

Priming meritocracy and the psychological justification of inequality [☆]

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Abstract

The belief that status in society is based on merit is a central feature of the American Dream. This belief system justifies status inequalities by locating the cause of status differences in the individual talents and efforts of group members. We hypothesized that activating meritocratic beliefs increases the extent to which individuals psychologically justify status inequalities, even when those inequalities are disadvantageous to the self. Specifically, we hypothesized that priming meritocracy prompts individuals to engage in system-justifying psychological responses when they experience threat either at the personal or group level. Across two studies, priming meritocracy led members of a low status group to justify both personal and group disadvantage by decreasing perceptions of discrimination (Studies 1 and 2) and increasing the extent to which they stereotyped themselves and their group in status-justifying ways (Study 2).

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Introduction

Americans adhere to a cultural worldview in which social rewards and status are assumed to reflect individual merit and hard work (Kluegel & Smith, 1986). This worldview is a central component of the American Dream and is reflected in the cultural stories of “Horatio Alger” and “The Little Engine that Could,” which promote the belief that anyone can get ahead if they work hard enough and are talented enough. Although endorsement of this belief in a meritocracy varies at the individual level, it is so widely held that it has been termed America’s dominant ideology (Kluegel & Smith, 1986). By locating the responsibility for social status within the efforts and abilities of individuals, the belief in meritocracy legitimizes existing status differences among individuals and groups and helps to justify the status quo (Augustinos, 1998; Gramsci, 1937/1971; Jost & Banaji, 1994; Kluegel &

Smith, 1986; Lukacs, 1923/1971; Major, 1994; Major et al., 2002; Marx & Engels, 1846/1970; Sidanius & Pratto, 1999; Thompson, 1990). In the current research, we examine the extent to which the belief in meritocracy leads individuals to psychologically justify status inequalities, even when those inequalities are disadvantageous to the self.

Meritocracy and the justification of inequality

If the status hierarchy is based on merit, the logical inference is that those who have higher status must also be more talented, valuable, hardworking, or in other ways more meritorious than those who have lower status. Indeed, research has shown that the more strongly individuals endorse meritocratic beliefs such as the belief in individual mobility (BIM; the belief that any individual can get ahead, regardless of their group membership), the protestant work ethic (PWE; the belief that hard work leads to success), or the belief in a just world (BJW), the more they favor members of higher status groups over lower status groups (e.g. Jost, Pelham, & Carvallo, 2002) and blame members of lower status groups for their relative disadvantage (e.g. Cozzarelli, Wilkinson, & Tagler, 2001; Crandall, 1994; Katz & Hass, 1988). Thus,

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individuals who endorse a meritocratic worldview psychologically justify the status hierarchy by viewing members of high status groups as more deserving than low status groups.

The system-justifying effects of endorsing meritocratic beliefs also occur among members of disadvantaged or lower status groups. For example, Hafer and Olson (1989) denied participants “bonus points” on a computer task and asked them to rate the fairness of the procedures used to assign these points. Individuals who strongly endorsed BJW were more likely to perceive the denial of points as fair and just than individuals who less strongly endorsed BJW, even when cues to the unfairness of the procedure were provided. Working women, who are aware of their group’s disadvantage relative to men, are more likely to perceive their own low job status as reasonable the more they endorse BJW (Hafer & Olson, 1993). Overweight individuals who endorse PWE are more likely to endorse anti-fat attitudes, to believe that weight is personally controllable, and to view being overweight as a personal failing (Crandall, 1994; Quinn & Crocker, 1999). In sum, the belief in meritocracy leads to different assumptions about the deservingness or “worthiness” of members of high and low status groups. These system-justifying assumptions appear to be made not only about other groups, but also about one’s own group, even when such assumptions appear to be disadvantageous.

These different assumptions about the relative deserving of members of high and low status groups influence how people explain differential outcomes among social groups. If social status is assumed to be based on merit, one’s own (or ingroup’s) lower status will be seen as due more to a lack of effort or ability than to the discrimination of others. It follows, then, that the more members of low status groups endorse a meritocracy worldview the more they may fail to recognize the extent to which they, or their group, face discrimination. In contrast, the belief in meritocracy suggests that high status group members deserve their position of relative advantage. Consequently, the more members of high status groups endorse a meritocracy worldview, the more they may view outcomes that favor low, over high, status groups or individuals as a violation of distributive justice principles. Based on this reasoning, Major and colleagues (Major et al., 2002) hypothesized that greater endorsement of meritocratic beliefs would be associated with a reduced tendency among members of low status groups to see themselves and their group as victims of discrimination but with an enhanced tendency among members of high status groups to see themselves and their group as victims of discrimination.

Across a series of three studies, Major et al. (2002) found support for these hypotheses using an individual difference measure of the belief in meritocracy. For example, in their third study, women and men were rejected for a desirable role on a workgroup team by a member of the other sex. The more strongly women endorsed meritocratic beliefs, the less likely they were to attribute rejection by a man (higher status) to discrimination. In contrast, the more

strongly men endorsed meritocratic beliefs the more likely they were to attribute rejection by a woman (lower status) to discrimination. These studies did not demonstrate, however, that endorsement of meritocracy leads members of low status groups to psychologically justify their own disadvantage by blaming themselves for the rejection (i.e. no effect on internal attribution). Because individuals who do not recognize that they are treated unjustly will not protest, status differences in perceptions of discrimination among those who endorse the belief in meritocracy serves to justify and maintain the existing status hierarchy.

The above studies suggest that meritocratic beliefs lead people to engage in system justifying attributions. Because meritocratic beliefs were measured rather than manipulated in the above research, however, they do not establish the causal impact of meritocracy beliefs on attributions. It is possible that some unmeasured variable, rather than meritocracy beliefs, was responsible for the observed pattern of results. Furthermore, because meritocracy beliefs were measured as an individual difference variable, these studies imply that psychological system justification may occur only among individuals who strongly endorse a meritocratic worldview. We believe that because meritocracy is a dominant worldview in North American society it is well known to members of this cultural context, even if they do not personally endorse this worldview. Thus, we believe that subtle meritocracy cues in the immediate environment can induce system justifying responses among individuals who are aware of this worldview, irrespective of personal endorsement. Finally, previous research has not directly tested the hypothesis that meritocracy beliefs can lead members of low status groups to psychologically justify the system by perceiving their own disadvantage as deserved.

The current research extended our prior research (Major et al., 2002) in several ways. First, rather than measuring individual differences in meritocracy beliefs, the studies reported here experimentally manipulated meritocracy beliefs using a subtle priming procedure. Study 1 examined whether experimentally activating meritocracy influences attributions of personal disadvantage to discrimination in a manner similar to personal endorsement of meritocracy beliefs. Second, we extended our prior research by examining whether activating meritocracy beliefs can lead to the psychological justification of blatant ingroup disadvantage (Study 2), as well as personal disadvantage (Study 1). Third, in addition to examining the effects of activating meritocracy beliefs on attributions (Study 1), we also examined their impact on the extent to which participants viewed their group as a target of discrimination, and stereotyped themselves and their group in system-justifying ways (Study 2).

Priming meritocracy

Meritocracy cues are ubiquitous in North American society. From media advertisements (e.g. Nike’s “Just do it” campaign) to children’s stories (e.g. *The Little Engine That Could*: “I think I can”) to cultural icons (e.g., Horatio

Alger) most Americans are regularly exposed to the central message that individual advancement is possible for anyone through hard work and talent. The sheer pervasiveness of this message in America means that most citizens are aware of a meritocratic worldview, even if they do not personally endorse it. Consequently, their thoughts, behaviors, and feelings may be influenced by this message whenever cues in the environment (e.g., motivational posters, advertisements, news stories about individuals who succeed despite adversity) make it salient. Specifically, when the belief in meritocracy is activated, individuals are likely to construe and explain the world around them in a manner consistent with this activated belief system.

Based on this reasoning, we hypothesized that situational cues that activate meritocracy beliefs will cause individuals to engage in system-justifying responses. Furthermore, we expected that activating meritocracy would produce responses similar to those observed among individuals for whom these beliefs are chronically activated (i.e., those who strongly endorse meritocracy beliefs). We tested this hypothesis by experimentally priming the belief in meritocracy vs. neutral information and examining the effects of these primes on system justifying responses to personal and group disadvantage.

We present three studies. In an initial pilot study we developed a manipulation to prime meritocracy. In Experiment 1, we examined the effect of this manipulation on the extent to which individuals explain personal disadvantage (rejection from a member of a higher or lower status group) in system-justifying ways. We expected that a meritocracy prime (relative to a neutral prime) would lead individuals rejected by a member of a higher status group to see the rejection as more just (e.g., to blame the rejection more on themselves), but would lead individuals rejected by a member of a lower status group to see it as less just (e.g., to blame the rejection more on discrimination). In Experiment 2, we examined the effect of the meritocracy prime on the extent to which members of a low status group engage in system-justification when faced with group disadvantage. We hypothesized that when faced with group disadvantage, women primed with meritocracy would be more likely than those not so primed to justify the social system by minimizing discrimination against women and by stereotyping women, men, and themselves in ways that justify men's higher status relative to women's.

Pilot study: Priming meritocracy

It is well established that constructs, goals, and stereotypes can be activated by subtle cues and can influence thoughts and behavior (e.g. Bargh, Chen, & Burrows, 1996; Chartrand & Bargh, 1996; Devine, 1989). This activation or "priming" occurs without conscious intention or awareness and passively influences behavior (Bargh, 1989). This influence may be particularly strong when individuals are unaware of the activation of the construct and therefore are unable to correct for its influence (Bargh, 1989). Further,

priming an individual with a trait, construct, or stereotype can result in thoughts and behavior that parallel behavior observed among individuals who personally endorse the trait, construct or stereotype (see Ferguson and Bargh, 2004; for a review). Thus, we predicted that priming individuals with meritocracy concepts would result in thoughts and behavior consistent with individual endorsement of a meritocracy worldview.

Some prior research has demonstrated that temporarily activating meritocracy beliefs does influence perceptions of low status groups. Katz and Hass (1988) found that White students who filled out a PWE questionnaire subsequently had higher anti-black attitudes compared to those who filled out a neutral questionnaire. Biernat, Vescio, and Theno (1996) found that participants who listened to a speech emphasizing PWE subsequently rated an African American as less competent than a European American, although this effect occurred only among participants who personally endorsed PWE. In related research, Quinn and Crocker (1999) found that overweight women who read and summarized a passage exemplifying meritocracy prior to reading about prejudice toward the overweight, subsequently reported lower self-esteem than overweight women who first summarized a passage exemplifying an inclusive ideology.

As a first step in our research, we conducted a pilot study to ascertain whether subtly priming simple concepts relevant to meritocracy via a sentence unscramble task would temporarily increase endorsement of a meritocratic worldview. Our approach aimed to minimize conscious awareness of the construct, as well as awareness of the construct's effect on subsequent attitudes and behavior. This departs from the work reviewed above that used much more overt manipulations of the salience of meritocracy.

Method

Participants

A total of 32 undergraduate volunteers (13 women, 19 men) ranging in age from 18 to 24 ($M = 19.56$, $SD = 1.58$) participated in the pilot experiment.

Procedure

Experimenters approached students at various locations on a college campus and asked them to volunteer for a brief study. Those who agreed completed one of two priming tasks, followed by distracter and meritocracy questionnaires.

Prime manipulation. We used a scrambled sentence task (e.g. Bargh et al., 1996; Srull & Wyer, 1979) to prime meritocracy. Participants were given 5 min to unscramble 20 sets of 5 words into 4 word sentences. These sentences unscrambled to make meritocracy or neutral content salient. For example, in the meritocracy prime condition, "effort positive prosperity leads to" unscrambled to "Effort leads to prosperity", "people are merit judge on" unscram-

bled to “Judge people on merit”, “deserve people rich house it” unscrambled to “Rich people deserve it.” The meritocracy prime condition contained 15 prime sentences and 5 neutral sentences. Participants in the neutral condition¹ unscrambled sentences that were unrelated to meritocracy (e.g. “a computer time calculator saves”, “by college goes quickly time”, “cakes she fluffy likes cats”). Once time was called, participants completed a brief distraction questionnaire prior to completing the meritocracy questionnaire.

Endorsement of meritocracy. We assessed endorsement of meritocracy with the four individual mobility items used by Major et al. (2002): “America is an open society where all individuals can achieve higher status”; “Individual members of certain groups are often unable to advance in American society” (reverse scored); “Most people who don’t get ahead should not blame the system; they really have only themselves to blame”; “Individual members of certain groups have difficulty achieving higher status” (reverse scored). These were averaged into a composite score ($\alpha = .70$). Prior research has shown that endorsement of individual mobility beliefs is positively and significantly correlated with endorsement of other merit-related beliefs, including BJW, PWE, and the belief in system legitimacy (see O’Brien & Major, 2005).

Results and discussion

Participants completed an average of 18.31 sentences out of 20 in the 5 min period. There were no significant differences in number of sentences unscrambled by prime condition (Meritocracy: $M = 18.06$; Neutral: $M = 18.56$). As predicted, priming meritocracy concepts led both the high and low status groups (men and women) to more strongly agree that America is an open society in which success is possible for all individuals ($M = 4.03$, $SD = 1.16$) than priming neutral content ($M = 3.43$, $SD = .59$); $t(30) = -2.11$, ($p < .05$). Thus, our pilot study established that priming simple concepts related to meritocracy temporarily increased personal endorsement of meritocratic beliefs. Although we instituted a time constraint and participants did not report noticing a particular message in the sentence unscrambles, it is possible that the results observed here were merely the result of demand characteristics. Accordingly, in the studies that follow, we presented the prime manipulation as a sepa-

¹ We used a neutral prime rather than an egalitarian prime as the control condition for our meritocracy prime, consistent with Katz and Hass (1988). Some researchers have used egalitarianism as the control condition for meritocracy (e.g. Biernat et al., 1996; Quinn & Crocker, 1999). Although egalitarianism and meritocracy beliefs may appear antithetical, research has demonstrated that Americans simultaneously endorse both belief systems (Katz & Hass, 1988). Egalitarianism is also a core American ideology that legitimates status differences in some contexts (e.g. as an argument for abolishing Affirmative Action) and is theoretically predicted to exert an independent influence on how individuals construe low status groups (Biernat et al., 1996; Katz & Hass, 1988; Quinn & Crocker, 1999). Interpretation of results becomes difficult when both egalitarianism and meritocracy are hypothesized to influence the dependent variable.

rate study (a two study ruse) to aid in reducing possible demand characteristics.

Experiment 1: System justification and personal disadvantage

Experiment 1 tested the hypothesis that priming the belief that status is based on merit prompts individuals to engage in system-justifying responses to explain personal disadvantage. Specifically, we hypothesized that when primed with meritocracy (relative to a neutral prime), members of a lower status group (women) who were rejected by a member of a higher status group (men) would engage in system justification by blaming the rejection more on themselves (their poor work) than on discrimination. In contrast, we predicted that when primed with meritocracy (relative to a neutral prime), members of a higher status group who were rejected by a member of a lower status group would engage in system justification by blaming the rejection more on discrimination than on themselves.

Method

Participants and design

A total of 78 (39 male, 39 female) European-American² undergraduate students ranging in age from 18 to 23 ($M = 19$, $SD = 1.01$) participated for credit in a psychology course. Males and females were randomly assigned to one of two prime conditions, resulting in a 2 (Status: High (male), Low (female)) \times 2 (Prime: Meritocracy, Neutral) between-participants design.

Procedure

Procedures were modeled after those used by Major et al. (2002). Upon arrival to the lab, a digital photograph of the participant was taken for use later in the experiment. Participants were told that the study concerned “work group development and performance.” All were assigned to a cubicle (“C”) via a bogus selection process, and were told that two other students were also participating in the experimental session, in cubicles “B” and “D.” In reality, only one participant was present during each session. The experimenter explained over the intercom that the three students would work together on a series of problem-solving tasks in a structured workgroup team. The team would consist of a Manager, a Co-Manager, and a Clerk. The Co-Manager would work with the Manager on constructing creative solutions to problems that occur in the business environment and both would be entered in a \$100.00 lottery. The Clerk would insure that the Managers had sufficient supplies, would record the management team’s decisions, and would not be eligible for the lottery. Participants were told

² We restricted participants to a single ethnic group (European-American) because we were manipulating group status (gender) via photographs and wanted to avoid confounding status differences associated with gender with status differences associated with ethnicity.

that the Manager role had already been randomly assigned to the student in cubicle B, and that the Manager would assign the two remaining positions.

Participants then completed a brief application, which they were led to believe was subsequently provided to the Manager for his or her review. The application consisted of a background information sheet (including sex and other demographic information) and a personal statement on which participants were asked to identify problems found in the workplace that would require teamwork to solve, and to describe why teamwork would be required to solve these problems.

While the participant awaited the Manager's decision, digital photos of the student in the Manager role (Person "B"), the actual participant (Person "C"), and the other applicant (Person "D") appeared on the participant's computer screen. These photos ostensibly were being displayed to all three students simultaneously. The photos of the Manager and the other applicant depicted students who were of the same ethnicity as the actual participant (European-American), but both of whom were of the other sex. For example, a male participant saw photos of a female Manager and a female other applicant, whereas a female participant saw photos of a male Manager and a male other applicant.

Prime manipulation. While waiting for the Manager to make his or her decision, participants were asked if they would be willing to participate in an unrelated 5 min study. This "unrelated study" served as our priming manipulation. As in the pilot study, half of the participants were randomly assigned to unscramble sentences that primed meritocracy while the remaining half unscrambled sentences that were neutral in content. After 5 min, participants placed the form in an envelope addressed to a researcher at a different university to further establish the "unrelated study" ruse.

The rejection. The participant then received a handwritten form indicating that the Manager had assigned the participant to the Clerk position because the Manager "did not think they would work well together." Participants were given 3 min to digest this negative feedback. Subsequently, they were asked to complete several questions on the computer which included the main dependent variables: attributions for rejection.

Role preference. Participants were asked to indicate which workgroup role they preferred on a 1 (prefer to be Clerk) to 5 (prefer to be Co-Manager) scale.

Attributions. We assessed the degree to which participants believed they were rejected for the Co-Manager role because of discrimination with 5 items. Participants were asked to indicate the extent to which the Manager's decision on their role assignment was: "discriminatory," "biased," "fair" (reverse scored), "just" (reverse scored), and "based on the Manager's prejudice" ($\alpha = .89$). Internal attri-

butions were assessed with a single item: "based on the quality of your written statement". All items were rated on a 1 (not at all) to 5 (very much) scale.

Debriefing. The participant was asked the sex of the other participants and his or her role assignment. The experimenter fully and sensitively debriefed the participants and all were entered into the lottery. The \$100 prize was awarded at the completion of the study.

Results

Suspicion and manipulation checks

All participants correctly identified the sex of the other two fictitious participants. A 2 (Prime) \times 2 (Sex) ANOVA on role preference revealed no significant differences in role preference by Prime, Sex or by the Prime \times Sex interaction (all p 's $> .13$). The sample mean was above the midpoint indicating that, overall, participants preferred the Co-Manager to the Clerk role ($M = 3.87$, $SD = 1.14$). Three participants reported suspicion. One did not believe there were other participants present, one had been in a "workgroup" study the previous quarter (repeating the course) and one believed the role assignment was rigged. These three students were omitted from further analyses.

Prime manipulation

All participants agreed to complete the 5 min prime manipulation. Participants completed an average of 18 sentences out of a possible 20. There were no significant differences in the number of sentences completed by status, prime, or the prime by status interaction (all F 's $< .74$; p 's $> .30$).

Attributions

We predicted that the extent to which participants blamed the rejection on discrimination vs. on themselves would be moderated by status and prime condition. To test this prediction, we conducted a 2 (Status: High, Low) \times 2 (Prime: Meritocracy, Neutral) mixed design ANOVA treating attribution type (Discrimination, Internal) as a repeated measure. Only the predicted three way interaction was significant, $F(1,71) = 7.77$, $p < .01$. (all other F 's $< .76$; p 's $> .35$). We probed the three way interaction by examining the relative pattern of discrimination and self-blame attributions within each gender (see Table 1 for means and standard errors).

Table 1
Attribution means and standard errors as a function of meritocracy manipulation and group status

	Meritocracy		Neutral	
	Discrimination	Internal	Discrimination	Internal
Women	2.61 _a (.22)	3.37 _b (.30)	2.93 _a (.19)	2.64 _a (.25)
Men	3.09 _a (.21)	3.06 _a (.28)	2.28 _b (.20)	3.45 _a (.26)

Note: Means with different subscripts in the same row are significantly different at $p < .05$.

Women. Consistent with our hypothesis that priming meritocracy would lead individuals to justify rejection when it came from a member of a higher status group, women primed with meritocracy blamed rejection by a male significantly more on themselves than on discrimination ($F(1,71) = 3.83$, $p < .05$). In contrast, women in the neutral prime condition were no more likely to blame themselves than they were to blame discrimination ($F < .65$; $p > .40$). Examination of the means within each attribution suggests that this attributional pattern is primarily driven by the effect of meritocracy on increasing women's self-blame.

Men. Importantly, the pattern for men was quite different. When primed with meritocracy, men blamed rejection by a woman as much on discrimination as on themselves ($F < .10$; $p > .80$). In contrast, when primed with neutral content, men were significantly less likely to blame discrimination than they were to blame themselves ($F(1,71) = 9.33$, $p < .01$). Examination of the means within each attribution separately suggests that this attributional pattern is primarily driven by the effect of meritocracy on increasing men's attributions to discrimination.

Discussion

Experiment 1 extends prior research by demonstrating that experimentally activating meritocracy beliefs leads to different attributions for rejection when people are rejected by a member of a higher vs. a lower status group. We predicted that a meritocracy prime (relative to a neutral prime) would increase the extent to which individuals explain rejection in ways that maintain the overall perceived justice of the status system. Specifically, we expected that a meritocracy prime would lead individuals rejected by a member of a higher status group to see the rejection as more just, in that they would blame the rejection more on themselves than on discrimination. In contrast, we predicted that a meritocracy prime would lead individuals rejected by a member of a lower status group to see the rejection as less just, in that they would blame the rejection more on discrimination than on themselves.

Results were largely consistent with our predictions. When meritocracy was salient, women blamed being rejected by a male (in favor of another male) more on the quality of their essay than on discrimination, thereby justifying the rejection. They did not do so, however, when meritocracy was not made salient. Further, women primed with meritocracy blamed themselves more, and tended to blame discrimination less than women primed with neutral content. In contrast, men who were rejected by a woman (in favor of another woman) blamed this rejection on discrimination significantly more when primed with meritocracy than when primed with neutral content, although they did not blame discrimination more than they blamed themselves in this condition.

The contrasting attribution patterns observed here among women and men who were randomly assigned to a

merit prime replicate the status differences in discrimination attributions observed by Major et al. (2002) in which meritocracy beliefs were measured as an individual difference variable.³ In those studies, endorsement of meritocracy beliefs was negatively related to attributing rejection to discrimination among members of low status groups (women and Latinos), but was positively related to attributing rejection to discrimination among members of high status groups (men and Whites). The current study extends these findings by demonstrating that situationally activating merit can cause individuals to engage in system justifying attributions and by specifically examining the relative pattern of internal and discrimination blame.

It is important to point out that the sentence unscramble task did not generally lead individuals to perceive their outcomes as more fair. If the meritocracy prime simply primed "fairness" it should have led to an assimilation effect such that everyone exposed to the prime would have interpreted their rejection as more fair. This assimilation did not occur among the high status group. When members of the high status group were rejected by members of a lower status group, the meritocracy prime led to increased perceptions of *unfairness* (i.e. discrimination). Together with the results of the pilot study, these data provide further validation that our sentence unscramble task effectively manipulates the belief in a meritocracy.

Although results of this first study are supportive of our hypothesis that priming meritocracy leads to system justification, there are several limitations. First, although the attribution patterns in Experiment 1 are consistent with the hypothesis that priming meritocracy leads both men and women to view men as more deserving than women of high status, Experiment 1 did not test this hypothesis directly. Second, Experiment 1 examined only one form of psychological system justification—attributions to discrimination and to self. In Experiment 2 we examine multiple forms of system justification in response to evidence of disadvantage. Finally, it is possible that the effects observed in study 1 are limited to situations in which a person faces an isolated instance of personal disadvantage, or to personal rejections which are attributionally ambiguous. It may be relatively easy for individuals to construe these situations in a manner consistent with the activated belief in meritocracy. In these instances, psychologically justifying a specific rejection as fair and deserved is plausible and may not implicate one's global sense of self. Clear evidence of pervasive disadvantage at the group level, however, may be much more difficult to psychologically justify as consistent with a status hierarchy based on merit.

We hypothesized, however, that when primed with the belief in meritocracy, exposure to information that violates

³ The mean levels of attributions to discrimination are in the expected range (hovering just below the midpoint) for a paradigm of this type and closely parallel those observed in our previous work with the same paradigm (Major et al., 2002). In order to examine differences in discrimination blame, we chose to create an ambiguous situation where discrimination is one plausible cause for the negative outcome.

this activated belief system will actually lead to *increased* and not *decreased* psychological system justification relative to information that does not violate this belief. As discussed previously, we propose that when the belief in meritocracy is activated individuals will construe and explain the world around them in a manner consistent with this activated belief system. This tendency may be strongest when individuals encounter evidence that threatens this belief (Major, Kaiser, McCoy, & O'Brien, 2006). Social psychological theorists have long drawn upon the basic ideas of dissonance to explain increased adherence to a particular view in the face of countervailing evidence. For example, terror management theorists have repeatedly demonstrated that violations of an individual's worldview are met with strident efforts to bolster and defend that worldview (for a review see Pyszczynski, Greenberg, & Solomon, 1997). Plaks, Grant, and Dweck (2005) showed increased adherence to implicit theories of personality among individuals exposed to theory violating information. We propose a similar mechanism here. Specifically, we hypothesize that individuals primed with meritocracy will be *more* likely to justify the system when faced with clear evidence that the status of their group is not merit based than when not faced with such evidence.

It is important to note that our dissonance based hypothesis depends upon the assumption that the evidence of injustice is self-relevant. The function of worldviews such as meritocracy is to provide a sense of stability, predictability, and certainty *in one's own life*. Lerner and Miller (1978) observed, "To witness and admit to injustices in other environments does not threaten people very much because these events have little relevance for their own fates. As events become closer to their world, however, the concern over injustices increases greatly, as does the need to explain or make sense of the event" (p. 1031). Thus, when faced with personal or ingroup injustice, individuals are motivated to construe and explain events in a manner consistent with their worldview. Evidence of injustice towards outgroups outside one's own social system, in contrast, is unlikely to motivate system justification. Thus, it is not merely injustice that motivates psychological system justification in the presence of meritocracy cues. Rather, it is evidence of self-relevant injustice that motivates individuals primed with meritocracy to justify their own social system. Accordingly, in experiment 2, we take a conservative approach in testing our hypothesis by including a non-self relevant injustice condition.

Experiment 2: System justification in response to group disadvantage

In Experiment 2, we examined whether exposure to a meritocracy prime (relative to a neutral prime) increases the extent to which individuals engage in system justification when faced with evidence of pervasive prejudice against their group. Women were randomly assigned to read about prejudice toward women at their own university, or preju-

dice toward a group outside the American social system (the Inuit in Canada) following completion of either the meritocracy or neutral prime.

We hypothesized that, consistent with our manipulation, women in the neutral prime condition would perceive more sexism after reading the article detailing sexism than after reading about pervasive racism. More interestingly, we also hypothesized that among women who read about pervasive sexism those primed with meritocracy would minimize the extent to which they and women as a group face discrimination compared to women primed with neutral content.

We further hypothesized that women exposed to sexism and primed with meritocracy would be more likely to endorse gender stereotypes that imply that men are more deserving of high status than women, and more likely to describe themselves in gender stereotypical ways (i.e., as less competent and more warm) than women in the remaining three conditions. There is ample evidence that group stereotypes often serve to justify and maintain the existing status hierarchy (Jost & Banaji, 1994; Sidanius & Pratto, 1999). For example, the stereotypes that women are more likely than men to become emotional when dealing with stress, or that men are better decision makers foster the perception that men are more capable and deserving of high status positions than women. Women's low status relative to men is also justified by stereotyping women as more warm, communal, and nurturing, as well as less competent than men (Eagly & Mladinic, 1993; Glick & Fiske, 2001; Ridgeway, 2001). Describing women as high in communal traits and low in agentic traits reinforces the belief that women are best suited for subordinate roles and justifies the over representation of men in high status positions. In addition, this positive "warmth" dimension of the stereotype allows low status group members to feel good about their group identity while simultaneously keeping them from attempting to advance in the status hierarchy (Glick & Fiske, 2001; Lane, 1962). Based on this literature, we reasoned that endorsing stereotypes that portray men as more deserving of high status positions than women, and describing oneself in gender stereotypical ways (i.e. as higher on feminine warmth traits and lower on masculine competence traits) are both ways in which women may justify the existing status hierarchy between women and men

Method

Participants and design

Participants were 41 undergraduate women (mean age = 18.6 years, $SD = .40$ years) who received course credit in exchange for their participation. Participants were predominately European American (68.3%), with the remainder reporting Asian American (7.3%), Latina American (2.4%), or "other" (21.9%) racial/ethnic backgrounds. They were randomly assigned to one of four conditions in a 2 (Prime: Meritocracy, Neutral) \times 2 (Article: Sexism, Inuit) between participants design.

Procedure

Participants reported to the laboratory in small groups and were met by a female experimenter who explained that the study session contained two different studies, one of which was not of primary interest to the experimenter. Participants learned that the study of primary concern addressed peoples' reactions to newspaper articles. The experiment was run in conjunction with a separate study involving men, and consequently, approximately half of the students in the room were men.

The "unrelated first study" served as the priming manipulation. As in Experiment 1, participants were randomly assigned to complete either the meritocracy or neutral sentence unscramble prime. Once time was called, participants placed the completed measure in an envelope.

Prejudice manipulation. One half of the participants then read an article contending that prejudice against women is pervasive (Sexism Condition). This article described an ostensible survey conducted by the "California Research Consortium." Participants learned that the survey, which examined 5000 present University of California (UC) students and 5000 recent UC alumni, revealed that women faced pervasive prejudice while in college (e.g., 50% of female UC students experienced sexual harassment, female students were eight times more likely than male students to report hearing sexist assumptions made about their personal and academic interests, to be the target of derogatory sexist remarks, and to be treated disrespectfully because of their gender) and after college (e.g., the female UC alumni earned 25% less than the male alumni, female alumni were considerably less likely than male alumni to hold supervisory and leadership positions). Additionally the article specified that most of the male respondents held sexist stereotypes and would discriminate against women if given the opportunity. Finally, in order to increase the plausibility of the manipulation, participants read that 90% of the female UC alumni reported that while in college they did not recognize the extent to which sexism would cause personal and professional barriers for them.

The remaining participants were assigned to a control condition. The content and wording of the article they read was identical to the sexism article, except that the target of prejudice was a less familiar group (the Inuit) and their outcomes were compared to ethnic majority group members from Canada. Importantly, participants were neither the target nor perpetrator of the prejudice in the control condition. All dependent measures were assessed on a 7-item scale ranging from 0 (Strongly Disagree) to 6 (Strongly Agree).

Gender stereotypes. Participants next completed a stereotyping measure on which they indicated their agreement or disagreement with 7 statements that imply that men are more suited to, and deserving of, high status in the work place; thereby justifying men's higher status relative to women. These items were: "On average, men are more

likely than women to make important sacrifices to further their careers"; "On average, women are more likely than men to turn down high status positions"; "On average, men are more likely than women to seek out positions of leadership"; "On average men are more likely than women to choose their careers based upon salary and earnings"; "On average, women enjoy supervising others less than men do"; "Women on average are more likely than men to become emotional when dealing with stress"; "Men on average are more decisive than women." These items formed a reliable scale and were averaged into a single measure of gender stereotyping ($\alpha = .86$).

Perceived sexism. Women indicated the extent to which they agreed or disagreed with 4 statements reflecting perceived sexism: "Women as a group face a good deal of sexism"; "Women are negatively affected by sexism"; "Sexism will have a negative impact on my future"; "Sexism will block me from reaching my goals." These were averaged and formed a single measure of perceived sexism ($\alpha = .67$).

Self-stereotyping. Participants rated themselves on 5 warmth (emotional, modest, kind, appreciative, considerate; $\alpha = .76$) and 5 competence traits (ambitious, competent, aggressive, intelligent, strong; $\alpha = .71$) on a scale from (0) "Not at all like me" to (6) "Very much like me." These items were selected to capture the "warmth" dimension of the female stereotype and the "competent" dimension of the male stereotype.

Manipulation check. Participants rated the validity of the article by rating the extent to which the article was credible, convincing, persuasive, and well-written ($\alpha = .65$).

Finally, participants were sensitively debriefed.

Results

Manipulation checks

A total of 3 participants reported that they believed the article was fake (2 = Sexism, 1 = Inuit) and were dropped from the remaining analyses. The remaining participants found both articles equivalently valid (Sexism: $M = 3.40$, $SD = 1.10$, Inuit: $M = 3.56$, $SD = .80$; $p > .60$). No main effect (F 's < 1.50 ; $p > .20$) or interaction ($F < .15$; $p > .70$) between prime and article content was observed. Participants also completed an equivalent number of sentences (18 out of 20) in each of the prime conditions. No main effects or interaction were observed on the number of sentences completed (all F 's $< .40$; p 's $> .25$).

Analysis strategy

As recommended by Rosenthal, Rosnow, and Rubin (2000), we conducted a priori contrasts to test our focused predictions that women in the meritocracy prime condition who read about pervasive sexism would be more likely to engage in psychological system justification relative to women in the remaining conditions. The perceived sexism

variable, however, served as both a manipulation check for the sexism article and as a dependent variable assessing system justification. Consequently, we conducted two a priori contrasts (controlling for familywise error) for this dependent variable only.

Perceived sexism

Manipulation check. To ascertain whether our article manipulation was effective, we first examined the perceived sexism means among women primed with neutral content. Consistent with our manipulation, women primed with neutral content tended to perceive more sexism if they read an article describing evidence of prejudice against women than if they read an article describing prejudice against the Inuit, although this contrast was only marginally significant $t(34) = 1.94, p = .06$ (two-tailed; see Table 2 for means).

System justification. We next examined whether the meritocracy prime reduced perceptions of discrimination. Consistent with predictions, women who read an article about prejudice against women perceived significantly less sexism if primed with meritocracy than if primed with neutral content ($t(34) = 2.92, p < .001$; see Table 2 for means). Prime condition had no effect on women who read about prejudice against the Inuit.

Gender stereotypes

We conducted an a priori contrast to test our focused prediction that women in the meritocracy prime condition who read about prejudice against women would be more likely to endorse system-justifying stereotypes (stereotypes that locate the cause of gender differences in status within characteristics of women and men) compared to women in the other three conditions. To test this prediction, we compared the mean of the meritocracy prime/sexism condition to the three remaining conditions. As predicted, women primed with meritocracy who read about sexism endorsed system-justifying stereotypes to a significantly greater extent than did women in the other three conditions ($t(34) = 2.08, p < .05$; see Table 2 for means).

Self-stereotyping

Our next hypothesis required a repeated measures approach. Specifically, we predicted that women exposed to

Table 2
Perceived sexism and gender stereotype means and standard errors as a function of meritocracy manipulation and article

	Meritocracy	Neutral
<i>Perceived sexism</i>		
Sexism	2.70 _b (.15)	3.62 _a (.34)
Inuit	3.00 _a (.18)	3.02 _a (.18)
<i>Gender stereotype endorsement</i>		
Sexism	3.84 _b (.34)	3.02 _a (.31)
Inuit	3.08 _a (.30)	3.04 _a (.36)

Note: Means with different subscripts in the same row are significantly different at $p < .05$.

Table 3
Masculine and feminine trait ratings as a function of meritocracy manipulation and prejudice condition

	Meritocracy		Neutral	
	Masculine	Feminine	Masculine	Feminine
Sexism	3.88 _a (.20)	4.68 _b (.21)	4.46 _b (.20)	4.20 _b (.21)
Inuit	4.15 _b (.23)	4.35 _b (.23)	4.42 _b (.20)	4.70 _b (.21)

Note: Means with different subscripts in the same row are significantly different at $p < .05$.

sexism and primed with meritocracy would also rate themselves significantly higher on warmth traits than on competence traits compared to women in the other three conditions. We conducted a one way mixed design ANOVA testing our meritocracy prime/sexism article condition against the remaining conditions on the within subjects variable of trait ratings (warmth, competence). Consistent with predictions, the contrast was significant ($F(3, 34) = 4.49, p < .001$).

Only women who were primed with meritocracy and who read the sexism article rated themselves significantly higher on warmth traits than on competence traits ($F(1, 34) = 15.25, p < .001$). Women in the remaining three conditions did not differ in their endorsement of competence and warmth traits (see Table 3 for means). The self-stereotyping pattern of trait endorsement observed in the meritocracy prime/sexism condition appears to be driven by the effect of the meritocracy prime on both increasing warmth and decreasing competence trait ratings relative to the remaining conditions.

Discussion

Experiment 2 demonstrated that subtle activation of the belief in meritocracy influences the construal of even the most overt inequality messages. When faced with evidence of the widespread disadvantage of their ingroup and primed with meritocracy, women were more likely to justify this disadvantage by minimizing sexism, by endorsing stereotypes that justify women's subordinate status relative to men, and by self-stereotyping (as more warm than competent) than women in the remaining conditions.

Experiment 2 furthered our investigation of meritocracy's role in the justification of disadvantage in two important ways. First, we examined multiple markers of psychological system justification: perceived discrimination, gender stereotyping, and self-stereotyping. We observed remarkably consistent effects on each of these separate indicators of system justification. Second, perhaps most surprisingly, we demonstrated that system justifying responses are most likely when the belief in meritocracy is both salient and threatened by belief violating evidence. An alternative hypothesis could have been that in the face of clear evidence of sexism subtle meritocracy cues would exert little effect on women's perceptions of sexism. Women who read about sexism, however, increased their system justifying responses when primed with meritocracy. Thus,

these data support our dissonance based argument by demonstrating increased adherence to the belief in meritocracy in the face of meritocracy-opposing evidence.

General discussion

We propose that situational cues that make meritocratic beliefs salient increase the extent to which individuals psychologically justify existing status inequalities in society, even when those inequalities are disadvantageous to the self. In Experiment 1, we demonstrated that when primed with meritocracy both high and low status individuals explained an ambiguous personal rejection in a manner consistent with the activated belief. In particular, women primed with meritocracy were more likely to view the rejection as deserved and fair than women primed with neutral content. Men primed with meritocracy, in contrast, were more likely to view the rejection as discriminatory than men primed with neutral content. In Experiment 2, we examined the effect of priming meritocracy on system justifying responses in the face of clear evidence of injustice. Subtle activation of the belief in meritocracy led women who read about pervasive sexism to minimize perceptions of sexism and to stereotype themselves, and women in general, in ways that justified women's subordinate status. These data demonstrate how activating cultural ideologies can influence individual cognition and behavior so as to maintain existing status hierarchies in society.

Priming meritocracy

Our findings demonstrate that subtle meritocracy cues can result in psychological system justification in the face of disadvantage. Our effects occurred irrespective of personal endorsement of the belief in meritocracy. This is in contrast with some previous research that has shown meritocracy prime effects only among individuals who personally endorsed the belief (e.g. Biernat et al., 1996). This difference in findings may be due to the nature of the meritocracy prime. Arguably, the subtle nature of the sentence-unscramble prime left participants in our research unaware of the activation of the construct and thus unable to correct for its influence. Our data suggest that regardless of individual level of endorsement, Americans who are aware of the cultural ideology of meritocracy may be subject to its influence without their awareness.

Limitations and future directions

Although we propose that the effects observed here hold for low status groups in general, the current work is limited to one low status group: women. In previous work, we have demonstrated that endorsement of a meritocratic worldview functions similarly to reduce perceptions of discrimination among women, African Americans, and Latino/a-Americans (Major et al., 2002). These groups however, differ in important ways (e.g. severity of discrimination,

group consciousness, group identity, stigma consciousness) which may influence their reaction to a meritocracy prime. For example, priming meritocracy among African Americans could arguably lead to a contrast effect and increased perceptions of discrimination in the face of personal and group disadvantage. The pervasive and blatant discrimination that African Americans face may have led to a strong internalized belief that the system is unfair. Thus, although we propose that the meritocracy prime will function similarly for all low status groups, this remains an open question.

Second, we examined the effects of priming one type of cultural ideology in the present research: the belief in a meritocracy. Other ideologies, such as egalitarianism, are also widely endorsed in American culture (Katz & Hass, 1988). Cues that activate egalitarianism are arguably just as pervasive as are cues that activate meritocracy. Although egalitarianism can serve to legitimize status differences in some contexts (e.g. as an argument for abolishing affirmative action programs), it also implies that all individuals, regardless of talents and ability, are worthy and deserving of equal status. As such, priming the belief in egalitarianism may lead to increased perceptions of discrimination in the face of personal or group disadvantage (relative to a neutral prime). How individuals respond to competing cues that legitimize and de-legitimize the status hierarchy is a question for future research.

Third, the current research examined the effect of priming meritocracy on ways of psychologically justifying the existing status hierarchy. We did not explore the consequences of system justification for psychological wellbeing. In related research we found that when exposed to evidence of pervasive discrimination against their group, members of low status groups (women, Latino-Americans) who endorse the belief in a meritocracy report lower self-esteem, whereas those who reject meritocracy beliefs report higher self-esteem (Major et al., 2006). We hypothesize that these self-esteem effects result from the fact that pervasive discrimination violates the worldview of those who endorse a meritocratic worldview but verifies the worldview of those who reject a meritocratic worldview (Major et al., 2006). Finally, endorsement of meritocracy may be beneficial for psychological wellbeing in the face of transient personal disadvantage. Such disadvantage is less of a threat to the meritocratic worldview, and, the belief in a meritocracy can increase perceptions of control over, and decrease the anxiety associated with, the negative event (McCoy, 2003).

Conclusions

The current research represents a significant advance over our previous work examining the effects of individual differences in meritocracy beliefs (i.e. Major et al., 2002). First, we demonstrated that all individuals, regardless of personal level of endorsement, may be subject to the influence of subtle meritocracy cues. Second, we pro-

vided evidence that meritocracy cues can lead to the psychological justification of personal and ingroup disadvantage. Specifically, we demonstrated that women primed with meritocracy were more likely to blame themselves vs. discrimination for a personal rejection, perceived less sexism, and stereotyped themselves and women in general in subordinate ways. As with many priming studies, our effects are not large. They are, however, notably consistent across different operationalizations of system justification.

In sum, our studies suggest one mechanism by which inequality and status differences are maintained in America. Subtle cues to meritocracy in the cultural environment may encourage members of low status groups to construe personal and group disadvantage as deserved and to minimize the perception that such disadvantage is due to discrimination. These system justifying responses to meritocracy cues may be most likely precisely when individuals would least like them to occur: in the presence of clear, meritocracy-violating inequality.

References

- Augustinos, M. (1998). Social representations and ideology: towards the study of ideological representations. In U. Flick (Ed.), *The psychology of the social*. New York: Cambridge University Press.
- Bargh, J. A. (1989). Conditional automaticity: varieties of automatic influence in social perception and cognition. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 3–51). New York: Guilford Press.
- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: direct effect of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology*, *71*, 230–244.
- Biernat, M., Vescio, T. K., & Theno, S. A. (1996). Violating American values: a “value congruence” approach to understanding outgroup attitudes. *Journal of Experimental Social Psychology*, *32*, 387–410.
- Chartrand, T. L., & Bargh, J. A. (1996). Automatic activation of impression formation and memorization goals: nonconscious goal priming reproduces effects of explicit task instructions. *Journal of Personality and Social Psychology*, *71*, 464–478.
- Cozzarelli, C., Wilkinson, A. V., & Tagler, M. J. (2001). Attitudes toward the poor and attributions for poverty. *Journal of Social Issues*, *57*, 207–227.
- Crandall, C. S. (1994). Prejudice against fat people: ideology and self-interest. *Journal of Personality and Social Psychology*, *66*, 882–894.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, *56*, 5–18.
- Eagly, A. H., & Mladinic, A. (1993). Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes and judgments of competence. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (15, pp. 1–35). New York: Wiley.
- Ferguson, M. J., & Bargh, J. A. (2004). How social perception automatically influences behavior. *Trends in Cognitive Sciences*, *8*, 33–39.
- Glick, P., & Fiske, S. (2001). AN ambivalent alliance. Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist*, *56*, 109–118.
- Gramsci, A. (1937/1971). *Selections from the prison notebooks*. New York: International Publishers.
- Hafer, C. L., & Olson, J. M. (1989). Beliefs in a just world and reactions to personal deprivation. *Journal of Personality*, *57*, 799–823.
- Hafer, C. L., & Olson, J. M. (1993). Beliefs in a just world, discontent, and assertive actions by working women. *Personality and Social Psychology Bulletin*, *19*, 30–38.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, *33*, 1–27.
- Jost, J. T., Pelham, B. W., & Carvallo, M. R. (2002). Non-conscious forms of system justification: Implicit and behavioral preferences for higher status groups. *Journal of Experimental Social Psychology*, *38*, 586–602.
- Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology*, *55*, 893–905.
- Kluegel, J. R., & Smith, E. R. (1986). *Beliefs about inequality: American's view of what is and what ought to be*. Hawthorne, NJ: Aldine de Gruyter.
- Lane, R. E. (1962). *Political ideology: why the American common man believes what he does*. Oxford, England: Free Press of Glencoe.
- Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: looking back and ahead. *Psychological Bulletin*, *85*, 1030–1051.
- Lukacs, G. (1923/1971). *History and class consciousness*. Cambridge, MA: The MIT Press.
- Major, B. (1994). From social inequality to personal entitlement: the role of social comparisons, legitimacy appraisals, and group membership. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (vol. 26, pp. 293–355). San Diego, CA: Academic Press.
- Major, B., Gramzow, R. H., McCoy, S., Levin, S., Schmader, T., & Sidanius, J. (2002). Perceiving personal discrimination: the role of group status and legitimizing ideology. *Journal of Personality and Social Psychology*, *82*, 269–282.
- Major, B., Kaiser, C. R., McCoy, S. K., & O'Brien, L. (2006). Perceived discrimination as worldview threat or worldview confirmation: implications for self-esteem. Manuscript under review.
- Marx, K., & Engels, F. (1846/1970). *The German ideology*. In C. J. Arthur (Ed.), . New York: International Publishers.
- McCoy, S. K. (2003). A double edged sword: ideology and self-esteem among low status groups. Unpublished doctoral dissertation.
- O'Brien, L., & Major, B. (2005). System justifying beliefs and psychological well-being: The role of group status and identity. *Personality and Social Psychology Bulletin*, *31*, 1718–1729.
- Plaks, J. E., Grant, H., & Dweck, C. S. (2005). Violations of implicit theories and the sense of prediction and control: implications for motivated person perception. *Journal of Personality and Social Psychology*, *88*, 245–262.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychological Inquiry*, *8*, 1–20.
- Quinn, D. M., & Crocker, J. (1999). When ideology hurts: effects of belief in the Protestant ethic and feeling overweight on the psychological well-being of women. *Journal of Personality and Social Psychology*, *77*, 402–414.
- Ridgeway, C. (2001). The emergence of status beliefs: from structural inequality to legitimizing ideology. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: emerging perspectives on ideology, justice, and intergroup relations* (pp. 257–277). Cambridge: Cambridge University Press.
- Rosenthal, R., Rosnow, R. L., & Rubin, D. B. (2000). *Contrasts and effect sizes in behavioral research: a correlational approach*. New York: Cambridge University Press.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: an intergroup theory of social hierarchy and oppression*. New York, NY: Cambridge University Press.
- Srull, T. K., & Wyer, R. S., Jr. (1979). The role of category accessibility in the interpretation of information about persons: some determinants and implications. *Journal of Personality and Social Psychology*, *37*, 1660–1672.
- Thompson, J. B. (1990). *Ideology and modern culture: critical social theory in the era of mass communication*. Stanford, CA: Stanford University Press.