

## When Power Does Not Corrupt: Superior Individuation Processes Among Powerful Perceivers

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To examine whether powerful people fail to individuate the less powerful, the authors assigned participants to either a high-power or low-power role for a computer E-mail role play. In 3 studies, participants in the high-power role made decisions and determined the outcomes of interactions; low-power role players had no power and relied on high-power targets for outcome decisions. Studies 1 and 2 found that high-power perceivers better individuated low-power targets. Study 3 demonstrated that high-power role players' superior judgment can be impaired by including a task that directs their responsibility toward organizational rather than interpersonal concerns. In all, results suggest that the effect of power on social judgment may be more complex and multifaceted than has previously been acknowledged.

Throughout human history, power has been a key feature of the social environment. Coups have been staged, wars fought, and hostile takeovers enacted. Powerful people have engineered lives, governments, and popular culture to maintain and strengthen their power. Democratic movements have tried to enforce the idea that power is given as part of a social contract in which the powerless consent to rule by the powerful, yet abuses of power have certainly occurred. Are these negative outcomes an inevitable by-product of differential power?

Evidence amassed by critical theorists, sociologists, political scientists, and social psychologists suggests that such negative consequences are highly probable. Specifically, research has found that people in powerful positions are more likely to stereotype the powerless (Fiske, 1993; Goodwin, Gubin, Fiske, & Yzerbyt, 2000), to distribute rewards in a way that favors their own powerful group (Chen, Lee-Chai, & Bargh, 2001; Sachdev & Bourhis,

1985, 1991), to attend only to information that confirms their expectations (Copeland, 1994; Ebenbach & Keltner, 1998), and to benefit from popular perceptions that they are more entitled to act coercively than are less powerful people (Molm, Quist, & Wiseley, 1994). If all of these things indeed occur, then we are left with a fairly dismal picture of the prospects for increasing equality and decreasing the negative effects of power.

However, even social psychology is not unanimous in its dire findings of how the powerful and powerless behave. In work on control deprivation, Ric (1997) demonstrated that participants not deprived of personal control were less likely to rely on stereotypes during impression formation than were control deprived. Louche (1982) found that, in a labor strike, power differences—particularly, differences in use of coercive action—were not related to differences in stereotyping. Even within single articles, the effects of power have been shown to depend on condition or individual differences. Although Chen et al. (2001) found that power priming led exchange relationship-oriented participants to distribute rewards in a self-serving way, participants with a communal relationship orientation were significantly less likely to distribute rewards unfairly. Similarly, Ng (1982) found that in-group favoritism in reward distribution could be reversed—in fact, that out-group favoritism resulted—if participants' power was simply made less secure.

In this article, we hope to contribute to the understanding of the important but (as often lamented by researchers) neglected variable of power. Although history and research have suggested that power is by its very nature negative and self-perpetuating, some work indicates that the effects of power are not wholly evil. Power may be inevitable, but perhaps in learning about its effects on judgment, we may find that there is hope after all.

It is difficult to give a verbal definition of power, though we tend to feel that we know it when we see it. Unfortunately for

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social psychologists, who need easily isolable constructs and clean operationalizations, power tends to be messy. Set the construct of "power" next to constructs such as "control," "dominance," "outcome dependency," or "influence," and you can watch the edges melt and blend together. Because of the conceptual (and, in fact, empirical) differences in these various constructs, it is helpful to establish precise distinctions among them.

Social psychology's approach to power hails from two primary sources. Perhaps most typical is Dahl's (1957) definition of power as the ability to compel others to do what you want them to do, or "power over" (see also Thibaut & Kelley, 1959). This is an explicitly social definition that requires some interaction between individuals or groups. A second popular definition follows Weber (1946) in saying that power is simply the "production of intended effects"; this implies that power could be exercised socially or through direct personal ability to get what one wants and is thus a broader view—the "power to." Later theorists have further specified that power should be considered the capacity or potential for influence or control (Copeland, 1994; French & Raven, 1959; Imai, 1993; Manz & Gioia, 1983). It is perhaps simplest to think of control and influence as a continuum of "ways to produce change or action in other people," with influence at the weakest end and control at the strongest.

In the work that is most relevant to the current studies, power has most often been operationalized as realized *outcome control*; that is, in some interaction or judgment task, the "high-power" person or perceiver (HPP) makes decisions that determine the outcomes of some target (cf. Copeland, 1994; Fiske & Dépret, 1996; Sachdev & Bourhis, 1985). This is an appropriate way to discuss *social* power, which is characterized by relationships between people or groups and the deliberate exercise of one's ability to influence. This approach is distinct from *personal* power, which involves one's ability to act for oneself, with agency.

This article follows a flurry of recent work on power and its effects (Copeland, 1994; Fiske, 1993; Fiske & Dépret, 1996; Goodwin et al., 2000; see, also, Sachdev & Bourhis, 1985, 1991). The dominant theory emerging from work by Fiske and colleagues is that people in high-power roles fail to individuate low-power targets and instead use stereotypes when thinking about the low-power targets.

Fiske (1993) argued that HPPs, such as bosses, tend to stereotype low-power people or perceivers (LPPs), such as employees, for three main reasons. First, the boss probably has quite a lot of employees, whereas each employee probably has only one boss; thus, the boss has high cognitive load and needs the efficient shortcut provided by stereotyping. Second, the boss's outcomes do not depend on the employees, but the employees do depend on the boss for performance evaluations, work assignments, and decisions about pay. Third, it is possible that people with dominant personalities are simultaneously drawn to positions of power and more likely to rely on stereotypes in perceiving their underlings (cf. Pratto, Sidanius, Stallworth, & Malle, 1994). Together, these assumptions and the overall theory constitute what Fiske (1993) called the "power as control (PAC) model" of stereotyping.

On further consideration, the fundamental tenet in the PAC is a somewhat perplexing claim. Although under some circumstances individuals with power might misuse it with little care for their underlings, in fact people typically occupy powerful positions because they have shown themselves to be competent and dedi-

cated leaders. Typically such persons feel a sense of responsibility toward their employees, and at a minimum, their goal is to successfully lead whatever group of workers over whom they have power. Accordingly, although one can imagine situations in which power holders rely on stereotypes to think about their employees, it would be surprising if this were the norm.

In fact, though most theories of power used in social psychology presume a model of the power holder as an absolute figure, beholden to no one, modern power is unlikely to match this prototype. An alternative view of power is provided by sociologists Hamilton and Biggart (1985), who stated that both powerful and powerless actors in a hierarchical relationship are bound in a dialectic of autonomy and obedience. To be sure, the autonomy of the powerless is more circumscribed, and their obedience is more obvious. However, the powerful are also required to *obey* the obligations and behaviors associated with their roles. That is, if a powerful member of an organization—the CEO, for instance—fails to obey the scripts for CEO behavior, then he or she is likely to lose the confidence of the organization. Subordinates may decide not to comply with orders, because they no longer perceive the CEO's power as legitimate or meaningful. The board of directors may decide to remove the CEO. Thus, to continue being powerful, the powerful person's options and behaviors are always bounded. This can be extended even to the most absolute-power despots we can think of: Their power always depends on their ability to mobilize a protective force or resources to sustain their power, and the ability to mobilize depends on their adherence to what is expected of them as despots.

Approaching power in this way—in which, indeed, the powerful person is not outcome-dependent on the powerless, but nevertheless must fulfill certain obligations that come with the powerful role—we can predict different consequences of power in modern group structures. The powerful person will always have a set of responsibilities and role obligations that must be obeyed to maintain power. Therefore, to be successful, the powerful actor should not simply ignore or stereotype subordinates. Instead, the powerful actor must know enough about subordinates to allow him or her to perform the job optimally. We believe that it is unrealistic to predict that HPPs will simply fail to attend to subordinates or that they will rely simply on stereotypes in their impressions of subordinates. To be effective at performing their own roles, HPPs undoubtedly need to know about subordinates.

Note that Fiske (1993) argued stereotypes are used in part because they are more efficient than individuating the various low-power targets. Numerous models of impression formation in the social psychology literature hold that impressions range on a continuum from the most category based or stereotypic to the most individuated or piecemeal (Brewer, 1988; Fiske & Neuberg, 1990). These models imply that if greater stereotyping occurs, then less individuation is seen; inversely, greater individuation implies less stereotyping. There is some question as to whether the use of a stereotype precludes individuation, and vice versa (see Oakes, Haslam, & Turner, 1994). Nevertheless, the PAC model research (Goodwin et al., 2000) has focused almost exclusively on stereotype use and only by implication has argued for differences in target individuation. The primary dependent variable examined in this research is perceivers' attention (i.e., reading times) to information consistent or inconsistent with an existing social stereotype, thus, with the category-based end of the impression forma-

tion continuum. The one set of findings based on individuation measures comes from Study 4 of Goodwin et al. (2000). In this study, LPPs appeared to base liking judgments for a set of targets almost exclusively on trait information about those targets, whereas HPPs' judgments were based equally on trait and social category information (i.e., major in college). Moreover, LPPs' impressions were based more on the trait information than were HPPs'.

In our work, we wished to more directly test the hypothesis that HPPs fail to individuate LPPs. Individuation is operationalized here as the ability to notice and remember the characteristics and actions of individual targets. For example, we used a free-recall measure to assess how well participants were able to remember specific information presented about each target. We also used the Taylor, Fiske, Etcoff, and Ruderman (1978) "who-said-what" task and collected trait ratings and paired-similarity ratings to assess individuation. All of these capture how well participants kept target-specific information straight and avoided confusing one target with another, as well as how similarly they viewed all the targets to whom they were exposed. Thus, rather than focus on stereotype use, our studies directly assessed individuation of the various targets.

These individuation measures also have the advantage of being less ambiguous than the reading-time measure used in the majority of Fiske's work (e.g., Goodwin et al., 2000). The meaning of reported differences in reading times is not entirely clear. Although the reported differences indicated relatively greater attention to the stereotype-consistent information by HPPs, this does not mean that the HPPs will necessarily show differential memory for this information, attribute this information dispositionally, or accept at face value the meaning of the presented information.

An additional difference between this work and that from other labs is in the nature of the power relations themselves. For example, in one design, Goodwin et al. (2000) gave HPPs 30% control of a decision to hire high school interns, while LPPs had no control of the decision. Participants then read applicant dossiers, of which two contained information stereotypical of Hispanics, and their reading time for stereotype consistent and inconsistent information was recorded and analyzed. Note that in this design, there is no assessment of the perceptions or the judgments given by the targets over whom power is exercised. In the current research, we were most interested in faithfully reproducing real-world social power relationships, such as those between bosses and employees or professors and graduate students. Consistent with our definition of social power, in our view a power design must feature an asymmetric assignment in which HPPs actually have power over LPPs, and LPPs are under the direct power of the HPPs. At work, for example, the boss has power over the employees, and the employees are under the power of the boss. Especially if we want to argue that members of these two roles perceive and judge each other differently on the basis of their power, then our laboratory designs must faithfully replicate the relationship. To ensure such an asymmetrical social power relationship, we define power as "outcome control over others" in this article. Our HPPs make decisions about important issues that affect LPPs, whereas the LPPs have no such decision-making authority.

Our goal, then, was to explore how power affects social judgment, using an asymmetric, reciprocal power relationship in which HPPs had outcome control over LPPs but were in no way outcome

dependent on LPPs. We also wished to use a broader range of dependent measures. To these ends, we created a computer role-play exercise in which participants were randomly assigned to a high-power or a low-power role and then participated in an E-mail exchange. With this design, every participant either had direct power over another target or was under the power of another target. To ensure that we could confidently assess the various effects of this manipulation, we used a number of social-judgment measures to examine attention, memory, and individuation. Moreover, it was clear from the content of the E-mail exchanges that LPPs might be better able to get what they wanted if they knew what the various HPPs were like. Therefore, the simulation offered the possibility to realize Fiske's (1993) suggestion that LPPs might spend energy and attention in individuating HPPs, because in this way the LPPs have a chance of bettering their own outcomes.

## Study 1

### Method

*Overview.* Participants came to a computer lab and were assigned to play a high-power role ("professor") or low-power role ("student") for a simulated E-mail interaction. Though participants believed they were actually interacting over a closed-circuit E-mail system with other participants, in fact all of their contacts were with scripted targets programmed into the computer. Participants spent more than an hour writing to and reading E-mails from four targets assigned to the opposite role (i.e., professors E-mailed only students and students E-mailed only professors). After the E-mail interaction phase was completed, participants answered a battery of questions about the interactions and the targets.

*Participants.* Eighty-five undergraduates at the University of Colorado at Boulder participated in the study in partial fulfillment of course requirements. Three participants expressed suspicion about the interactions, and therefore, their data were excluded from all analyses, leaving a total of 82 participants. Of these participants, 34 were men, 47 were women, and 1 did not identify gender.

*Stimulus materials.* The materials for the study were presented on Macintosh computers. A HyperCard program presented instructions to participants, administered questionnaires, described situations about which participants needed to communicate with others, and provided an E-mail system for participants to write and receive messages. Each participant saw 12 E-mails—3 E-mails from each of four targets. The program was carefully designed to create the appearance that the participant was engaging in actual, live E-mail interaction with four other experimental participants. A sample E-mail screen, showing what participants in the professor role actually saw during the study, is presented in Figure 1. The student version is shown in Figure 2.

Within each E-mail was embedded one piece of information relevant to the interaction at hand and one piece of irrelevant information. This information was controlled: Every participant, regardless of condition, dealt with the same 12 situations, presented in the same order. The E-mails that they received from each target were constructed to include the same pieces of relevant and irrelevant information, whether the sender was supposed to be a professor or a student. For example, in the interaction depicted in Figures 1 and 2, the relevant information was that he waited until the last minute to give (for the professor) or to begin (for the student) the assignment. The irrelevant information was that the target individual was once on the amateur golf circuit. Note that these same items appeared both when the target was ostensibly a professor and when he was a student. (See the Appendix for the complete set of situations and the relevant and irrelevant information embedded in each E-mail.)

Participants assigned to the professor role first read an E-mail with a request from a student and some background regarding information and

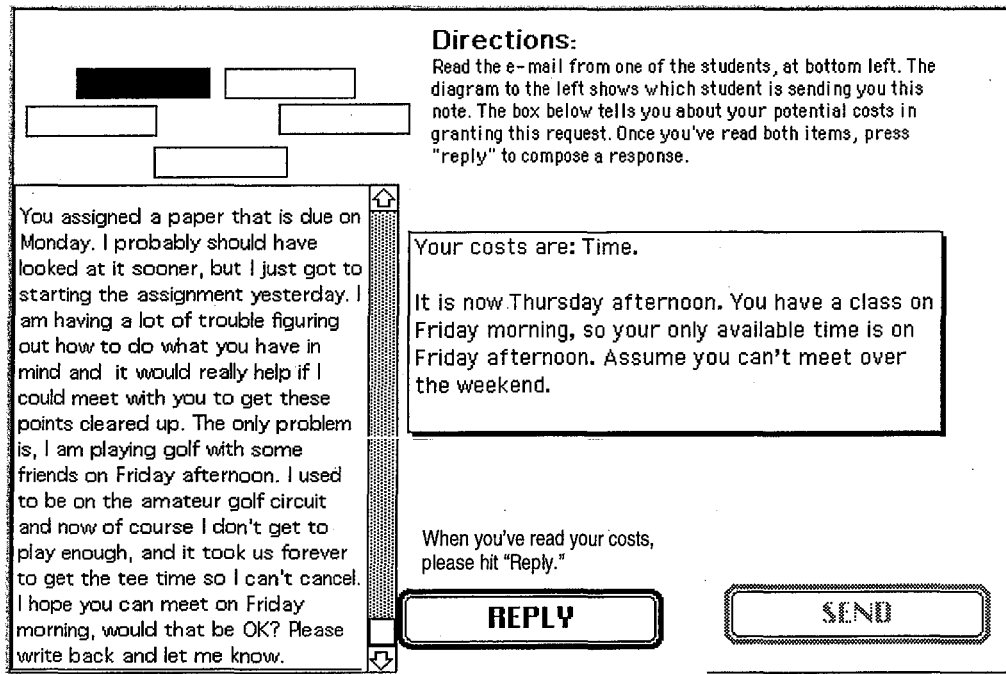


Figure 1. Sample E-mail screen (this is the version seen by professors/high-power perceivers). Above the E-mail text, a "From:" line, giving the sender's name, and a "Re:" line, giving the topic, were presented (as in Figure 2).

costs associated with the request. They then composed a reply. Participants assigned to the student role first were given some descriptive information and asked to make a request of the professor. Once this request was sent, and after a randomized delay, they received a response to their request from the professor. Note that although power differences were not explicitly pointed out through this information, it was clear that the student must simply await the verdict of the professor, who was free to make any decision. This design manipulated the psychological control of outcomes, through conferring decision-making power on one party and lack of decision control on the other. Although it is possible that adding control over some tangible outcome may lead to an even greater perception of a power difference, we believe that the psychological reality created by our manipulation captured well the state of mind under which HPPs and LPPs typically interact. As discussed later, a review of participants' E-mails indicated that power differences were psychologically real and salient to participants.

Each target could be individuated through the information presented. First, the relevant and irrelevant information presented in each exchange could be used to individuate the target. Further, the tone of the E-mails and the modal behavior were manipulated to give each scripted player a "personality." The participant had three separate interactions with each of the four targets. Across the three interactions, each target displayed language and behavior that constituted a personality characterized by one trait: irresponsible, rigid, competent, or unintelligent. The professor and student targets were written so that these characteristics applied equally, regardless of target role. The examples in Figures 1 and 2 come from the "irresponsible" target. In this and the other two situations involving that target, the target acted in a way that shirks responsibility, offering weak excuses for the behavior.

Participants completed three rounds of interaction with the four targets; each target appeared once in each round and always in the same order. This constituted the stimulus set for the study. With the exception of the E-mails and two screens that tested participants' memory for the names of the four

targets (see below), all other materials presented on the computer were exactly the same for participants assigned to both roles.

*Procedure.* Participants entered the lab and were seated in separate rooms, each with a Macintosh computer. They were told that they would interact via E-mail with four other players, though in fact all the E-mails they received were pre-scripted. Care was taken to ensure that it always appeared plausible that four targets were actually present. Participants were also told that the study would examine "how people conduct various kinds of interactions in a university setting." The instructions said that participants would take on the roles of "student" and "professor" for a role-play exercise and stated that assignment to role would be based on participants' responses to a questionnaire that would be presented on the computer.

Participants then completed an 18-item questionnaire that included the Personal Power Scale (O'Neill et al., 1988), an 11-item scale designed to assess a person's sense of his or her own agency and ability to control his or her own outcomes. This measure was included to see, first, whether a participant's sense of personal power might affect the efficacy of our power manipulation. Second, we wanted to find out whether personal power moderated the effects of social power on social judgment.<sup>1</sup> The remaining seven items in the scale were filler items. Assignment to condition was actually randomly predetermined. After a delay, during which participants believed that the computer scored the questionnaire, the participants were informed of their role assignment, and they were told that they would interact with four other participants who had been assigned to the other role.

<sup>1</sup> The Personal Power Scale, in our study, showed fairly low reliability, with  $\alpha = .60$ . We found no relationship between participants' own sense of personal power and the power they felt as a result of the lab manipulation,  $F(1, 79) = 0.86, ns$ . Further, personal power was never a significant predictor of social judgment over and above lab-manipulated power, and it did not moderate any reported relationships. Therefore, we do not discuss it further.

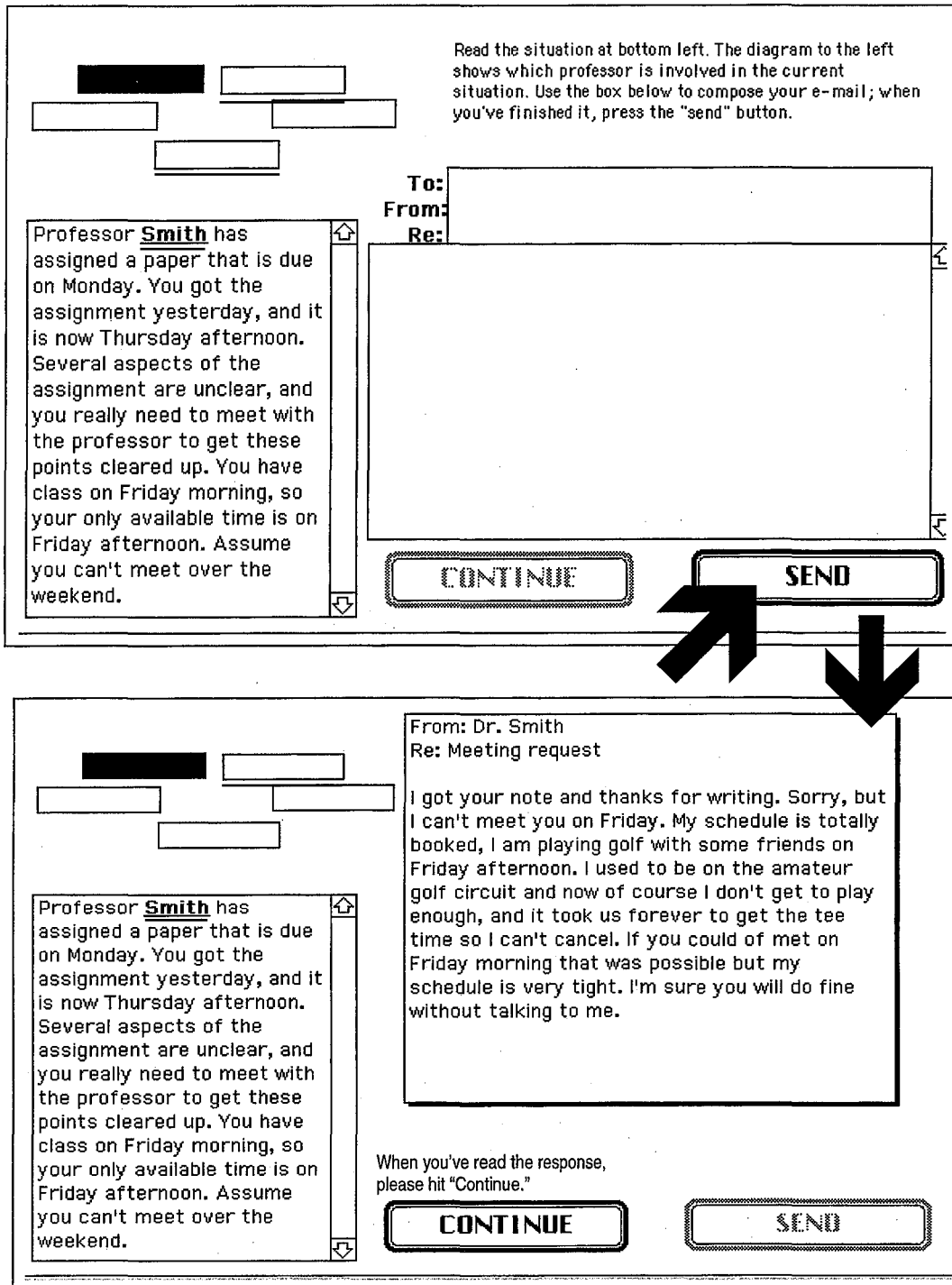


Figure 2. Sample E-mail screen (this is the version seen by students/low-power perceivers). This sample contains both the initial information seen by the student and a "professor's" response. The participant saw the upper screen first. Hitting the "send" button initiated a randomized delay, after which the lower screen with the professor's response appeared.

Participants were next required to learn the names of the four (scripted) others with whom they would interact, along with a spatial tag for each person, by using a schematic presented on the computer. They were quizzed to ensure that they learned the names and spatial location of targets to perfection.

To make the E-mail exchange as realistic as possible, we built a randomized delay into the program so that there was a variable waiting period between the time when one E-mail was sent and the next was received. This was especially important for participants in the student role, who were ostensibly waiting while a partner in another room composed a

direct reply to their requests. To keep participants involved during these delays, and to ensure that they processed the information they had seen about each target, participants were asked to keep a log of their contacts. They recorded each name, request, and how the situation was resolved. When these logs were later informally reviewed, the entries were generally quite detailed, no unusual entries or incorrect information appeared, and thus the log contents were not analyzed further. In addition, the spatial schematic was displayed throughout the E-mail exchange, with the position of the current target highlighted as in Figures 1 and 2. Participants were also required to type the target's name when they addressed each E-mail.

Once the E-mail session was completed, participants were presented with an extensive set of dependent measures (described in detail in the next section). After all questions were completed, participants saw a "thank you" screen that explained the purpose of the study. It debriefed participants about the experimental hypothesis but not about the deception regarding the interaction with the other participants. As each person left the lab, the experimenter asked a series of questions to probe for suspicion, then revealed that all interactions had in fact been preprogrammed.

*Dependent measures.* After exchanging the 12 E-mails, participants completed a total of four measures, all of which assessed the degree to which participants individuated the four targets. The logs were collected at this time so that participants could not rely on their written notes.

The first task examined memory for information encountered during the E-mail session. Participants performed a free-recall task in which they wrote down, on a paper questionnaire, as much information from the E-mails as they could remember, along with the name of the target to which the information applied. These items were later coded for recall of the 12 relevant and 12 irrelevant items.

Participants were then directed to return to the computer, where they completed the remaining three measures. The first was a confusions task, similar to that used by Taylor et al. (1978). The 24 pieces of information from the E-mails were randomly ordered and presented in succession, and participants were asked to indicate which target had provided the information. The four target names were arranged spatially on the computer screen to correspond with the spatial diagram used throughout the E-mail task, and participants clicked a radio button to select the desired target name. The extent to which a participant could correctly do this was used as an indicator of target individuation. Next, participants completed a trait-rating task. Each target was rated on 10 trait adjectives. These included the 4 traits characteristic of the various targets (irresponsible, rigid, competent, ignorant), 4 words of opposite meaning (conscientious, flexible, lazy, intelligent), and 2 filler adjectives. Participants indicated the degree to which the traits described each of the four targets, on a 7-point scale (1 = *not at all descriptive*, 7 = *highly descriptive*). Participants then completed a paired-similarity task, in which they were shown each possible two-member combination of the four targets they had seen and asked to rate the similarity between the two members of each pair (1 = *not at all similar*, 7 = *extremely similar*).

Finally, as a manipulation check, participants were asked to indicate how much power they felt they had in the E-mail situations, and, separately, the amount of control they had over the outcomes of the situations (1 = *not at all*, 7 = *a great deal*).

## Results

The two manipulation checks confirmed that professors (HPPs) felt more power than did students (LPPs). HPPs indicated that they felt they had more power in the E-mail situations ( $M_s = 6.15$  vs. 3.40),  $F(1, 79) = 99.93, p < .001$ , and more control over the situation outcomes ( $M_s = 5.95$  vs. 3.05),  $F(1, 79) = 103.72, p < .001$ . Thus, the manipulation of social power appears to have been successful. This experienced power difference was also apparent in the E-mails. For example, a role-playing professor composed the following E-mail in response to a request to submit a project late.

Dear Jim

I understand and am sympathetic to your situation, however the assignment was given to you long in advance with ample time for completing the assignment. It is now Thursday [*sic*] afternoon and you are just alerting me to the fact that you began your assignment [*sic*] late. I would be more than glad to meet with you on Friday morning, however your paper will sustain a drop in a half a grade for each day it is late.

Meanwhile, a role-playing student wrote the following, in one interaction:

Dr. Smith,

I am a student in one of your classes. You assigned our paper to be due on Monday, but I have a few questions about it I would like to talk to you about [*sic*]. They are just basic questions about the format and the kind of information we need to include in our paper. I have a 9:00 am class on Friday morning, so I was wondering if you could have time to meet with me at any time after 10:00 to discuss my questions that I have. I would really appreciate it.

Thank you for your time.

*Recall measure.* An item was coded as correct from the free-recall task if it contained the gist of 1 of the 24 items, along with the correct name of the target. The total number of relevant (maximum = 12) and irrelevant (maximum = 12) items recalled by each participant was computed. A reliability check showed that two independent coders agreed 82% of the time in scoring the responses.

In this analysis, we used a 2 (participant power: high vs. low)  $\times$  2 (information type: relevant vs. irrelevant) analysis of variance (ANOVA), with repeated measures on the second factor. Across information type, HPPs correctly recalled on average more pieces of information than did LPPs ( $M_{\text{HPP}} = 4.10$  vs.  $M_{\text{LPP}} = 1.54$ ),  $F(1, 79) = 33.60, p < .001$ . The main effect for information type was also significant, such that participants recalled more relevant (3.75) than irrelevant (1.98) items,  $F(1, 79) = 35.26, p < .001$ . These main effects were qualified by a significant Participant Power  $\times$  Information Type interaction. As is clear in Table 1, HPPs recalled more items than did LPPs primarily on the relevant statements,  $F(1, 79) = 31.17, p < .001$ . High-power perceivers recalled an average of 5.76 relevant items versus 1.59 for LPPs,  $F(1, 77) = 44.58, p < .001$ . However, HPPs recalled an average of 2.43 irrelevant items versus 1.49 for LPPs,  $F(1, 78) = 2.90, p < .10$ . Thus, HPPs clearly attended to information about LPPs much more than LPPs did to information about HPPs. Further, HPPs were especially attentive to information that was relevant to the interaction.

*Confusions task.* Performance on this task indicated whether power affected participants' ability to attribute information to the correct source and to distinguish the targets from each other. The dependent variable for this analysis was simply a count of the number of items correctly attributed; that is, if the participant correctly responded that it was "Jim/Dr. Smith" who said he "used to be on the amateur golf circuit," then that counted as one correct identification, in this case, on an irrelevant item. As in the free-recall task, the maximum number of correct pieces of information was 24, the 12 relevant and 12 irrelevant items scripted into the E-mails.

Table 1  
Free Recall and Correct Target Identifications From the Confusions Task as a Function of Perceiver Power and Information Type (Studies 1-3)

Study/condition	Free recall				Correct identification			
	Relevant		Irrelevant		Relevant		Irrelevant	
	M	SD	M	SD	M	SD	M	SD
Study 1								
HPPs	5.76	3.28	2.43	2.46	8.48	2.04	7.07	2.04
LPPs	1.59	1.77	1.49	1.45	4.68	2.45	5.08	2.31
Study 2								
HPPs	5.34	3.37	2.88	2.19	8.34	2.51	7.36	2.17
LPPs	2.55	2.14	2.03	2.12	6.28	2.67	5.38	2.48
Study 3								
HPPs	4.65	1.53	1.88	1.56	5.14	1.37	5.02	1.41
LPPs	3.56	1.92	1.72	1.64	5.07	1.33	4.67	1.44

Note. Maximum possible score in any cell for Studies 1 and 2 is 12. Maximum possible score in Study 3 cells is 6. HPPs = high-power perceivers; LPPs = low-power perceivers.

Again there was a main effect of participant power, such that HPPs correctly identified more targets than did LPPs ( $M_{\text{HPP}} = 7.78$  vs.  $M_{\text{LPP}} = 4.68$ ),  $F(1, 80) = 45.38$ ,  $p < .001$ . There was also a significant main effect for information type, such that more relevant (6.63) than irrelevant (6.10) items were correctly attributed overall,  $F(1, 80) = 4.65$ ,  $p < .04$ . These main effects were qualified by a significant Power  $\times$  Information Type interaction,  $F(1, 80) = 15.01$ ,  $p < .001$ . As is clear in Table 1, HPPs' ability to correctly identify the source of the statements was particularly strong on relevant items. However, simple contrasts show that HPPs correctly identified both more relevant items than did LPPs ( $M_{\text{HPP}} = 8.48$  vs.  $M_{\text{LPP}} = 4.68$ ),  $F(1, 78) = 55.11$ ,  $p < .001$ , and more irrelevant items than did LPPs ( $M_{\text{HPP}} = 7.07$  vs.  $M_{\text{LPP}} = 5.08$ ),  $F(1, 78) = 16.91$ ,  $p < .001$ .

Thus, HPPs showed superior ability to keep track of the information provided by their interaction partners. This difference was especially strong on information relevant to the situation at hand: They were particularly likely to better know which target had supplied which piece of information that bore directly on the issue being dealt with in a given interaction.

**Trait ratings.** Recall that a "personality" was embedded in the E-mails from each target. Participants rated all four targets on eight traits, four that characterized one of each of the targets (i.e., irresponsible, rigid, competent, ignorant), and four that were the opposites of these traits (i.e., conscientious, flexible, lazy, intelligent). We examined participants' ability to recognize and distinguish the four personalities through a 2 (participant power: high vs. low)  $\times$  2 (trait type: characteristic vs. uncharacteristic)  $\times$  2 (target: correct vs. other) mixed-model ANOVA. A target was "correct" if the characteristic trait correctly described that target; for example, Jim was the correct irresponsible target, whereas Leah, Sarah, and Pat were the three other targets. Thus, individuation is indicated by high ratings on the characteristic traits and low ratings on the

uncharacteristic traits for the correct targets. In contrast, the other targets should be rated more moderately on both the characteristic and uncharacteristic traits as these were neither particularly present nor absent for these targets. Put differently, the difference in the ratings on characteristic versus uncharacteristic traits should be larger for the correct than the other targets (a Trait Type  $\times$  Target interaction), and we expected that power would moderate this interaction.

The analysis indeed revealed a significant three-way interaction of Power  $\times$  Trait Type  $\times$  Target,  $F(1, 80) = 24.78$ ,  $p < .001$ . The means appear in Table 2. The interaction indicated that the predicted pattern of a larger characteristic versus uncharacteristic difference for correct targets than for other targets was in fact stronger for HPPs than for LPPs. To confirm this interpretation, we examined the simple two-way interactions of power and trait type at each level of target. Indeed, HPPs were more likely than LPPs to see the characteristic traits as descriptive, and the uncharacteristic traits as less descriptive, of correct targets,  $F(1, 80) = 24.49$ ,  $p < .001$ . In contrast, the simple two-way interaction within other targets indicated that HPPs in fact saw the uncharacteristic traits as better descriptors and the characteristic traits as worse descriptors when evaluating other targets, relative to LPPs,  $F(1, 80) = 7.62$ ,  $p < .008$ . Thus, HPPs did not simply overgeneralize the presence of characteristic traits, and the absence of uncharacteristic traits, to all targets but instead saw them as appropriately present for just the correct targets.

Several additional effects were significant in the trait-ratings analyses, but all of them were involved in the three-way interaction reported above. Overall, characteristic traits were seen as more prevalent than uncharacteristic traits,  $F(1, 80) = 30.80$ ,  $p < .001$ , and this difference was especially large for HPPs,  $F(1, 80) = 12.89$ ,  $p < .001$ . Further, the two-way interaction of trait

Table 2  
Trait Ratings as a Function of Perceiver Power, Target, and Trait Type (Studies 1-3)

Study/condition	Correct targets				Other targets			
	HPP		LPP		HPP		LPP	
	M	SD	M	SD	M	SD	M	SD
Study 1								
C	4.90	0.92	4.11	0.64	3.52	0.54	3.82	0.41
UC	2.95	0.89	3.64	0.66	4.15	0.45	4.00	0.46
C-UC	1.05		0.47		-0.63		-0.18	
Study 2								
C	4.80	1.03	4.13	1.15	3.30	0.56	3.56	0.74
UC	3.13	0.80	3.26	0.92	4.13	0.44	3.93	0.62
C-UC	1.67		0.87		-0.83		-0.37	
Study 3								
C	5.52	0.99	4.97	1.06	3.08	0.70	3.50	0.59
UC	2.62	1.10	2.52	0.88	3.83	0.59	3.77	0.60
C-UC	2.90		2.45		-0.75		-0.27	

Note. Ratings were made on a 1-7 scale with 7 = extremely characteristic. HPP = high-power perceiver; LPP = low-power perceiver; C = characteristic; UC = uncharacteristic.

type and target type was significant, indicating that characteristic traits were matched more with correct targets and uncharacteristic traits with other targets,  $F(1, 80) = 68.66, p < .001$ .

*Paired-similarity task.* For this task, participants were presented with each two-member combination of the four targets they had seen and asked to rate how similar these were. In fact, the four scripted target personalities did have varying degrees of similarity to each other. One pair of targets was highly similar because of their similar characteristic traits (the irresponsible and the ignorant targets); two were moderately similar because of the negative valence of their characteristic traits (the irresponsible and rigid targets and the ignorant and rigid targets); and three were very dissimilar because neither their traits nor the trait valences were similar (the irresponsible and competent targets, rigid and competent targets, and ignorant and competent targets). We analyzed this measure in a 2 (participant power: high vs. low)  $\times$  3 (degree of similarity: high vs. medium vs. low) ANOVA with repeated measures on the second factor. The relevant means appear in Table 3.<sup>2</sup>

Overall, HPPs' average ratings of similarity were lower than those of LPPs ( $M_{\text{HPP}} = 3.58$  vs.  $M_{\text{LPP}} = 4.00$ ),  $F(1, 80) = 15.13, p < .001$ , indicating that HPPs were less likely to view the targets as all alike. Further, the test of the Linear Contrast  $\times$  Participant Power interaction revealed that HPPs correctly discerned the linear pattern of similarity among the targets—recognizing that some targets were in fact more and less similar than others,  $F(1, 80) = 7.82, p < .01$ . As is clear from the means, LPPs showed no such sensitivity.<sup>3</sup>

### Discussion

The free-recall task shows that HPPs recall more information about LPPs than LPPs do about HPPs, especially when the information is relevant to the task at hand. The confusions task shows that HPPs were better able to keep straight which targets provided specific pieces of information—again, especially information relevant to the task. High-power perceivers recognized the presence

of four specific personality traits in the group of targets, and they were able to distinguish between targets with and without these traits, whereas LPPs' responses to the trait-rating task showed that they were less likely to make these distinctions. Also, HPPs were sensitive to the actual degrees of similarity between pairs of targets, but LPPs did not pick up on the real differences in target-pair similarity.

These analyses provide a strong, consistent conclusion: Participants in the low-power role were less likely to individuate HPP targets, they remembered less information about them, and they saw the HPPs as more homogeneously similar to one another. High-power participants successfully differentiated LPPs, remembered much about them, and saw them as more heterogeneous.

These results are striking in part because they are at odds with prior work on power and stereotyping (Ebenbach & Keltner, 1998; Goodwin et al., 2000; Sachdev & Bourhis, 1985). In considering our results, we wondered about two alternative explanations for our findings. First, it could be that the roles we used in our design affected participants' behavior and judgments. Perhaps our participants, accustomed to being "students" but finding a "professor" role novel, were simply more interested when assigned to the professor role. They may have enjoyed this role more and may have been more involved because of its novelty. Alternately, perhaps our participants came into the lab with particular expectations about how a professor should behave and then strove to embody those expectations in their behavior. For example, if participants believed that good professors pay attention to students and get involved in their problems, then those assigned to the professor role may have tried very hard to do these things. Those assigned to be students, on the other hand, were merely continuing in a role that was familiar to them and would have felt no compunction to be more vigilant than they would usually be.

A second alternative explanation concerned the level of processing engaged in by HPPs versus LPPs. Recall that LPPs always composed a message, then received a reply from the HPPs, which contained the relevant and irrelevant information. High-power perceivers, on the other hand, always received a request from the LPP target that contained the relevant and irrelevant information and then made a decision and composed a response. It is possible that HPPs processed the embedded information more than did LPPs because they had to make decisions using that information, whereas LPPs did not especially need to attend to the responses if they did not wish to do so. As mentioned earlier, we believe that decision making is indeed part of the distinction between real-world power holders and the powerless. However, it is important that differential processing be ruled out as a possible source of our differences.

Table 3  
Paired Similarity Ratings (Studies 1–3)

Study/condition	Actual (scripted) similarity					
	Low		Moderate		High	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Study 1						
HPPs	3.33	1.02	3.67	1.14	4.12	1.70
LPPs	3.98	0.81	4.29	0.91	3.45	1.57
Study 2						
HPPs	3.84	0.81	3.08	1.07	4.02	1.68
LPPs	3.98	0.73	3.62	1.31	3.75	1.68
Study 3 <sup>a</sup>						
HPPs	3.33	1.09	3.16	1.56		
LPPs	3.21	1.15	4.05	1.56		

Note. Similarity ratings were made on a 1–7 scale with 7 = *extremely similar*. HPP = high-power perceivers; LPP = low-power perceivers.

<sup>a</sup> Study 3 did not have high-similarity pairs.

<sup>2</sup> It is important to note that the three levels of the "degree of similarity" factor collapsed across unequal numbers of ratings because of the different numbers of target pairs that fall into each level (high has one pair, moderate has two pairs, and low has three pairs). This implies that our estimates for the various levels of similarity may not be equally stable.

<sup>3</sup> Because there is some suggestion that people's exercise and perception of power differs based on gender (cf. Degelman et al., 1991; Offermann & Schrier, 1985), we also examined whether there were any gender effects in any of the analyses. In fact, no evidence of any gender effects or interactions with gender were obtained.



Study 2 was designed specifically to examine these two threats to our conclusions.

## Study 2

### Method

**Overview.** Study 2 replicates Study 1, with a few specific changes. First, for Study 2, HPPs were assigned to play "judges" and LPPs were assigned to play "attorneys." These roles offered possibilities for vivid and engaging role play, but they were roles that we could be certain our participants had no experience occupying. Second, we augmented the "attorney" log (the packet in which participants kept notes on what occurred during the E-mail session) by adding two questions to increase processing of the judges' replies. Third, we required players in both roles to memorize both the first and last name of each target. In Study 1, students had to learn professors' last names only ("Dr. Smith"), but professors used students' first names ("Jim"). First names are easier to remember, therefore Study 2 equalized the names that must be learned.

**Participants.** Eighty-seven undergraduates at the University of Colorado at Boulder participated in partial fulfillment of a course requirement. Of these, 3 participants' data were dropped from the analysis because the participants were not able to finish the study in the allotted time and needed to leave for a class. No participants reported suspicion of the manipulation. Of the participants included in analyses, 30 were men and 54 were women.

**Stimulus materials.** The same E-mails and scripted targets from Study 1 were adapted to a courtroom context. Almost all situations and embedded relevant and irrelevant information were easily modified to fit the new context. For example, instead of needing to meet about a term paper, attorney Jim Smith now requested a meeting to review evidence. As in Study 1, Jim had put off looking at the evidence until the last minute, and he was playing golf on Friday. Similar changes were made for all 12 E-mails.

**Procedure.** The procedure for Study 2 was identical to that used in Study 1, except for two minor changes. First, this study was presented as examining "how people conduct various kinds of interactions in a courtroom setting." Second, the attorneys' log was changed to include two new questions. First, after each judge's response was received, attorneys were asked to summarize the content of the response. Further, they were told, "Assume you will continue interacting with this judge on this topic. What do you think you will do next about this issue?" Attorneys made log entries to both of these queries before continuing to the next E-mail. These two changes required attorneys to process the judges' E-mails in a manner analogous to judges' processing of the attorney E-mails, including making decisions about how to proceed on each issue.

**Dependent measures.** The measures from Study 1 were adapted to reflect minor content changes in shifting from the university to the courtroom setting. Otherwise, all dependent measures in Study 2 were identical to those in Study 1.

### Results

As in Study 1, gender was included as a factor in all reported analyses. It did not predict or moderate any results and therefore is not discussed further. Again, the two manipulation checks confirmed that judges (HPPs) felt more powerful than did attorneys (LPPs). High-power perceivers indicated that they felt both more power in the situations ( $M_s$  6.19 vs. 2.73),  $F(1, 81) = 169.70, p < .001$ , and more control over outcomes ( $M_s$  5.95 vs. 2.63),  $F(1, 81) = 135.46, p < .001$ . Again it appeared that social power was successfully manipulated in this paradigm. In addition, the E-mails written by participants indicated again that the psychological experience of power differed on the basis of assigned role. A role-

playing judge wrote the following, in response to an E-mail asking for a committee recommendation:

Jim

Are you sure you are responsible enough to even inquire about this position. Do you know all of the responsibilities this entails? research [sic] further about it and let me know if you think you are motivated enough and can handle it. Write me back on your confidence level and why you are the best for this position.

A role-playing attorney, meanwhile, wrote the following:

Your Honor

I am most embarrassed [sic] to come to you with this request. I was in a car accident yesterday and could not appear in your courtroom. I can provide evidence of my duration in the emergency room. If you could please delay the proceedings by one day, it would be greatly appreciated.

Attorney

Our primary hypothesis for Study 2 was that the results of Study 1 would be replicated, thus indicating that obtained effects were due to the power manipulation and not to the particular roles used or to differences in processing. As will become clear, this hypothesis was supported.

**Recall measure.** The free-recall task was again used to assess participants' memory for the relevant and irrelevant information embedded in the E-mails. Participants' responses were submitted to a 2 (participant power: high vs. low)  $\times$  2 (information type: relevant vs. irrelevant) ANOVA with repeated measures on the second factor. As can be seen in Table 1, HPPs recalled more total pieces of information than did LPPs ( $M_{HPP} = 4.11$  vs.  $M_{LPP} = 2.29$ ),  $F(1, 77) = 13.78, p < .001$ . In addition, all participants correctly recalled more relevant ( $M = 4.00$ ) than irrelevant ( $M = 2.47$ ) statements,  $F(1, 77) = 26.95, p < .001$ . Both of these main effects were qualified by a significant Power  $\times$  Information Type interaction, which again showed HPPs correctly recalling more items than LPPs primarily on the relevant statements,  $F(1, 77) = 11.32, p < .002$ . High-power perceivers recalled an average of 5.34, and LPPs recalled an average of 2.55 relevant statements,  $F(1, 77) = 18.97, p < .001$ . On irrelevant statements, HPPs recalled an average of 2.88, and LPPs recalled an average of 2.03,  $F(1, 77) = 3.07, p < .09$ . Again we find that HPPs attended to the E-mails better than LPPs did and that HPPs were especially attentive to relevant information.

**Confusions task.** Study 1 results were largely replicated for the confusions task. As shown in Table 1, HPPs correctly matched more information to its target source ( $M = 7.81$ ) than did LPPs ( $M = 4.88$ ),  $F(1, 82) = 16.93, p < .001$ . A main effect was also observed for statement type, such that all participants correctly matched more relevant ( $M = 7.36$ ) than irrelevant ( $M = 6.42$ ) items,  $F(1, 82) = 19.25, p < .001$ . In Study 1, the power difference, although significant for both types of items, was even larger on the relevant items. However, in Study 2, there was no interaction between participant power and information type on the confusions task. Thus, HPPs' superior recognition on this task was not different for irrelevant and relevant items.

**Trait ratings.** The trait-rating data completely replicated Study 1 results. The same traits were used and were assigned to the same targets as in Study 1. Trait ratings were submitted to a 2

(participant power: high vs. low)  $\times$  2 (trait type: characteristic vs. uncharacteristic)  $\times$  2 (target: correct vs. other) mixed-model ANOVA. Again, the three-way interaction was significant, such that characteristic traits were rated higher and uncharacteristic traits were rated lower, for the correct targets relative to the other targets, and this was especially true when the participants had high power,  $F(1, 82) = 9.63, p < .003$ . (See Table 2 for means.) The simple two-way interactions within levels of target again confirmed that HPPs were better both at recognizing the correct scripted personalities and at not overgeneralizing scripted traits. For correct targets, HPPs were more likely than LPPs to see characteristic traits as descriptive, and uncharacteristic traits as not descriptive,  $F(1, 82) = 5.42, p < .03$ . For other targets, again HPPs saw the uncharacteristic traits as more descriptive and the characteristic traits as less descriptive, relative to LPPs,  $F(1, 82) = 6.74, p < .02$ . Trait ratings from Study 2, then, confirm the finding that HPPs do a better job than LPPs at differentiating between targets and identifying their distinct personalities.

As in Study 1, several additional effects were significant in the trait-ratings analyses, but all of them were involved in the three-way interaction reported above. Overall, characteristic traits were seen as more prevalent than uncharacteristic traits,  $F(1, 82) = 13.62, p < .001$ . The Target  $\times$  Condition interaction was also significant, indicating that on average the correct targets were given higher ratings than the other targets by HPPs, whereas LPPs' ratings were nearly equal,  $F(1, 82) = 7.95, p < .007$ . Finally, the Trait  $\times$  Target interaction, showing that characteristic traits were generally ascribed to correct targets and uncharacteristic traits to other targets, was again significant,  $F(1, 82) = 86.86, p < .001$ .

*Paired-similarity task.* The paired-similarity data reflect trends that support the Study 1 findings, but no effects on paired similarity reached significance. Again, participants rated the similarity of each possible pair of targets on a 1–7 scale. Results were analyzed in a 2 (participant power: high vs. low)  $\times$  3 (scripted similarity: high vs. medium vs. low) mixed-model ANOVA. The significant main effect of participant power in Study 1 appeared as a marginal main effect of participant power in Study 2. As shown in Table 3, HPPs saw targets as somewhat less similar ( $M = 3.62$ ) than did LPPs ( $M = 3.82$ ),  $F(1, 82) = 3.59, p < .07$ . The Participant Power  $\times$  Scripted Similarity interaction, testing participants' ability to perceive the linear pattern of differences in target-pair similarity, was not replicated in Study 2,  $F(1, 82) = 0.87, ns$ . Thus, Study 2 results on the paired-similarity measure offer only partial replication of Study 1.

## Discussion

Results from the recall and individuation measures in Study 2 demonstrate that our findings in Study 1 were indeed due to differences in the power roles occupied by participants, and not to either the specific roles we used or any differences in depth of processing. Taken together, the first two studies offer compelling evidence that being in a high-power position does not necessarily lead individuals to stereotype the powerless or to pay poor attention to them; in fact, our results suggest that just the opposite happens. HPPs appear to do a better job attending to and individuating low-power targets.

Although work discrimination cases and personal experience may seem to offer intuitive support for Fiske's (1993) PAC model

(certainly, there are cases in which upper management is guilty of treating workers in a stereotyped and discriminatory manner), we would argue that counterexamples are just as easy to generate. Think, for example, of real-world professors and students. Although in large lecture courses professors may not be able to get to know all students personally, in general the professor is at least attuned to task-relevant differences among students such as who does good work, who participates in class, and who wants to go on to graduate school. Many students, on the other hand, appear somewhat oblivious to even task-relevant characteristics of their professors (beyond, perhaps, "easy grader" vs. "hard grader"). Such examples occur throughout many domains, including the very work domains in which the PAC model would predict greater stereotyping by HPPs.

Given the empirical evidence in Studies 1 and 2, then, it is clear that effects of power on social judgment are by no means invariant. After establishing that HPPs do, at least sometimes, outperform LPPs at individuating targets, we decided to explore a possible boundary condition of this effect.

One potential issue that could affect our participants' responses was the possibility that HPPs felt a greater sense of responsibility in the interaction context.<sup>4</sup> Researchers working in the power domain have often predicted that differences would be driven by low-power individuals' greater motivation to attend to individuating information, given their desire to improve their own outcomes (Ebenbach & Keltner, 1998; Erber & Fiske, 1984; Fiske, 1993). At the same time, it is well established that responsibility can lead to greater accuracy motivation (e.g., Lerner & Tetlock, 1999). Perhaps, here, the HPPs' accuracy motivation because of increased responsibility simply outweighed LPPs' accuracy motivation because of desire to increase control.

Kipnis (1972) discussed at length the question of whether power leads to corruption (acting for one's own gain or exploitation of others) or to responsibility (acting in a compassionate manner to serve others). Researchers have found evidence for both compassionate power (Cartwright & Zander, 1968; Chen et al., 2001) and for a more exploitative power (Chen et al.; Deutsch & Krauss, 1960; Kipnis, 1972). However, as Kipnis (1972) noted, it is likely that responsibility–compassion and exploitation–corruption do not represent a bipolar structure of power. Instead, whether power is seen as compassionate or corrupt may have to do with the context and target of the power.

For example, a manager in a company must make decisions that elevate the interests of the company and its shareholders. These decisions may go against the wishes or interests of the larger community and thus be seen popularly as immoral or corrupt. However, the manager has a duty—which can, in fact, be legally enforced through the courts—to protect the shareholders' interests

<sup>4</sup> Thanks go to many colleagues, both at the University of Colorado and those met at the American Psychological Society's 1999 Convention, for this suggestion. Evidence for this possibility was also provided from a pilot study we conducted prior to Study 3. In this study, we provided two levels of high-power induction: a stronger level, in which participants' power was emphasized and made more salient, and a weaker level, comparable to that used in Studies 1 and 2 here. Participants in the stronger power condition reported feeling more responsible to the low-power targets and more concerned with satisfying their needs than did participants in the weaker power condition.

first and foremost. A manager who accepts an avoidable financial loss in order to favor the community's interests will be seen as breaching his or her obligations—he or she will, in fact, be seen as irresponsible (see Kipnis, 1972). More simply, once a company employee transitions to a management role, he or she acquires a whole new set of responsibilities and issues of concern. The new manager will have to learn to balance the demands of people who report to him or her with the expectations of shareholders and executives. Whether a consequence of motivation or simply of a new level of awareness and job content, this suggests that the idea of power's invoking responsibility is not at all unique to our participants, our setting, or our manipulations. Instead, it is likely that power often imbues a sense of responsibility; however, the scope and target of that responsibility can change.

In our first two studies, the only available target for HPPs' responsibility was the LPP targets. However, given that in the real world most people in power must share both interpersonal and organizational responsibility, we might expect attention by real world HPPs to these two concerns to trade-off against one another. As discussed earlier, Hamilton and Biggart (1985) proposed that power holders are required to obey the demands of their roles. In our first two studies, what is expected of HPPs as power holders is that they administer subordinate requests appropriately. Thus, they are attending well to subordinates. But if role expectations go beyond the interpersonal and include more organization-centered duties, then perhaps attention to subordinates will also change.

To explore this possibility, we designed a third study, which examined whether HPPs would continue to show superior individuation of LPPs in an organizational context that made it necessary for them to focus on more than one area of responsibility.

### Study 3

#### Method

*Overview.* The design used in Study 3 is quite similar to those of Studies 1 and 2. Participants were assigned to play the role of either a judge (HPP) or an attorney (LPP) in a simulated computer interaction. Here, however, we added an administrative task in which participants had to read and respond to a series of memos, regarding the operation of the court system. Judges were responsible for making decisions on these administrative matters. Attorneys read the memos, but had no institutional responsibility to make decisions. The E-mail interactions and dependent measures remained largely the same as in earlier studies.

*Participants.* Ninety undergraduates from the University of Colorado at Boulder participated in the study in partial fulfillment of course requirements. Four participants' data were deleted because the participants kept their log notes while completing the dependent measures, thus potentially relying on the notes rather than on their own recall. Therefore, 86 participants' data are included in these analyses, including 31 men and 55 women.

*Stimulus materials.* The materials for Study 3 were presented on Macintosh computers and were programmed using HyperCard. Most materials were the same as those in Studies 1 and 2, but because changes were fairly involved, we describe the new materials in some detail.

After reading instructions, participants were shown a screen that listed two inboxes: one, labeled *E-mail inbox*, contained six E-mail titles and the other, labeled *memo inbox*, contained six administrative memo titles. This screen served as a dispatch center for participants, showing them the tasks they were to complete and sending them to other screens to work on those tasks. Participants were free to work on E-mails or memos as they wished, with the sole restriction that they must complete each group in the order

presented. Clicking on a title took participants to either an E-mail screen (identical to those used in the first two studies) or a memo screen. When they finished the current task, they were returned to the dispatch screen.

All E-mails and E-mail targets were exactly the same as those used in the prior studies, and a similar spatial schematic was used; however, to compensate for the added time required to complete administrative tasks, we dropped one target (Pat Robinson, "ignorant") from the E-mail portion. Therefore, all participants interacted with Jim Smith (irresponsible), Leah Leyden (rigid), and Sarah Wyatt (competent). Further, one E-mail from each target was removed, so that each participant saw two E-mails from each target, for a total of six E-mails. These E-mails were listed in the same order, in the E-mail inbox, as they had been presented in the prior studies. All embedded information (i.e., characteristic traits, relevant and irrelevant information) remained unchanged.

The administrative memos consisted of notes from various offices in the court administration, giving background on issues of organizational importance and asking for decisions about the issues. For example, the first memo said the following:

As you may be aware, Judge Harris is retiring this month after 20 years on the family court bench. The Judge was handling a very large portion of the family court caseload and we have been notified that there are no plans to hire a new judge for these duties. Therefore it will be necessary to find ways for the court to accommodate cases with one less judge.

At this point, the most promising option is to limit family court cases to Tuesday and Thursday only. The two remaining family court judges report that most of their other cases (those not involving family court) are scheduled on Mondays and Wednesdays. An additional judge has volunteered to help out, but her docket is full on Mondays, Wednesdays and Fridays for the next several months. Moving family court cases to Tuesdays and Thursdays will allow current judges to absorb the caseload without causing excessive work for them.

However, at the present time cases are scheduled all day Monday through Friday for the next three months. If the change is made now, a huge number of cases will need to be rescheduled and the delays may inconvenience citizens who need to come before the court, as well as their attorneys. If the change is not made now, judges will somehow have to cover the extra load, and other cases (and other citizens) may then need to be delayed.

As in the E-mails, particular kinds of information were embedded in each memo. Specifically, each memo included an item of background information (here, that Judge Harris is retiring after 20 years) and an issue to be decided (whether to schedule family court cases on Tuesdays and Thursdays only). Thus, just as there were 12 pieces of E-mail information (six relevant and six irrelevant) to be used later as memory probes, there were also 12 pieces of administrative memo information (six backgrounds and six issues) to be used as probes.

Judge participants (HPPs) were directed to compose a response that gave a decision about each issue. To this end, they read a memo, such as the example above, and the instructions, "Please consider this issue and write a memo to the county court system giving your decision and reasoning." Attorney participants (LPPs) were told that, like in a real organization, they were responsible for knowing what administrative decisions were made. In addition to the example above, an attorney's memo provided a decision that ostensibly represented the consensus of the current group of judges. For example, for the Judge Harris memo, attorneys read,

On balance, the judges felt that the Tuesday-Thursday option was best. However, they decided to delay starting this option for 3 months while the court looks at what cases are coming up and how to schedule both family court and other cases so that the less important ones get delayed. This may affect attorneys given that some cases may get rescheduled.

Attorneys were instructed to type a summary of the issue and decision to reflect that they understood it. These instructions provided a differential degree of responsibility for the administrative issues but a comparable level of required processing.

*Procedure.* As in Studies 1 and 2, participants read general instructions, completed a scale ostensibly used to assign them to condition, and then learned the names of the (now three) "other players" in the opposite role. To lessen the time required for participants to complete the study, we shortened the assignment scale to only four items, and the Personal Power Scale—which had been unrelated to any measures in Studies 1 and 2—was eliminated.

Afterwards, participants read more specific instructions that introduced the study as a simulation of real-world organizations. They were told that, in any organization, there are two basic kinds of tasks that need to be accomplished: those that involve interacting with other people to address individual needs and concerns, and those that involve administrative matters about how to keep the organization running. Participants in this study would complete both kinds of tasks. Further, they were told that in any organization there are some people whose jobs include making decisions about various matters and others who must be aware of and carry out those decisions.

Following these instructions, the dispatch screen was presented. Participants completed the E-mails and memos in their own desired order (checks confirmed that participants did complete the E-mails and memos in the order in which they were listed). In addition, all participants kept a log of each E-mail contact and each administrative memo. For E-mails, they recorded names, requests, how the situation was resolved, and (for attorneys) reactions and plans for future actions. For memos, they recorded the office sending the memo, the issue being addressed, and the decision that was made. For both E-mails and memos, the information that the participant must read (an E-mail from an attorney or judge, or the administrative memo) was presented separately from the portion that allowed participants to compose the written task material. The computer recorded the time spent reading and writing each task for later analysis.

Once the task session was completed, participants turned in their logs and were given recall questionnaires. Finally, they completed all remaining measures on the computer. At the end of the computer program, a "thank you" and debriefing screen explained the study. The experimenter probed for suspicion as participants departed and gave the final debriefing to reveal that interactions had been preprogrammed.

*Dependent measures.* Most measures used in this study were the same as those used in Studies 1 and 2, but several changes were made.

For memory measures, in addition to the free-recall task for E-mails, a memo-recall task was added. Participants were asked to list as many pieces of information as possible from the administrative memos. The E-mail and the memo-recall tasks were presented on separate sheets of paper, which were given to participants at the same time. Participants could generate recalled items in whatever order they chose.

Again, the individuation measures were presented on the computer. Only one change was made to the E-mail confusions task: All items referring to Pat Robinson, or to the one E-mail per target that was deleted, were removed from the list of recognition probes. Otherwise, this task was identical to its prior versions.

To assess recognition memory for the memos, we presented each background and each decision-issue item from the memos one at a time to participants, paired with a false probe. For example, the true background item, "Judge Harris served 20 years on the Family Court before retiring recently," was presented along with, "Judge Harris recently died after serving 20 years on the Family Court." Participants were asked to indicate which item (denoted Item A and Item B) actually appeared in the administrative memos and to rate their confidence on a 1–3 scale where 1 was *not at all confident* and 3 was *extremely confident*.

The trait-rating task and the paired-similarity task were adapted to remove references to the deleted target. Further, the two filler traits that had

appeared in Studies 1 and 2 were removed from the trait-rating task, so that only the six characteristic and uncharacteristic traits of interest remained.

Finally, in addition to the power manipulation checks, we added a "responsibility" manipulation check, assessing where participants had directed their concern and attention. This asked participants to "think about how concerned you were with each of [the] different tasks. If you were to estimate how you DIVIDED your concern, how much would you say you spent on each task?" Participants typed two numbers, summing to 100, to answer two questions: (a) "I was concerned with matters involving how the court system was run about \_\_\_\_%"; and (b) "I was concerned with matters involved in the interactions with judges about \_\_\_\_%."

The computer kept track of participants' reading time, which started when a participant opened one of the memos or E-mails and ended when the participant hit a button to begin composing a response to the memo or E-mail, or to indicate that the E-mail had been read. The computer also recorded writing time, which started when the participant hit a button to begin composing an E-mail or a memo response and ended when the participant hit the "send" button. The reading and writing times were treated as dependent measures. A greater time spent on memos than E-mails, for example, could indicate greater attention paid to the memos (see Erber & Fiske, 1984).

## Results

The power manipulation checks confirmed that judges (HPPs) felt more powerful than did attorneys (LPPs). High-power perceivers indicated that they felt more power in the situations ( $M_s = 6.49$  vs. 2.76),  $F(1, 83) = 338.42, p < .001$ , and more control over the situation outcomes ( $M_s = 5.88$  vs. 2.67),  $F(1, 83) = 163.32, p < .001$ .

Further, the responsibility manipulation check confirmed that, as expected, HPPs had shifted more of their responsibility from the E-mails to the memos. High-power perceivers indicated, on average, that they devoted 53% of their concern to E-mails and 47% to the memos, whereas LPPs devoted 64% of their concern to E-mails and 36% to memos,  $F(1, 83) = 13.99, p < .001$ .

In addition to this check on participants' perceptions of how they spent their attention, we also examined the task times. The reading and writing times for each individual task, measured in seconds, were log transformed to correct for skewed distribution in time data; the log-transformed times were then summed to create a measure of overall time spent on each of the 12 tasks and averaged to yield a mean time per individual task. (Time results are reported in seconds below.) These were then analyzed in a 2 (participant power: high vs. low)  $\times$  2 (task type: E-mail vs. memo) ANOVA, with repeated measures on the second factor. A main effect for power showed that, on average, HPPs spent less time overall on the tasks ( $M_{HPP} = 305.17$  vs.  $M_{LPP} = 439.89$ ),  $F(1, 84) = 38.09, p < .001$ . This effect was qualified by a significant Power  $\times$  Task Type interaction,  $F(1, 84) = 270.19, p < .001$ . This interaction revealed that HPPs spent far less time on E-mails than did LPPs ( $M_{HPP} = 230.84$  vs.  $M_{LPP} = 561.87$ ); simple  $F(1, 84) = 280.70, p < .001$ , while they spent slightly more time on memos ( $M_{HPP} = 379.50$  vs.  $M_{LPP} = 317.90$ ); simple  $F(1, 84) = 7.90, p < .02$ . Follow-up analyses indicated no correlations between the E-mail reading times and any of the individuation measures reported below. Again, these results confirm that HPPs' attention appears to have been shifted from the interpersonal task to the administrative task.

If, indeed, HPPs tend to shift their attention and sense of responsibility to those tasks that better serve the needs of the

organization as an entity in a context in which multiple attentional demands are presented, then we would expect that the superior individuation of LPPs by HPPs observed in Studies 1 and 2 should lessen or disappear. Further, we might expect that HPPs devote more attention to, and better recall, administrative information relative to LPPs.

*Recall measures.* Recall for E-mail information and memo information was assessed in 2 two-way ANOVAs. A 2 (participant power: high vs. low)  $\times$  2 (task type: E-mails vs. memos) ANOVA, with repeated measures on the second factor, was used to determine whether an overall effect of power emerged. Indeed, we did find this effect, which indicated that across task type, HPPs recalled more information than did LPPs,  $F(1, 84) = 4.06, p < .05$ .

Next, a 2 (participant power: high vs. low)  $\times$  2 (information type: relevant vs. irrelevant) ANOVA was conducted on the E-mail data. (Note that the memos contained background and issue information, all of which was relevant to the task at hand. Therefore, these two ANOVAs could not be combined into 1 three-way analysis.) A maximum of 12 items could now be recalled from the E-mails. Replicating results from Studies 1 and 2, HPPs again recalled more information than did LPPs ( $M_s = 3.27$  vs. 2.64),  $F(1, 84) = 4.71, p < .04$  (see Table 1). Further, this main effect was again qualified by the two-way interaction of power and information type,  $F(1, 84) = 4.74, p < .04$ . This interaction indicated that HPPs' superior recall was primarily on relevant information ( $M_{\text{HPP}} = 4.65$  vs.  $M_{\text{LPP}} = 3.55$ ),  $F(1, 84) = 8.55, p < .005$ , whereas recall for irrelevant information was largely equivalent ( $M_{\text{HPP}} = 1.88$  vs.  $M_{\text{LPP}} = 1.72$ ),  $F(1, 84) = 0.22, ns$ .

Finally, we conducted a one-way ANOVA on memo recall, with participant power (high vs. low) as the between-subjects factor. A maximum of 12 items could be recalled from the memos. Somewhat surprisingly, there were no significant differences between HPPs and LPPs on recall of information from the memos, although the trend indicates that HPPs recalled more memo items ( $M = 4.44$ ) than did LPPs ( $M = 3.74$ ),  $F(1, 84) = 1.92, p < .17$ .

*Confusions task and memo recognition.* The E-mail confusions task indicated for the first time that HPPs no longer showed superior individuation of LPP targets. Confusions data were submitted to a 2 (participant power: high vs. low)  $\times$  2 (information type: relevant vs. irrelevant) mixed-model ANOVA. The means are presented in Table 1. On average, there was no difference in the number of items correctly matched by HPPs ( $M = 5.08$ ) and LPPs ( $M = 4.87$ ),  $F(1, 84) = 0.59, ns$ ; and there was no difference in the number of relevant ( $M_{\text{HPP}} = 5.14$  vs.  $M_{\text{LPP}} = 5.07$ ) and irrelevant ( $M_{\text{HPP}} = 5.02$  vs.  $M_{\text{LPP}} = 4.67$ ) items matched,  $F(1, 84) = 1.49, ns$ .

Similarly, the memo-recognition task yielded no differences between HPPs and LPPs. Out of 12 true items that participants had to distinguish from false lures, HPPs correctly identified 10.34 items and LPPs correctly identified 10.14 items,  $F(1, 84) = 0.36, ns$ . There were no differences in ratings of confidence on correct items.

*Trait ratings.* This task also indicated that HPPs' superior individuation of LPPs is diminished in the present context. Again, the trait ratings were analyzed in a 2 (participant power: high vs. low)  $\times$  2 (trait type: characteristic vs. uncharacteristic)  $\times$  2 (target: correct vs. other) mixed-model ANOVA, with means presented in Table 2. The three-way interaction was marginally significant,  $F(1, 83) = 3.07, p < .09$ . In contrast to Studies 1 and 2, the simple

interaction of power and trait type was nonsignificant for the "correct" targets,  $F(1, 83) = 1.34, ns$ . The simple two-way interaction for "other" targets obtained in Studies 1 and 2 was replicated here. High-power perceivers were more likely to see uncharacteristic traits and less likely to see characteristic traits as true of other targets, relative to LPPs,  $F(1, 83) = 5.16, p < .03$ .

Several additional effects were again significant in the trait-ratings analyses, and again, all of them were involved in the marginally significant three-way interaction reported above. Again, characteristic traits were seen as more prevalent than uncharacteristic traits,  $F(1, 83) = 163.58, p < .001$ . In addition, on average the correct targets were given higher ratings across all items than the other targets,  $F(1, 83) = 41.40, p < .001$ , and this was much more true for HPPs,  $F(1, 83) = 20.19, p < .001$ . The Trait  $\times$  Target interaction again revealed that characteristic traits were matched more with correct targets and uncharacteristic traits were matched with other targets,  $F(1, 83) = 144.17, p < .001$ .

*Paired-similarity task.* Finally, the paired-similarity judgments again confirmed that HPPs in Study 3 no longer outperformed LPPs in terms of individuating opposite-role targets. Note that, because there were only three targets rather than the previous four, now pairs of targets comprise only medium similarity (characterized by negative, but distinct, traits) and low similarity (characterized by differently valenced traits). Ratings of the similarity of the three possible target pairs were analyzed in a 2 (participant power: high vs. low)  $\times$  2 (scripted similarity: medium vs. low) mixed-model ANOVA and are presented in Table 3. There were no differences between HPPs and LPPs on average ratings ( $M_{\text{HPP}} = 3.27$  vs.  $M_{\text{LPP}} = 3.49$ ),  $F(1, 83) = 1.39, ns$ . The significant interaction of power and scripted similarity actually revealed a reversal of prior effects. Now, LPPs were better able to discern the contrast between the low-similarity pairs ( $M = 3.21$ ) and the medium-similarity pair ( $M = 4.05$ ), whereas HPPs saw the low-similarity pairs as equally (or, if anything, more) similar ( $M = 3.33$ ) as the medium-similarity pair ( $M = 3.16$ ),  $F(1, 83) = 5.19, p < .03$ .

## Discussion

Overall, then, the results of Study 3 look quite different from those of the previous studies. High-power perceivers spent less time looking at information than did LPPs, and although they still showed better recall of the E-mail information, they performed essentially no better than LPPs on the confusions task, the trait ratings, and the paired-similarity task. It appears that adding an alternative target for HPPs' attention may indeed encourage them to shift their time and energy to this organization-focused task. Indeed, both manipulation checks and task-time measures confirmed that this occurred.

It is noteworthy that HPPs retained their superior ability to remember information but did not continue to outperform LPPs at individuating targets on other measures. Such a pattern suggests that as high-power individuals take on more responsibility for an organization, they continue to remember critical information about their underlings' behavior. Importantly, however, even while HPPs are able to remember the events that have transpired, they are more likely to lose track of who has done what. That is, they are less able to individuate their underlings. One can easily imagine how this might happen in real offices: Managers meet their obligation to be

aware of what is going on and therefore remember information that has been presented to them. However, because of their other job-related demands, they do not exert the additional energy to learn about their employees as individuals and to keep information about them distinct.

It is also interesting that conclusions based on the reading-time data would be very different from those based on free-recall and the confusions tasks. High-power perceivers spent substantially less time on the E-mails than did the LPPs. Yet they showed significantly better recall of the presented information than did the LPPs, and they performed at the same level as the LPPs on identifying who wrote the information contained in the various E-mails. As we noted in the introductory section, there is a fair amount of ambiguity involved in interpreting reading-time measures. That point is underscored by the pattern of findings from Study 3.

The addition of the memo task could be seen as an operationalization of cognitive load. We propose, however, that only when load-imposing information is also highly important and relevant for HPPs does that information interfere with interpersonal processing tasks. In fact, we conducted an additional study in which a purer, non-task-relevant load manipulation was used (i.e., the digit rehearsal task, Gilbert & Hixon, 1991). Importantly, the effects of power in this study were virtually unchanged from those of Studies 1 and 2. In Study 3, not only did the HPPs have more to attend to, but that additional work was relevant to running the organization itself. In this case, HPPs and LPPs performed similarly on the memory and individuation tasks. Note that LPPs in Study 3 were exposed to an equivalent amount of load, but the load-inducing task was not as personally relevant for them. Therefore, they did not exhibit any decrement in their own performance relative to Studies 1 and 2. It appears that effects of power in real-world impression formation and judgment may interact with the content of tasks for which powerful people are responsible, not simply the number of tasks to be performed.

### General Discussion

Studies 1 and 2 demonstrated that HPPs do not necessarily fail to individuate low-power targets; instead, they were much better than LPPs at remembering information about targets and recognizing distinctions among them. Study 2 confirmed that this finding was not limited only to relationships that featured particular power-related roles. Study 3 offered evidence that HPPs' superior individuation can be undermined in a situation in which competing task demands are compelling in terms not only of quantity but, more importantly, of content. That is, when the high-power actor also has organization-focused responsibilities, then although he or she will still attend to information about low-power targets and their activities, it is likely that he or she will be less likely to identify this information with the appropriate particular targets. This finding offers a bridge from the first two studies to the PAC model and, importantly, sheds light on the possible reasons why some real-world HPPs may fail to individuate.

The work reported here differs from the research supporting the PAC model in several important ways. First, power is operationalized differently. In the current work, HPPs and LPPs engaged in a reciprocal role-playing relationship, featuring repeated interactions between the two roles and measures that asked LPPs and

HPPs to essentially judge each other. In the PAC work, either power holders have input into decisions about absent targets and read these absent targets' application files, or alternatively, power holders expect to assign tasks to a low-power worker but do not interact with the worker, and the power holders and workers read information about each other. The current design could be said to encourage individuated, person-centered processing, because of the person-centered nature of the interactions we established. However, both HPPs and LPPs participated in the same interpersonally focused context, therefore this variable itself could not be responsible for the high level of individuation on the part of HPPs obtained in our studies.

Second, while the PAC model deals with attention to a particular social stereotype (related either to women or Hispanic people), in the current work there is no social stereotype operating. Instead, the current work focused on processes of individuation. Our measures did allow us to assess whether participants were simply "lumping together" the targets, in a manner consistent with stereotype use. That is, to the extent that a participant (a) saw all targets as highly similar, (b) confused the statements of one target with another, and (c) were unable to perceive the personality tendency of a given target, the participant would be treating the group as an undifferentiated mass. Clearly this did not happen, particularly among the HPPs. Nevertheless, we did not give perceivers a social category on which they could base their judgments, as opposed to using the individuated information, and this is certainly a variable that could be manipulated in future research. For example, it would be possible to use a paradigm like that in Study 3—in which both interpersonal and organizational task demands are present—to explore whether a more challenging processing environment might lead HPPs to use a social stereotype of targets when one is available.

Third, the kinds of measures used in the two research programs are entirely different. Although Goodwin et al. (2000) reported time spent reading stereotype-consistent versus -inconsistent information as an indication of stereotyping, in this article we reported a variety of attention and judgment measures, including memory, individuation measures, and reading time, to more fully explicate the results of the power differences. The only individuation measure reported by Goodwin et al. (2000, Study 4) was quite different from those studied here. In this measure, participants indicated how much they liked a number of college majors, as well as how much they would like someone who had various traits. They then learned about the majors and traits for four targets that they would either have power over or who would have power over them. Liking for these particular targets among the powerless was better predicted by liking ratings of the traits they possessed than of their majors, suggesting that liking was based more on the former than the latter. Among power holders, liking for the targets was predicted equally well by liking for the traits as by liking for the majors. The extent to which liking for the traits predicted liking for the target was significantly less than was the case for the powerless, leading the researchers to conclude that the powerless relied more on trait or individuated information in forming their liking judgments.

These differences between the two lines of research likely contributed to the different pattern of findings. Nevertheless, these studies revealed a clear and consistent pattern of better individuation on the part of HPPs relative to LPPs, and these findings are

at odds with some of the most central predictions made by the PAC model. On the basis of the PAC model, we would have expected to see a significant disadvantage in HPPs' processing of social information about LPPs. This was not supported in our work. Even in Study 3, where HPPs' relative advantage disappeared, we did not see a reversal of HPPs' and LPPs' performance.

Social power can take many forms, according to French and Raven (1959; Raven, 1965). One form is coercive and reward power, in which the HPP can provide punishments or material rewards to LPPs who comply. A second form is referent power, in which the LPP identifies with or wants to be like the HPP and therefore behaves according to the HPP's expectations. Organizations are characterized by different power bases. The use of reward and coercion suggests that HPPs may not be highly attentive to LPPs and may not be particularly adept at individuating LPP targets because there is no need or incentive for doing so. Low-power perceivers in this situation, though, may become very good at predicting the attitudes and behaviors of HPPs to avoid sanctions and secure rewards.

In the structure typical of most young, "flat" organizations in today's business world, reward and coercion are less likely to be seen. Instead, power is generally very subtle. Bosses may control information, may be more expert in their functional field, may be imbued with legitimate authority by the organization, and in many cases, may simply have compelling personal charisma and skills that lure employees to want to please them. In settings that use these bases of power, it seems less likely that the boss can ignore the employees, whereas employees must effortfully attend to the boss. Instead, these are settings in which we are likely to see bosses' performance, depending on their skill with and knowledge of employees, and therefore we may expect to see superior social perception by HPPs in such settings.

In organizations such as law firms, schools or educational institutions, and service- or training-oriented businesses, being in power carries the responsibility to know people and to be able to elicit performance and growth from them. In such person-centered organizations, a successful power holder must be able to attend effectively and to form accurate impressions to do his or her job well. Other organizations, especially such product-focused companies as manufacturers, may be more likely to see workers as interchangeable cogs. This is the kind of setting in which we might expect greater adherence to stereotypes and less incentive for power holders to individuate. We are suggesting, then, that the likelihood of observing particular effects—whether the predictions made by the PAC model or instead findings more like those obtained here—depends on the context in which the power differential exists. In particular, if the context is very product or outcome oriented, HPPs may rely more on stereotypes because of their heuristic value. But when the context involves a service, the operation of an institution, or an intellectually focused outcome, the individuals who comprise the organization are its primary asset and it therefore behooves those in power to attend to and know about the low-power group members.

In fact, it is interesting to consider the context surrounding one of the real-world examples often used to illustrate the operation of the PAC model. Fiske (1993), among other social scientists (Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991), contributed important information in regards to the operation of social stereotypes in the Supreme Court case of *Price Waterhouse v. Hopkins*. Among the

issues raised in the brief presented by the social scientists was the—often unconscious—operation of stereotypes in social perception. In fact, however, the core argument in the case was not that Ann Hopkins's superiors failed to individuate her and saw her as simply an "indecisive and nonagentic female" who perhaps could not withstand the driven, aggressive world of accountants. Instead, the argument was that her superiors took offense to the fact that Hopkins did not behave in accordance with the female stereotype. That is, in her dress and interpersonal style, she was not feminine enough. Now clearly, the issue is still one of social stereotypes having adverse consequences for individual group members. Nevertheless, in this case the problem was not an overapplication of the stereotype to the target. The HPPs clearly individuated Hopkins and knew about her behavioral tendencies. They simply did not like that these were at odds with the female stereotype.

In contrast, the other case often discussed in this realm is the Jacksonville Shipyards lawsuit (Fiske, 1993), in which a female welder sued because the work environment was hostile, negative, and pejorative toward women. This was much more a case of HPPs' using their stereotype to perceive workers and failing to see the workers as individuals. Although this has not been systematically studied to date, we suggest that it is this latter case that fits the profile of the PAC model, whereas the Hopkins case is one in which HPPs likely do a very good job of individuating underlings. Stereotypes still operate and have consequences in both situations, but it is through a very different mechanism than failure to individuate in the second, more people-focused context.

Our own research will pursue many of the issues raised in this discussion. Meanwhile, we must simply conclude that the effect of power is not to uniformly produce a failure to individuate. Although a given power context—specifically, one that requires attention to other organizational responsibilities—may minimize individuation, power in and of itself does not appear to uniformly cause undifferentiated responding. Further work is needed to explore the conditions that foster specific outcomes.

## References

- Brewer, M. B. (1988). A dual process model of impression formation. In T. K. Srull & R. S. Wyer (Eds.), *Advances in social cognition* (Vol. 1, pp. 1–36). Hillsdale, NJ: Erlbaum.
- Cartwright, D., & Zander, A. (1968). *Group dynamics*. (3rd ed.) New York: Harper.
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Does power always corrupt? Relationship orientation as a moderator of the effects of social power. *Journal of Personality and Social Psychology*, *80*, 173–187.
- Copeland, J. T. (1994). Prophecies of power: Motivational implications of social power for behavioral confirmation. *Journal of Personality and Social Psychology*, *67*, 264–277.
- Dahl, R. (1957). The concept of power. *Behavioral Science*, *2*, 201–215.
- Degelman, D., Owens, S. A., Reynolds, T., & Riggs, J. (1991). Age and gender differences in beliefs about personal power and justice. *International Journal of Aging & Human Development*, *33*, 101–111.
- Deusch, M., & Krauss, R. M. (1960). The effect of threat upon interpersonal bargaining. *Journal of Abnormal and Social Psychology*, *61*, 181–189.
- Ebenbach, D. H., & Keltner, D. (1998). Power, emotion, and judgmental accuracy in social conflict: Motivating the cognitive miser. *Basic and Applied Social Psychology*, *20*, 7–21.
- Erber, R. T., & Fiske, S. T. (1984). Outcome dependency and attention to

- inconsistent information. *Journal of Personality and Social Psychology*, 47, 709-726.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48, 621-628.
- Fiske, S. T., Bersoff, D. N., Borgida, E., Deaux, K., & Heilman, (1991). Social science research on trial: Use of sex stereotyping research in *Price Waterhouse v. Hopkins*. *American Psychologist*, 46, 1049-1060.
- Fiske, S. T., & Dépret, E. (1996). Control, interdependence and power: Understanding social cognition in its social context. *European Review of Social Psychology*, 7, 31-61.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 1-73). New York: Random House.
- French, J. R. P., & Raven, B. H. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies of social power* (pp. 118-149). Ann Arbor, MI: Institute for Social Research.
- Gilbert, D. T., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypical beliefs. *Journal of Personality and Social Psychology*, 60, 509-517.
- 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 and Intergroup Relations*, 3, 227-256.
- Hamilton, G. G., & Biggart, N. W. (1985). Why people obey: Theoretical observations on power and obedience in complex organizations. *Sociological Perspectives*, 28, 3-28.
- Imai, Y. (1993). Perceived social power and power motive in interpersonal relationships. *Journal of Social Behavior and Personality*, 8, 687-702.
- Kipnis, D. (1972). Does power corrupt? *Journal of Personality and Social Psychology*, 24, 33-41.
- Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255-275.
- Louche, C. (1982). Open conflict and the dynamics of intergroup negotiation. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 469-482). Cambridge, England: Cambridge University Press.
- Manz, C. C., & Gioia, D. A. (1983). The interrelationship of power and control. *Human Relations*, 36, 459-476.
- Molm, L. D., Quist, T. M., & Wiseley, P. A. (1994). Imbalanced structures, unfair strategies: Power and justice in social exchange. *American Sociological Review*, 59, 98-121.
- Ng, S. H. (1982). Power and intergroup discrimination. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 179-206). Cambridge, England: Cambridge University Press.
- Oakes, P. J., Haslam, S. A., & Turner, J. C. (1994). *Stereotyping and social reality*. Oxford, United Kingdom: Blackwell Publishers.
- Offermann, L. R., & Schrier, P. E. (1985). Social influence strategies: The impact of sex, role and attitudes toward power. *Personality and Social Psychology Bulletin*, 11, 286-300.
- O'Neill, P., Duffy, C., Enman, M., Blackmer, E., Goodwin, J., & Campbell, E. (1988). Cognition and citizen participation in social action. *Journal of Applied Social Psychology*, 18, 1067-1083.
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67, 741-763.
- Raven, B. H. (1965). Social influence and power. In I. D. Steiner & M. Fishbein (Eds.), *Current studies in social psychology* (pp. 371-381). New York: Holt, Rinehart, & Winston.
- Ric, F. (1997). Effects of control deprivation on subsequent use of stereotypes. *The Journal of Social Psychology*, 137, 333-342.
- Sachdev, I., & Bourhis, R. Y. (1985). Social categorization and power differentials in group relations. *European Journal of Social Psychology*, 15, 415-434.
- Sachdev, I., & Bourhis, R. Y. (1991). Power and status differentials in minority and majority group relations. *European Journal of Social Psychology*, 21, 1-24.
- Taylor, S. E., Fiske, S. T., Etcoff, N. L., & Ruderman, A. J. (1978). Categorical and contextual bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, 36, 778-793.
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York: Wiley.
- Weber, M. (1946). Bureaucracy. In H. Gerth & C. W. Mills (Eds.), *Max Weber: Essays in sociology*. London: Oxford University Press.



## Appendix

## Complete Set of E-Mail Situations and Embedded Information

Character	Relevant information	Irrelevant information
1. Irresponsible You need to meet; target busy playing golf Student has question on Exam 1 and now it is time for the final  Student took the class a year ago and now wants a letter of recommendation	Target has an inflexible schedule; waited until last minute to address assignment. If target is student: lost first exam and wants credit for an answer to a question. If target is a professor: lost student's exam and may give credit to student for the answer. If target is a student: missed a lot of classes and only did "OK" in the course. If target is a professor: was busy and had the TA teach a lot of the classes, doesn't remember student.	Was once on the amateur golf circuit Recently moved into a nice house near the Foothills  Just started up a jazz ensemble
2. Rigid You missed an exam because of an auto accident. Class has a no make-up policy Student has questions about material and needs to meet, but there are problems getting together during office hours  Assignment is due on a certain date. Twenty-five out of 30 students want to have the deadline moved back	If target is a student: has another exam to study for and wants the same grade (98) as on Exam 1. If target is a professor: will let student make up exam but will lower exam score. If target is a student: wants professor to arrange extra weekend session because professor was 10 min late to office hours. If target is a professor: is not willing to meet with student outside office hours; school comes first and student must make the time to go to office hours. Target believes that "A deadline is a deadline." If target is a student: moving deadline penalizes those who have done their work. If target is a professor: recognizes that work was too much for the allotted time but won't change.	Has kids in daycare  Works (or has worked) at a medical office during college  Plays basketball
3. Competent Student wants professor to supervise an independent study project the next semester Target must miss class  A packet of 20 readings has been put out by the professor. Students must copy these readings for class	Very interested in classroom and project material; wants to put in planning time.  Would like to videotape the class and watch/show the tape to make up for absence. Target wants to organize a Xeroxing pool among all the students so the copying burden is not as onerous.	A skateboard park is being proposed in target's neighborhood Little sister is getting married Likes Indian food
4. Ignorant A conflict over a question on the most recent exam Student asks that TA give review for next test because professor's explanations are hard to understand  Student is working on a project in the professor's area of expertise and wants some guidance on how to deal with the material	Target does not understand the question, despite reviewing the material repeatedly. If target is a student: wants to hear TA because TA goes slowly and is patient with slower learners. If target is a professor: wants to have questions E-mailed in advance because on-the-spot questions are harder to answer. If target is a student: wants to give the prof the assignment and be hand-fed the right approach. If target is a professor: has not worked in this area for years and can only provide an old syllabus.	Was once diagnosed with dyslexia Is originally from Nebraska  Has been studying Buddhism at Naropa University recently

*Note.* "You" refers to the participant, in either role. "Target" refers to the target being interacted with, in either role. If a role is specified, then that information is role specific in the interaction. TA = teaching assistant.

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