____?
[Response scale: 1 = None at all; 7 = Completely]

- Professional development opportunities
- Personal preferences (i.e. time off, working hours, working from home)
- Promotion decisions
- Work-related preferences (i.e. work assignments)
- Recognition/praise
- Salary/bonuses
- Opportunities for feedback
- Opportunities for progress outside of the organization
- Opportunities for progress within the organization

Please indicate how much you agree with each statement below using the rating scale provided:
[Response scale: 1 = None at all; 7 = Completely]

- To what extent are you given control in your current role?
- To what extent do you have power in your current role?
- To what extent are you "in charge" in your current role?

Prior to your current role, did you previously work full time in a managerial position (being directly responsible for 1 or more employees)?
- Yes
- No

In total, how many years of management experience (being directly responsible for 1 or more employees) do you have in your lifetime?

- No managerial experience
- Less than 3 months
- 3-6 months
- 6-12 months
- 1-2 years
- 2-4 years
- 4-6 years
- 6-8 years
- 8-10 years
- More than 10 years

How many direct reports your current manager has (including you)?

- 1 employee
- 2 employees
- 3 employees
- 4 employees
- 5 employees
- 6 employees
- 7 employees
- 8 employees
- 9 employees
- 10 or more employees

At your current role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH (last 30 days):
[Response scale: 1 = Never; 10 = 10 times or more]

- Made recommendations concerning issues that affect my work group
- Started an argument with a work group member
- Made fun of a work group member
- Lend a helping hand to those around me
- Ignored a work group member
- Spoke up and encouraged others in my group to get involved in issues that affect the group
- Behaved in a nasty or rude manner to a work group member
- Took steps to try to prevent problems with other employees
- Yelled or swore at a work group member
- Spoke up with ideas for new projects or changes in procedures
- Considered the impact of my actions on coworkers
- Helped orient new people even though it was not required

At your current role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH (last 30 days):
[Response scale: 1 = Never; 10 = 10 times or more]

- Discussed confidential company information with an unauthorized person
- Dragged out work in order to get overtime
- Taken an additional or longer break than is acceptable at your workplace
- Made an ethnic, religious, or racial remark at work
- Falsified a receipt to get reimbursed for more money than you spent on business expenses
- Made fun of someone at work

- Littered your work environment
- Spent too much time fantasizing or daydreaming instead of working
- Acted rudely toward someone at work
- Used an illegal drug or consumed alcohol on the job
- Said something hurtful to someone at work
- Publicly embarrassed someone at work
- Neglected to follow your boss's instructions
- Put little effort into your work
- Intentionally worked slower than you could have worked
- Taken property from work without permission
- Played a mean prank on someone at work
- Cursed at someone at work
- Come in late to work without permission

Please indicate how much you think YOUR MANAGER will agree with each statement below ABOUT YOU AND YOUR PERFORMANCE using the rating scale provided. Your responses will remain strictly confidential.
[Response scale: 1 = Strongly disagree; 7 = Strongly agree]

- I feel energetic at my job
- At work, I concentrate on my job
- I am proud of my job
- I try my hardest to perform well on my job
- I am enthusiastic in my job
- I am interested in my job
- I strive as hard as I can to complete my job
- I feel positive about my job
- I exert my full effort to my job
- At work, I focus a great deal of attention on my job
- I devote a lot of energy to my job
- At work, my mind is focused on my job
- I am excited about my job
- I exert a lot of energy on my job
- At work, I devote a lot of attention to my job
- At work, I am absorbed by my job
- I work with intensity on my job
- At work, I pay a lot of attention to my job

How would you characterize your transition to your current role/job title?
- Transition within my organization
- Transition from a different organization
- Other (please specify)

How would you characterize your transition to your current role/job title?
- Promotion
- Lateral move (a change from one job to another job that has the same salary level)
- Demotion
- Other (please specify)

Please indicate how much you agree with each statement below using the rating scale provided. Your responses will remain strictly confidential.
[Response scale: 1 = Strongly disagree; 7 = Strongly agree]

When I just started my current role...

- I felt that I happened to be in the right place at the right time or knew the right people
- I compared my ability to those around me and thought they may be more intelligent than I am
- I was afraid I would not be able to live up to others expectation of me
- I gave the impression that I'm more competent than I really am
- I was afraid that I would not do well
- I felt like my success in my job had been the result of some kind of error
- I felt like I deserved it

How often do people in your level within this organization get promoted?

- Every 1-3 months
- Every 3-6 months
- Every 6-12 months
- Every 12-18 months
- Every 18-24 months
- Every 2-3 years
- Every 3-5 years
- Every 5-7 years
- Every 7-9 years
- More than 10 years
- Not sure / don't know

Previous role

Next, we will ask you a number of questions about your PREVIOUS ROLE (your role/job before you started your current role).

What was your previous job title (before you started your current role)?

_____

How long did you work at your previous role?

- For less than 3 months
- For 3-6 months
- For 6-12 months
- For 1-2 years
- For 2-4 years
- For 4-6 years
- For 6-8 years
- For 8-10 years
- For more than 10 years

How would you describe your rank within the organization at your previous role/job title?

- Intern
- Entry-level individual contributor (i.e. Associate)
- Intermediate or Experienced level individual contributor (i.e. Senior Associate)
- First-level management (i.e. Manager)
- Experienced first-level management (i.e. Senior Manager)
- Middle-level management (i.e. Director)
- Experienced middle-level management (i.e. Senior Director)
- Executive-level (i.e. VP)
- Experienced executive-level (i.e. Senior VP)
- Top-level management and Chiefs (i.e. CEO)
- Other (please specify)

At your previous role, how many employees directly reported to you?

- No direct reports
- 1 employee
- 2 employees
- 3 employees
- 4 employees
- 5 employees
- 6 employees
- 7 employees
- 8 employees
- 9 employees
- 10 or more employees

How much control did you previously have over your subordinates' _____ (at your previous role)?

[Response scale: 1 = None at all; 7 = Completely]

- Professional development opportunities
- Personal preferences (i.e. time off, working hours, working from home)
- Promotion decisions
- Work-related preferences (i.e. work assignments)
- Recognition/praise
- Salary/bonuses
- Opportunities for feedback
- Opportunities for progress outside of the organization
- Opportunities for progress within the organization

Please indicate how much you agree with each statement below using the rating scale provided:

[Response scale: 1 = None at all; 7 = Completely]

- To what extent were you given control in your previous role?
- To what extent did you have power in your previous role?
- To what extent were you "in charge" in your previous role?

At your previous role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH on the job:

[Response scale: 1 = Never; 10 = 10 times or more]

- Made recommendations concerning issues that affect my work group
- Started an argument with a work group member
- Made fun of a work group member
- Lend a helping hand to those around me
- Ignored a work group member
- Spoke up and encouraged others in my group to get involved in issues that affect the group
- Behaved in a nasty or rude manner to a work group member
- Took steps to try to prevent problems with other employees
- Yelled or swore at a work group member
- Spoke up with ideas for new projects or changes in procedures
- Considered the impact of my actions on coworkers
- Helped orient new people even though it was not required

At your previous role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH on the job:

[Response scale: 1 = Never; 10 = 10 times or more]

- Discussed confidential company information with an unauthorized person
- Dragged out work in order to get overtime
- Taken an additional or longer break than is acceptable at your workplace
- Made an ethnic, religious, or racial remark at work
- Falsified a receipt to get reimbursed for more money than you spent on business expenses
- Made fun of someone at work
- Littered your work environment
- Spent too much time fantasizing or daydreaming instead of working
- Acted rudely toward someone at work
- Used an illegal drug or consumed alcohol on the job
- Said something hurtful to someone at work
- Publicly embarrassed someone at work
- Neglected to follow your boss's instructions
- Put little effort into your work
- Intentionally worked slower than you could have worked
- Taken property from work without permission
- Played a mean prank on someone at work
- Cursed at someone at work
- Come in late to work without permission

Please describe how your previous role (TextEntryValue) was SIMILAR to your current role (TextEntryValue}):

_____

Please describe how your previous role (TextEntryValue) was DIFFERENT from your current role (TextEntryValue):

_____

How would you compare your POWER in your previous role (TextEntryValue) and your POWER in your current role (TextEntryValue)?

[Response scale: 1 = Very different; 7 = Very similar]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you felt this way, after you just got your current role:

[Response scale: 1 = Does not describe my feelings; 7 = Clearly described my feelings]

- Pleased
- Determined
- Enthusiastic
- Inspired
- Excited
- Irritable
- Joyful
- Angry
- Proud
- Irritated
- Happy
- Annoyed

Think about the reason or reasons you have experienced a change in your power (i.e. transitioned from your previous role to your current role). How much did each of the following factors contribute to your transition?

[Response scale: 1 = None at all; 5 = A great deal]

- My personal performance
- My personal desire
- My team's performance
- My team's teamwork
- Luck
- Things outside of my control
- Other (please specify)

Please indicate how your POWER in your current role (TextEntryValue) compared to your POWER in your previous role (TextEntryValue)?

[Response scale: 1 = Current power is at a much LOWER level than what I had in my previous role; 7 = Current power is at much HIGHER level than what I had in my previous role]

[Prosocial Motivation Scale]

Please indicate your degree of agreement or disagreement with each of the following statements using the scale provided.

[Response scale: 1 = Strongly Disagree; 7 = Strongly Agree]

- I get energized by working on tasks that have the potential to benefit others
- I like to work on tasks that have the potential to benefit others
- I prefer to work on tasks that allow me to have a positive impact on others
- I do my best when I'm working on a task that contributes to the well-being of others
- It is important to me to have the opportunity to use my abilities to benefit others

[Temporal Focus Scale]

Please indicate how often (in general) do you engage in each of the following:

[Response scale: 1 = Never; 7 = Constantly]

- I replay memories of the past in my mind
- I reflect on what has happened in my life
- I think about things from my past
- I think back to my earlier days
- I focus on what is currently happening in my life

- My mind is on the here and now
- I think about where I am today
- I live my life in the present
- I think about what my future has in store
- I think about times to come
- I focus on my future
- I imagine what tomorrow will bring for me

[PANAS]

This scale consists of a number of words that describe different feelings and emotions. Indicate the extent to which you **generally feel this way**, that is, <u>how you feel on average</u>, using this scale:

[Response scale: 1 = Never; 7 = Always]

- Active
- Ashamed
- Nervous
- Proud
- Alert
- Upset
- Interested
- Strong
- Afraid
- Guilty
- Excited
- Jittery
- Determined
- Enthusiastic
- Irritable
- Attentive
- Hostile
- Inspired
- Scared
- Distressed

[Demographics]

Please answer the following demographics questions:

- What is your age?
- What is your gender?

Time 2 & Time 3 Survey:

<u>Instructions</u>
Thank you for participating in this study. It will take approximately 5-10 minutes to complete.
Please provide your name and email address.
All responses will be kept completely confidential and we will discard names once we receive all the data. This information will be used to link your responses across the surveys.

First Name:

Last Name:

Email Address (where you received the survey invite):

Do you still have the same job title as a month ago (when you completed the first part of this survey)?

- Yes
- No
- Not sure

What best describes your current employment status?

- I am employed full time (30 hours per week or more)
- I am employed part time (under 30 hours per week)
- I am not employed currently, but I am not retired
- I am a full-time student and not employed currently
- I am a full-time student and employed full or part time
- I am retired
- Other (please specify):
- What is your current job title?

How would you describe your current rank within the organization at your current role/job title?

- Intern
- Entry-level individual contributor (i.e. Associate)
- Intermediate or Experienced level individual contributor (i.e. Senior Associate)
- First-level management (i.e. Manager)
- Experienced first-level management (i.e. Senior Manager)
- Middle-level management (i.e. Director)
- Experienced middle-level management (i.e. Senior Director)
- Executive-level (i.e. VP)
- Experienced executive-level (i.e. Senior VP)
- Top-level management and Chiefs (i.e. CEO)
- Other (please specify)

At your current role, how many employees directly report to you?

- No direct reports
- 1 employee
- 2 employees
- 3 employees
- 4 employees
- 5 employees
- 6 employees
- 7 employees
- 8 employees
- 9 employees
- 10 or more employees

How much control do you currently have over your subordinates' _____?

[Response scale: 1 = None at all; 7 = Completely]

- Professional development opportunities
- Personal preferences (i.e. time off, working hours, working from home)
- Promotion decisions
- Work-related preferences (i.e. work assignments)
- Recognition/praise
- Salary/bonuses
- Opportunities for feedback
- Opportunities for progress outside of the organization
- Opportunities for progress within the organization

How many direct reports your current manager has (including you)?

- 1 employee
- 2 employees
- 3 employees
- 4 employees
- 5 employees
- 6 employees
- 7 employees
- 8 employees
- 9 employees
- 10 or more employees

Please indicate how much you agree with each statement below using the rating scale provided:

[Response scale: 1 = None at all; 7 = Completely]

- To what extent are you given control in your current role?
- To what extent do you have power in your current role?
- To what extent are you "in charge" in your current role?

At your current role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH (last 30 days):
[Response scale: 1 = Never; 10 = 10 times or more]

- Made recommendations concerning issues that affect my work group
- Started an argument with a work group member
- Made fun of a work group member
- Lend a helping hand to those around me
- Ignored a work group member
- Spoke up and encouraged others in my group to get involved in issues that affect the group
- Behaved in a nasty or rude manner to a work group member
- Took steps to try to prevent problems with other employees
- Yelled or swore at a work group member
- Spoke up with ideas for new projects or changes in procedures
- Considered the impact of my actions on coworkers
- Helped orient new people even though it was not required

At your current role, please indicate the frequency with which you engaged in the following behaviors during the last MONTH (last 30 days):
[Response scale: 1 = Never; 10 = 10 times or more]

- Discussed confidential company information with an unauthorized person
- Dragged out work in order to get overtime
- Taken an additional or longer break than is acceptable at your workplace
- Made an ethnic, religious, or racial remark at work
- Falsified a receipt to get reimbursed for more money than you spent on business expenses
- Made fun of someone at work
- Littered your work environment
- Spent too much time fantasizing or daydreaming instead of working
- Acted rudely toward someone at work
- Used an illegal drug or consumed alcohol on the job
- Said something hurtful to someone at work
- Publicly embarrassed someone at work
- Neglected to follow your boss's instructions
- Put little effort into your work
- Intentionally worked slower than you could have worked
- Taken property from work without permission
- Played a mean prank on someone at work
- Cursed at someone at work
- Come in late to work without permission

Please indicate how much you think YOUR MANAGER will agree with each statement below ABOUT YOU AND YOUR PERFORMANCE using the rating scale provided. Your responses will remain strictly confidential.
[Response scale: 1 = Strongly disagree; 7 = Strongly agree]

- I feel energetic at my job
- At work, I concentrate on my job
- I am proud of my job
- I try my hardest to perform well on my job
- I am enthusiastic in my job
- I am interested in my job
- I strive as hard as I can to complete my job
- I feel positive about my job
- I exert my full effort to my job
- At work, I focus a great deal of attention on my job
- I devote a lot of energy to my job
- At work, my mind is focused on my job

- I am excited about my job
- I exert a lot of energy on my job
- At work, I devote a lot of attention to my job
- At work, I am absorbed by my job
- I work with intensity on my job
- At work, I pay a lot of attention to my job

[Previous role]

Next, we will ask you a number of questions about your PREVIOUS ROLE (your role/job before you started your current role - your role during the time you filled the previous survey).

What was your previous job title (before you started your current role)?

_____

How would you characterize your transition to your current role/job title?

- Transition within my organization
- Transition from a different organization
- Other (please specify)

How would you characterize your transition to your current role/job title?

- Promotion
- Lateral move (a change from one job to another job that has the same salary level)
- Demotion
- Other (please specify)

Please indicate how much you agree with each statement below using the rating scale provided. Your responses will remain strictly confidential.

[Response scale: 1 = Strongly disagree; 7 = Strongly agree]

When I just started my current role...

- I felt that I happened to be in the right place at the right time or knew the right people
- I compared my ability to those around me and thought they may be more intelligent than I am
- I was afraid I would not be able to live up to others expectation of me

- I gave the impression that I'm more competent than I really am
- I was afraid that I would not do well
- I felt like my success in my job had been the result of some kind of error
- I felt like I deserved it

Please describe how your previous role (TextEntryValue) was SIMILAR to your current role (TextEntryValue}):

_____

Please describe how your previous role (TextEntryValue) was DIFFERENT from your current role (TextEntryValue):

_____

How would you compare your POWER in your previous role (TextEntryValue) and your POWER in your current role (TextEntryValue)?

[Response scale: 1 = Very different; 7 = Very similar]

This scale consists of a number of words that describe different feelings and emotions.

Indicate the extent to which you felt this way, after you just got your current role:

[Response scale: 1 = Does not describe my feelings; 7 = Clearly described my feelings]

- Pleased
- Determined
- Enthusiastic
- Inspired
- Excited
- Irritable
- Joyful
- Angry
- Proud
- Irritated
- Happy
- Annoyed

Think about the reason or reasons you have experienced a change in your power (i.e. transitioned from your previous role to your current role). How much did each of the following factors contribute to your transition?

[Response scale: 1 = None at all; 5 = A great deal]

- My personal performance
- My personal desire
- My team's performance
- My team's teamwork
- Luck
- Things outside of my control
- Other (please specify)

Please indicate how your POWER in your current role (TextEntryValue) compared to your POWER in your previous role (TextEntryValue)?

[Response scale: 1 = Current power is at a much LOWER level than what I had in my previous role; 7 = Current power is at much HIGHER level than what I had in my previous role]

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