



## UvA-DARE (Digital Academic Repository)

### A reciprocal influence model of social power: Emerging principles and lines of inquiry

Keltner, D.; van Kleef, G.A.; Chen, S.; Kraus, M.

**DOI**

[10.1016/S0065-2601\(07\)00003-2](https://doi.org/10.1016/S0065-2601(07)00003-2)

**Publication date**

2008

**Document Version**

Author accepted manuscript

**Published in**

Advances in Experimental Social Psychology

[Link to publication](#)

**Citation for published version (APA):**

Keltner, D., van Kleef, G. A., Chen, S., & Kraus, M. (2008). A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Advances in Experimental Social Psychology*, 40, 151-192. [https://doi.org/10.1016/S0065-2601\(07\)00003-2](https://doi.org/10.1016/S0065-2601(07)00003-2)

**General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

**Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

*UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)*

RUNNING HEAD: Reciprocal Influence and Power

A Reciprocal Influence Model of Social Power:  
Emerging Principles and Lines of Inquiry

Dacher Keltner

University of California, Berkeley

Gerben A. Van Kleef

University of Amsterdam, The Netherlands

Serena Chen

University of California, Berkeley

Michael W. Kraus

University of California, Berkeley

**Full reference:**

Keltner, D., Van Kleef, G. A., Chen, S., & Kraus, M. (2008). A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Advances in Experimental Social Psychology*, 40, 151-192.

In the present article we advance a reciprocal influence model of social power. Our model is rooted in evolutionist analyses of primate hierarchies, and notions that the capacity for subordinates to form alliances imposes important demands upon those in power, and that power heuristically reduces the likelihood of conflicts within groups. Guided by these assumptions, we posit a set of propositions regarding the reciprocal nature of power, and review recent supporting data. With respect to the acquisition of social power, we show that power is afforded to those individuals and strategic behaviors related to advancing the interests of the group. With respect to constraints upon power, we detail how group-based representations (a fellow group member's reputation), communication (gossip), and self-assessments (an individual's modest sense of power) constrain the actions of those in power according to how they advance group interests. Finally, with respect to the notion that power acts as a social interaction heuristic, we examine how social power is readily and accurately perceived by group members and gives priority to the emotions, goals, and actions of high power individuals in shaping interdependent action. We conclude with a discussion of recent studies of the subjective sense of power and class-based ideologies.

*The fundamental concept in social science is Power, in the same sense that Energy is the fundamental concept in physics... The laws of social dynamics are laws which can only be stated in terms of power* (Russell, 1938, p. 10)

Bertrand Russell's claim that "the laws of social dynamics are laws that can only be stated in terms of power" would have made contact with few empirical findings in social psychology 20 years ago. Since that time, power has become a central area of inquiry, and one with an outpouring of findings that lend credence to Russell's assertion that to understand the thoughts, feelings, and actions of individuals within social interaction, one must consider their power dynamics (Brauer & Bourhis, 2006; Keltner, Gruenfeld, & Anderson, 2003).

In the present article, we present a reciprocal influence model of social power. This model is grounded in two assumptions that derive from studies of primate hierarchies. First, power relations are bidirectional, and governed according to the extent to which individuals act in ways that advance the interests of the group. That is, power is acquired by individuals and, just as importantly, granted to others by low power individuals in affordance and constraint processes that are responsive to how the individual advances the interests of group members. Our second assumption is that power is a heuristic solution to the problem of allocating resources in interdependent relations, and as such, should be a basic dimension of social perception and social behavior.

This model helps us frame and address new questions essential to the study of power. How is power acquired and granted to others? What social processes within groups constrain power holders? To what extent do social perceivers reliably perceive others' capacity for power? How does power influence dyadic exchanges? We rely on our reciprocal influence model of

social power and recent empirical studies to provide some initial answers to these and other questions. We conclude in a more speculative vein, presenting recent evidence concerning the subjective experience of power and how the experience of power might shape class-based ideologies.

### **Traditions in the Empirical Study of Power**

Social psychological studies of power have concentrated on three broad questions (for reviews, see Keltner et al., 2003; Kipnis, 1976; Ng, 1980; Raven, 1999). First, what are the origins of power? Since French and Raven's analysis of the bases of power (French & Raven, 1959), investigators have sought to identify the social processes that endow individuals with power. Empirical studies have identified specific behaviors, such as gossip, teasing, and status moves, which influence hierarchy formation in children (e.g., Savin-Williams, 1977), in organizations (Owens & Sutton, 2001), in informal groups (Buss & Craik, 1981), and in the emergence of leaders (Eagly & Johnson, 1990). Other studies have documented how social power derives from membership in demographic groups, such as gender or ethnicity (Berger, Cohen, & Zelditch, 1972).

A second question concerns the concomitants of power. What does the experience of power correlate with in the phenomenological moment? Studies seeking answers to this question have found that contextual shifts in the individual's power lead to, for example, variation in cortisol (Ray & Sapolsky, 1992; Sapolsky & Ray, 1989) and testosterone (Bernhardt, 1997; Dabbs, 1997; Gladue, Boehler, & McCaul, 1989; Mazur & Booth, 1998), linguistic and paralinguistic behavior (Dovidio & Ellyson, 1982; Hall, Coats, & LeBeau, 2005; Tiedens & Fragale, 2003), as well as strategic social behavior and mood (Moskowitz, 1994).

A third broad question in the empirical literature on power concerns the consequences of power, that is, how power shapes ensuing cognitive, behavioral, and emotional responses (see Bugental, 2000; Kipnis, 1972; Reid & Ng, 1999). Different theoretical models have been advanced to account for how power affects those who have elevated power and those who do not (Keltner et al., 2003). Research within this tradition has examined how the possession (or absence) of power influences, for example, emotion (Langner & Keltner, in press), approach-related behavior (Galinsky, Gruenfeld, & Magee, 2003), goal-directed social cognition (Guinote, 2007), the variability of social behavior (Guinote, Judd, & Brauer, 2002), and the likelihood of condescending behavior (Vescio, Snyder, & Butz, 2003).

These lines of inquiry, both empirical and theoretical, have been characterized by two tendencies, which in part motivated the model we present in this article. A first concerns the unit of analysis: almost all studies of social power have focused on the individual as the unit of analysis (for notable recent exceptions, see Copeland, 1994; Guinote et al., 2002; Overbeck & Park, 2001; Tiedens, 2001; Van Kleef, De Dreu, Pietroni, & Manstead, 2006; Vescio et al., 2003). Less attention has been paid to the critical question of how power shapes, and is shaped by, dyadic and group processes.

How power arises in dyadic and group processes is an important area in need of systematic investigation, for power is inherently relational. An individual's power (or lack thereof) is shaped by face-to-face dyadic exchanges, group-related processes, and participation in social collectives and ideologies (e.g., Berger, et al., 1972; Bourdieu, 1985; Sidanius & Pratto, 2001). Very little is known about how the dyad, the group, and social collective shape the individual's sense of power. A primary aim of the present article will be to fill this lacuna, and to

offer a set of theoretical concepts and new findings to clarify how social power is distributed in groups as a result of dyadic exchanges and group-based processes.

A second, related tendency in the literature on power is that almost all studies of power to date have conceived of power as a unidirectional phenomenon, originating in the individual, and flowing outward in systematic correlates and consequences. It is now common to study how power determines the individual's behavior. Or, complementarily, other studies emphasize how power (or status) is an outcome of the individual's action. There has been little systematic treatment of how social power is actively constructed in processes by which individuals acquire power, and are granted power by others – a longstanding concern in sociological treatments of power, deference, and status (e.g., Emerson, 1962; Goffman, 1967). In the present article we offer a theoretical treatment of the bidirectional nature of power, how it is acquired by individuals, and afforded to them, and how it is regulated within groups. To consider these issues – how power arises in dyads and groups as a result of bi-directional processes – we must first look at the evolution of human hierarchies. Such an analysis sets the stage for our reciprocal influence model of social power and its specific empirical propositions.

### **Ultrasociality and Human Hierarchies**

Social power reflects the relative influence an individual exerts over his or her interaction partner's outcomes through the allocation of resources and punishments (Lewin, 1951; French & Raven, 1959; Dépret & Fiske, 1999; Keltner et al., 2003). It translates to the individual's perceived capacity to modify others' states by providing or withholding resources or administering punishments, as well as the freedom the individual believes he or she has to deliver resources and punishments (Emerson, 1962; Fiske, 1993; Parker & Rubenstein, 1981; Rusbult, Verette, Whitney, & Slovik, 1991; Thibaut & Kelley, 1959). The individual's

experience and exercise of power occur in dyadic and group-based processes within human hierarchies. The more specific propositions of our reciprocal influence model derive from recent analyses of human ultrasociality, social hierarchies, and different relationships (Boehm, 1999; Caporael & Brewer 1995; Dunbar, 2004; Fiske, 1991).

The most basic assumption emerging from these analyses is that humans are an ultrasocial species, accomplishing most tasks relevant to survival and reproduction, from the provision of resources to the raising of offspring, in highly coordinated, close proximity, face-to-face relationships and groups (Caporael, 1997; Caporael & Brewer, 1995; Keltner & Haidt, 2001). The basic elements of human sociality are relationships, and a central task in human adaptation is to navigate the myriad relationships of human groups effectively (Baumeister & Leary, 1995; Chen & Andersen, 1999; Fiske, 1991).

With increases in human sociality and the capacity to communicate and store symbolic information (Dunbar, 2004) came an important property of human social life with profound implications for the distribution and exercise of power: the capacity for subordinates in hierarchies to form alliances and networks. The hierarchical organization of higher primates and early and present-day humans differs from that of other species (Boehm, 1999; de Waal, 1989). Lower status individuals can readily form alliances, most typically dyadic coalitions, which potentially negate any advantages that higher status individuals might enjoy in physical size or power. This development radically shifted how power is acquired and negotiated. The acquisition of power shifted from being based on coercion and assertion to processes by which low status individuals afford power to high power individuals (Emerson, 1962). This shift also placed additional importance upon communicative processes in subordinates – e.g., gossip – that can potentially constrain the expression of power of dominant individuals.



The capacity for subordinates to form alliances introduced new demands upon individuals in power. An individual's power depended critically upon that individual's ability to engage in, and advance, the interests of other group members. Social engagement became the critical ingredient to the acquisition and maintenance of power. For example, in close primate relatives, such as chimps and bonobos, Frans de Waal has shown that social power is based less on sheer strength, coercion, and the unbridled assertion of self-interest, and more on the ability to negotiate conflicts, to enforce group norms, and to allocate resources justly (Aureli & de Waal, 2000). This requirement of those in power to be socially engaged is all the more pronounced in humans.

Finally, the centrality and complexity of social relationships in human groups led to a degree of interdependence in human relationships -- between parents and offspring, reproductive partners, and same-sex individuals within alliances -- that is unprecedented in the primate world (Brewer, 2004; Bugental, 2000; Hrdy, 1999; Rusbult, et al., 1991; Sulloway, 1996).

Interdependence implies potential competing interests, and the need to establish cooperative mechanisms for negotiating conflicts. Mutually recognized power differences are one such mechanism, serving as a social heuristic that solves more complex problems surrounding the allocation of resources and the coordination of interdependent action.

In nonhuman species, well-studied conventionalized status contests – stags locking horns, chimpanzees bearing teeth in threat displays -- allow competing group members to establish positions within social hierarchies through signaling, rather than more costly aggressive encounters (Krebs, Davies, & Parr, 1993). These status contests make decisions regarding the allocation of resources and the coordination of interdependent action more efficient. As a result, status, or resource holding potential, emerges as a basic property of a repertoire of display

behaviors, and as a focus of the social cognition of nonhuman species, which is oriented toward the accurate assessment of conspecifics' power.

Humans rely to an even greater extent upon face-to-face negotiations, rather than violence or territorial arrangements to negotiate competing interests (Boehm, 1999). As a result, power should be an especially potent social heuristic that prioritizes the actions and interests of those with power in situations defined by interdependent action (e.g., Fiske, 1991).

### **A Reciprocal Influence Model of Social Power**

Human groups, then, are defined by the profound interdependence of their members, and by the capacity for subordinates to form alliances. These properties of human groups place demands upon those in power to act in ways that advance the interests of the group. In addition, they make power a pervasive dimension to social relationships, one that acts in heuristic fashion to pre-empt more costly conflicts and to prioritize the actions and interests of those with power in dyadic exchanges.

The above properties of human hierarchies translate to the propositions of a reciprocal influence model of social power, which we summarize in Table 1, and which organizes the remainder of this article. Our first two propositions concern the acquisition of power. Given the power that subordinates find in forming alliances, we hypothesize that those individuals who actively engage in the interests of others will be afforded power by other group members. We further propose that strategic behaviors that signal the disposition to actively engage in the interests of others will also lead to the affordance of social power. In the formation of hierarchies, the acquisition of social power is not about manipulation, aggression, or strength; it is based on the ability to act in ways that advance the interests of the group (and that satisfy alliances of subordinates).

Our next set of propositions pertains to the constraint processes by which subordinates regulate the power of power holders. With the rise of alliance formations, and the astonishing symbolic and communication capacities of humans, the determination of power within groups increasingly shifted to the actions, communication, and representations of subordinates (e.g., Emerson, 1962). These social and cognitive shifts led to communicative and representational processes by which subordinates afford and constrain the power of those in power. In this article we propose, and detail supporting empirical evidence, that the representation of group members' reputations, and reputation-relevant communication, constrain the actions of those in power. We also suggest that group members constrain their own potential abuses of power through modest self-assessments of power.

Our final set of propositions follows from the notion that power acts as a heuristic solution to potential conflict between group members. To the extent that power relations prevent costly aggressive encounters, social power should function something like a social heuristic or relationship model (e.g., Fiske, 1991), quickly and efficiently guiding social perception and behavior. Much as the human mind readily detects baby-like, neotonous cues in others for evolutionary advantage (McArthur & Apatow, 1983), and perceptions of neotony automatically evoke certain reliable patterns of behavior, such as the provision of care, the same should be true of social power. Social power should be readily and accurately identified in other group members, and serve as a guide for how individuals act within dyadic interactions, prioritizing the dispositions, goals, actions, attitudes, and emotions of high power individuals – our final two propositions.

### **The Acquisition of Social Power**

Who acquires social power? How is power distributed across group members as hierarchies form? In one well-established line of inquiry, investigators have examined how more *static* features of the individual – their physical morphology, gender, ethnicity – influence inferences related to power. Here the theoretical notion, supported by numerous studies, is that individuals associated with groups who historically have enjoyed greater economic and political power -- for example, European American males or political majorities in U.S. culture -- are afforded power as a simple result of their group membership (Berger et al., 1972; Nemeth, 1986).

In many group settings and face-to-face interactions, power is negotiated in a more *dynamic* fashion. On the grammar school playground, in leaderless teams, in groups of friends, in emergent social movements, and on athletic teams, individuals often gravitate to positions of power through processes that are largely independent of more static features of their identity – namely, their patterns of interaction with other group members, their way of being with others. This kind of dynamic acquisition of power has long been of interest to those interested in charisma (Weber, 1947) and the qualities that make for effective leaders (Eagly & Johnson, 1990). In more dynamic settings, who acquires power?

In our reciprocal influence model of social power, we reason that the capacity for subordinates within hierarchies to form alliances places demands upon high power individuals to engage socially and advance the interests of the group. The distribution of power within social groups, therefore, should go preferentially to those individuals who are socially engaged in ways that advance the interests of the group – our social engagement hypothesis. By extension, one would expect social behaviors that are socially engaged, that is, that are oriented toward the interests of others, to prompt attributions of power.

As we have already noted, several studies lend credence to the social engagement hypothesis in nonhuman species. Specifically, studies have found that high status chimpanzees and bonobos acquire and maintain elevated positions of power as a function of their social engagement. Non-human primate leadership requires that powerful individuals maintain the social harmony and coherence of relationships and groups through negotiation, reconciliation, and matters of adjudicating the distribution of resources and work (de Waal, 1989).

In humans, select studies provide evidence that could be interpreted as consistent with the social engagement hypothesis. For example, in studies of hierarchy formation in children at a summer camp, Savin-Williams (1977) found that it was the more socially dynamic, outgoing children who rose to positions of leadership. In a study of the social dynamics of members of a fraternity, Keltner and colleagues (Keltner, Young, Heerey, Oemig, & Monarch, 1998) assessed the peer-rated power of 48 members of a fraternity, and examined how they teased one another in a semi-structured teasing interaction involving groups of four fraternity members. Consistent with the social engagement hypothesis, the more dynamic, playful, engaging teasers were found to have elevated peer-rated power within the fraternity, independent of whether they were new or older and more established members of the group. More recent tests reported below reveal more rigorous support of the social engagement hypothesis.

### **The Disposition to Engage Socially Predicts the Acquisition of Social Power**

In more systematic tests of the social engagement hypothesis, it is necessary to study the formation of hierarchies in emergent groups whose members have no prior history with one another, to identify which group members who all start from similar status positions rise in the social hierarchy. It is also necessary to study the social affordance of power, that is, how group members ascribe power to other group members. Guided by these criteria, Anderson and

colleagues (2001) studied the emergence of hierarchies in three different groups: an all-male fraternity at a Midwestern university; an all female sorority at a Southern university; and in a longitudinal study of the members of a mixed-sex residence hall on a college campus at a Western university.

The simple prediction was that individuals, both males and females, who self-report high levels of Extraversion would acquire and maintain elevated levels of power, as afforded by their peers in ratings of influence, prominence, and respect. In the Big Five framework, Extraversion implies an “energetic approach to the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality” (John & Srivastava, 1999, p. 121) - all characteristics that should predispose extraverts to engage in the interest of other group members. This prediction is consistent with findings showing that extraverts report engaging in a variety of social behaviors – conversation, persuasion, conflict resolution, humor – that actively engage with others (Akert & Panter, 1988; Riggio & Friedman, 1986; D. Buss, 1996; D. Buss et al., 1987; Hampson, Goldberg, & John, 1987; Kyl-Heku & D. Buss, 1996).

Table 2 presents the data relevant to our social engagement hypothesis. Consistent with expectation, one can see that highly extraverted males and females in the two same-sex social groups – the fraternity and sorority – were afforded greater status and power by their peers as these two hierarchies formed, as measured in assessments gathered at the beginning of the academic year, when the status hierarchies were still dynamic and forming. The dormitory findings are important for several reasons. First, these longitudinal findings show that the tendency to engage socially (Extraversion) predicts the acquisition of social power at later points in time: in the dormitory study elevated levels of Extraversion predicted greater influence, prominence, and respect amongst peers for women and men across the course of an academic

year. Socially engaged extraverts acquired elevated social status in their peers' eyes within two weeks of the academic year, as the students were all getting to know one another, and they maintained their positions of elevated status for the next nine months. Social engagement appears to be critical to the stability of a power holder's position. Second, the sample was diverse with respect to SES and ethnicity and mixed in terms of gender: social engagement predicts the acquisition of social power across groups that are likely to have their own historical legacy with respect to experienced power.

In this same investigation, neuroticism for males, which is defined in terms of elevated anxiety, distress, and agitation, was associated with lower peer-related status. This too fits the social engagement hypothesis. Neuroticism has been shown to be associated with an interaction style – self focus, emotional reactivity, plaintiveness, the over-interpretation of conflict (e.g., Bolger & Schilling, 1991; Keltner, 1996) – that interferes with smooth functioning social relations, and in two studies, cost men in terms of their peer-afforded social status. Interestingly, Agreeableness did not predict the acquisition of power. It is not a pro-social orientation toward others (or an anti-social, Machiavellian orientation) that predicts the acquisition of power; instead, it is a more general kind of social energy, one that predisposes individuals to engage with other group members in a variety of ways.

It is also worth noting that these dynamic dispositional predictors of the acquisition of social status within groups diverge from lay theories of who will rise in social hierarchies. In a survey of undergraduates about which traits would be associated with the acquisition of elevated status, respondents indicated that the more task- and achievement-oriented trait – conscientiousness – would predict the acquisition of elevated status. This lay theory about the acquisition of social power proved to be wrong; conscientiousness, defined by the interest in

achievement, task focus, and goal directedness, was unrelated to peer affordances of social power. The acquisition of power appears to hinge more on social engagement than the ability to pursue goals and carry out tasks efficiently. The viability of the social engagement hypothesis rests critically on further research examining different groups, individuals other than college-aged students, and members of different cultures.

### **Displays of Power: Strategic Signals of Social Engagement**

Thus far we have seen that in the establishment of male and female hierarchies, the disposition to engage with others – Extraversion – predicts the acquisition of power. In addition, social behaviors that engage others, and presumably advance the interests of the group are rewarded with affordances of power. This association between the disposition toward social engagement and the rise in power has important implications for how people signal social power strategically, a longstanding interest in social psychology (Hall et al., 2005; Henley, 1973; Henley & LaFrance, 1984). More specifically, strategic displays that lead to the acquisition of power should be behaviors that signal social engagement. Social perceivers, furthermore, should prove to be fairly reliable in their detection of the specific behaviors that serve as displays of social power.

A recent meta-analytic review by Hall and colleagues (2005), which included studies published up to 2002, bears upon these two predictions (and in part motivated their review). Hall et al. examined the relation between several nonverbal behaviors (e.g., facial behavior, body movement, interpersonal distance, touch, vocalizations) and power, status, and dominance. Their analysis distinguished between beliefs about the relation of these nonverbal behaviors to power (120 studies) and actually observed relations (91 studies). The results are summarized in Table 3.



This table reveals several important empirical regularities relevant to the question of how power is signaled strategically. First, reliable relations between nonverbal behaviors and actual power were found only for facial expressiveness, bodily openness, interpersonal distance, loudness of voice, interruptions, and the ability to convey emotions through face and/or voice. As it turns out, however, this constellation of behaviors also tends to be the kind of behaviors that highly extraverted individuals emit reliably in social interactions (e.g., Borkenau & Liebler, 1995; Funder, 1999). Second, the overall correlation between perceived relations and actual relations between power and nonverbal behavior was significant, suggesting that individuals' beliefs regarding relations between nonverbal behavior and power may be accurate – a theme we examine more directly in the next section.

Finally, Table 3 reveals that people have quite rich stereotypes of the behaviors associated with power, which are elaborations upon actual behavior to power associations. People associate higher levels of power with less smiling, more gazing, less eyebrow raising, a more expressive face, more nodding, less self-touching, more other-touching, more hand and arm gestures, more bodily openness, smaller interpersonal distances, louder voice, more interruptions, shorter speech latencies, fewer filled pauses, more laughter, higher rate of speech, and a lower voice. It is noteworthy that many of the behaviors individuals erroneously associate with power – for example, increased gazing, nodding, other-touching – are actually agreeable, affiliative behaviors that the data in Table 2 reveal to be independent of actual social power.

In addition to these nonverbal behaviors, social engagement (and therefore power) may be signaled by particular patterns of emotional responding. As is the case with the nonverbal behaviors discussed above, in the case of emotional responding, too, well-learned stereotypes may explain at least in part why some patterns of emotional responding lead to the affordance of

social power. Tiedens, Ellsworth, and Mesquita (2000) found that people believe that, in negative situations, high-status individuals are more likely than their low-status counterparts to feel anger – a negative emotion that is focused on engaging with others (Keltner, Ellsworth, & Edwards, 1993) -- as opposed to more self-focused emotions such as sadness. In accordance with this belief, people expressing anger are more likely to be seen as high in status and to be granted status by others (Tiedens, 2001). Part of the reason why anger leads to status affordance may be that expressions of anger signal engagement and a desire to change the situation (possibly to the benefit of the group) as opposed to accepting the negative state of affairs.

Finally, it is interesting to speculate how responses to the socially engaged style of individuals with power may serve as a self-reinforcing mechanism that perpetuates power structures. Specific responses to the power holder's socially engaged behavior that are complementary in nature -- such as expressions of deference, affirmation, or gratitude -- may actually reinforce existing power relations. For example, various politeness tactics – indirect requests, formality, qualified assertions and claims – tend to systematically characterize how low power individuals speak to high power individuals (Brown & Levinson, 1987). This linguistic style of politeness complements the more direct, assertive linguistic style of power holders. In keeping with this thesis, Tiedens and Fragale (2003) showed that complementary responses to dominant nonverbal behaviors produced more comfortable interactions and interpersonal liking. Thus, affording power to individuals who exhibit socially engaged nonverbal behavior by accommodating nonverbally leads to smoother interactions. Over time, people may learn, through repeated reinforcement, that deferential responses to others' dominant behavior often produce more easy-going, less confrontational interactions. In these ways low power individuals afford power to others, thus contributing to the formation and maintenance of status hierarchies.

### **Power and Social Constraint Processes**

A central assumption of our reciprocal influence model of social power is that power dynamics are bidirectional. Individuals acquire and assert power, as we have seen, through their capacity to engage in the interests of other group members. Strategic displays of socially engaged behaviors are likely to be afforded power. Complementary behaviors on the part of subordinates afford power to other group members. Just as importantly, subordinates readily form face-to-face alliances and fold into more complex networks, and in these social entities have the potential to constrain the actions of those in power.

The need to constrain individuals with power is all the more pressing in light of the effects of power upon social behavior. Numerous studies reveal that elevated power leads individuals to act in ways that potentially harm the interests of other group members (for a review, see Keltner et al., 2003). Power renders leaders more likely to act in ways – through disinhibited action, risk taking, and self-serving behavior – that risk damaging the interests of group members, and even, more generally, the cooperative, smooth functioning of the group.

This tension between what is needed in leaders and what kind of behavior power tends to produce is likely to be a central motive of social constraint processes by which group members regulate the actions of high power individuals, and ensure that those who occupy positions of power are likely to act in ways that promote the interests of the group. Most established groups have formalized mechanisms by which low power individuals regulate the actions of power holders – elections and referenda, evaluation procedures, public forms of accountability, external boards who receive input from group members and provide oversight. These institutionalized checks and balances to the abuses of power are elaborations upon basic communicative processes that accomplish similar functions of regulating the actions of those in power.

Group members also rely on more informal means to regulate the actions of power holders. Informal off-record forms of communication, in the form of gossip, teasing, or idle chat, allow group members to comment upon the actions of other group members and, we suggest, constrain power holders and prevent inappropriate individuals (those who do not advance the interests of the group) from rising in power. Here we focus on recent empirical work on two kinds of such informal power constraint processes: reputation-relevant communication (gossip) and modest self-assessments.

### **Reputation and Gossip as Power Constraint Processes**

We define reputation as the discussion of an individual's character by members of a social network. Reputation emerges in communication (Emler, 1994), and is located within the representations of individuals in a social network; it is information about an individual's engagement in a group as defined by specific norms, values, and needs of the group.

The transmission of reputation-related information takes two forms: distributed and discursive (Craik, 2007). Distributive reputation refers to the information about a group member that is stored throughout the group. Distributive reputation is not actively shared, but is accessible by simply inquiring about a group member (Whitmeyer, 2000). Discursive reputation emerges in active, face-to-face communication amongst group members, in such processes as gossip (Dunbar, 2004; Emler, 1994; Ben-Ze'ev, 1994), teasing (Keltner et al., 2001), and pleasant idle chat.

Reputation is a powerful tool of the less powerful and, we suggest, emerged as a mechanism by which group members regulate the distribution of power within their group. The transmission of reputation-relevant information, in distributed and discursive processes, allows low power individuals to track, evaluate, and comment upon the actions of those individuals in

power. Because so many acts of reputation transmission occur when the target of the communication is not present (e.g., gossip), high power individuals have little or no control over how their reputations are constructed, save by acting in ways that fit the expectations of low power individuals. We suggest that distributed and discursive reputational processes will tend to concentrate on the power worthiness of other group members. In light of our reciprocal influence model of social power, we posit that the communication of reputation-relevant information will concentrate on whether other group members are socially engaged, and whether they are trustworthy and oriented to the interests of others.

In one recent study guided by this analysis, we examined the content of distributed reputation, that is, group members' representations of the reputations of their fellow group members. Ninety-four undergraduates who were members of a residence hall were asked to write about their own reputations and those of two individuals on their hall at two times during an academic year. These narratives were then coded for which personality traits were central to reputation. Importantly, there was a great deal of consensus in group members' representations of each other's reputations. And consistent with our foregoing analysis, distributed reputation – their knowledge of others' reputations -- concentrated on traits critical to the status potential of their fellow hall-mate (Extraversion) as well as the individual's trustworthiness (Agreeableness), but not on other traits like their negative emotionality (Neuroticism) or ability to carry out tasks and goals effectively (Conscientiousness), nor on their idiosyncratic preferences, for example, for particular types of music or forms of recreation (see Table 4). This proved to be true of group members' representations of their own reputations as well as those of other group members.

We would further expect forms of discursive reputational processes to center upon the question of whether group members deserve their power and their positions within the social hierarchy. Gossip may be the prototypical kind of discursive communication that transmits reputation-relevant information to other group members. Gossip is a communication of positive or negative reputational information about a group member. Importantly, gossip employs paralinguistic devices, such as indirectness, exaggeration, or humor, which indicate that the claim is not entirely serious, thus providing low power individuals a plausible basis for denying any critique contained within the gossip (e.g., Keltner et al., 2001). Gossip also focuses on group members who are not present. These two features of gossip – its off-record quality and its focus on individuals not present – allow group members to comment on the actions of high power individuals with less fear of conflict or retaliation. Gossip should therefore serve as a means by which a group member's worthiness of elevated power is evaluated.

To test this hypothesis, we investigated the gossip amongst 55 sorority sisters at a West Coast University in the United States (Logli, Keltner, Campos, & Oveis, 2007). In an initial phase of the study, sorority sisters completed sociometric ratings of the other sorority sisters, indicating how well-known each sister was, whether she was well-liked, had high status, had deserved status, and had an admirable reputation. All sorority sisters also completed two personality questionnaires relevant to our notion that gossip would target individuals unfit for power – a measure of Agreeableness, which captures the individual's warmth and kindness, and a measure of Machiavellianism, which captures the individual's willingness to manipulate and exploit others to rise in status, and cynical expectations that others will do the same. Finally, we gathered sociometric measures of each sister's self-reported tendency to gossip about other

sisters in the sorority. This measure allowed us to identify sisters who were frequent targets of gossip.

Our expectations were based on the analysis that gossip is a means by which group members identify sisters who are not deserving of elevated power. The pattern of results observed in Table 5, pertaining to the profiles of targets of gossip, conform to these expectations. Frequent targets of gossip were well-known but not well-liked. The other group members indicated that these individuals had status that was not well-deserved. They reported that these frequent targets of gossip had poor social reputations. Participants reported frequently teasing and gossiping about these persons – presumably to comment on actions that damage group interests.

Moving beyond these sociometric data, other data suggest that gossip identifies group members who are not worthy of positions of power. Given that group members appear to afford power to socially engaged individuals (see Table 2), one would expect gossip to target individuals unworthy of power, that is, individuals who are disposed to actually harm the interests of other group members. Consistent with this analysis, one sees in the final two rows of Table 5 that frequent targets of gossip self-reported high levels of disagreeableness – they were cold and aggressive. They also reported high levels of Machiavellianism, which captures the tendency to harm others in the pursuit of elevated status and power. In short, gossip targets individuals who are likely to abuse power.

Along similar lines, another recent study exploring the antecedents and social functions of gossip indicates that, in addition to the rather banal enjoyment of talking about others who are not present, people often gossip to warn fellow members of a social collective about the defective or norm-violating behavior of another member (Beersma & Van Kleef, 2007).

Gossipers punish wrongdoers for their deeds by tainting their reputation, thus reducing their social power.

### **Modesty**

We have just seen that the informal communication of group members in the form of gossip acts as a constraint of the actions of those who seek power, targeting individuals who act in ways that harm the interests of other group members. Group members who act in ways that too systematically benefit themselves over the interests of the group, or who strive too explicitly toward the acquisition of power, suffer reputational costs.

One interesting possibility is that reputation-related processes such as gossip influence group members' self assessments in ways that would lead them to act in ways that subordinate self-interest in the service of advancing the interests of the group. People act in various altruistic ways to enhance their reputations, for example through gift giving, leaving tips, providing aid, and other forms of generosity (Frank, 1988). Complementarily, group members are likely to internalize reputational discourse processes into self-regulation mechanisms that increase the likelihood that they act in ways that advance the interests of the group. One such candidate is modesty. Modesty, or humility, refers to the tendency to underestimate one's relative talents and abilities vis-à-vis other group members, and to underestimate one's claims to collective resources. Most enduring belief systems have well-developed treatments of modesty, which largely focus on cultivating a set of principles that in part constrains the likely excesses of those in power. Within Western thought, the concept of *Noblesse Oblige* speaks to the necessity for those with power to attend to the needs of those who do not have power. In several Eastern traditions, such as Taoism and Confucianism, there is systematic discussion about the modest



leader, as exemplified in the following quote of Lao Tzu: “To lead the people, walk behind them.”

Recent work suggests that an ethic of modesty may be built into group members’ self-assessments of their own power, acting as an intrapsychic constraint upon the potential abuses of power (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). In this research, undergraduates formed groups of four to eight participants and visited the laboratory once a week for four weeks. During each visit the participants engaged in different kinds of group tasks, in one instance disclosing embarrassing experiences to one another, in another engaging in a more competitive collective allocation of resources. After each of the four group interactions, participants rated their own status, as well as the status of each of the other group members, which allowed for the assessment of whether individuals were likely to self-enhance or show modesty in their assessments of their status within the group. Participants also rated how much they liked each of the other group members.

This study of the emergence of status in groups yielded two important findings relevant to our present interest in social constraints upon power. The first was a consistent modesty effect in self-assessment of social power: individuals’ self-assessments of status were consistently lower than the status afforded to them by their peers. This modesty effect diverges from numerous self-enhancement effects documented in the self literature (e.g., Baumeister, 1998; Dunning, Leuenberger, & Sherman, 1995; Taylor & Brown, 1988). We would contend that this predilection toward more modest assessments of status within groups acts to constrain the effects of power.

The second finding was fitting with this analysis: using cross lag correlational procedures, Anderson and colleagues found that individuals who self-enhanced in their

assessments of their power, holding constant initial levels of being accepted by their group members, were liked less in subsequent interactions of the group. This finding is in keeping with other findings reviewed thus far concerning group representational processes (e.g., that gossip targets Machiavellian group members striving for elevated status). There are costs to having an inflated sense of power in terms of the liking, acceptance, and status affordance of peers. This dynamic is seen in other age groups. For example, children who are prone to bullying often have an inflated sense of their power, and clearly use bullying to assert their dominance in socially unacceptable fashion, but they are systematically shunned and rejected by their peers (Solberg, Olweus, & Endresen, 2007).

One intriguing possibility worthy of empirical investigation is that high power individuals resort to strategic displays of modesty, to afford respect and status to low power individuals, thus pacifying individuals likely to usurp their power. For example, based on Goffman's (1957) nuanced analysis of face and deference, investigators have identified several kinds of modest behaviors that afford status to others, including politeness tactics (Brown & Levinson, 1987), acts of etiquette (Elias, 1978), and modest nonverbal displays (e.g., Abu-Lughod, 1986; Keltner & Anderson, 2000). While in general these modest behaviors tend to be enacted by low power group members toward high power individuals, to the extent that effective leadership requires modesty, one might see that powerful individuals rely strategically on these modest acts as a means of maintaining their positions of power.

Taken together, the findings we have reviewed in this section speak to the dynamic bi-directional nature of power. We have seen that the communication and social representations of group members systematically focus on the power worthiness of other group members, and whether those individuals tend to act in the interests of the group. We have suggested that these

group-based processes feed back into group members' own modest self-assessments of their power, a claim in need of more systematic investigation.

### **Power as an Interaction Heuristic**

Thus far we have examined the distribution of power in social groups. Consistent with our reciprocal influence model, we have seen that individuals who socially engage with other group members acquire power, as do strategic behaviors that are organized according to such intentions. We next examined how power is constrained by those lower in the hierarchy through reputational discourse. We saw that the content of reputation, distributed across group members, focuses on the power worthiness of individuals. And we saw that gossip, a form of discursive reputation transmission, identifies group members who are likely to abuse power. These findings are in keeping with the reciprocal dynamics of social power.

Whereas in the first half of this article we have addressed the principles that govern the distribution of power, in this next section we ask how power organizes social perceptions and actions of individuals in dyads and groups. We start from the assumption that social power serves as a heuristic solution to many of the problems of human ultrasociality – increased interdependence, conflict, and the need to negotiate the distribution of resources and work (Chance, 1967). Mutually recognized levels of power between group members pre-empt more costly aggressive encounters over negotiations regarding the distribution of resources and the allocation of work. Mutually recognized levels of power also serve as heuristic solutions to the problems of coordinating interdependent action; more specifically, power prioritizes the actions, intentions, and emotions of high power individuals in dyadic exchanges.

### **Power as a Social Affordance**

Within nonhuman species, status contests – stags locking horns, frogs croaking – are designed to provide conspecifics with opportunities for the accurate assessment of one another's power and, in turn, to pre-empt costly aggressive encounters (Krebs et al., 1993). We likewise assume that there are numerous advantages within human hierarchies to the accurate identification of a group member's social power. Most obviously, individuals who arrive at accurate appraisals of their own power and that of other group members will avoid competitive status dynamics and conflicts over positions within social hierarchies. Ambiguous appraisals of relative power increase the chances of costly competition and aggressive encounters. It is also plausible that groups who more quickly identify those individuals predisposed to possess power will select more effective leaders – presumably those who will engage in the concerns of group members in ways that benefit the overall functioning of the group.

These arguments suggest that power should act like a social affordance (McArthur & Berry, 1987). Social power should have evolved a reliable set of cues (see Table 3). Social perceivers, furthermore, should quickly and reliably detect other group members' social power. Cast within recent advances in the person perception literature (e.g., Funder, 1999), one would expect group members to achieve impressive levels of consensus and accuracy in judging the power of other group members (see Anderson et al., 2006 for full rationale).

A first prediction is that there should be a great deal of consensus in group members' judgments of one another's power. To assess this claim, Anderson and colleagues had members of dormitory residence halls rate the social status (influence, prominence, and respect) of their peers two weeks into their year together, and then four and nine months later (Anderson et al., 2001). The question is whether group members agreed in their independent assessments of each other's social status. Group members showed impressive consensus or agreement in their

judgments of who had high and low status the first two weeks of their time together, and these judgments predicted students' status at the four and nine month assessments. Group members appear to form quick and shared impressions of who is and is not worthy of elevated social status, and these perceptions remain stable over time. Importantly, these impressions did not vary significantly according to whether the person being judged was male or female, or according to the individual's ethnic background. Group members are attuned to the potential others have for social power, beyond ingroup and outgroup social categories.

Just as interesting is the question of accuracy: Do group members' judgments of social power correspond to individuals' own self-assessments on this important dimension? Both determinants of accuracy – self and other assessments – are important to consider. Specifically, are individuals aware of their own influence and prominence in groups? And do groups, in effect, pick the right people to lead, the individuals who have a stronger capacity for social power?

A positive illusions perspective might suggest that there would be little accuracy in the perception of group members' status and power. It is well documented that people tend to self-enhance on a variety of dimensions, including their intelligence (Kruger & Dunning, 1999) and personality traits (Messick, Bloom, Bgoldizar, & Samuelson, 1985), and that they do so because of the esteem benefits of self-enhancement (Dunning, Leuenberger, & Sherman, 1995; Taylor & Brown, 1988). Because one's social esteem is so intimately tied to self-esteem (Barkow, 1975; Leary, Cottrell, & Phillips, 2001), one might expect group members to consistently inflate their own status and power, as a means by which to enhance self-esteem.

This line of reasoning is contradicted by the modesty results we presented earlier – that new group members tend to underestimate their degree of power in emergent groups.

Furthermore, another line of reasoning would suggest that there are clear costs to such self-enhancement of power, and many benefits to a more accurate correspondence between self- and peer-assessments of power and status. More accurate self- and peer-assessments of social power clarify individuals' positions within the social hierarchy. Agreement in self- and peer-assessments of social power should enable more smooth functioning social hierarchies within social groups.

In two different studies of group dynamics over time, self- and peer-ratings of influence, prominence, and respect have been compared, to ascertain the degree of accuracy in the perception of social power (Anderson et al., 2001; Anderson et al., 2006). As one can see in Table 6, there is a great deal of correspondence between the individual's own assessment of his or her influence, prominence, and respect, and the ascription of those attributes by peers.

The emerging conclusion that people can with immediacy and accuracy judge their own and others' status is underscored by recent research using "thin slices" of behavior to predict status. This technique is grounded in empirical findings indicating that people are surprisingly accurate at judging others on the basis of very brief observations – or thin slices – of behavior (Ambady, Hallahan, & Rosenthal, 2002). Evidence from studies using this methodology suggests that individuals are able to judge strangers' status on the basis of brief (90 seconds) video clips of behavior with considerable accuracy (Dawson & Gilovich, 2004). Interestingly, other research indicates that negotiation outcomes can be reliably predicted from conversational dynamics within the first five minutes of a negotiation, and more importantly, that these dynamics differentially predict outcomes for high as compared to low status negotiators (Curhan & Pentland, 2007).

Finally, there is evidence from neuroscience studies that perceptions of social power and status occur quickly and are represented in specific regions of the brain. In general, the brain is well-equipped to quickly process, store, and retrieve social information, including cues regarding social status and hierarchy (Insel & Fernald, 2004). A recent study showed not only that individuals are able to detect dominance (as signaled through a direct eye gaze and upward head tilt) and submission (averted eye gaze, downward head tilt) in others with as little as 33 ms of exposure to facial cues, but also that differentiation of dominance and submission is represented in the brain (in the mid-superior temporal sulcus, lingual gyrus, and fusiform gyrus) about 200 ms after the face is perceived (Chiao, 2006). All in all, converging evidence from multiple methods points to the immediacy of social power in perception.

### **Power as a Prioritization Device**

In this section, we review two sets of findings consistent with the idea that power may serve as a heuristic solution to the problems of coordinating interdependent action by prioritizing the goals, actions, and emotions of high power individuals. As a result of this prioritization, those with power tend to play a greater role in shaping dyadic exchanges with the relatively less powerful. Indeed, it is part of the definition of power that those individuals who enjoy elevated power should wield more influence upon the actions of those with less power. The findings we describe below therefore emphasize one direction of influence in our reciprocal influence model—namely, that originating from the powerful to the powerless. In addition, as we shall see, because power differences heuristically prioritize the inclinations of those high relative to low in power, the influence of those with power on the relatively less powerful may at times result in socially inappropriate behavior.

*Power and the amplification of pre-existing inclinations.* Studies documenting that power amplifies individuals' pursuit of goals and the expression of their states and traits fits the notion that power serves as a prioritization heuristic, leading people in positions of power to exert a greater impact on those with lower power. For example, across several studies Chen et al. (2001) showed that an experimental manipulation of power increased the tendency for individuals to pursue their chronic relationship goals (i.e., communal- vs. exchange-oriented goals) in a dyadic setting. More specifically, individuals who reported the tendency to chronically pursue communally-oriented goals, which involve a focus on the needs and welfare of others, behaved in a more socially responsible fashion toward an alleged other participant when primed with high power relative to low power. In contrast, individuals who reported the chronic pursuit of exchange-oriented goals in their relationships, which engender a focus on one's own needs and interests, responded in a more self-interested fashion when primed with high relative to low power.

Along conceptually related lines, Van Kleef and Côté (in press) showed that people with higher levels of power are more likely to behave according to their desires than those with low power. In a conflict setting, parties who felt a desire to retaliate in response to inappropriate anger displays by their opponent were more likely to do so when they felt more powerful.

Beyond goals and desires, research has shown that elevated power is linked to a greater tendency to express one's true attitudes and feelings. For example, Anderson and Berdahl (2002) showed that people with high power are more apt to express their attitudes and less inclined to keep their disagreements to themselves in a discussion with another person. In contrast, low power individuals reported inhibiting the expression of their true attitudes. In essence, high power leads one's views to be more likely to be "on the table" for discussion.



Along related lines, there is evidence that elevated power is associated with greater correspondence between one's inner experience and outward expression of emotion. For example, research has shown greater correspondence between self-reports of pleasure and smiling behavior among participants randomly assigned to a high power position relative to their counterparts assigned to a low power role (Hecht & LaFrance, 1998).

*Power and interpersonal responsiveness.* From studies of obedience to authority and conformity (Asch, 1951; Milgram, 1963), to studies of conversational dynamics (Brown & Levinson, 1987), it is clear that low-power individuals modify their behavior in deference to high-power individuals, and that the direction of joint or collective action is disproportionately shaped by those in power. Perhaps a more radical possibility is that the actions and representations of people with power exert influences upon more deeply-rooted and involuntary processes such as emotional experience and attitude shifts. Humans are a mimetic species – we routinely imitate the actions of those around us (Chartrand & Bargh, 1999) – processes enabled by mirror neurons and regions of the brain that serve basic empathic and imitative responses (Preston & de Waal, 2002).

Recent empirical evidence indicates that low power individuals shift towards the emotions and attitudes of those individuals in power, often without being aware of these shifts. In one study of emotional convergence (the process by which social actors' emotions come to resemble those of other individuals), friends came to the laboratory at two different times during the year and reported their emotional reactions to different evocative stimuli, such as humorous or disturbing film clips (Anderson, Keltner, & John, 2003). The general pattern observed was that the emotions of friends, as assessed in response to these controlled evocative stimuli, converged over the course of the year: they became more similar in valence and intensity. Just

as basic physiological cycles of individuals in close proximity tend to converge and become synchronized (e.g., McClintock, 1971), this study found that young adults' basic emotions came to resemble one another.

With respect to power differences, the central question was whether those individuals with less power within a dyadic bond would make more of the change in the emotional convergence process over the course of the year than high power individuals. That is, did the emotions of low power individuals, thought by many to be outside of volitional control, begin to conform to the emotions of high power friends over time? To address this question, Anderson and colleagues gathered self-reports of power and influence within the relationship, and identified roommates who felt that they had more power in their relationship, and those who felt they had less power. They then asked whether the emotional style of the high power individuals, as assessed early in the year, shaped the emergent emotional style of the low power roommate over the course of the year.

As can be seen in Table 7, this proved to be the case: the emotional styles of low power individuals shifted over the year to resemble the emotional profiles of high power individuals. Powerful partners' own emotions at a later time point were not predicted by their partners' emotions at Time 1. These null findings emerged for positive and negative emotion. In contrast, the emotions of the less powerful partner at Time 2 were predicted by their partners' prior emotions. Thus, these findings indicate that low power individuals shift their basic emotional reactions to resemble the emotional reactions of high power individuals within their immediate social environment.

These findings fit one of the well-documented properties of the social interactions of high and low power individuals: that low power individuals attend quite carefully to the actions of

high power individuals, who in turn are relatively unaware of the actions of low power individuals (e.g., Erber & Fiske, 1984; Fiske, 1993; Fiske & Dépret, 1996; Goodwin, Gubin, Fiske, & Yzerbyt, 2000). This power-related difference in social attention is likely to account, at least in part, for the patterns of emotional convergence. However, as we shall see below, other more motivational processes also appear to play a role in creating the asymmetrical patterns of responding that are so characteristic of interactions between individuals with different levels of power.

A recent study by Van Kleef, Oveis, Van der Löwe, and Keltner (2007) examined patterns of emotional responding to others' emotions as a function of power. Same-sex dyads composed of unacquainted individuals were prompted to talk about instances in their life that had caused them suffering. At several time points during the interaction participants' emotions were assessed through self-report as well as physiological measures. The data showed that participants with a higher subjective sense of power felt less reciprocal distress in response to their partner's suffering than did those with a lower sense of power. Furthermore, high-power participants responded less compassionately to their partner's distress. Physiological data (i.e., measures of respiratory sinus arrhythmia) also indicated that high-power individuals were less affected emotionally by their partner's accounts of distress. These differences could not be attributed to differential attention to the other's emotion: low and high power participants showed similar levels of empathic accuracy. This suggests that the differential responses of high and low power individuals may have a more motivational underpinning. In line with such an explanation, high-power individuals reported a weaker inclination to develop a friendly relationship with their interaction partner, suggesting that they were less motivated to invest in them emotionally.

Other studies have looked at the role of power in determining responses to others' emotions in more competitively structured settings. Van Kleef, De Dreu, and Manstead (2004) examined whether behavioral reactions to expressions of anger and happiness in negotiation are moderated by outcome dependency (a proxy of power) and several other variables affecting the motivation to engage in thorough information processing. They found that expressions of anger elicited larger concessions than expressions of happiness, but only in negotiators who were dependent on their opponent for their outcomes. Participants under outcome dependency were strongly affected by the opponent's emotion, conceding more to an angry than to a happy adversary. Negotiators under low outcome dependency (and with low information processing motivation), in contrast, were impervious to their counterpart's emotions. Other studies have documented that this effect generalizes across different power bases (Friedman et al., 2004; Sinaceur & Tiedens, 2006; Van Kleef, De Dreu, Pietroni, & Manstead, 2006). For instance, Van Kleef et al. (2006) showed that negotiators with few or poor alternatives to a negotiated agreement, little support from their management, or low legitimate power were strongly affected by their opponent's anger. In contrast, negotiators with many or highly attractive alternatives, strong support from management, or high legitimate power were immune to their counterpart's emotional state.

It is clear, then, that individuals with high power do not yield to others' anger. But is this because they attend less to their less powerful counterparts (cf. Fiske, 1993)? Recent evidence suggests that there is more to it. Van Kleef and Côté (in press) investigated the interplay between power and the appropriateness of anger expressions in conflict, which was manipulated by having a simulated opponent's expressions of anger violate a display rule or not. The results showed that the appropriateness of the opponent's anger did not affect the behavior of low power

negotiators—they conceded more to angry opponents than to non-emotional ones, regardless of whether the anger violated a display rule. In contrast, the appropriateness of the opponent's anger did matter when the focal negotiator had high power. High-power negotiators, besides conceding less in general, were found to be especially intransigent when they deemed the opponent's anger inappropriate. Thus, high-power participants were not insensitive to their opponent's emotions; instead, they selectively reacted to the other's emotions when doing so could further their own goals.

Together, these studies suggest an important qualification of the widespread idea that powerful individuals pay less attention to their social environment than low-power individuals (e.g., Fiske, 1993). It appears as though high-power people do not necessarily attend less to others in general (see also Chen, Ybarra, & Kiefer, 2004; Overbeck & Park, 2001, 2006); rather, they attend selectively to emotions and behaviors that they can turn to their own advantage. Powerful people can afford to ignore the individual motivations and desires of others and think of them in stereotypical as opposed to individuating ways. However, high-power people do seem attuned to situations in which others can be used to further their own goals.

More generally, these studies of social interaction suggest that high power individuals evoke in others confirmatory patterns of emotions, attitudes, and behavior (see also Copeland, 1994). An illustrative study by De Dreu and Van Kleef (2004) showed that low-power negotiators who were asked leading questions regarding their future cooperation or competition by a high-power counterpart confirmed the other's expectations by exhibiting the expected behavior. That is, they behaved more cooperatively after the other had asked leading questions about cooperation (e.g., "What do you like about cooperating in negotiations?"), and more competitively after the other had asked about competition (e.g., "What do you like about winning

in negotiations?"). Low-power negotiators did not initiate a similar self-fulfilling prophecy. Thus it may be that the consensus high power individuals tend to evoke in those individuals who surround them enhances the certainty and conviction in their views.

Overall, the findings discussed in this section fit the proposition that power serves as a prioritization heuristic in dyadic interactions between those with power and those without. This heuristic leads to a disproportionate impact for people in positions of power on those with relatively less power. The wide-ranging research we described suggests that interactions between the powerful and powerless are shaped more by the emotions, attitudes, and goals of the former than the latter.

### **Future Directions: The Experience of Power and Class and Ideology**

Our reciprocal influence model of social power has largely concerned itself with how power is distributed across groups and organizes dyadic exchanges. We have seen that power is afforded to those individuals who advance the interests of the group. Group-based representations (a fellow group member's reputation), communication (gossip), and self-assessments (an individual's modest sense of power) reflect the bi-directional nature of power within groups, and how individuals are afforded power by other group members, and constrained in their actions according to how they advance group interests. We have seen that power can be thought of as a social interaction heuristic: it is readily and accurately perceived by group members, and serves as a prioritization device in dyadic interaction, giving priority to the emotions, goals, and actions of high power individuals in shaping interdependent action.

The preliminary nature of the data we have reviewed in support of our reciprocal influence model of social power calls out for further inquiry. For example, it will be interesting to experimentally address whether strategic displays of social engagement lead to shifts in social

power (e.g., Tiedens, 2001). Can group members differentiate between sincere and insincere, or feigned, displays of strategic engagement? Does the social engagement hypothesis apply to all manner of groups? Our analysis of the constraint processes that regulate the distribution and conduct of power also warrants further empirical study. Does a group member's modest self-assessment track his or her reputation in the group? Do immodest leaders suffer reputational costs? Finally, and just as critically, our propositions related to the notion that power serves as an interaction heuristic are in need of further investigation.

In this concluding section of our article, we draw upon what has been learned in the study of power in dyads and groups from our reciprocal influence model of social power to highlight two new areas of inquiry. A first focuses on the individual, and concerns the experience of power. A second focuses on the social collective, and concerns how the principles of reciprocal power might become elaborated into social ideologies.

### **The Experience of Power: Reciprocal Influence Dynamics**

The individual's sense of power has many well-theorized roots, but has been little studied with social psychological methods. More "structural" perspectives situate the origins of the individual's social power within institutional contexts. For example, the sense of power is assumed to be amplified in social institutions that selectively distribute power, such as elite preparatory schools and social clubs (e.g., Domhoff, 1988). Broader ideologies that deem who is worthy of power and who is not are also hypothesized to influence the individual's sense of power. This kind of analysis has been applied to religion, medical practice, and stereotypes, all social institutions or representations that putatively alter the individual's own sense of power (Foucault, 1977; Jost & Banaji, 1994).

To advance the study of the experience of power, we have developed an eight-item measure of the sense of power, whose items are presented in Table 8 (Anderson & Galinsky, 2006; Anderson, John, & Keltner, 2007). These items have satisfactory alpha coefficients and test-retest reliability. Table 9 presents a series of preliminary findings related to this 8-item self-report measure. As one might expect, self-reports of the experience of power correlate moderately with a sense of personal control and dominance, which reflects the broad class of strategies used in the acquisition of power, although the magnitude of these correlations suggests that power is distinct from these closely related constructs. The next set of findings indicates, quite intuitively, that the sense of power tracks structural sources of power: MBA students with elevated authority in organizations report having a greater sense of power; people who subjectively report lower SES vis-à-vis their fellow students also report lower levels of subjective power; and the more leadership positions the individual enjoys in a social group, one sees in the next row, the more subjective power one experiences. Finally, in two different groups -- a sorority and a dormitory hall -- one sees that the subjective sense of power covaries with peer reports of elevated social status, but not with how well liked the individual is. Power is not simply some facet of a social perceptual halo effect; the individual's sense of power is independent of being liked.

These preliminary findings set the stage for other lines of inquiry. Two conceptual questions stand out. A first concerns the degree of across-context variation that one observes in the experience of power. One model of power holds that it is fairly restricted to hierarchical relationships, and that it is fairly fixed once roles within hierarchies are established. This view might suggest that one would observe little contextual variation in the experience of power. Our approach diverges from this view of social power. We suggest that recognized power differences



are a pervasive solution to potential conflict over competing interests in all manner of relationships – e.g., between status rivals or parent and child -- and the product of bi-directional processes. We would therefore expect the individual's sense of power to vary according to social context. Indeed, experienced sampling data of Moskowitz and colleagues (1994) suggests that power-related behaviors vary quite dramatically in different contexts. We would expect similar contextual variation in the experience of power, given power's pervasiveness and function as a social interaction heuristic.

A second conceptual concern pertains to the extent to which the sense of power is reciprocally determined by internal and social processes, in particular power-related actions on the part of the actor, and reputation-related actions on the part of other group members. We have argued that power is reciprocally determined, acquired by the actor, and afforded to the individual by others, according to the extent to which that individual advances group interests. Basic work on how the experience of power tracks these sources of power is needed.

### **Power and the Ideologies of Agency and Obligation**

Social ideologies – broad beliefs systems of a group or culture – are deeply intertwined with conceptions of power (Fiske, 1991; Jost, 2006; Tetlock, 1992). Social ideologies, be they liberal or conservative, involve concepts regarding who is worthy of power, how it is to be distributed, and how it should influence the allocation of resources and punishments. The recent interest in ideology (e.g., Jost, 2006; Jost, Glaser, Kruglanski, & Sulloway, 2007) is based on studies of the systematic content of ideologies, and how they may vary according to social cognitive factors, like the need for cognition. One can just as readily ask whether there is an ideological direction to the experience of power. Does an individual's position within a social hierarchy give rise to certain ideological constructs? We would suggest yes.

We suggest that ideologies emerge out of the experience of power and its consequences, and the need to justify these patterns of social response. With respect to the experience of power, several new studies, which we review in Table 10, suggest that elevated power is associated with certain social precepts and actions that should feed into the individual's ideological inclinations. More specifically, these studies reveal that power predisposes individuals to be attuned to potential goals and within situations, to act in unfettered and free fashion, to be optimistic about the pursuit of goals, and to take risks (see summary in Table 10). These same studies suggest that experimentally induced low levels of power, in contrast, orient individuals to elevated threat within the environment, as well as to the risks and constraints of pursuing goals and rewards (which of course are greater for those in low power positions).

We propose, in keeping with social intuitionist accounts of morality (Haidt, 2001), that individuals invoke ideological concepts to explain and rationalize their own power-related behavior, as well as the actions of other individuals. In Table 11, we summarize a set of predictions regarding how different levels of power might covary with the endorsement of different ideological principles. Given how power gives rise to disinhibited, reward-oriented behavior, and goal-directed cognition, we posit that elevated power will be associated with an ideology of agency. This ideology is in keeping with the effects of power upon the individual, and is defined by an emphasis on freedoms and rights (which enable unfettered action), dispositionist social explanations of people's places within social hierarchies, and equity as a principle to govern the allocation of resources. These ideological principles readily follow from the high power individual's action and reward orientation, and justify his or her elevated standing within social hierarchies.

In contrast, reduced power gives rise to perceptions of threat and disinhibition.

Ideological principles that fit more readily with the effects of reduced power, and the lives of low power individuals, are an emphasis on obligations and duties as moral principles (which bind low power people to others), contextualist explanations of people's places within hierarchies, and the principles of equality and need as ones that govern the allocation of resources.

No experimental studies have tested these predictions, and they certainly warrant exploration. An emergent literature on socio-economic status (SES), defined in terms of education, family wealth, and prestige of occupation, however, has begun to explore such ideas, and the findings are consistent with the foregoing analysis. For example, in a classic study on culture and morality, lower and upper class participants in Brazil and Philadelphia read a number of vivid scenarios and indicated whether they thought the people in the scenarios should be punished for their actions (Haidt, Koller, & Dias, 1993). Some of these situations involved harm, some impure but harmless acts, and others violations of social obligations and duties. Members of both cultures and of both classes were strongly inclined to punish perpetrators of harmful acts. For every other violation, however, the lower SES students expressed a greater sense of moral offense (as indicated by the reported tendency to punish). Whereas lower SES individuals define morality as including issues of obligation, duty, and purity, these are not deemed as moral concerns by upper SES individuals, who instead define morality in terms of freedoms and individual rights.

In more recent work, Snibbe and Markus (2005) found that the ideology of agency is systematically related to SES-related differences in preference. Specifically, these authors found that college educated upper SES adults were more likely to listen to music emphasizing self-

interest and actualization, and were also more likely to value objects of their own choosing. In contrast, lower SES adults showed no such bias.

In our own work on SES and the ideology of agency, we examined how SES influences explanations of inequality (Kraus & Keltner, 2007). In one of the studies, students were presented with a figure representing the rise in income inequality over the past 30 years in the United States. They then were asked to explain this rise in the income gap between rich and poor by attributing this economic condition to dispositional factors (talent, effort, motivation) as well as contextual factors (educational opportunity). Students who indicated higher levels of SES favored more dispositional over contextual factors in explaining the income gap when compared to students from lower SES backgrounds. In evidence that speaks more directly to the ideology of agency, upper SES individuals also indicated a greater sense of personal control over the outcomes in their lives, and this sense of control mediated the relationship between their social class self-reports and dispositional explanations of social inequality (see Figure 1), suggesting that high-status individuals perceived they had control of their environments, and in turn, judged societal inequality as under individual control.

Similar evidence on SES and the ideology of agency has been found in younger age groups and in different cultures. Higher-status Icelandic 12 year-olds were more likely to describe themselves in terms of psychological factors such as thoughts and feelings compared to lower class children of the same age (Hart & Edelstein, 1992). These disposition biases are also seen in terms of perceptions of the powerful. When information about causes of behavior was ambiguous, actions of powerless actors were seen as situational and those of powerful actors were seen as more dispositional (Overbeck, Tiedens, & Brion, 2006).

### **Conclusion**

Power is inherently social: its subjective qualities, and effects upon thought, action, and feeling, are shaped by bi-directional processes between individuals in interactions. In the present article we advanced a reciprocal influence model of social power, to begin to understand the bi-directional processes of social power. This model is based on evolutionist analyses of human hierarchies, and notions that the capacity for subordinates to form alliances imposes important demands upon those in power, and that power heuristically reduces the likelihood of conflicts within groups.

Guided by these assumptions, we then posited a set of propositions regarding the reciprocal nature of power, and reviewed recent supporting data. With respect to the acquisition of social power, we saw that power is afforded to those individuals who advance the interests of the group. With respect to constraints upon power and the abuses it enables, we reviewed reasoning and evidence showing that group-based representations (a fellow group member's reputation), communication (gossip), and self-assessments (an individual's modest sense of power) constrain the actions of those in power according to how they advance group interests. Finally, we reviewed several different kinds of evidence suggesting that power can be thought of as a social interaction heuristic: it is readily and accurately perceived by group members, and serves as a prioritization device in dyadic interaction, giving priority to the emotions, goals, and actions of high power individuals in shaping interdependent action.

The promise of our reciprocal influence model is evident in the clear need for further inquiry in several of the domains we have reviewed. We believe this kind of research will help to further illuminate this most pervasive dimension of human social life – power.

### References

- Abu-Lughod, L. (1986). *Veiled Sentiments: Honor and poetry in a Bedouin society*. Berkeley, California: University of California Press.
- Akert, R. M., & Panter, A. T. (1988). Extraversion and the ability to decode non-verbal communication. *Personality and Individual Differences, 9*(6), 965-972.
- Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On judging and being judged accurately in zero-acquaintance situations. *Journal of Personality and Social Psychology, 69*(3), 518-529.
- Anderson, C., & Berdahl, J. L. (2002). The experience of power: Examining the effects of power on approach and inhibition tendencies. *Journal of Personality and Social Psychology, 83*(6), 1362-1377.
- Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology, 36*(4), 511-536.
- Anderson, C., John, O. P., & Keltner, D. (2007). The Sense of Power. Manuscript under review.
- Anderson, C., John, O. P., Keltner, D., & Kring, A. M. (2001). Who attains social status? Effects of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology, 81*, 116-132.
- Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time. *Journal of Personality and Social Psychology, 84*(5), 1054-1068.
- Anderson, C., Srivastava, S., Beer, J. S., Spataro, S. E., & Chatman, J. A. (2006). Knowing your place: Self-perceptions of status in face-to-face groups. *Journal of Personality and Social Psychology, 91*(6), 1094-1110.

- Asch, S. E. (1951). *Effects of group pressure upon the modification and distortion of judgments*. Oxford, England: Carnegie Press.
- Aureli, F., de Waal, F. B. M. (2000). *Natural conflict resolution*. Berkeley, CA: University of California Press.
- Barkow, J. H. (1975). Prestige and culture: A biosocial interpretation. *Current Anthropology*, 16(4), 553-572.
- Baumeister, R.F. (1998). The self. In D.T. Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *Handbook of Social Psychology* (4th ed.; pp. 680-740). New York: McGraw-Hill.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Beersma, B., & Van Kleef, G. A. (2007). *Why people gossip: Antecedents, consequences, and social functions*. Manuscript in preparation.
- Ben-Ze'ev, A. (1994). The vindication of gossip. In R. Goodman and A. Ben-Ze'ev (Eds.), *Good Gossip* (pp. 11-24). Lawrence, KS: University Press of Kansas.
- Berger, J., Cohen, B. P., & Zelditch, M., Jr. (1972). Status characteristics and social interaction. *American Sociological Review*, 37(3), 241-255.
- Bernhardt, P. C. (1997). Influences of serotonin and testosterone in aggression and dominance: Convergence with social psychology. *Current Directions in Psychological Science*, 6(2), 44-48.
- Boehm, C. (1999). *Hierarchy in the forest: The evolution of egalitarian behavior*. Cambridge, MA: Harvard University Press.

- Bolger, N., & Schilling, E. A. (1991). Personality and the problems of everyday life: The role of neuroticism in exposure and reactivity to daily stressors. *Journal of Personality, 59*(3), 355-386.
- Borkenau, P., & Liebler, A. (1995). Observable attributes as manifestations and cues of personality and intelligence. *Journal of Personality, 63*(1), 1-25.
- Bourdieu, P. (1985). The social space and the genesis of groups. *Theory and Society, 14*(6), 723-744.
- Brauer, M., & Bourhis, R. Y. (2006). Social power. *European Journal of Social Psychology, 36*(4), 601-616.
- Brewer, M. B. (2004). Taking the social origins of human nature seriously: Toward a more imperialist social psychology. *Personality and Social Psychology Review, 8*(2), 107-113.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. New York, NY, US: Cambridge University Press.
- Bugental, D. M. (2000). Acquisition of the algorithms of social life: A domain based approach. *Psychological Bulletin, 126*(2), 187-219.
- Buss, D. M., Abbott, M., Angleitner, A., Biaggio, A., Blanco-Villasenor, A., Bruchon-Schweitzer, M (& 45 additional authors). (1990). International preferences in selecting mates: A study of 37 societies. *Journal of Cross Cultural Psychology, 21*, 5-47.
- Buss, D. M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.), *The Five Factor Model of Personality* (pp. 180 – 208). New York, NY, US: Guilford Press.



- Buss, D. M., & Craik, K. H. (1981). The act frequency analysis of interpersonal dispositions: Aloofness, gregariousness, dominance and submissiveness. *Journal of Personality*, 49, 175-192.
- Caporael, L. R. (1997). The evolution of truly social cognition: The core configurations model. *Personality and Social Psychology Review*, 1(4), 276-298.
- Caporael, L. R., & Brewer, M. B. (1995). Hierarchical evolutionary theory: There is an alternative, and it's not creationism. *Psychological Inquiry*, 6(1), 31-34.
- Chance, M.R.A. (1967). Attention structure as the basis of primate rank order. *Man*, 2, 503-518.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76(6), 893-910.
- Chen, S., & Andersen, S. M. (1999). Relationships from the past in the present: Significant-other representations and transference in interpersonal life. In M.P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 31, pp. 123-190). San Diego, CA: Academic Press.
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of the effects of social power. *Journal of Personality and Social Psychology*, 80, 173-187.
- Chen, S., Ybarra, O., & Kiefer, A. K. (2004). Power and impression formation: The effects of power on the desire for morality and competence information. *Social Cognition*, 22(4), 391-421.
- Chiao, J. Y. (2006). Building blocks to human social hierarchy: Psychological and neural investigations of social dominance perception. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 67 (5-B), 2851.

- Copeland, J. T. (1994). Prophecies of power: Motivational implications of social power for behavioral confirmation. *Journal of Personality and Social Psychology*, 67(2), 264-277.
- Craik, K. (2007). *Reputation*. Manuscript under review.
- Curhan, J. R., & Pentland, A. (2007). Thin slices of negotiation: Predicting outcomes from conversational dynamics within the first 5 minutes. *Journal of Applied Psychology*, 92(3), 802-811.
- Dabbs, J. M. (1997). Testosterone, smiling, and facial appearance. *Journal of Nonverbal Behavior*, 21(1), 45-55.
- Dawson, E. C., & Gilovich, T. (2004). *Perceptions of status in the self and others*. Working paper, Yale School of Management.
- De Dreu, C. K. W., & Van Kleef, G. A. (2004). The influence of power on the information search, impression formation, and demands in negotiation. *Journal of Experimental Social Psychology*, 40, 303-319.
- De Waal, F. B. M. (1989). *Peacemaking among primates*. Cambridge, MA: Harvard University Press.
- Dépret, E., & Fiske, S. T. (1999). Perceiving the powerful: Intriguing individuals versus threatening groups. *Journal of Experimental Social Psychology*, 35(5), 461-480.
- Domhoff, G.W. (1998). *Who rules America*. Mountain View, CA: Mayfield Publishing.
- Dovidio, J. F., & Ellyson, S. L. (1982). Decoding visual dominance: Attributions of power based on relative percentages of looking while speaking and looking while listening. *Social Psychology Quarterly*, 45(2), 106-113.
- Dunbar, N. E. (2004). Dyadic power theory: Constructing a communication-based theory of relational power. *Journal of Family Communication*, 4(3 and 4), 235-248.

- Dunning, D., Leuenberger, A., & Sherman, D. A. (1995). A new look at motivated inference: Are self-serving theories of success a product of motivational forces? *Journal of Personality and Social Psychology*, 69(1), 58-68.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, 108(2), 233-256.
- Elias, N. (1978). *The history of manners*. New York, NY: Pantheon Books.
- Emerson, R. M. (1962). Power dependence relations. *American Sociological Review*, 27(1), 30-41.
- Emler, N. (1994). Gossip, reputation, and social adaptation. In R.F. Goodman & A. Ben-Ze'ev (Eds.), *Good Gossip* (pp.117 – 138). Wichita, KA: University Press of Kansas.
- Erber, R., & Fiske, S. T. (1984). Outcome dependency and attention to inconsistent information. *Journal of Personality and Social Psychology*, 47(4), 709-726.
- Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*. New York, NY, US: Free Press.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48(6), 621-628.
- Fiske, S. T., & Dépret, E. (1996). Control, interdependence, and power: Understanding social cognition in its social context. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 7, pp. 31-61). Chichester, UK: Wiley.
- Foucault, M. (1977). *Discipline and punishment*. New York, NY: Vintage Books.
- Frank, R. H. (1988). *Passions within reason: The strategic role of the emotions*. New York, W.W. Norton.

- French, J. R. P., Jr., & Raven, B. (1959). *The bases of social power*. Oxford, England: Univer. Michigan.
- Friedman, R., Anderson, C., Brett, J., Olekalns, M., Goates, N., & Lisco, C. C. (2004). The positive and negative effects of anger on dispute resolution: Evidence from electronically mediated disputes. *Journal of Applied Psychology, 89*, 369-376.
- Funder, D. C. (1999). *Personality judgment: A realistic approach to person perception*. San Diego, CA: Academic Press
- Galinsky, A. D., Gruenfeld, D. H., & Magee, J. C. (2003). From power to action. *Journal of Personality and Social Psychology, 85*(3), 453-466.
- Gladue, B. A., Boechler, M., & McCaul, K. D. (1989). Hormonal response to competition in human males. *Aggressive Behavior, 15*(6), 409-422.
- Goffman, E. (1967). *Interaction ritual: Essays on face-to-face behavior*. Garden City, NY: Anchor Books.
- Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes & Intergroup Relations, 3*(3), 227-256.
- Guinote, A. (2007). Power and goal pursuit. *Personality and Social Psychology Bulletin, 30*(8), 1076 - 1087.
- Guinote, A., Judd, C. M., & Brauer, M. (2002). Effects of power on perceived and objective group variability: Evidence that more powerful groups are more variable. *Journal of Personality and Social Psychology, 82*(5), 708-721.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*(4), 814-834.

- Haidt, J., Koller, S. H., & Dias, M. G. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, 65(4), 613-628.
- Hall, J. A., Coats, E. J., & LeBeau, L. S. (2005). Nonverbal behavior and the vertical dimension of social relations: A meta-analysis. *Psychological Bulletin*, 131(6), 898-924.
- Hampson, S. E., Goldberg, L. R., & John, O. P. (1987). Category-breadth and social-desirability values for 573 personality terms. *European Journal of Personality*, 1(4), 241-258.
- Hart, D., & Edelstein, W. (1992). The relationship of self-understanding in childhood to social class, community type, and teacher-rated intellectual and social competence. *Journal of Cross-cultural Psychology*, 23(3), 353-365.
- Hecht, M. A., & LaFrance, M. (1998). License or obligation to smile: The effect of power and sex on amount and type of smiling. *Personality and Social Psychology Bulletin*, 24(12), 1332-1342.
- Henley, N. M. (1973). Power, sex, and nonverbal communication. *Berkeley Journal of Sociology*, 18, 1-26.
- Henley, N. & LaFrance, M. (1984). Gender as culture: Difference and dominance in nonverbal behavior. In A. Wolfgang (Ed.), *Nonverbal behavior: Perspectives, applications, intercultural insights* (pp. 351-371). Lewiston, NY: C.J. Hogrefe, Inc.
- Hrdy, S. (1999). *Mother nature: A history of mothers, infants and natural selection*. New York: Pantheon Books.
- Insel, T. R., & Fernald, R. D. (2004). How the brain processes social information: Searching for the social brain. *Annual Review of Neuroscience*, 27, 697-722.

- John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102 – 139). New York, NY: Guilford Press.
- Jost, J. T. (2006). The end of the end of ideology. *American Psychologist*, *61*(7), 651-670.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology. Special Issue: Stereotypes: Structure, Function and Process*, *33*(1), 1-27.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2007). Political conservatism as motivated social cognition. *Psychological Bulletin*, *129*(3), 339-375.
- Keltner, D. (1996). Facial expressions of emotion and personality. In C. Malatesta-Magai & S. H. McFadden (Eds), *Handbook of emotion, aging, and the lifecourse* (pp. 385-402). New York: Academic Press.
- Keltner, D., & Haidt, J. (2001). Social functions of emotions. T. Mayne & G. Bonanno (Eds.), *Emotions: Current issues and future directions* (pp. 192-213). New York: Guilford Press.
- Keltner, D., & Anderson, C. (2000). Saving face for Darwin: The functions and uses of embarrassment. *Current Directions in Psychological Science*, *9*(6), 187-192.
- Keltner, D., Ellsworth, P. C., & Edwards, K. (1993). Beyond simple pessimism: Effects of sadness and anger on social perception. *Journal of Personality and Social Psychology*, *64*(5), 740-752.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, *110*(2), 265-284.

- Keltner, D., Young, R. C., Heerey, E. A., Oemig, C., & Monarch, N. D. (1998). Teasing in hierarchical and intimate relations. *Journal of Personality and Social Psychology*, 75(5), 1231-1247.
- Kipnis, D. (1972). Does power corrupt? *Journal of Personality and Social Psychology*, 24(1), 33-41.
- Kipnis, D. (1976). *The powerholders*. Chicago, IL: University of Chicago Press.
- Kraus, M. W., & Keltner, D. (2007). *Socioeconomic status, the sense of control, and explanations of life outcomes*. Manuscript in preparation.
- Krebs, J. R., Davies, N. B., & Parr, J. (1993). *An Introduction to Behavioural Ecology (3rd ed.)*. Cambridge, MA, US: Blackwell Scientific Publications.
- Kruger, J. & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments, *Journal of Personality and Social Psychology*, 77(6), 1121 – 1134.
- Kyl-Heku, L. M., & Buss, D. M. (1996). Tactics as units of analysis in personality psychology: An illustration using tactics of hierarchy negotiation. *Personality and Individual Differences*, 21(4), 497-517.
- Langner & Keltner (In press). Power and emotion. *Journal of Experimental Social Psychology*.
- Leary, M. R., Cottrell, C. A., & Phillips, M. (2001). Deconfounding the effects of dominance and social acceptance on self-esteem. *Journal of Personality and Social Psychology*, 81(5), 898-909.
- Lewin, K. (1951). *Field theory in social science: Selected theoretical papers (edited by Dorwin Cartwright)*. Oxford, England: Harpers.

- Logli, M.A., Keltner, D., Campos, B., Oveis, C. (2007). Gossip and reputation within social hierarchies. Manuscript in preparation.
- Mazur, A., & Booth, A. (1998). Testosterone and dominance in men. *Behavioral and Brain Sciences*, 21(3), 353-397.
- McArthur, L. Z., & Apatow, K. (1983). Impressions of baby-faced adults. *Social Cognition*, 2(4), 315-342.
- McArthur, L. Z., & Berry, D. S. (1987). Cross-cultural agreement in the perception of babyfaced adults. *Journal of Cross-Cultural Psychology*, 18(2), 165-192.
- McClintock, M. K. (1971). Menstrual synchrony and suppression. *Nature*, 229(5282), 244-245.
- Messick, D. M., Bloom, S., Boldizar, J. P., & Samuelson, C. D. (1985). Why we are fairer than others. *Journal of Experimental Social Psychology*, 21(5), 480-500.
- Milgram, S. (1963). Behavioral study of obedience. *The Journal of Abnormal and Social Psychology*, 67(4), 371-378.
- Moskowitz, D. S. (1994). Cross-situational generality and the interpersonal circumplex. *Journal of Personality and Social Psychology*, 66(5), 921-933.
- Nemeth, C. J. (1986). Differential contributions of majority and minority influence. *Psychological Review*, 93(1), 23-32.
- Ng, S.H. (1980). *The social psychology of power*. San Diego, CA: Academic Press.
- Overbeck, J. R., & Park, B. (2001). When power does not corrupt: Superior individuation processes among powerful perceivers. *Journal of Personality and Social Psychology*, 81(4), 549-565.



- Overbeck, J. R., & Park, B. (2006). Powerful perceivers, powerless objects: Flexibility of powerholders' social attention. *Organizational Behavior and Human Decision Processes*, 99(2), 227-243.
- Overbeck, J. R., Tiedens, L. Z., & Brion, S. (2006). The powerful want to, the powerless have to: Perceived constraint moderates causal attributions. *European Journal of Social Psychology*, 36(4), 479-496.
- Owens, D. A., & Sutton, R. I. (2001). Status contests in meetings: Negotiating the informal order. In M. Turner (Ed.), *Groups at work: Theory and research* (pp. 299-316). Mahwah, NJ: Erlbaum.
- Parker, G. A., & Rubenstein, D. I. (1981). Role assessment, reserve strategy, and acquisition of information in asymmetric animal conflicts. *Animal Behaviour*, 29(1), 221-240.
- Preston, S. D., & de Waal, F. D. M. (2002). Empathy: Its ultimate and proximate bases. *Behavior and Brain Sciences*, 25, 1-20.
- Raven, B. H. (1999). Influence, power, religion, and the mechanisms of social control. *Journal of Social Issues. Special Issue: Social influence and social power: Using theory for understanding social issues*, 55(1), 161-186.
- Ray, J. C., & Sapolsky, R. M. (1992). Styles of male social behavior and their endocrine correlates among high-ranking wild baboons. *American Journal of Primatology*, 28(4), 231-250.
- Reid, S. A., & Ng, S. H. (1999). Language, power, and intergroup relations. *Journal of Social Issues. Special Issue: Social influence and social power: Using theory for understanding social issues*, 55(1), 119-139.

- Riggio, R. E., & Friedman, H. S. (1986). Impression formation: The role of expressive behavior. *Journal of Personality and Social Psychology, 50*(2), 421-427.
- Rusbult, C. E., Verette, J., Whitney, G. A., & Slovik, L. F. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology, 60*(1), 53-78.
- Russell, B. (1938). *Power: A new social analysis*. London, Allen and Unwin.
- Sapolsky, R. M., & Ray, J. C. (1989). Styles of dominance and their endocrine correlates among wild olive baboons (*papio anubis*). *American Journal of Primatology, 18*(1), 1-13.
- Savin-Williams, R. C. (1977). Dominance in a human adolescent group. *Animal Behaviour, 25*(2), 400-406.
- Sidanius, J., & Pratto, F. (2001). Social dominance: An intergroup theory of social hierarchy and oppression. *American Journal of Sociology, 106*(5), 1436-1440.
- Sinaceur, M., & Tiedens, L. Z. (2006). Get mad and get more than even: When and why anger expression is effective in negotiations. *Journal of Experimental Social Psychology, 42*(3), 314-322.
- Snibbe, A. C., & Markus, H. R. (2005). You can't always get what you want: Educational attainment, agency, and choice. *Journal of Personality and Social Psychology, 88*(4), 703-720.
- Solberg, M. E., Olweus, D., & Endresen, I. M. (2007). Bullies and victims at school: Are they the same pupils? *British Journal of Educational Psychology, 77*(2), 441-464.
- Sulloway, F.J. (1996). *Born to rebel: Birth order, family dynamics, and creative lives*. New York, NY: Pantheon Books.

- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103(2), 193-210.
- Tetlock, P.E. (1992). The impact of accountability on judgment and choice: Toward a social contingency model. In M. P Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 25, pp. 331-376). New York:Academic Press.
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. Oxford, England: Wiley.
- Tiedens, L. Z. (2001). Anger and advancement versus sadness and subjugation: The effect of negative emotion expressions on social status conferral. *Journal of Personality and Social Psychology*, 80(1), 86-94.
- Tiedens, L. Z., Ellsworth, P. C., & Mesquita, B. (2000). Sentimental stereotypes: Emotional expectations for high-and low-status group members. *Personality and Social Psychology Bulletin*, 26(7), 560-575.
- Tiedens, L. Z., & Fragale, A. R. (2003). Power moves: Complementarity in dominant and submissive nonverbal behavior. *Journal of Personality and Social Psychology*, 84(3), 558-568.
- Van Kleef, G. A., & Côté, S. (in press). Expressing anger in conflict: When it helps and when it hurts. *Journal of Applied Psychology*.
- Van Kleef, G. A., De Dreu, C. K. W., & Manstead, A. S. R. (2004). The interpersonal effects of emotions in negotiations: A motivated information processing approach. *Journal of Personality and Social Psychology*, 87, 510-528.
- Van Kleef, G. A., De Dreu, C. K. W., Pietroni, D., & Manstead, A. S. R. (2006). Power and emotion in negotiation: Power moderates the interpersonal effects of anger and happiness

- on concession making. *European Journal of Social Psychology: Special issue on social power*, 36, 557-581.
- Van Kleef, G. A., Oveis, C., Van der Löwe, I., & Keltner, D. (2007). *Power and compassion: How social power shapes emotional responses to the suffering of others*. Manuscript in preparation.
- Vescio, T. K., Snyder, M., & Butz, D. A. (2003). Power in stereotypically masculine domains: A social influence strategy X stereotype match model. *Journal of Personality and Social Psychology*, 85(6), 1062-1078.
- Weber, M. (1947). *The theory of social and economic organization*. (Henderson, A.M. & Parsons, T., trans.). New York: Oxford University Press.
- Whitmeyer, J. M. (2000). Effects of positive reputation systems. *Social Science Research*, 29(2), 188-207.

Table 1

*A Reciprocal Influence Model of Social Power: Empirical Propositions*

---

*THE ACQUISITION OF SOCIAL POWER*

*Proposition 1: Individuals who advance the interests of the group will be afforded social power.*

*Proposition 2: Expressive behaviors associated with social engagement will lead to power affordances.*

*CONSTRAINTS UPON SOCIAL POWER*

*Proposition 3: Reputation tracks which group members are worthy of social power.*

*Proposition 4: Gossip is an informal means of identifying individuals who are not deserving of high power, and restoring a power balance that serves the interests of the group.*

*Proposition 5: Modesty functions as an internalized regulation mechanism that prevents the abuse of power.*

*POWER AS AN INTERACTION HEURISTIC*

*Proposition 6: Power is readily and accurately perceived in others.*

*Proposition 7: Power prioritizes the emotions, attitudes, and goals of high power individuals in shaping social interactions.*

---

Table 2  
*Correlations of the Big Five Dimensions with Social Status (Summary of Three Studies)*

Measure	Dormitory men			Dormitory women		
	Fraternity men	Time 2	Time 3	Sorority women	Time 2	Time 3
<b>Big Five</b>						
Extraversion	.47**	.48**	.40**	.45**	.39*	.36*
Agreeableness	.12	.08	.17	.24	.01	-.01
Neuroticism	-.31*	-.39*	-.46**	-.21	.08	.14
Conscientiousness	.23	.16	.19	.03	-.20	-.31
Openness to Experience	-.05	-.03	.00	.11	-.12	-.24

Note. \* $p < .05$ ; \*\* $p < .01$ .

Table 3

*Perceived and Actual Relations between Nonverbal Behaviors and Power, Status, and Dominance**(Adapted from Hall et al., 2005)*


---

Nonverbal Behavior	Perceived Relation	Actual Relation
Smiling	-	0
Gazing	+	0
Raised brows	-	0
Facial expressiveness/intensity	+	+
Nodding	+	0
Self touch	-	0
Other touch	+	0
Hand/arm gestures	+	0
Bodily openness	+	+
Interpersonal distance	-	-
Loud voice	+	+
Interruptions	+	+
Pausing/latency to speak	-	0
Filled pauses	-	0
Laughter	+	0
Rate of speech	+	0
Vocal pitch	-	0
Encoding skill/ability to convey emotion	x	+

---

*Note.* +, -, and 0 denote positive, negative, and nonsignificant (or unreliable) relations, respectively; x denotes a lack of data. Weak and inconsistent effects have been omitted from this table.

Table 4

*Reputation Content Theme Means for Self- and Peer-Narratives at Time 1 and Time 3*

Reputation Theme	Self Narratives		Peer Narratives	
	Time 1	Time 3	Time 1	Time 3
Community	1.21	0.82	0.89	0.77
Trait	1.10	0.66	0.93	0.98
Agreeableness				
Trait Extraversion	0.64	0.71	0.59	0.53
Idiosyncratic	0.48	0.40	0.55	0.55
Preferences				
Energy Level	0.27	0.25	0.16	0.12
Emotion / Mood	0.24	0.15	0.32	0.22
Autonomy	0.20	0.05	0.09	0.10
Trait	0.19	0.16	0.22	0.20
Conscientiousness				

*Note.* Values refer to the frequencies with which different themes were coded in self and peer narratives about the individual's reputation.



Table 5

*Relationships Between Sociometric Ratings and Personality Measures and the Likelihood of Being Nominated by Other Group Members as a Target of Gossip*

Gossip Target Identification	
Sociometric Ratings	
Well-known	.34*
Liked	-.33*
Status in house	-.08
Status deserved	-.35*
Admirable reputation	-.51*
Teased	.24+
Rater gossips critically about target	.84*
Target gossips critically about rater	.74*
Personality Measures	
Agreeableness	-.39*
Machiavellianism	.28*

*Note.* Gossip target identification refers to sociometric indications provided by other group members of the likelihood that the individual is gossiped about in the sorority. \*  $p < .05$ .

Table 6

*Accuracy in Perceiving Social Status: Correlations between Self- and Peer-reports of Social Status*

	Anderson et al., 2001		Anderson et al., 2006			
	Time 1	Time 2	Time 1	Time 2	Time 3	Time 4
Accuracy Status Ratings	.58**	.62**	.59**	.34**	.48**	.42**

*Note.* \* $p < .05$ ; \*\* $p < .01$ .

Table 7

*Power in the Emotional Convergence Process: Cross-Lagged Correlations between Participants' Emotions at Time 2 and Their Partner's Emotions at Time 1 Separately for Participants High and Low in Power*

Relationship	Participants with more power	Participants with less power
Romantic Relationships		
Total emotion	.19	.69**
Positive emotion	.12	.50**
Negative emotion	.27	.53**
Dormitory Roommates		
Total emotion	-.10	.40**
Positive emotion	.32	.38*
Negative emotion	-.10	.42**

*Note.* The correlations in the first column indicate how well the later emotions of the participants with more power were predicted by the prior emotions of the participant with less power. The correlations in the second column indicate how well the later emotions of the participants with less power were predicted by the prior emotions of the participants with more power.

\* $p < .05$ ; \*\* $p < .01$ .

Table 8

*Items to Measure the Subjective Sense of Power*

---

I can get people to listen to what I say.

Even when I try, I am not able to get my way.

I think I have a great deal of power.

Even if I voice them, my views have little sway.

I can get others to do what I want.

My ideas and opinions are often ignored.

If I want to, I get to make decisions.

My wishes don't carry much weight.

---

Note. Items are reported in Anderson & Galinsky (2006).

Table 9

*Relations between the Sense of Power with Measures of Related Constructs and Objective and Socially Afforded Origins of Power*

	Subjective Sense of Power
Self-reported Traits	
Internal Locus of Control	.35**
Dominance	.51**
Structural Factors	
Job level in organization	.31**
Socioeconomic status	.37**
Leadership positions	.26*
Peer-measured Status	
In sorority	.37**
In dormitory	.32**
Peer-measured Popularity	
In sorority	-.01
In dormitory	.18

\* $p < .05$ ; \*\* $p < .01$ .

Table 10

*Recent Findings Linking Power to Increased Freedom of Action, Risky Choices, and Optimism*

Source	Power Manipulation	Task	Effect on Emotion, Thought, or Action
Anderson & Berdahl, 2002 (Study 1)	Dispositional power	Dyadic negotiation task	↑ Power – ↑ positive affect, expression of true attitudes, perception of rewards, and ↓ perception of threats
Anderson & Galinsky, 2006 (Study 1)	Dispositional power & power situation prime	Estimates of future personal outcomes	↑ Power – ↑ optimism for achieving positive and avoiding negative outcomes.
Anderson & Galinsky, 2006 (Study 2)	Dispositional power & power situation prime	Estimates of fatalities from potential disasters	↑ Power – ↓ estimates of fatalities
Anderson & Galinsky, 2006 (Study 3)	Nonconscious power prime	Choice of action in Asian disease problem	↑ Power – ↑ likelihood of risky choice
Anderson & Galinsky, 2006 (Study 5)	Structural power	Dyadic negotiation task	↑ Power – ↑ sharing information during negotiation
Anderson & Thompson, 2004	Structural Power	Dyadic negotiation task	↑ Power – Positive affect predicts cooperative negotiations
De Dreu & Van Kleef, 2004 (Studies 1 & 2)	Structural power	Dyadic negotiation task	↓ Power – ↑ information gathering, and ↑ impression formation goals

Galinsky, Gruenfeld, & Magee, 2003 (Study 1)	Structural power	Simulated blackjack game	↑ Power – ↑ likelihood of taking a card
Galinsky et al., 2003 (Study 2)	Power situation prime	Action taken against external environment	↑ Power – ↑ likelihood of taking action
Guinote, Brown, & Fiske, 2006	Minimal group procedure	Perceptions of a potential interaction partner	↓ Power – ↑ focus on external environment (dispositions of potential partner)
Guinote, Judd, & Brauer, 2002	Structural Power (group based)	Group task aimed at solving a social dilemma	↑ Power – ↑ variability in behavior and self-descriptions
Magee, Galinsky, & Gruenfeld, 2007 (Study 1)	Power situation prime	Estimates of likelihood to negotiate	↑ Power – ↑ likelihood to initiate a price negotiation.
Magee et al., 2007 (Study 2)	Nonconscious prime	Debate competition scenario	↑ Power – ↑ likelihood to make opening argument
Magee et al., 2007 (Study 3 & 4)	Structural power	Dyadic negotiation task	↑ Power – ↑ likelihood to make first offer in negotiation
Snibbe & Markus, 2005	Educational Attainment	CD choice in reactance paradigm	↑ Power – ↑ evaluation of chosen objects
Vescio, Gervais, Snyder, & Hoover, 2005 (Study 1)	Gender	Team member assessments when focused on weaknesses	↑ Power males – ↑ patronizing (assign lower positions and give higher praise) of subordinates

or strengths of  
subordinates when weakness-focused

Vescio, Snyder, &  
Butz, 2003 (Study 1)

Gender

Assessment of female  
subordinate's job  
performance when  
focused on weaknesses  
or strengths

↑ Power males – assigned less  
valued tasks and said had less  
task relevant attributes when  
focused on weaknesses



Table 11

*Power, Social Class and the Ideologies of Freedom and Obligation*

	Elevated Power	Reduced Power
Moral Principles	Freedom, rights	Obligation, duty
Explanations of Hierarchy	Dispositionist	Contextualist
Resource Distribution	Equity	Equality, need

Figure 1. Model of the relationship between subjective SES and contextual explanations mediated by sense of control after accounting for ethnicity and objective SES.

