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Power, Approach, and Inhibition

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This article examines how power influences behavior. Elevated power is associated with increased rewards and freedom and thereby activates approach-related tendencies. Reduced power is associated with increased threat, punishment, and social constraint and thereby activates inhibition-related tendencies. The authors derive predictions from recent theorizing about approach and inhibition and review relevant evidence. Specifically, power is associated with (a) positive affect, (b) attention to rewards, (c) automatic information processing, and (d) disinhibited behavior. In contrast, reduced power is associated with (a) negative affect; (b) attention to threat, punishment, others' interests, and those features of the self that are relevant to others' goals; (c) controlled information processing; and (d) inhibited social behavior. The potential moderators and consequences of these power-related behavioral patterns are discussed.

> 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)

What do exhilaration, stereotyping, and poor table manners have in common? Or what do embarrassment, the advantage younger siblings enjoy over older ones in understanding others' mental states, and the complexity of Supreme Court justices' decisions have in common? Our answer is simple: power. Power, as Bertrand Russell (1938) implied, is a basic force in social relationships (A. P. Fiske, 1992; S. T. Fiske, 1993; Kemper, 1991), the press of situations (Emerson, 1962; Thibaut & Kelley, 1959), and the dynamics and structure of personality (Moskowitz, 1994; Wiggins & Broughton, 1985). As central as power is to social life and to theoretical inquiries in the social sciences, it has received only sporadic attention from psychologists.

Recently, intellectual tides have shifted (e.g., Frieze, 1999; Kipnis, 1976; Lee-Chai & Bargh, 2001). Psychologists have begun to illuminate how power influences cognitive processes such as stereotyping (S. T. Fiske, 1993; Jost & Banaji, 1994; Keltner & Robinson, 1996, 1997; Sidanius, 1993), complex social reasoning (Gruenfeld, 1995; Gruenfeld & Preston, in press; Kipnis, 1972; Nemeth, 1986; Woike, 1994), moral judgment (A. P. Fiske, 1992), and inferences about nonverbal behavior (Hall & Halberstadt, 1994; LaFrance & Banaji, 1992; Snodgrass, Hecht, & Ploutz-Snyder, 1998). Others have examined how power influences social behavior, including emotional display (Clark, 1990; Kemper, 1991), behavioral confirmation (Copeland, 1994), familial aggression (Bugental, Blue, & Cruzcosa, 1989), hate crime (Green, Wong, & Strolovitch, 1996), sexual aggression (Malamuth, 1996), and teasing (Keltner, Young, Heerey, Oemig, & Monarch, 1998).

Is there an integrative account of the effects of power on human behavior? We think so and present such a theory in this article. Elevated power, we propose, involves reward-rich environments and freedom and, as a consequence, triggers approach-related positive affect, attention to rewards, automatic cognition, and disinhibited behavior. In contrast, reduced power is associated with increased threat, punishment, and social constraint and thereby activates inhibition-related negative affect, vigilant, systematic cognition, and situationally constrained behavior. This framework allows us to integrate disparate literatures and to generate a significant number of novel hypotheses about the consequences of power.

Defining Power and Related Constructs

As pervasive as power is, it is as difficult to define (Lukes, 1986). Definitions of power vary according to the guiding question (e.g., "Where is it located?" or "How is it distributed?"), unit of analysis (e.g., societies, institutions, groups, dyads, or the individual), and outcome of interest (e.g., voting behavior or emotional experience). Some definitions focus on the actor's intentions (e.g., power as social motive; see Winter, 1988) or actions, as in treatments of power as dominance, whereas others highlight the target's response to the actor, as in treatments of power as influence.

We define power as an individual's relative capacity to modify others' states by providing or withholding resources or administering punishments. This capacity is the product of the actual resources and punishments the individual can deliver to others

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(Emerson, 1962; S. T. Fiske, 1993; Parker & Rubenstein, 1981; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; Thibaut & Kelley, 1959). Resources and punishments can be material (food, money, economic opportunity, physical harm, or job termination) and social (knowledge, affection, friendship, decision-making opportunities, verbal abuse, or ostracism). The value of resources or punishments reflects other individuals' dependence on those resources.

The perceived freedom with which individuals can deliver resources and punishments to others also influences the individual's level of power. Beliefs about the exercise of power figure prominently in cultural values and morals (e.g., A. P. Fiske, 1992; Vasquez, Keltner, Ebenbach, & Banaszynski, 2001) as well as attitudes within personal relationships (Bugental et al., 1989; Howard, Blumstein, & Schwartz, 1986). Beliefs about the freedom to exercise power can come into conflict with the actual resources and punishments the individual can deliver to others (see Bugental et al., 1989; Bugental & Lewis, 1999)—a tension that we elaborate on later.

In our definition, we focus on the capacity to change others' states for several reasons. People frequently feel powerful or powerless in the absence of observable behavior. The target's response can have many determinants in addition to the power discrepancy itself (Lukes, 1986). Our definition does not restrictively focus on one kind of resource or outcome and suggests that power is present in almost all contexts, from parent–child dynamics to international disputes.

Our definition also distinguishes power from related constructs (see also Emerson, 1962; French & Raven, 1959; Thibaut & Kelley, 1959; Weber, 1947). Status is the outcome of an evaluation of attributes that produces differences in respect and prominence. Status in part determines the allocation of resources within groups and, by implication, each individual's power (Blieszner & Adams, 1992; French & Raven, 1959; Kemper, 1991). However, it is possible to have power without status (e.g., the corrupt politician) and status without relative power (e.g., a readily identified religious leader in line at the Department of Motor Vehicles). Authority is power that derives from institutionalized roles or arrangements (Weber, 1947), but power can exist in the absence of formal roles (e.g., within informal groups). Dominance is behavior that has the acquisition of power as its end, yet power can be attained without performing acts of dominance (e.g., leaders who attain their positions through their cooperative and fair-minded style). Thus status, authority, and dominance are all potential determinants of power as we define it.

Empirical Traditions in the Study of Power

The empirical literature on power has been guided by three questions (for reviews, see Kipnis, 1976; Ng, 1980; Raven, 1999). First, what are the origins of power? French and Raven (1959), in their now classic article, addressed how coercion, expertise, authority, referent power, and rewards serve as bases of power. Several studies have identified specific behaviors that influence the distribution of power, ranging from the pragmatics of turn taking to gossip and teasing. This emphasis is evident in studies of hierarchy formation in children (Savin-Williams, 1977), status moves in organizations (Owens & Sutton, 2001) and informal hierarchies (Buss & Craik, 1981), and the emergence of leaders (Eagly & Johnson, 1990). Finally, individuals derive power from groups (Berger, Cohen, & Zelditch, 1972), including membership in opinion majorities (Nemeth, 1986) and high socioeconomic status (SES) subgroups (Domhoff, 1998) and the assumption of authority-based roles within groups (French & Raven, 1959).

A second question concerns the concomitants of power. What are the correlates of the experience of power? Power correlates with different levels of cortisol (Ray & Sapolsky, 1992; Sapolsky & Ray, 1989) and testosterone (Bernhardt, 1997; Dabbs, 1997; Gladue, Boechler, & McCaul, 1989; Mazur & Booth, 1998), although these correlations vary according to the stability of power (e.g., Sapolsky & Ray, 1989). Nonverbal signals of power include facial displays (submissive smiles vs. furrowed brows), gaze patterns (eye contact or avoidance while speaking), and postural displays (expansion vs. constriction; Ellyson & Dovidio, 1985). Power is associated with perceived efficacy, dependence, freedom, and control (Haidt & Rodin, in press; Kipnis, 1972; Ng, 1980). Finally, social perceivers attribute positive characteristics to individuals with power (Clark, 1990; Tiedens, Ellsworth, & Mesquita, 2000).

A third question in the literature on power has to do with its consequences (see Kipnis, 1972; Reid & Ng, 1999). An abiding concern in social psychology has been how power affects the targets of powerful individuals' actions. For example, individuals are more likely to obey powerful authority figures (Milgram, 1963) and accept the persuasive attempts of powerful individuals (Petty & Cacioppo, 1986). This kind of research holds constant the behavior of the actor and assesses variation in the target's response. Our own interest lies in how power produces variation in the behavior of the actor. This issue has been the focus of select literatures, which set the stage for our own theory.

Consequences of Power

Our theory derives in essential ways from two previous approaches. A first is Kipnis's (1972, 1976; see also Rind & Kipnis, 1999) examination of the thesis that power corrupts. Kipnis (1972) showed that in a manager–subordinate simulation, participants given control over resources (e.g., pay increases or deductions) made more attempts to influence their subordinates than did those who did not control resources. Powerful managers, as a consequence, valued subordinates' performances less, attributed subordinates' efforts to their own control rather than subordinates' motivations, and desired greater distance from their subordinates. This study laid the groundwork for a "metamorphic" model of power (Kipnis, 1976), which asserts that through the repeated exercise of power individuals adopt more vainglorious self-concepts and as a consequence denigrate the less powerful.

Kipnis's (1976) model inspires our own in that it attempts to explain how the possession of power changes the powerholder. Recent evidence, however, suggests that the effects of power are broader than the corruptive influences portrayed by Kipnis. Chen, Lee-Chai, and Bargh (2001) found that exchange-oriented individuals given power acted in self-serving fashion, as Kipnis would predict, but communally oriented individuals given power acted in more altruistic fashion. Power enhances the expression of trait-consistent behavior—a thesis we develop later in the article. Kipnis also assumed a degree of social awareness in those affected by power that we do not. In Kipnis's treatment, the powerholder is

tempted to exert influence as a way of satisfying latent desires. We assume that power activates the behavioral approach system without conscious awareness of its effects and, in fact, that those with power may actually be less cognizant of others.

Our assumption about how power affects social attention follows from another tradition that one might summarize as the power–vigilance hypothesis. Early naturalistic studies documented that low-power individuals attend to others more carefully to navigate more threatening social environments, whereas high-power individuals are attended to more carefully by others (Chance, 1967; Ellyson & Dovidio, 1985; Emory, 1988).

Scholars have elaborated on this vigilance hypothesis in several ways. Henley and LaFrance's (1984) "subordination hypothesis" holds that women are less powerful and more vigilant than men are. As a consequence, women judge others' nonverbal behavior more accurately and express themselves more clearly (see Henley & LaFrance, 1984; Snodgrass et al., 1998). S. T. Fiske's (1993) power-as-control account of stereotyping posits that high-power individuals are more likely to stereotype others than are low-power individuals, in part because they are less motivated to attend to others carefully. S. T. Fiske's account inspires several of the ensuing hypotheses concerning the effects of power on complex social inference.

These traditions lay a very important foundation for our theory, highlighting striking differences in how powerful and less powerful individuals perceive and act within the social environment. These traditions likewise present the opportunity for theoretical expansion. Previous approaches are largely local enterprises, focusing on how power affects specific classes of behaviors (e.g., self-perception, attributions, the decoding of nonverbal behavior, or stereotyping). They say little about how power influences emotion or social interaction. Often the theories largely concentrate on the processes associated with either elevated power (e.g., Kipnis, 1972) or powerlessness (e.g., Henley & LaFrance, 1984), without incorporating both in one theory. We now develop a more comprehensive account of how power influences affect, cognition, and behavior.

Power, Approach, and Inhibition

We have defined power as the capacity to alter others' states by providing or withholding resources and administering punishments. In informal interactions, individuals provide resources such as affection, information, attention, or humor and administer punishments through such practices as storytelling, teasing, gossiping, and gift giving. In more formal interactions, individuals provide resources and punishments as a function of their roles and positions within groups; for example, by providing others with financial opportunities, contacts and referrals, or access to decision-making processes or by demoting them or terminating their employment. Four classes of variables afford certain individuals greater power vis-à-vis others (see Figure 1).

At the individual level of analysis, elevated power is associated with certain traits, such as Extraversion (from the Big Five factors; C. Anderson, John, Keltner, & Kring, 2001), dominance (Buss & Craik, 1981; Gough & Bradley, 1996; Megargee, 1969), increased social skills (Coats & Feldman, 1996), charisma (Hogan, Raskin, & Fazzini, 1990), and, in some cases, Machiavellianism (see Wilson, Near, & Miller, 1996). Certain physical characteristics, including height and muscle mass for men (Savin-Williams, 1977), physical attractiveness (C. Anderson, John, et al., 2001), and even

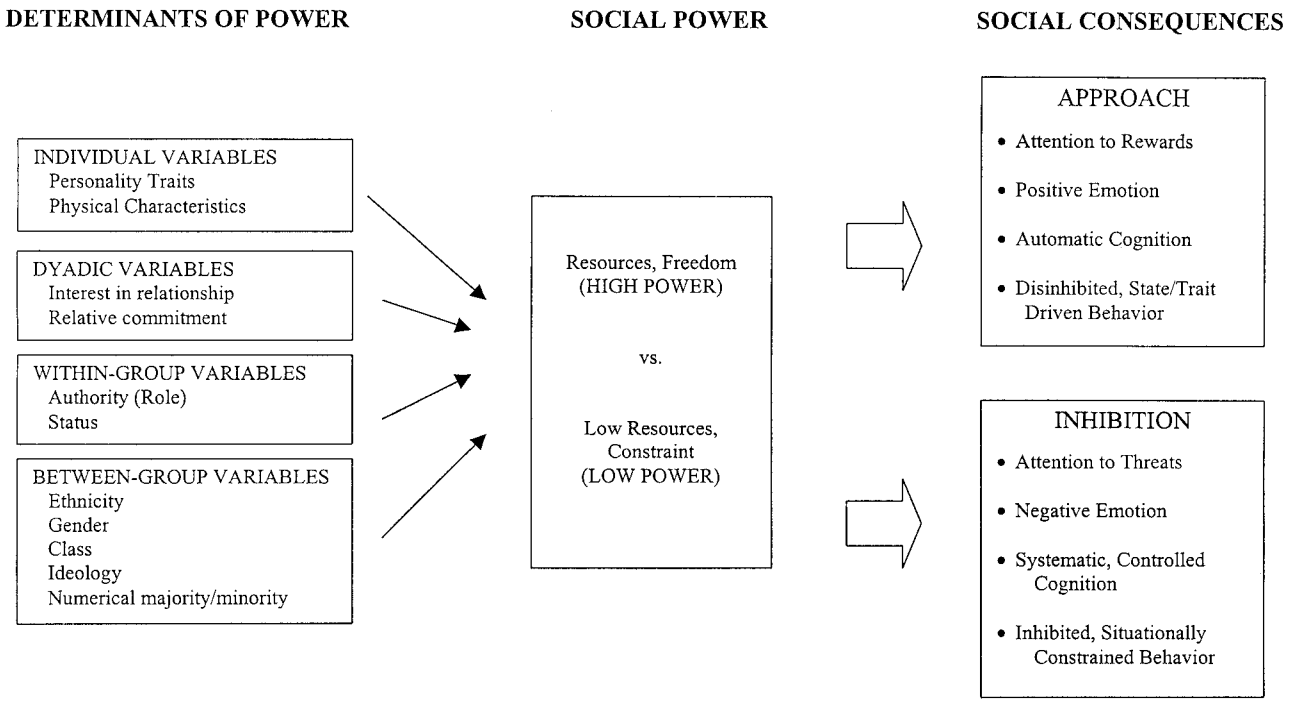

Figure 1. Determinants and consequences of power.

facial characteristics such as the prominent jaw (Mueller & Mazur, 1997) are also associated with elevated power.

At the dyadic level, the aforementioned attributes determine the individual's power in conjunction with other factors, such as others' interest, investment, and commitment to the relationship (Moreland & Levine, 1989; Rusbult et al., 1991). For example, the capacity to provide or withhold affection increases power only if the other person values that affection highly (Rusbult et al., 1991). Further, even if individuals have control over resources, their power depends on whether the other person can obtain those resources by alternative means (Emerson, 1962).

Within groups, power is determined by a number of processes in addition to a number of those already discussed. Specific roles govern the extent to which group members can provide resources to others (Carter, Haythorn, & Howell, 1950; Emerson, 1962). This is true in formal hierarchies such as organizations (Hickson, Hinings, Lee, Schneck, & Pennings, 1971; Pfeffer, 1992) as well as informal authority structures such as sibling hierarchies (Sulloway, 1996).

Finally, factors that distinguish groups from one another, including SES and class (Domhoff, 1998), majority or minority group affiliation (Brewer, 1979; Ng, 1980), and ethnicity (Sidanius, 1993), provide certain individuals with the greater control over resources and punishments. For example, group membership may afford power to men over women, given the privileged access men have to resources and political decision making (Henley & LaFrance, 1984; although see Hall & Halberstadt, 1994).

Together, these factors determine the individual's power. As a field, we do not know how these different determinants combine, how they vary across different contexts (e.g., erudition matters more in the halls of the academy than on the dance floor), and what happens when factors contradict one another (see Bugental et al., 1989; Bugental & Lewis, 1999). For our purposes, this review identifies our independent variables of interest, which we will soon argue shape behavior in systematic and similar ways.

The second part of our theory pertains to the effects of power on affect, cognition, and behavior (see Figure 1). To develop specific hypotheses, we draw on recent descriptions of behavioral approach and inhibition[1] (see also DePue, 1995; Elliot & Covington, 2001; Fowles, 1980; Gray, 1982, 1987, 1991; Newman, 1997; Sutton & Davidson, 1997) and promotion and prevention (Higgins, 1997, 1999).

Dating back to classical philosophers and certainly earlier, scholars have asserted that approach and inhibition are fundamental dimensions of the organism's response to the environment (for relevant history, see Carver, Sutton, & Scheier, 2000; Elliot & Covington, 2001; Higgins, 1997). This is seen in early characterizations of behavior of nonhuman species (Schneirla, 1959), accounts of reactions to reward and punishment (Miller, 1944), and even recent theorizing about the functional organization of the orbitofrontal cortex (Rolls, 2000).

Our perspective on approach and inhibition has been shaped by two theories. The first is Gray's (1982, 1987, 1991, 1994) theory of the neural substrates of approach and inhibition and their relations to emotion and emotional disorders (see also Newman, 1997). Gray's theory has guided studies of reward sensitivity in psychopaths (Newman, 1987), the organization of the autonomic nervous system (Fowles, 1980), the biological underpinnings of personality traits and emotional disorders (e.g., Carver et al., 2000; Carver & White, 1994; DePue, 1995; Larsen & Ketelaar, 1991), and the structure of emotion (Davidson, 1992; Sutton & Davidson, 1997).

A second influence is Higgins's (1997, 1999) theory of promotion and prevention self-regulatory focus. Higgins argued that pleasure and pain do not suffice in accounting for motivational behavior. What is needed is a more complex and precise theory of the social processes by which people obtain rewards and avoid threats—hence the concepts of promotion and prevention focus. In empirical work, Higgins and colleagues (Brendl, Higgins, & Lemm, 1995; Higgins, Shah, & Friedman, 1997; Shah & Higgins, 2001) have shown that a promotion focus, triggered by nurturance needs, associations regarding the ideal self, and potential gains, activates cheerful (or dejected) affect (Higgins, Shah, & Friedman, 1997; Shah & Higgins, 2001), approach-related behavior, and the heightened sensitivity to positive outcomes (Brendl, Higgins, & Lemm, 1995). A prevention focus, triggered by security needs, associations regarding the ought self, and potential punishment, activates agitated affect, avoidant behavior, and the sensitivity to negative outcomes.

In Table 1, we synthesize the different treatments of approach and inhibition. The behavioral approach system is believed to regulate behavior related to sex, food, safety, achievement, aggression, and social attachment (DePue, 1995). Rewards and opportunities trigger approach-related processes that help the individual pursue and obtain goals related to these rewards. These include affective states that motivate approach-related behavior, cognitive assessments of reward contingencies in the environment, and forward locomotion.

The behavioral inhibition system is equivalent to an alarm–threat system. Inhibition is activated by punishment, threat, and uncertainty. The behavioral inhibition system involves affective states such as anxiety, heightened vigilance and inspection of punishment contingencies, and avoidance and response inhibition.

Researchers have largely focused on individual differences in approach and inhibition (e.g., Carver & White, 1994; Elliot & McGregor, 2001; Elliot & Sheldon, 1998). Our theory reveals how one important aspect of social contexts—power—influences the relative balance of the tendencies to approach and inhibit. More specifically, elevated power activates approach-related processes for two reasons. First, power is correlated with increased resources. Powerful individuals live in environments with abundant

[1] Addressing theoretical tensions and ambiguities in Gray's (1987) model is beyond the ken of this article. For example, Gray's systems are conceptual in nature; they are organized by psychological constructs that will certainly be subject to theoretical revision. Understanding about the biological correlates of these systems is likely to be refined and revised by future research. Any one behavior (e.g., approaching a new acquaintance) is the likely product of varying activity in Gray's systems and other factors as well. For our concerns, the utility of Gray's theorizing is twofold. First, Gray's theory identifies processes (i.e., approach and inhibition) that are likely to be influenced by the myriad determinants of power and therefore is more general in its explanatory scope than accounts that emphasize processes that are more closely linked to certain classes of variables (e.g., testosterone). Second, Gray's theory provides a basis for advancing cogent hypotheses related to a broad array of behaviors in the domains of affect, cognition, and behavior.

Table 1
Characteristics, Components, and Biological Markers of the Behavioral Approach and Inhibition Systems

Domain	Approach	Inhibition
Evocative stimuli	Rewards	Punishment, uncertainty
Motivational–emotional state	Positive emotion, affective aggression	Negative emotion, anxiety
Cognitive process	Incentive cognition, flexible strategies	Vigilant inspection, narrow focus
Behavioral tendency	Approach goals	Interrupt behavior, inhibit
CNS structures	Left frontal cortex, mesolimbic, mesocorticol	Right frontal cortex, septohippocampal system, locus ceruleus
Neuroendocrine	Dopamine	Norepinephrine, cortisol
ANS	Heart rate	Electrodermal
Related constructs	Extraversion, impulsivity	Neuroticism, shyness

Note. CNS = central nervous systems; ANS = autonomic nervous system.

rewards,[2] including financial resources, food, physical comforts, beauty, and health as well as social resources, such as flattery, esteem, attraction, and praise. Second, the experience of power involves the awareness that one can act at will without interference or serious social consequences (Weber, 1947). Acting within reward-rich environments and being unconstrained by others' evaluations or the consequences of one's actions, people with elevated power should be disposed to elevated levels of approach-related affect, cognition, and behavior.

For complementary reasons, the lack of power should be associated with increased inhibition. Less powerful individuals have less access to material, social, and cultural resources (Domhoff, 1998) and are more subject to social threats and punishments. Thus, they are more sensitive to the evaluations and potential constraints of others (e.g., S. T. Fiske, 1993; Steele & Aronson, 1995). For example, less powerful individuals are more likely to be victims of aggression. This is evident in childhood bullying, which is directed at low-status children (Whitney & Smith, 1993), in racism and discrimination against minority groups (Sidanius, 1993), in violence against women (Sanday, 1981), and in violent crime perpetrated against members of lower classes (Gottfredson & Hindelang, 1981), to cite a few of many relevant findings. Acting in environments with increased punishment, threat, and the lack of resources and being aware of social constraints, people with reduced power should be disposed to elevated levels of inhibition-related affect, cognition, and behavior.

The preceding arguments suggest that more powerful individuals should show elevated activity of processes that are part of the approach system (see Table 1). The absence of power, in contrast, should be associated with heightened activity of inhibition-related processes. We now develop more specific predictions that follow from this reasoning. We first discuss affect, then cognition, then behavior, in part relying on what is known in one domain (e.g., affect) to justify predictions in the next (e.g., cognition), and in part motivated by the assumption that basic affective processes and construals guide specific social behaviors. For expository purposes, we will often refer to high- and low-power individuals or to individuals with and without power, recognizing that an individual's power should be characterized not in absolute terms but as falling on a continuum relative to the power of others.

Power and Affect

The question of how power influences affect has attracted increasing attention in the study of emotion (Clark, 1990; Collins, 1991; Kemper, 1991; Tiedens et al., 2000). Typically, theorists have argued that specific roles, such as that of a parent, priest, or political pundit, vary in their levels of power, which in turn shapes the experience and expression of emotion. Although this work connects broad sociological constructs, such as role and hierarchy, to individual experience, it does little to specify how roles and identities influence experience (although see Tiedens et al., 2000, on the relationship between status and emotion-related appraisal). Our own predictions regarding power and affect are outlined in Table 2.

Proposition 1: Elevated Power Increases the Experience and Expression of Positive Affect

Positive affect facilitates the pursuit of approach-related goals (e.g., Davidson, 1992; Higgins, 1997). Consistent with this view, markers of the approach system, including left frontal activity and dopamine, correlate with increased positive affect (Ashby, Isen, & Turken, 1999; Carver & White, 1994; Davidson, 1992; DePue, 1995; Sutton & Davidson, 1997).

On the basis of this treatment of approach and affect, we predict that elevated power will be associated with increased positive mood (Hypothesis 1). A recent study by C. Anderson, Langner, and Keltner (2001) bears on this hypothesis: In an informal group (dormitory members), high-power men, as nominated by their peers, reported elevated baseline positive mood prior to completing experimental tasks ($r = .32$, $p < .05$). Watson and Clark (1997) have also documented that self-reports of dominance, assertiveness, social potency, and assumed leadership roles all correlate with the self-reported experience of elevated positive mood.

[2] It would be obvious, profound, and bordering on the tautological to demonstrate empirically that people in power live lives surrounded by more abundant rewards. Power is associated with more resources and, by implication, increased rewards. One interesting example is the work of Domhoff (1998) on the social lives of the "ruling class."

Table 2
Predicted Relations Between Power and Affect

Affect	High power	Low power
Mood	Positive, irritable	Negative, anxious, depressive
Discrete emotion	Desire, enthusiasm, pride	Awe, embarrassment, fear, guilt, gratitude, shame
Emotional disorders	Mania	Anxiety, depression

We also predict that elevated power will increase the likelihood of positive emotion (Hypothesis 2). In one test of this hypothesis, individuals reported their general sense of power (e.g., "I experience power in my day to day life") as well as their general tendency to experience different emotions (C. Anderson, Langner, & Keltner, 2001). The sense of power correlated with the increased experience of many positive emotions, including amusement ($r = .38, p < .001$), desire ($r = .14, p < .10$), enthusiasm ($r = .26, p < .01$), happiness ($r = .35, p < .01$), and love ($r = .24, p < .01$).

This pattern of results has been replicated in studies of adolescents, suggesting that the observed relations between power and affect are not limited to adults or to specific self-report measures. In one study, boys (9 to 14 years old) at a basketball camp teased one another in playful fashion in the context of an exercise that was part of the camp's morning drills and reported on the pleasure they experienced during the teasing (Young, Keltner, Londahl, Capps, & Tauer, 1999). Consistent with Proposition 1, boys of high sociometric status (peer nominated) reported more pleasure ($r = .34, p < .05$) associated with teasing and being teased. In similarly motivated work, La Freniere and Sroufe (1985) have likewise observed that elevated sociometric status relates to increased positive affect in spontaneous interactions.

Another recent study suggests that power influences expressive behavior as well. Fraternity members teased each other in foursomes comprising 2 low- and 2 high-power members (Keltner et al., 1998). The individual's power was defined according to his position in the fraternity (as an "active" or recent "pledge"). Facial expressions were coded with the use of the Facial Action Coding System (Ekman & Friesen, 1978), which identifies emotion-relevant facial muscle movements. Table 3 shows that high-power members were more likely to display smiles of pleasure than were low-power members.

Proposition 2: Reduced Power Increases the Experience and Expression of Negative Affect

Self-reports of negative moods correlate with self-report measures of behavioral inhibition (Carver & White, 1994; see also Higgins et al., 1997, for relevant evidence relating prevention focus to negative affect) and central nervous system markers of inhibition and avoidance, such as increased activity in the right frontal cortex (DePue, 1995; Sutton & Davidson, 1997). We therefore expect reduced power to be associated with the experience and expression of negative mood (Hypothesis 3).

In support of this prediction, children of low sociometric status report higher levels of negative moods, guilt, and depression (e.g., D. B. Hecht, Inderbirtzen, & Bukowski, 1998; Kupersmidt & Patterson, 1991; La Freniere & Sroufe, 1985; Upmanyu, 1974). Lower SES also relates to increased negative mood in adults (e.g., Link, Lennon, & Dohrenwend, 1993). Members of minority groups such as Asians and African Americans, stereotypically associated with reduced power (and often in terms of actual resources), often report increased anxiety and mild depression relative to European Americans (e.g., Sasao, Toshiaki, Duval, & Sadamura, 1986; Warren, 1997).

These correlations between power and affect suffer from obvious problems of interpretation (e.g., does elevated power lead to positive or negative affect or vice versa?). It is important to note that a manipulation study has replicated these correlational findings. After having initially expressed their views vis-à-vis school busing, participants were assigned to either a unanimous group or a nonunanimous group in which they belonged to a majority or a minority (Gruenfeld, 1993). After a group decision task, participants reported their general feelings. Minority members reported feeling more negative affect ($M = 4.51$) than did majority members ($M = 4.19$), $F(5, 14) = 3.39, p < .03$, and members of unanimous groups ($M = 4.08$), $F(5\ 32) = 5.92, p < .001$, who did not differ from one another, $F(5, 32) = 1.12, p > .10$.

Given the preceding reasoning and findings, one would also expect low-power individuals to be more likely to experience and express negative, inhibition-related emotions, such as embarrassment and fear (Hypothesis 4). In studies reported earlier (C. Anderson, Langner, & Keltner, 2001), a self-report measure of subjective power correlated with self-reports of negative emotions, such as embarrassment ($r = -.22, p < .01$), fear ($r = -.22, p < .01$), guilt ($r = -.22, p < .01$), sadness ($r = -.25, p < .01$), and shame ($r = -.23, p < .01$), and low-power teasers in a fraternity

Table 3
Influence of Power on Facial Expressions of Emotion During Teasing Interactions

	High power (HP)		Low power (LP)	
Facial expression	Teasing LP	Teased by LP	Teasing HP	Teased by HP
Duchenne smiles	83.3	95.8	56.5	95.8
Facial anger	8.3	25.0	0.0	0.0
Facial contempt	4.2	16.7	0.0	0.0
Facial fear	0.0	0.0	16.7	8.3
Facial pain	4.2	4.2	12.3	25.0

Note. Numbers refer to percentages of participants who displayed each kind of expression. Duchenne smiles involve the action of the zygomatic major muscle, which pulls the lip corners up, and the orbicularis oculi muscle surrounding the eye and are closely tied to the experience of positive emotion.

were more likely to display fear, embarrassment, and pain (see Table 3) and to report feeling embarrassment (Keltner et al., 1998). College students whose attitudes were in the numerical minority on campus (which, in the context of ideological debate, typically translates to reduced power) reported more negative emotions vis-à-vis the ideological conflict than did students in the majority (Ebenbach & Keltner, 1998). In a study that manipulated status, low-status individuals reported more guilt and sadness in response to negative events, whereas high-status individuals reported more anger (Tiedens et al., 2000).

In this section, we have seen that the affective life of the individual varies significantly according to his or her power. High-power individuals more frequently experience and express positive mood and emotion. Low-power individuals more frequently experience and express negative mood and emotion. This pattern of results was observed across various measures of affect, measurement contexts, and determinants of power (e.g., peer ratings, ethnicity, and SES).

The studies that we have reviewed, as suggestive as they are, call for further research. Studies have examined only select emotions and only a few measures of emotion (e.g., no study has looked at autonomic response). The correlational findings can be accounted for by alternative explanations. For example, Extraversion predicts both elevated sociometric status (C. Anderson, Langner, & Keltner, 2001) and positive emotion (Keltner, 1996) and may account for the links between sociometric status and emotion. Possible mediators, such as the selective exposure to different events or the differential treatment by others, need to be examined. The relation between power and anger needs further attention. In a correlational study described earlier (C. Anderson, Langner, & Keltner, 2001), self-reports of chronic anger were associated with lower power ($r = .21$, $p < .01$), whereas facial displays of anger were associated with increased power (see Table 3). Differences in the object of anger (e.g., self or others), context, and display rules may account for these apparent contradictions. Notwithstanding these concerns, our literature review indicates that social power profoundly shapes the emotional life of the individual.

Power and Social Attention

Of the many objects of social attention, we will focus on three: rewards or punishments, other individuals, and the self. We propose that high-power individuals, who are disposed to approach, will attend to potential rewards rather than to threats and as a consequence will construe others through a lens of self-interest. In contrast, low-power individuals will be more sensitive to threats than rewards and will therefore construe themselves vis-à-vis others' interests. These predictions are summarized in Table 4.

Table 4
Predicted Differences in Patterns of Social Attention for High- and Low-Power Individuals

Object of attention	High power	Low power
Valence of stimuli	Rewards, opportunities	Punishment, threats
Attention to self and others	Others as means to own ends	Self as means to others' ends

Proposition 3: Elevated Power Increases the Sensitivity to Rewards

Approach is facilitated by the direction of attention toward rewards and means for obtaining those rewards (Higgins, 1997). A number of correlates of behavioral approach are associated with attention to rewards, including increased dopamine (DePue, 1995), Extraversion (Larsen & Ketelaar, 1991), and impulsivity and psychopathy (Newman, 1997). On the basis of this reasoning and evidence, we posit that power will be associated with the increased attention to rewards (we let the reader draw his or her own parallels between elevated power and psychopathy).

It therefore follows that powerful people will be quicker to detect opportunities for material rewards, such as food; social rewards, such as attention, sex, and approval; and conditioned stimuli, such as money (Hypothesis 5). One supportive line of evidence is found in the literature on the need to approach success, which reflects the sensitivity to rewards as assessed by Thematic Apperception Tests (TATs; Atkinson, 1964). Individuals in group leadership roles (Zander & Forward, 1968), children from higher status social groups (Nygard, 1969), and European Americans, as compared with African Americans (Adkins, Payne, & Ballif, 1972; Cooper & Tom, 1984; Graham, 1984) as well as Native Americans and Hispanics (Ramirez & Price-Williams, 1976; Sanders, Scholz, & Kagan, 1976), all exhibit high levels of the need to approach success. It will be important for future studies to manipulate power and to assess reward sensitivity directly (e.g., Higgins, 1997; Newman, 1997).

A related prediction is that elevated power will increase the tendency to perceive rewards and opportunities in ambiguous acts and interactions (Hypothesis 6). One suggestive line of studies finds that men, who might be assumed to occupy positions of elevated power, perceive sexual interest in women's ambiguous behavior (Abbey, 1982; Keltner et al., 1998; Simpson, Gangestad, & Nations, 1996). These studies did not directly measure power, and one might argue that in interactions that revolve around mate selection women have equal or elevated power. Clearly, the predicted relation between power and the sensitivity to rewards warrants empirical attention that uses direct measures of power and various measures of reward sensitivity.

Proposition 4: Reduced Power Increases the Sensitivity to Threat and Punishment

We further expect low-power individuals to selectively attend to punishments and threats (Hypothesis 7). The literature on anxiety lends indirect support to this hypothesis. Namely, studies using dichotic listening tasks, lexical decisions, and the Stroop task have found that dispositional anxiety, which correlates with reduced power, relates to the selective attention to punishments and threats (MacLeod & Mathews, 1988; Mathews & MacLeod, 1985). Of course, correlations between two variables (power and anxiety) do not guarantee common correlations with a third variable (attention to threats); relevant empirical work is needed.

Several kinds of evidence indicate that individuals with less power interpret ambiguous events as more threatening (Hypothesis 8). Children of low sociometric status tend to perceive threat in ambiguous social interactions (Schwartz, Dodge, & Coie, 1993). Lower SES adults tend to report higher levels of mistrust in others

(Dohrenwend & Dohrenwend, 1969; Mirowsky & Ross, 1983) and higher levels of worry about crime (Riger, Lebailly, & Gordon, 1981). Compared with dominant men, submissive men, as measured by a self-report adjective checklist, showed threat-related elevated heart rate when challenged by a female confederate (Rejeski, Gagne, Parker, & Koritnik, 1989).

A related and perhaps more unsettling literature supports the prediction that social threat disrupts the cognitive performance of low-power individuals (Hypothesis 9). Students who were in the minority in their group in terms of gender remembered less of their group's discussion, suggesting that subordinate status interferes with memory processes (Lord & Saenz, 1985). Stereotype-related threat interferes with the performance of minority group members on intellectual tests (Steele & Aronson, 1995). Thus, on exams like the Graduate Record Examination, the performance of African American students equals that of European Americans until they are prompted to think of their race. Similarly, women perform at similar levels as men on math exams unless the exam is portrayed as one that produces gender differences, which markedly reduces their performance. Power may in part account for these findings (Croizet & Claire, 1998). Exams that have status, class, or power-related connotations may direct the attention of individuals of low-power groups away from the substance of the test to its social implications, thus worsening performance. A power-based explanation posits that reduced power would not hinder intellectual performance in contexts in which stereotypes are neither salient nor endowed with performance-based expectations (e.g., in interactions among in-group members). This assertion awaits empirical attention.

Proposition 5: Elevated Power Increases the Tendency to Construe Others as a Means to One's Own Ends

Turning to the attention that individuals direct toward others, we predict that high-power individuals, inclined to approach rewards, will attend to others in terms of how they enable the power holder to satisfy current goals and desires (Hypothesis 10). This prediction has not been addressed directly, although in a related vein, Kipnis (1972) showed that powerful individuals attributed others' achievements to their own power rather than others' efforts.

Proposition 6: Reduced Power Increases the Tendency to View the Self as a Means to Others' Ends

A complementary prediction is that low-power individuals will perceive themselves as a means to the ends of high-power individuals, or as the instrument of others' goals and desires (Hypothesis 11). This assertion closely resembles recent analyses of gender-related experiences of self-objectification (Fredrickson & Roberts, 1997; Hall, 1984). These researchers argue that women construct their identities in part according to how their physical self is sexualized by others. As a consequence, women feel objectified or judged according to how they serve the corporal needs of others. It is interesting to note that self-objectification has many of the consequences of reduced social power, including elevated anxiety and shame, the dissociation from internal states, and interference on the performance of intellectual tasks (Fredrickson & Roberts, 1997).

For example, in one study, self-objectification was heightened in women by having them wear a swimsuit (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998). Compared with women asked to wear a sweater, women wearing swimsuits reported more shame about their bodies, experienced more self-conscious emotions, ate less food given to them by the experimenter, and performed poorly on a number of math problems. Our framework suggests more generally that low-power individuals, whether it be workplace subordinates, adolescents vis-à-vis their parents, or low-status group members, will construe themselves as means to the ends of powerful individuals (and in a well-known formulation of Marx, 1982, this self-construal is a source of alienation).

We have posited that high-power individuals selectively attend to rewards and how others satisfy self-interests, whereas low-power individuals attend to punishment and threat and construe the self through a lens of others' interests. For the most part, the studies we reviewed only indirectly assessed the various hypotheses. Empirical research has yet to settle important issues. For example, we have argued that power affects attention, directing it toward rewards or threats, independent of external reality. Yet these differences in attention may simply reflect the different social environments of high- and low-power individuals rather than some perceptual bias that operates independent of external reality. In this vein, most studies have focused on the power of the social perceiver while neglecting the power of the target of social perception (although see Snodgrass et al., 1998). Thus, it is not known whether the effects of power on social attention hold regardless of the target's power or whether there are interesting interactions. Notwithstanding these limitations, our attention-related hypotheses lay one foundation for a variety of predictions concerning power and social cognition, which we now consider.

Power and Social Cognition

Automatic social cognition is relatively rapid, effortless, and associated with the use of cognitive heuristics and simple rules to make judgments (Bargh & Chartrand, 1999; Chaiken, Liberman, & Eagly, 1989; Wegner & Bargh, 1998). Controlled social cognition is deliberate, effortful, and involves the consideration of multiple response options and stimulus characteristics. This dual-process analysis has been applied to stereotyping (Devine, 1989), attribution (Gilbert, 1998), attitudes (Fazio, Sanbonmatsu, Powell, & Kardes, 1986), and persuasion (Chaiken et al., 1989), among other widely studied topics.

S. T. Fiske (1993) and Neuberg and Fiske (1987) were the first to hypothesize that high-power individuals construe social events in more automatic fashion. They do so, the reasoning continues, because they are less motivated to attend to the consequences of their actions and because of the myriad cognitive demands of high-power positions (e.g., coordinating the actions of many subordinates). Elevated power, as we have seen, is also associated with positive affect, which increases the likelihood of automatic social cognition (Bodenhausen, Sheppard, & Kramer, 1994; Lerner & Keltner, 2000). Reduced power is associated with depressive mood and anxiety, which increase the likelihood of more deliberate, controlled social cognition (see Bodenhausen et al., 1994; Lerner & Keltner, 2001). These lines of reasoning converge on our predictions laid out in Table 5.

Table 5
Predicted Patterns of Social Cognition of High- and Low-Power Individuals

Cognitive domain	High power	Low power
Perception of individuals	Stereotypes, inaccurate inferences	Individuating information, accurate inferences
Perception of groups	Out-group discrimination, in-group favoritism	In-group discrimination, out-group favoritism
Attribution		
Collective tasks	Self focus	Other focus
Others' actions	Dispositional	Situational

Proposition 7: Elevated Power Increases the Automaticity of Social Cognition

A first prediction is that high-power individuals will be more prone to stereotype others than are low-power individuals (Hypothesis 12; see S. T. Fiske, 1993, for a comprehensive statement). Stereotypes consist of culturally encoded beliefs about groups that individuals apply in relatively thoughtless ways (Devine, 1989). S. T. Fiske (1993) first documented that high power individuals are more likely to judge others according to stereotypes rather than individuating information. In one illustrative study (Goodwin & Fiske, 1993), college undergraduates evaluated high school students' summer job applications. As participants' power in the decision increased, they became less attentive to information about the applicants. In another study (Depret & Fiske, 1993), participants were more attentive to stereotype-disconfirming information about powerful evaluators than less powerful evaluators. Most recently, Goodwin, Gubin, Fiske, and Yzerbyt (2000) showed that power increases stereotyping through both increased attention to stereotype-consistent information (stereotyping by design)—which corresponds to automatic, top–down processing—and decreased attention to stereotype-inconsistent information (stereotyping by default).

Group-based power increases the tendency to stereotype as well. Sidanius (1993) and Pratto (1996) have found that social dominance orientation—the desire to see one's own group dominate other groups—is more strongly endorsed by individuals associated with more powerful groups, including men as compared with women, European Americans as compared with African Americans, and individuals in hierarchy-enhancing (e.g., the police) as opposed to hierarchy-attenuating careers (e.g., social services; for reviews, see Pratto, 1996; Sidanius, 1993). Measures of social dominance, in turn, correlate with increased stereotyping and prejudice.

Other studies of intergroup conflict similarly reveal that power increases the tendency to judge others unsystematically. Group representatives on the offensive in social disputes, those who represent legitimate, orthodox positions and those who have defeated opposing groups, all have elevated power. Members from these groups demonstrate higher levels of in-group favoritism, which is the preferential allocation of resources to one's own group, and out-group discrimination, both of which reflect more unsystematic, heuristic judgments of others (Brewer, 1979; Mullen, Brown, & Smith, 1992; Ng & Cram, 1988; Sachdev & Bourhis, 1991).

Predisposed to judge others in heuristic fashion, high-power individuals should tend to judge others' attitudes, interests, and positions less accurately (Hypothesis 13). Consistent with this assertion, one line of studies has found that high-power ideological partisans judge their opponents' attitudes less accurately than do low-power partisans (Ebenbach & Keltner, 1998; Keltner & Robinson, 1996, 1997). For example, in one study (Keltner & Robinson, 1997), "traditionalist" and "revisionist" English professors throughout California, embroiled in a debate about the content of a liberal arts curriculum, offered their own attitudes about literature and estimated the average attitudes of traditionalists and revisionists. Traditionalists were more powerful in that they were more likely to be tenured, male, and interested in preserving the literary status quo (e.g., Homer and Shakespeare), instead of incorporating the works of women and minorities (e.g., Toni Morrison), which the revisionists advocated. As one sees in Figure 2, the more powerful traditionalists were more prone to stereotype both sides as extremists and thereby to misperceive their opponents' views. Both sides made more accurate estimates of the status quo traditionalists. A subsequent study of partisans whose attitudes were either in the numerical majority (high power) or numerical minority (low power) replicated this pattern of observer effects (low-power individuals are more accurate) and target effects (high-power individuals are more accurately judged; Ebenbach & Keltner, 1998).

Unfortunately, the preceding studies did not measure power directly, which instead was inferred from proxy, and participants judged abstract social categories (e.g., "average revisionists in California") rather than real individuals. Studies in the negotiation literature have not been limited by these concerns, and they find that high-power disputants tend to be less aware of their opponents' underlying interests than are low-power disputants, who are more likely to discover integrative solutions that benefit both parties (Mannix & Neale, 1993; see also Kim, 1997; Sondak & Bazerman, 1991). Power differences may account for the tendency for men to be slightly less accurate than women in judging expressive behavior (Henley & LaFrance, 1984; LaFrance, Henley, Hall, & Halberstadt, 1997; although see Hall, 1984). Power may also be at work in the striking finding that younger siblings, who experience reduced power vis-à-vis older siblings, outperform their older siblings on theory-of-mind tasks, which assess the ability to imagine the intentions and beliefs of others (Jenkins & Asington, 1996; Perner, Ruffman, & Leekam, 1994).

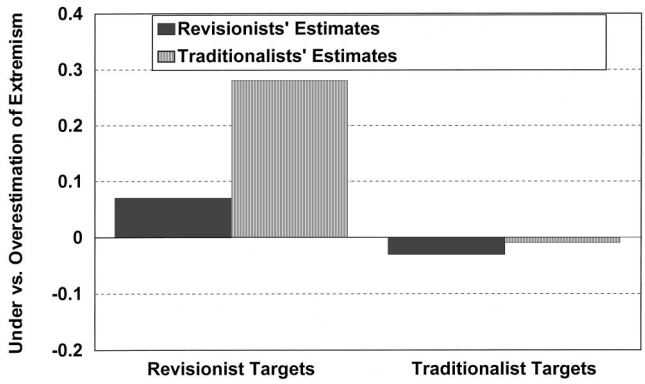

Figure 2. Influence of ideological power on accuracy of social judgment.

Proposition 8: Reduced Power Increases Controlled Social Cognition

Components of the behavioral inhibition system, most notably fear and anxiety, are associated with vigilant, narrowed attention (MacLeod & Mathews, 1988; Mathews & MacLeod, 1985; Mineka & Sutton, 1992). We therefore posit that reduced power increases the likelihood of controlled, deliberate social cognition. At the behavioral level, we would expect low-power individuals to more carefully scrutinize the actions of others (Hypothesis 14). Consistent with this prediction, studies of children (F. J. Anderson & Willis, 1976; La Freniere & Charlesworth, 1983; Montagner et al., 1988), adults (Ellyson, Dovidio, & Fehr, 1981), and nonhuman primates (Chance, 1967) found that low-power individuals concentrate their gaze more on others (particularly of elevated status) than do individuals with elevated power.

These power-related patterns of social attention are likely to contribute to the greater accuracy low-power individuals demonstrate in judging others (see Proposition 7). Studies by Snodgrass (1985, 1992) suggest that reduced power may motivate attention toward specific kinds of social information. She and colleagues (Snodgrass et al., 1998) assigned college students to low- (e.g., student or employee) or high-power roles (e.g., teacher or business owner). Low-power individuals proved to be more adept at judging what high-power individuals think of them (i.e., the low-power persons). High-power individuals, in contrast, were more accurate judges of what the low-power individuals thought of themselves (i.e., the low power individuals; Snodgrass, 1985, 1992; Snodgrass et al., 1998). These findings fit our formulation nicely: Subordinates are highly attuned to others' evaluations of their own actions. Powerful individuals more reliably detect how subordinates evaluate themselves, we suspect, because subordinates display self-evaluative emotions more readily (e.g., embarrassment or shame; see Proposition 2).

We also predict that low-power individuals will reason in more complex ways (Hypothesis 15). Whereas high levels of complexity reflect careful consideration of stimulus characteristics and the trade-offs among response options, low levels of complexity reflect the use of a single evaluative dimension to distinguish good and bad alternatives (Suedfeld, Tetlock, & Streufert, 1992). Increased concern about the consequences of one's actions—which correlates with low power—tends to lead to high levels of cognitive complexity (Lerner & Tetlock, 1999; Tetlock, 1992).

To address whether power influences the complexity of reasoning, a recent study compared the decisions of U.S. Supreme Court justices when they endorsed opinions of coalitions of different sizes (Gruenfeld & Kim, 1998). All opinions in the sample were single authored, but each opinion was written on behalf of a coalition of other justices. As in other democratic decision groups that use a majority wins rule (Davis, 1973; Jost, in press), the size of the coalition endorsing the author's opinion was equated with the author's power. As expected, justices writing from positions of less power crafted more complex arguments in their opinions (see Figure 3).

Consistent with the preceding findings, authors of majority opinions are less cognitively complex when the group is unanimous (and therefore more powerful), and their actions are more unconstrained than when they encounter resistance from a vocal minority (Gruenfeld, 1995; see also Janis, 1972; Janis & Mann, 1991; Nemeth, 1986). In experimental studies, participants' public and private statements become less complex when assigned to unanimous as opposed to nonunanimous decision groups (Gruenfeld, Thomas-Hunt, & Kim, 1998). A recent study found that highly dominant individuals described a social target with lower levels of cognitive integration than did more communally oriented individuals (Woike, 1994).

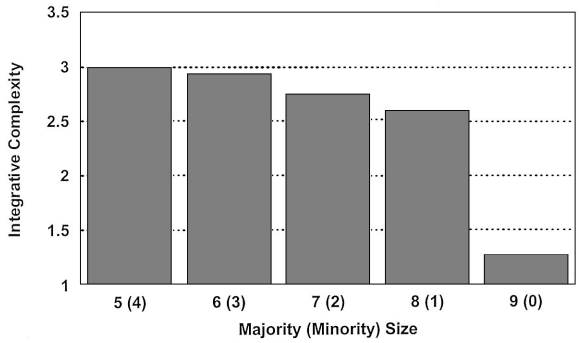

Figure 3. Influence of majority and minority status on the complexity of Supreme Court justices' decisions.

Given these differences in the direction of social attention and complexity of social reasoning, one would expect high- and low-power individuals to arrive at different attributions for social behavior (e.g., Brewer, 1986; Kipnis, 1976). In terms of collective actions, one would expect high-power individuals to attribute joint outcomes to their own actions, which are particularly salient in their phenomenal field, and low-power individuals to attribute the same outcomes to the actions of others (Hypothesis 16). In a test of this hypothesis, equal numbers of high- and low-power participants collaborated on a group task that involved assembling a complex puzzle (Fan & Gruenfeld, 1998). High-power participants were given control over how the work was to be accomplished and a blueprint of the puzzle, which they could not show to low-power subjects. After the task, group members offered private explanations of their group's performance. Although power did not influence the actual contributions of group members, high-power individuals were more likely to explain the group's performance in terms of their own motivations and abilities, whereas low-power individuals were more likely to mention the actions of other group participants.

Power-related attributions for others' actions are likely to follow a different pattern. Attributions of others' actions involve automatic dispositional inferences as well as more deliberate considerations of situational constraints (Gilbert, 1998). More prone to automatic social judgment, high-power individuals should be more likely to make dispositional attributions about others' behavior, whereas low-power individuals should be more likely to make situational attributions (Hypothesis 17; Brewer, 1986; Gilbert, Krull, & Pelham, 1988). This hypothesis awaits empirical attention. Certain social implications of this hypothesis, however, give reason to pause: In explaining the circumstances of low-power individuals, their relative privation and distress, high-power individuals may be especially prone to blaming these outcomes on the traits of the less powerful.

In summary, high- and low-power individuals construe their social worlds quite differently. Studies using varied measures of

power and social judgment consistently show that elevated power is associated with more automatic, less complex styles of reasoning, whereas reduced power increases controlled information processing, deliberation, and the complexity of thought. Many of these hypotheses need to be fleshed out, as do their boundary conditions. In particular, it will be important to pay heed to the object of the social judgment. As objects of social judgment, high-power individuals appear to receive more careful social attention, pointing to likely interactions between the power of the social judge and person being judged. To the extent that the judgment is about a source of rewards, one might expect high-power individuals to demonstrate more systematic, accurate judgment.

Power and Social Behavior

Cultural aphorisms (e.g., "Power corrupts") and observations (e.g., "Power is the ultimate aphrodisiac" [Henry Kissinger]) have long recognized that power influences social behavior in noteworthy and at times disturbing ways. This basic notion motivated Kipnis's (1972, 1976) work on how power corrupts. In this section, we present a more complex view. We propose that elevated power disinhibits a wide array of behaviors, both bad and good (see also Chen et al., 2001), whereas subordinate status is associated with inhibition. The determinants of these acts, we further propose, differ: The actions of high-power individuals are governed by internal traits and states, and the actions of low-power individuals are governed by situational factors. Our predictions are represented in Table 6.

Proposition 9: Elevated Power Increases the Likelihood of Approach-Related Behavior

The approach system modulates processes related to eating, offensive aggression, and sexual behavior (see DePue, 1995). Power should therefore increase the performance of approach-related behaviors in these and other domains. Power should prompt the performance of simple approach behaviors (Hypothesis 18), such as entering the social space of others and initiating physical contact. Indeed, high levels of touching behavior correlate with being male, being older, and having higher SES (Goffman, 1967; Henley, 1977; Heslin & Boss, 1980; Major & Heslin, 1982). Studies of adults (Dean, Willis, & Hewitt, 1975; Lott & Sommer, 1967) and children (King, 1966) indicate that high-status, powerful individuals are more likely to approach subordinates at interpersonal distances that indicate intimacy.

Elevated power should disinhibit sexual behavior (Hypothesis 19). Bargh, Raymond, Pryor, and Strack (1995) found that the simple priming of power-related concepts made sexual concepts more accessible, and in a second study, increased feelings of attraction toward a confederate were evident in those individuals who scored high on a likelihood-of-sexual harassment scale. The simple idea of power increases sexual ideation and feeling, especially in those individuals prone to disinhibited, inappropriate sexual behavior.

A more recent study has addressed whether the assumption of power influences sexual behavior (Gonzaga & Keltner, 2001). Unacquainted, female–male dyads teased each other either in an equal power condition or in a condition in which one participant, the high-power individual, was given control over the allocation of experimental points. Following the ethological literature (Eibl-Eibesfeldt, 1989; Grammer, 1990), disinhibited (e.g., forward leans, provocative eye contact, and touches) and more inhibited flirtatious behaviors (e.g., coy glances and neck presentations) were coded. Consistent with our prediction, high-power men and women flirted in more disinhibited fashion, and men were more disinhibited in their flirtation than women (see Figure 4). It will be important to determine whether power heightens other facets of sexual response, including sexual phenomenology and physiology.

Table 6
Predicted Patterns of Behavior of High- and Low-Power Individuals

Social action	High power	Low power
Content of behavior	Approach related	Inhibited
Determinants of behavior	Internal states, traits	Context
Relation to social norms	Counternormative	Constrained by norms

Proposition 10: Reduced Power Increases Behavioral Inhibition

We expect reduced power to lead to the inhibition of social behavior (Hypothesis 20). Several research traditions demonstrate that low-power individuals inhibit the direct expression of ideas (as any first year graduate student will lament). The nonverbal behavior of subordinates is defined by inhibited postural constriction and reduced gestures (Ellyson & Dovidio, 1985). Low-power individuals inhibit their speech, as evident in associations between low power and increased hesitations (Holtgraves & Lasky, 1999; Hosman, 1989). Low-status individuals are more likely to show facial muscle actions that inhibit emotional displays, such as lip presses and lip sucks (Keltner et al., 1998). Research on small group dynamics has documented that high-power group members tend to be more actively and physically engaged in group projects, whereas low-power members are more often passive and withdrawn (Moreland & Levine, 1989). At the group level, individuals who ascribe to low power, minority positions tend to speak out less in public debate (Noelle-Neumann, 1991; although see Shamir, 1997). We would expect reduced power to lead to inhibition in all domains of social behavior (e.g., resource consumption, sex, aggression, and affiliation).

Proposition 11: Elevated Power Increases the Consistency and Coherence of Social Behavior

Free to approach rewards and less governed by social constraint, high-power individuals, we predict, will behave in more state- and trait-consistent fashion (Hypothesis 21). A first demonstration of this thesis is found in a study by M. Hecht and LaFrance (1998), who assigned individuals to the role of interviewer (high power) or interviewee (low power) or an equal status condition and asked them to engage in a discussion about career interests. Consistent with our expectation, high-power individuals' smiles of pleasure were significantly correlated with reports of pleasure, whereas this correlation was nonsignificant for the subordinate individuals and differed statistically from that of high-power individuals. LaFrance

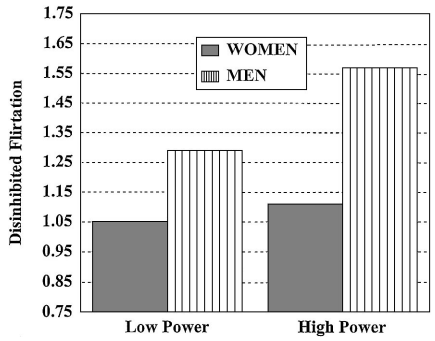

Figure 4. Influence of power on disinhibited flirtation.

and Banaji (1992) also found a stronger correlation between certain kinds of emotion (e.g., anger) and behavior in men than women.

One would also expect the personality traits of high-power individuals to be more predictive of their social behavior. The strongest test of this hypothesis was recently provided by Chen and colleagues (2001). As reported earlier, these researchers found that power enhanced the self-serving behavior of exchange-oriented individuals and the altruistic behavior of communally oriented individuals.

On the basis of similar theoretical motivations, we examined the correlations between fraternity members' self-reports of neuroticism gathered 2 weeks prior to the teasing interaction and responses to the teasing (C. Anderson, Langner, & Keltner, 2001). Whereas high-status members' levels of neuroticism predicted both their reports of negative emotion ($r = .45, p < .05$) and their pleasurable smiles ($r = -.48, p < .05$), these correlations were not significant for low-status members ($rs = .13$ and .16, respectively, *ns*). More generally, the preceding reasoning and findings suggest that personality traits may predict behavior more strongly in contexts in which the individual feels powerful.

When individuals feel powerless, in contrast, they should devote more attention to others and inhibit their behavior. As a consequence, the actions of low-power individuals should be more situationally contingent than those of high-power persons (Hypothesis 22). In Figure 5, we see that low-power fraternity members altered their teasing according to the target of the tease more than high-power members did (and not surprisingly were rather delicate when teasing their high-status brothers), whereas high-power individuals were consistently hostile (Keltner et al., 1998).

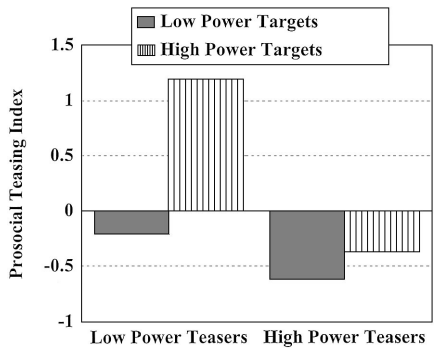

Figure 5. Influence of power on fraternity members' teasing.

In another test of this hypothesis, romantic partners and pairs of roommates completed several emotion-inducing tasks, such as discussing a recent success or performing a mental arithmetic task, at the beginning and end of the academic year (C. Anderson, Keltner, & John, in press). Power was measured in the romantic partners using self- and partner-ratings and in the college roommates using peer-ratings from fellow dormitory members. Table 7 shows, as expected, that the emotional experiences of low-power individuals at Time 2 was more influenced by the emotions of high-power individuals at Time 1 than vice versa. We would expect similar differences to emerge in the extent to which high-power and low-power individuals shape each other's habits, attitudes, values, and thought processes. This kind of power-related contagion is likely to account for the dissemination of ideas and practices in social groups.

Several corollary predictions await empirical attention. The states and traits of high-power individuals should be judged more reliably by others because they are associated with more observable behavior. Individuals with less power, in contrast, should find that others are less aware of and responsive to their internal states and traits because they receive less attention from others and because their states and traits are less transparent to others. This may contribute to the alienation often attributed to those without power (e.g., Weber, 1947).

Proposition 12: Elevated Power Increases the Likelihood of Socially Inappropriate Behavior

History is replete with illustrations of Proposition 12, from the love affairs and capricious executions of the British, French, and Russian monarchies to the prosaic transgressions of political, business, and religious leaders. This tendency is all the more perplexing given the greater consequences and scrutiny that accompany the actions of high-power individuals. Our formulation suggests that this is not a historical anomaly but is something general about the nature of power. Less likely to attend to others and more likely to approach potential rewards, high-power individuals should more frequently act on their desires in socially inappropriate ways (Hypothesis 23).

Table 7
Correlations Between Estimates of Roommates' Emotions and Self-Reports of Own Emotions 8 Months Later

Self-reports of emotion	High power influenced by low power	Low power influenced by high power
Dating partners		
Total emotion	.19	.69**
Positive emotion	.12	.50**
Negative emotion	.27	.53**
Roommates		
Total emotion	−.10	.40**
Positive emotion	.32	.38*
Negative emotion	−.10	.42**

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

Winter (1973, 1988) and Winter and Barenbaum (1985) have produced evidence that bears most directly on this hypothesis. They investigated the correlates of the need for power, which is measured from people's interpretations of the ambiguous social situations portrayed in TAT scenes. Although the need for power does not correspond directly to our definition of power, it does correlate with indices of actual power in college students, such as office holding and the pursuit of and entry into high-power careers (Winter, 1988). In a number of samples, Winter (1973, 1988) and Winter and Barenbaum (1985) documented that the need for power is positively correlated with a variety of profligate behaviors in men, including gambling, drinking, and sexual licentiousness.

High-power individuals are also more likely to violate politeness-related communication norms (for a review, see Brown & Levinson, 1987). High-power individuals talk more, interrupt more, are more likely to speak out of turn, and are more directive of others' verbal contributions than are low-power individuals (DePaulo & Friedman, 1998). In a recent survey of 775 employees, individuals reported that rude, uncivil behaviors were three times as likely to come from individuals higher up in the organization than from peers or subordinates (Pearson & Porath, 1999), although one could attribute these findings to the heightened social sensitivity of subordinates.

Inspired by historical analyses of power, greed, and manners (e.g., Elias, 1978), Ward and Keltner (1998) examined whether power would produce socially inappropriate styles of eating. In same-sex groups of 3 individuals, 1 randomly chosen individual (the high-power person) was given the role of assigning experimental points to the other 2 on the basis of their contributions to written policy recommendations concerning contentious social issues. After group members discussed a long and rather tedious list of social issues for 30 min, the experimenter arrived with a plate of five cookies. This procedure allowed each participant to take one cookie and provided an opportunity for at least 1 participant to comfortably take a second cookie, thus leaving one cookie on the plate. Consistent with the prediction, high-power individuals were more likely to take a second cookie (see Figure 6). Coding of the videotaped interactions also revealed that high-power individuals were more likely to chew with their mouths open and to get crumbs on their faces and on the table. Male participants ate in more disinhibited ways as well, lending further support to our power-based hypothesis, to the extent that gender is equated with power.

In light of postulated connections between the approach system and aggression (DePue, 1995; Gray, 1991), high-power individuals should be more likely to engage in aggressive acts (Hypothesis 24). Several research literatures lend support to this prediction. Across contexts (e.g., school playgrounds, hospital settings, and summer camps), high-status individuals are more likely to tease (rather than avoid the potentially offensive teasing in the first place), and when they tease, they do so in more hostile ways (Keltner, Capps, Kring, Young, & Heerey, 2001). In one study of heterosexual and homosexual relationships, the partner who was less committed to the relationship, and therefore more powerful, was more likely to bully the partner (Howard et al., 1986).

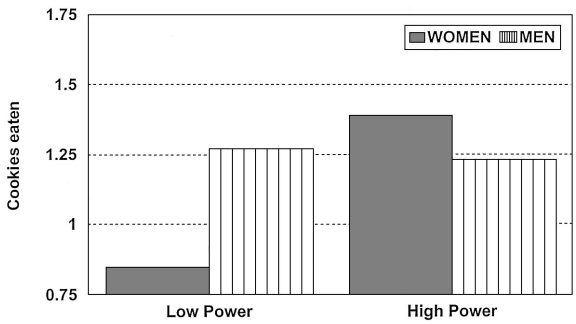

Figure 6. Influence of power on disinhibited eating.

Power disinhibits more pernicious forms of aggression as well. Power asymmetries predict the increased likelihood of sexual harassment (Studd, 1996). Green, Wong, and Strolovitch (1996) found that the incidence of hate crimes against disliked minority groups (i.e., non-Whites) was highest when the proportion of demographic majority members (i.e., Whites) in a particular neighborhood was largest relative to that of the minority. Across cultures and historical periods, the prevalence of rape rises with the cultural acceptance of male dominance and the subordination of women (Sanday, 1981).[3]

We have not portrayed power in a flattering light. High-power individuals tend to act in ways that disregard conventions, morals, and the effects on others. Yet approach-related behavior can be of a more prosocial nature, and our analysis and the supportive findings of Chen and colleagues (2001) do suggest that high-power individuals will engage in behaviors that violate social norms in prosocial ways. Some of these behaviors include intervening in emergencies or helping others in distress, mediating conflicts (e.g., Aureli & de Waal, 2000; de Waal, 1989; Keltner, Young, & Buswell, 1997), and expressing approval and affection.

Moderators of the Effects of Power on Affect, Cognition, and Behavior

The astute reader will no doubt have generated counterexamples to our various predictions. People with power can be anxious and paranoid, intensely sensitive to the actions and intentions of others, and scrupulous and restrained. Subordinates or challengers of the status quo can be euphoric, exhilarated, belligerent, naive to others' intentions, and impulsive. These and other counterexamples highlight how we have often treated power independent of social variables that might produce more complex outcomes. Power is not static but interacts with contextual factors, culture, and individual difference variables (e.g., Chen et al., 2001).

How might one think about the variables that moderate the effects of power on affect, cognition, and behavior? Our approach to power provides one answer. Namely, we have argued that the resources and punishments one can deliver to others, in combination with the freedom to take such action, lead to the individual's power. People often have both the access to resources and punishments and the freedom to deliver them to others. Sometimes, however, there are constraints on the actions of those with access to resources and the capacity to deliver punishment. In such cases, the forces determining the experience of power come into conflict with one another, and the outcomes, little explored empirically, are certain to be striking.

[3] Malamuth (1996) also discusses the hypothesis that men use sexual aggression to assert or maintain their greater power over women.

One outcome appears to be that people with actual power who feel constrained misperceive themselves to be powerless and pursue coercive social behaviors to reaffirm their power. For example, Bugental and Lewis (1999) have shown that parents who have plenty of resources to deliver to children but feel unable to do so feel powerless and resort to coercive parenting tactics.

More generally, we would expect factors that reduce the freedom with which the powerful can act to dampen approach-related tendencies. In fact, many social values and practices, from conceptions of virtuous leaders to institutionalized checks and balances, have as their very purpose the placing of constraints on those with power. Drawing on extant literatures, we propose that three processes—stability of power relations, accountability, and social values embodied in cultural and individual differences—act as constraints, thus moderating the effects of power on affect, cognition, and behavior.

Stability of Power Relations and Perceived Threat

Social systems vary in the extent to which power relations are stable. Group hierarchies tend to be the least stable during initial group formation or following changes to the composition of the group (e.g., C. Anderson, John, et al., 2001; Savin-Williams, 1977). In certain systems, power can be revoked; in other systems, power is nonnegotiable. Events that threaten the legitimacy of those in power or enhance the legitimacy of the less powerful destabilize social hierarchies.

We hypothesize that threat to social hierarchies and social instability reduce the freedom with which the powerful can act, thereby activating the behavioral inhibition system in powerful individuals. This should lead to more negative feelings, careful attention to others, systematic cognition, and inhibited behavior on the part of the powerful (Hypothesis 25). Findings from the hate-crime study just described (Green et al., 1996) lend support to this prediction. Namely, the incidence of hate crimes against minority members was highest (i.e., disinhibited behavior was greatest) when the power distance between majority and minority groups was greatest (and therefore the threat posed by the minority group was most reduced) and dropped off as the balance of power approached equilibrium. Increased balance in power between majority and minority group members more generally should lead the powerful to experience more negative affect, engage in more careful attention to others and more systematic social cognition, and act in less disinhibited fashion.

When high-power individuals experience threat-related emotions, they should show different patterns of social cognition. Thus, one study examined the attitudes of gay and Christian college students who were embroiled in a conflict over a reported beating of 1 group member—a gay member— by the other group (Ebenbach & Keltner, 1998). Within the controversy, the gay students reported higher levels of power than Christians because of the support of students and the university administration. As expected, high-power partisans (the gays in this study) who felt threat-related negative emotions judged their opponents' attitudes more accurately than high-power partisans who did not feel these emotions.

Perceived threat has also been shown to alter the social cognition of Supreme Court justices who overturned or upheld legal precedent (Gruenfeld & Preston, in press). When precedent is overturned, new powerholders are liberated from the burden of legitimation; they face no immediate threat, and they are free to act as they choose. In contrast, majority members who uphold precedent must defend the status quo against challenges to the legitimacy of their position. Consistent with our prediction, Supreme Court justices who overturned legal precedent, and therefore were momentarily without challenge to their position, were less cognitively complex in their written opinions than were those who upheld precedent.

Threats to the stability of power structures should have equally important effects on low-power individuals. For example, individuals who espouse minority, low-power positions should be more likely to speak out when the dominant view is threatened, for example, by legislative events or changes in public opinion or by political events that afford legitimacy to the minority view. Threats to the power structure give legitimacy and esteem to minority group positions, thus encouraging speaking out as well as other politically relevant approach behaviors (Hypothesis 26).

Accountability

Accountability—the sense that one's actions are personally identifiable and subject to the evaluation of others— often acts as a constraint on unchecked power. Individuals in power who know they will be held accountable are more likely to consider social consequences and take others' interests into account (Lerner & Tetlock, 1999; Tetlock, 1992). This explains why U.S. Presidents exhibit greater cognitive complexity after they are elected, when they are accountable to a diverse array of constituents, than prior to election (Tetlock, 1981). Accountability is implicit in the psychology of low-power individuals—they carefully consider how their actions will be evaluated by and influence others. To the extent that high-power individuals are accountable, we predict that their affect, cognition, and behavior will shift toward a pattern of increased inhibition (Hypothesis 27).

Accountability may play a role in several paradoxes suggested by our review. The apparent inconsistency exhibited by powerful leaders who are deliberative in their policy making but impulsive in their personal lives may in part be due to context-related variation in accountability. Individuals may behave in strikingly different fashion as they acquire power and are accountable to others than when their power is firmly entrenched (e.g., Gruenfeld & Preston, in press).

Winter and Barenbaum (1985) have generated evidence that lends credence to these speculations. High-need-for-power individuals engaged in profligate gambling, drinking, and sexual licentiousness less often when two kinds of life events enhanced their accountability: having younger siblings and becoming a parent. In fact, the social responsibilities tied to having a younger sibling or being a parent led high-power individuals to engage in more prosocial, approach-related behaviors, such as involvement in voluntary organizations. More generally, we would predict that accountability would lead to less approach-related emotion, more attention to others, and more careful cognition in high-power individuals.

Individual and Cultural Differences

People vary in their levels of dominance (Moskowitz, 1994) in whether they rise in status (e.g., C. Anderson, John, et al., 2001)

and in how they lead (e.g., Eagly & Johnson, 1990; Eagly, Makhijani, & Klonsky, 1992). Culture predicates the extent to which power differences are accepted and consensually reinforced (e.g., in high-power-distance cultures) or disputed, challenged, and consensually negotiated (e.g., in low-power-distance cultures). How might one think about how individual differences and cultural factors moderate the effects of power on affect, cognition, and behavior?

In terms of individual differences, we predict that individuals who are predisposed to approach-related behavior will especially conform to the pattern of power-related affect, cognition, and behavior on gaining power (Hypothesis 28). Thus, one might make this prediction about highly extraverted or dominant individuals, already predisposed to approach. Consistent with this possibility, Goodwin et al. (2000) found that individuals who were high in trait dominance exhibited the same tendency to use stereotypes as those who were placed in a high-power experimental condition. Ironically, it is the extraverted, dominant individual who is more likely to gain power and, by implication, act in disinhibited fashion (for a review, see C. Anderson, John, et al., 2001). In contrast, one would expect different effects of power for highly introverted, inhibited individuals: They would likely be less vulnerable to the disinhibiting effects of power. Power may even enhance their introverted tendencies.

A similar logic applies to culture. We would expect cultures defined by high power distance (i.e., those cultures who endorse power differences) to facilitate disinhibition in the powerful as well as inhibition in the powerless (Hypothesis 29). Cultures defined by low power distance, in contrast, should moderate these effects by placing constraints on the behavior of high-power individuals and introducing incentives for low-power individuals to challenge power-related expectations (e.g., Kipnis, 1972).

Summary, Speculations, and Conclusions

High- and low-power individuals inhabit and, through their own actions, create strikingly different worlds. People feeling powerful experience approach-related moods and emotions; are more attentive to social rewards; construe others in terms of how they satisfy their own goals and needs; and cognize their social environment in more automatic, simplistic ways. They also act in a more disinhibited and at times counternormative fashion. People feeling powerless are more likely to feel negative moods and emotions; to attend to punishment and threat; to make more careful, controlled judgments about others' intentions, attitudes, and actions; and to inhibit their own behaviors and act contingently on others.

Throughout this review, we have pointed out the various gaps and limitations of the evidence with respect to each specific proposition. The body of evidence that we have reviewed suffers from more general problems. We have relied extensively on studies of proxies of power, most notably gender, ethnicity, and SES, and minority or majority status of group. Although status and power are quite salient to college students (C. Anderson, John, et al., 2001; Winter, 1988), studies that give power to college students may amplify the disinhibiting effects of power because of the participants' relative lack of experience in this domain. In most of the studies that we have reviewed, researchers have isolated select determinants of power (e.g., resource control), holding constant other potential determinants (e.g., expertise), or they have ensured that determinants (e.g., expertise and reward control) are consistent. Thus, we can say little about how the determinants of power combine, how they conflict, and what consequences ensue (see Bugental et al., 1989; Bugental & Lewis, 1999).

As researchers chart the consequences of power, several complex questions await them. A first is how the independent effects of power on affect, cognition, and behavior interact. Given the inherent complexity of these relations, we have remained agnostic as to their order of unfolding in their relation to power. Several interesting mediating links warrant attention. Power-related effects on moods and emotions, which lead to different kinds of social cognition (e.g., Lerner & Keltner, 2000), may in part account for why powerful individuals are more prone to judge others in relatively unsystematic fashion. The tendency for high-power individuals to misperceive others' intentions and attitudes may account for their increased tendencies to be aggressive and sexually forward (Kipnis, 1976). People may judge high-power individuals more accurately because high-power individuals provide more reliable cues of their attitudes, emotions, and personalities (see Henley & LaFrance, 1984; Snodgrass et al., 1998). High-power individuals may be more likely to stereotype others or perceive homogeneity in their social worlds because those with less power inhibit the expression of their actual attitudes (see Kelley & Stahelski, 1970, for a comparable analysis of competitive people). These and other observations highlight the promise of exploring the different routes by which power influences affect, cognition, and behavior.

A second question has to do with how power figures in the development and dynamics of social change, typically the strong suit of disciplines other than psychology. We have seen in this article that powerful individuals gravitate to positions of power; that power prompts disinhibited, self-serving behavior and stereotypic social perceptions; and that powerful individuals exert more influence on others. The very individuals who might keep in check this pattern of behaviors, those with less power, are constrained in thought, word, and action.

This scenario, portrayed at the individual level of analysis, points to clear processes by which leaders shape the culture of groups, organizations, subcultures, and governing bodies. This analysis just as readily reveals the conditions for social change: The excesses of powerful leaders—their propensity for disinhibited behavior and stereotypic, error-prone social perceptions—are certain to feed into the processes that lead to changes in leadership. These speculations make contact with social psychology's long-standing interest in authority and group dynamics, as seen in Lewin, Lippitt, and White's (1939) early investigation of authoritarian and egalitarian playgroups; Sherif, Harvey, White, Hood, and Sherif's (1961) Robbers Cave experiment; Janis's (1972) discussion of groupthink; and Emerson's (1962) lasting observation that low-power individuals constrain the actions of high-power individuals by affording them respect and status and thus controlling their public reputation.

Perhaps what is most promising about power as an object of inquiry is its interface between macro- and microprocesses. Students of social structure, institutions, class, ethnicity and race, and groups have long viewed power as an organizing force. So have students of cardiovascular response, neuroendocrinology, neurotransmitters, and physical health (e.g., Adler et al., 1994). As psychology moves toward an increasing synthesis in the theory

and study of these levels of analysis, we think that the effects of power that we have documented point to processes linking the more macro- and microlevels of social life.

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