Devaluing Domains in Response to Threatening Intergroup Comparisons: Perceived Legitimacy and the Status Value Asymmetry

Toni Schmader
University of Arizona

Brenda Major, Collette P. Eccleston, and Shannon K. McCoy
University of California, Santa Barbara

Group status and status legitimacy were tested as moderators of devaluing in response to threatening intergroup comparisons. In 3 experiments, participants received feedback comparing their in-group (based on school or gender) to a higher or lower status out-group. When the legitimacy of group status differences was assumed (Studies 1 and 2) or manipulated (Study 3), participants devalued the domain when their in-group compared unfavorably with a lower status out-group but did not devalue the domain when their in-group compared unfavorably with a higher status out-group. In Study 3, the status value asymmetry was eliminated when status differences were delegitimized. Mediational analyses suggested that the status value asymmetry was explained by the perceived utility of the domain for gaining status-relevant rewards.

So our self-feeling in this world depends entirely on what we back ourselves to be and do. It is determined by the ratio of our actualities to our supposed potentialities; a fraction of which our pretensions are the denominator and the numerator our success. . . . To give up pretensions is as blessed a relief as to get them gratified; and where disappointment is incessant and the struggle unending, this is what men will always do. (William James, 1890/1950, p. 187)

In this statement, James (1890/1950) implied that the experience or expectation of failure in a domain leads individuals to devalue (or give up pretensions of success in) that domain. Indeed, a substantial amount of research indicates that when individuals fare poorly in a domain relative to others, they often follow James's advice (e.g., Rosenberg, 1979; Tesser & Campbell, 1980; Tesser & Paulhus, 1983). James's argument becomes more provocative, however, when one considers its implications for members of groups that have lower social status and, hence, more limited opportunities for success. A Jamesian perspective implies that in an effort to protect self-esteem, members of lower status groups who encounter obstacles to success might devalue those domains in which their group fares poorly relative to other, more advantaged groups (cf. Crocker & Major, 1989).

Although this prediction can be derived from most theories of self-protection, we believe that it ignores the impact of a group's social status and the perceived legitimacy of that status on self-protective processes. Specifically, we hypothesize that group members do not devalue domains in which higher status groups outperform their in-group unless they have reason to believe that status differences between the groups are illegitimate. Without such delegitimizing information, we argue, the default tendency is represented by a status value asymmetry, whereby group members devalue domains in which their in-group fails relative to equal or lower status groups but do not devalue domains in which their in-group fails relative to higher status groups. The goals of the present research are to show that group status constrains devaluing in response to threatening intergroup comparisons, to test the prediction that perceived status legitimacy moderates this status value asymmetry, and to examine appraisals that mediate this phenomenon.

Devaluing in Response to Threat: An Ego-Defense Perspective

Devaluing can be defined as a process of reducing the perceived importance of a domain in an effort to protect oneself against negative outcomes received in that domain. Derived originally from James (1890/1950), this view of devaluing as an ego-defense strategy has received considerable support (e.g., Harter, 1986; Jussim, Coleman, & Nassau, 1989; Robinson, Tayler, & Pirolat, 1990; Rosenberg, 1979; Tesser & Campbell, 1980; Tesser & Paulhus, 1983). For example, Tesser and Paulhus (1983) demonstrated that individuals who scored lower than another individual on a fictitious personality trait described that trait as less personally relevant to their self-concepts, compared with individuals who scored higher than another on the trait. According to Tesser's (1988) self-evaluation maintenance model, the upward social com-
parison information that individuals received in this study presented a threat to their views of themselves that prompted a strategy to devalue the importance of that domain for self-definition.

In addition to evidence that self-protective devaluing occurs in response to personal failures in a domain, there is also evidence that devaluing is used as a strategy to defend against negative group outcomes. Individuals devalue domains in which they observe their in-group doing more poorly than another group of equal status (e.g., Sachdev & Bourhis, 1987; Schmader & Major, 1999; Wagner, Lampen, & Syllwasschy, 1986). For example, Schmader and Major (1999) provided participants with feedback about how their in-group scored on a personality test relative to an out-group. Without any information about their personal score on the test, participants valued the trait less if the out-group scored higher than their in-group did than if their in-group scored higher than the out-group did.

Drawing on this notion that devaluing occurs in response to group threats, many intergroup theorists have assumed that individuals devalue domains in which their lower status in-group is at a disadvantage relative to higher status out-groups (e.g., Crocker & Major, 1989; Ogbe, 1991; Steele, 1997; Tajfel & Turner, 1986). For example, Crocker and Major (1989) proposed that devaluing is one of the self-protective strategies that stigmatized individuals might use to maintain a high sense of self-worth in spite of poorer outcomes they receive in certain domains compared with nonstigmatized individuals. Because experimental studies of devaluing in response to group threat have only examined groups of equivalent status, the use of devaluing among lower status groups when comparing with higher status groups has not been explicitly examined. In fact, we argue that when intergroup comparisons are made between groups of different social status, individuals are sometimes constrained from devaluing domains in which their lower status in-group does more poorly than a higher status out-group does.

How Social Status Constrains Devaluing: A Status Value Perspective

The ego defense perspective previously described assumes that the value of a domain is determined by self-protective concerns alone. We believe the personal value placed on a domain is also affected by one's knowledge of who excels in that domain, such that domains in which higher status groups excel are often perceived as having greater value by members of low- and high-status groups alike. This perspective on valuing is related to Ridgeway's (1991) status construction theory, from which we borrow the status value terminology. Ridgeway argued that if people who possess a certain nominal characteristic (e.g., being male or Caucasian) are observed to have greater power in social interactions, that characteristic becomes a marker of status and is valued in itself. Thus, being male takes on status value, because there is often an observed correlation between "maleness" and having interpersonal power.

We extend Ridgeway's (1991) theory beyond nominal characteristics to argue that ability and personality domains also develop status value when members of higher status groups are observed to excel in those domains. Thus, we hypothesize that when intergroup comparisons are made between groups of different status, individuals devalue domains in which a lower status group excels (just as ego-defense theories predict) but are constrained from devaluing domains in which a higher status group excels. We refer to this predicted pattern of valuing as a status value asymmetry.

Although it has never been tested experimentally, there is some existing evidence for this hypothesized asymmetry. For example, Spears and Manstead (1989) found that students at a lower status university did not devalue attributes they saw as being possessed by students at a higher status university. Students at the higher status university, however, did devalue attributes that they associated with the less prestigious school. Furthermore, in our previously described study (Schmader and Major, 1999), we observed that women were somewhat (but not significantly) less likely to devalue a fictitious personality trait when they learned that men possessed the trait more than were men who learned that women possessed the trait more. Thus, in contrast to predictions derived from ego-defense theories, the results of these studies suggest that when group members' in-group does poorly relative to a higher status group, they value (rather than devalue) that domain.

**Perceived Legitimacy as a Moderator of Devaluing**

Thus far, we have outlined two competing predictions for devaluing in response to intergroup comparisons between different status groups. Ego-defense theories predict that group members devalue domains in which their in-group receives poorer outcomes than does a higher status group. From a status value perspective, however, we expect group members to value domains in which their in-group does poorly compared with higher status groups. We believe that these two positions can be reconciled by considering the extent to which individuals believe that the status hierarchy defining the two groups is legitimate or illegitimate.

We define perceived legitimacy as an individual's subjective appraisals that the social hierarchy defining the relative status of different groups is fair in that it is based on actual differences in ability or effort between those groups. This definition equates perceived legitimacy with the perception that rewards are distributed equitably, such that individuals and groups receive outcomes in proportion to their inputs (Adams, 1965; also see Walster, Walster, & Berscheid, 1978, for a review). Several theorists have proposed that perceptions of legitimacy influence the strategies used by disadvantaged groups to cope with the low status of their group (Major, 1994; Tajfel, 1975; Turner & Brown, 1978). Research indicates that perceptions of legitimacy moderate social comparison strategies (Bylsma, Major, & Cozzarelli, 1995; Major, 1994), tendencies toward ingroup versus out-group favoritism (Jost & Burgess, 2000), and attributions to discrimination (Major et al., 2000).

We argue that perceptions of legitimacy also moderate valuing processes in response to in-group comparisons. We hypothesize that when status differences are assumed to be legitimate, status information constrains individuals from devaluing domains in which a higher status group excels, thereby creating the status value asymmetry described previously. However, we predict that when status differences are delegitimized, the status constraints on devaluing will disappear, freeing group members to devalue domains in which their in-group is outperformed by a higher status out-group.
We believe that in most cases, the default perception is to assume that prevailing status differences between groups are legitimate. Our reasoning is based on substantial evidence that people tend to justify the status quo, even when it is disadvantageous to them (e.g., Heider, 1958; Homans, 1974; Ichheiser, 1970). As a consequence, prevailing status hierarchies are generally assumed to be legitimate unless there is clear evidence to the contrary (Jost & Banaji, 1994; Kluegel & Smith, 1986; Major, 1994; Sidanius & Pratto, 1993). This tendency has been shown to lead members of lower status groups to often forego self-serving and group-serving biases and, instead, to hold beliefs and attitudes that validate existing status systems (Jost & Banaji, 1994; Kluegel & Smith, 1986; Major, 1994) and favor more advantaged outgroups (e.g., Jost & Burgess, 2000; Sachdev & Bourhis, 1987, 1991). Given evidence of these status-justifying tendencies, we predict that in the absence of clear delegitimizing information, individuals will respond to intergroup comparisons by valuing (not devaluing) domains in which a higher status group outperforms their in-group.

Although there has been no direct test of the role played by perceived legitimacy in valuing processes, correlational data indicate its importance. For example, East Germans who perceive that their lower status position relative to West Germany is illegitimate show a significant tendency to devalue the importance of economic wealth, one of the key dimensions that differentiates East and West Germans (Mummedeby, Mielke, Wenzel, & Kanning, 1996). Furthermore, Sachdev and Bourhis (1987) showed that members of a lower status group perceived their status as being less legitimate and valued the status-defining dimension to a lesser degree than did members of a higher status group. Finally, Schmader, Major, and Gramzow (in press) found that African American college students who perceived injustice in the American ethnic hierarchy were more likely to devalue academic success. In sum, although there is some support for our hypothesis that perceived illegitimacy moderates valuing processes, this prediction has not been experimentally tested.

Explanations of the Status Value Asymmetry

**Perceived Utility for Gaining Status-Relevant Rewards**

We believe that the status value asymmetry is primarily mediated by perceptions of a domain’s utility for gaining status-relevant rewards. Thus, members of lower status groups might personally value domains in which their in-group does more poorly than higher status groups do, because they believe that excelling in those domains will bring with it the rewards enjoyed by those of higher status. This might explain why Latino and African American students do not, on average, devalue academic success in spite of pervasive ethnic differences in academic performance (e.g., Goodenow & Grady, 1993; Major & Schmader, 1998; Mickelson, 1990; Schmader, Major, & Gramzow, in press; Voelkl, 1997). The belief that academic success leads to the rewards possessed by higher status ethnic groups (e.g., higher income, better job opportunities) might offset any ego-defensive tendency to devalue academics in response to poor performance. By the same token, group members are unlikely to value domains in which lower status groups excel, because they view those domains as having little utility.

We further argue that the tendency to infer status-relevant utility from intergroup comparison information is stronger when status differences are assumed to be legitimate. However, if status differences are shown to be illegitimate, with rewards being distributed unfairly, the tendency to infer a domain’s utility by observing who excels in that domain should be greatly diminished, leaving members of lower status groups free to devalue domains in which their in-group does poorly relative to a higher status out-group.

Although we believe that perceptions of utility offer the best explanation for the patterns we predict, we also examine two additional variables that might influence valuing processes.

**Domain Definition**

In addition to the perceived utility of a domain, the perceived definition of a domain might influence how much that domain is valued. Research by Dunning and Cohen (1992) indicates that trait definitions are somewhat subjective. Specifically, individuals often define traits specific to their own idiosyncratic behaviors so that they can claim to possess positive traits and deny possessing any negative traits. Given the malleability of trait definitions and given people’s implicit personality theories, it is likely that when individuals learn about a group’s standing on an attribute, the meaning of that attribute is shaped by other traits that the group is seen to possess (Asch, 1946). Glick and Fiske (2000) have recently asserted that high-status groups are characterized as being highly competent but lacking interpersonal warmth, whereas nonthreatening, low-status groups are characterized as being socially warm but low in competence. Thus, when a higher status group excels on a novel trait, the meaning of that trait might be associated with higher competence and lower warmth, but when a lower status group excels on a novel trait, the meaning of the trait might be associated with lower competence and higher warmth. This change in meaning, more than the perceived utility of the trait, might underlie the value individuals assign to the trait.

This distinction between meaning and value is reminiscent of an early debate in the attitude literature (Asch, 1948). Attitude researchers had demonstrated that people value a message more if it is presented by a prestigious source than if it is presented by a less prestigious source. Asch argued that the value of the message changes because the meaning of the message is altered by the context in which that message is presented (i.e., by the prestige of the individual making the statement). Anderson (1971) countered that the prestige of the source creates a halo effect that influences the value assigned to a message but does not change the meaning of the message itself. Although studies have not explicitly resolved this debate, we explore the distinction between the changing meaning and the changing value of traits in response to intergroup comparisons.

---

1 Although value and utility may seem conceptually similar, the distinction between the two can be seen as a distinction between a belief (i.e., Domain X has utility for achieving Outcome Y) and an attitude (i.e., "I personally value excellng in Domain X"). In accordance with Fishbein's (1967) assertion that beliefs dictate attitudes, we believe that the perceived utility of a domain is an important predictor of how much that domain is personally valued.
Self-Appraisals

Previous research on devaluing in response to group outcomes suggests that self-appraisals are an important predictor of valuing. From an ego-defense perspective, individuals value traits that they believe they personally possess and devalue traits that they do not personally possess. Moreover, individuals often use the performance of their in-group to estimate their personal abilities (e.g., Tindale, Kulik, & Scott, 1991; Zander, Stotland, & Wolfe, 1960). Thus, it was not surprising that in our earlier work with groups of equal status, individuals devalued a domain in which their in-group had performed relatively poorly, in part because the feedback about their group directly affected their self-appraisals in that domain (Schmader & Major, 1999). Following from this past work, in the present research we again examined self-appraisals in response to group performance feedback as a possible antecedent to valuing among groups of differing status.

Overview of Present Research

We examined selective devaluing among low- versus high-status groups in three experimental studies, two using groups based on school affiliation, and one using gender. In each experiment, participants received group feedback that suggested that one group tended to score much higher than the other group on a novel personality attribute called surgency. In Studies 1 and 2, participants received no information that would explicitly delegitimize status differences between the groups (schools in Study 1, gender in Study 2). We hypothesized that without delegitimizing information, the status value asymmetry would occur, in that group members would devalue a domain in which their in-group failed relative to a lower status group but would not devalue that domain if their in-group failed relative to higher status groups. In Study 3, we manipulated status legitimacy by suggesting that status differences between schools either could or could not be justified by actual differences in intellectual ability. We hypothesized that the status value asymmetry would be present under conditions of legitimacy but would be absent when status differences were delegitimized.

Study 1

Method

Participants and Design

Seventy-seven introductory psychology students at the University of California, Santa Barbara (UCSB) participated in groups of 6 to 10. Ten participants were excluded from analyses, because they suspected that the attribute was fictitious or that the feedback was not veridical or because they had applied to the comparison school. The final sample included 67 participants (25 men, 42 women) randomly assigned to a 2 (relative group status: high or low) × 2 (relative group feedback: in-group success, or out-group success) between-subjects factorial. Analyses conducted on the full sample yielded nearly identical results for all dependent variables, with one exception (footnoted later in this article).

Procedure

The experiment was described as a study of a newly identified personality trait called surgency (Schmader & Major, 1999). Other than describing surgency as a positive personality characteristic, we provided no other definition of surgency. Participants spent 10 min completing a 50-item surgency test. The content of the statements on the test varied widely, thus making it difficult to discern the personality construct that was presumably being measured. While the participants’ tests were ostensibly being scored by an assistant, the experimenter explained that one goal of the research was to examine possible differences in surgency between students attending different colleges and universities. We manipulated the relative status of the in-group by varying the comparison out-group. In the relative high-status condition, participants were told that the scores of students at their own university (UCSB) would be compared with the scores of students at the local city college. In the relative low-status condition, participants were told that the scores of UCSB students would be compared with the scores of students at Stanford University. To further reinforce perceived status differences between the schools, participants were shown a data sheet depicting differences in income, career advancement, and the likelihood of postgraduate education between alumni from UCSB and the comparison institution (see Jost & Burgess, 2000, for a similar paradigm).

After the manipulation of group status, each participant received a summary sheet depicting the average surgency score obtained by participants in that experimental session and an average surgency score obtained by a group of participants at the comparison school. Because we emphasized to participants that their own score was not included in the calculation of their session’s average, participants had no information about their personal performance on the test. In the in-group success condition, this sheet indicated that the average score for UCSB was 72.5 and the average score for the comparison school was 34.5 (i.e., in-group success also implies out-group failure). In the out-group success condition, the out-group success condition, the sheet showed that the score for the UCSB session was 34.5, compared with an average score of 72.5 for the comparison school (i.e., out-group success also implies in-group failure). Participants then completed the dependent measures, were thoroughly debriefed, and were thanked for their participation.

Measures

Unless otherwise mentioned, all dependent measures were rated on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Valuing. To assess valuing, we adapted the following three items from the Valuing subscale of Major and Schmader’s (1998) Intellectual Engagement Inventory: “Being high in surgency is very important to me,” “I care a great deal about being high in surgency,” and “It doesn’t matter to me one way or the other if I am high or low in surgency.” The last item was reverse coded and averaged with the other two to create a reliable index of valuing (α = .91).

Perceived utility. We assessed perceived utility both as status-relevant utility (for gaining career success) and status-irrelevant utility (for gaining social success). Three items assessed career utility (α = .83): “Does surgency seem to be an attribute that could help a person be more successful in their career?” “How useful is surgency for becoming successful in one’s career?”, and “If a person lacks surgency, will they have greater difficulty attaining career success?” Three additional items assessed social utility (α = .81): “Does surgency seem to be an attribute that could help a person be more successful in their social relationships?”, “How useful is surgency for getting along well with others?”, and “If a person lacks surgency, will they have greater difficulty in their social relationships?” These two measures were moderately intercorrelated (r = .36, p < .01).

Domain definition. To assess how they defined surgency, we had participants rate the degree to which they thought a person who was high

---

2 Pilot testing confirmed that students at UCSB perceived their own school (M = 5.40, on a 7-point scale) as having higher status than City College (M = 2.64), t(49) = 16.43, p < .001, and as having lower status than Stanford (M = 6.96), t(49) = 14.51, p < .001.
in surgery also possessed traits that are related to social warmth or competence (the two fundamental dimensions of social perception identified by Glick & Fiske, 2000). Competence traits included intelligent, lazy (reverse scored), unintellectual (reverse scored), and diligent (α = .79). Social warmth traits included sociable, easygoing, friendly, and empathic (α = .73). These two measures were orthogonal to one another (r = .03).

**Self-appraisals.** We averaged the following three items to form a measure of self-appraisals (α = .79): “I think I am probably high in surgery,” “I doubt that I am a person who is high in surgery” (reverse scored), “Surgery is not a large component of my personality” (reverse scored), and “I think other people would consider me to be high in surgery.”

**Manipulation Checks**

**Group feedback and group status.** As a check on the manipulation of relative group performance, we asked participants, “Students at which school tend to be higher in surgery?” The manipulation check for relative group status was the average of two items (r = .97): “On the average, which students are more successful in their careers (e.g., earn high salary, promotions, etc.)?” and “In general, which school has higher status as an institution of higher education?” These items were rated on 7-point scales ranging from 1 (Stanford/City College) to 7 (UCSB).

**Perceived legitimacy.** We assessed participants’ perceptions of the legitimacy of group status differences with three items: “Do you believe that it is accurate or inaccurate to say that Stanford [UCSB] really is superior to UCSB [City College] as an institution of higher education?” “How fair or unfair do you think it is that Stanford [UCSB] has higher status than UCSB [City College] as an institution of higher education?” and “Do you think it is justified that Stanford [UCSB] has higher status than UCSB [City College] as an institution of higher education?” Responses were made on 7-point rating scales and were averaged so that higher numbers indicated greater perceived legitimacy (α = .83).³

**Results**

We analyzed the dependent measures with 2 (relative group status) × 2 (relative group feedback) between-subjects analyses of variance (ANOVAs). Significant interactions were followed up with simple effects tests.

**Manipulation Checks**

Both manipulations were effective. First, participants rated UCSB as having relatively higher status when City College was the comparison school (M = 6.74) than when Stanford was the comparison school (M = 1.47), F(1, 63) = 1.60, p < .001, partial η² = .96. No other effects on this measure were significant, Fs < 1. Second, participants who received in-group success feedback rated their own school as being higher in surgery (M = 6.53) than did participants who received out-group success feedback (M = 1.25), F(1, 62) = 1.33, p < .001, partial η² = .96.⁴ In addition, participants in the higher status condition rated their own school higher in surgery (M = 4.10) than did participants in the lower status condition (M = 3.68), F(1, 62) = 8.68, p < .01, partial η² = .12, but the interaction was not significant, F < 1.

Although we did not manipulate perceived legitimacy in this study, we believed that participants would tend to see status differences between schools as legitimate. Analyses revealed that participants saw the relative position of their school as more legitimate in the high-status condition (M = 5.23) than in the low-status condition (M = 4.22), F(1, 63) = 11.25, p < .001, η² = .15. No other effects were significant, ps > .10. In spite of this main effect of group status, however, both means were above the scale midpoint of 4, indicating that both groups perceived status differences to be more legitimate than illegitimate.

**Primary Hypothesis: The Status Value Asymmetry**

Consistent with our primary hypothesis, the status of the in-group relative to the comparison group significantly moderated the effect of relative group performance on valuing, F(1, 63) = 9.55, p < .01, partial η² = .13 (see Figure 1). The main effects of relative group status, F < 1, and relative group performance, F(1, 63) = 2.64, p > .10, were not significant. As we predicted, UCSB students valued surgery significantly less when they learned that a lower status school (City College) scored higher than their own school did in surgery (M = 2.88) than when they learned that their own school scored higher than City College did on surgery (M = 4.35), F(1, 63) = 11.29, p < .001. This is the devaluing pattern predicted by an ego-defense perspective. In the low-status

³ Studies 1 and 3 also included several items assessing perceived similarity to one’s in-group relative to the out-group. Analysis of these items yielded only one significant effect in both studies: UCSB students felt their values and goals were more similar to those of Stanford students than to those of City College students. Because this effect did not elucidate other findings and was not moderated by status legitimacy, we do not discuss these results in detail.

⁴ Degrees of freedom in this analysis are lower, because 1 participant failed to answer this question.
condition, however, this pattern did not occur. UCSB students who learned that a higher status school (Stanford) had outscored UCSB on the test ($M = 4.10$) valued the attribute just as much as did those who learned that UCSB had scored higher than Stanford ($M = 3.65$), $F(1, 63) = 1.06, ns$. If anything, in this low-status condition, participants showed a tendency to value the attribute more when the high-status school scored higher than their own school did.

Testing the simple main effects of status further highlighted the status asymmetry in devaluing in response to group failure. Under conditions of relative in-group success, participants in the high-status ($M = 4.35$) and low-status ($M = 3.65$) conditions showed equivalent levels of valuing, $F(1, 63) = 2.60, ns$. However, under conditions of relative in-group failure, participants in the high-status condition valued the domain significantly less ($M = 2.88$) than did those in the low-status condition ($M = 4.10$), $F(1, 63) = 7.56, p < .001$.

**Perceived Utility as a Mediator**

We hypothesized that the perceived utility of the trait would mediate the status value asymmetry. Because status differences between schools are defined in terms of academic competence, we predicted that intergroup comparison information would affect perceptions of the trait’s utility specific to status-relevant outcomes (i.e., career success) but would not alter participants’ construal of the trait’s utility for gaining outcomes irrelevant to status differences between the groups (i.e., social success).

As we predicted, group status and group feedback had an interactive effect on perceptions of status-relevant utility, $F(1, 63) = 20.16, p < .001, \eta^2 = .24$. Neither main effect was significant, $F$s < 1. Surcery was perceived to be more useful for gaining career success when UCSB scored higher in surgery than City College did ($M = 5.26$) but not when City College scored higher than UCSB did ($M = 3.78$), $F(1, 63) = 15.28, p < .001$ (in the high-status condition). Likewise, the perceived career utility of surgery was also higher if Stanford scored higher in surgery than UCSB did ($M = 5.08$) than vice versa ($M = 4.15$), $F(1, 63) = 6.01, p < .05$ (in the low-status condition).

In contrast, the status-irrelevant utility of surgery was affected solely by group feedback, $F(1, 63) = 10.15, p < .01, \eta^2 = .14$. Participants saw surgery as having greater utility for social relations when their own school scored higher than the other school did ($M = 4.95$), as compared with conditions in which their own school scored lower ($M = 4.17$).

Thus, consistent with our predictions, individuals made inferences about the status-relevant utility of a trait on the basis of information about which group seemed to possess that trait. Both high- and low-status group members saw a trait as useful for gaining rewards associated with higher status if it was a trait on which a higher status group already excelled. We conducted mediational analyses (Baron & Kenny, 1986) to test our hypothesis that differences in the value assigned to the trait could be accounted for by participants’ beliefs about the status-relevant utility of the trait. An initial regression analysis predicting valuing showed that the interaction of group status and group feedback was significant ($\beta = .36, p < .01$). This effect represents the effect to be mediated. In a second hierarchical regression analysis predicting valuing, we entered career utility on an initial step, followed by group status, group feedback, and their interaction on Step 2. Examination of the final step of this analysis revealed that career utility was a significant predictor of valuing ($\beta = .42, p < .001$) and that the original interaction effect was no longer significant ($\beta = .15, p > .22$). Furthermore, a test of the indirect effect revealed that the original interaction effect on valuing was significantly decreased by the inclusion of career utility in the model, $z = 2.81, p < .05$ (see Kenny, Kashy, & Bolger, 1998, for this procedure). These results are consistent with our hypothesis that career utility mediates the status value asymmetry.3

**Testing Alternative Explanations**

The preceding results suggest that members of lower status groups might not devalue domains in which their in-group compares unfavorably with higher status groups because they infer that such domains might have high utility for gaining higher status. There are, however, alternative explanations for valuing that we wished to examine.

**Domain definition.** Because participants were given intergroup comparison information on a domain about which they knew little, it is possible that the differences we observed in the value they placed on the domain were a function of how they defined the domain on the basis of their stereotypes about the groups and the feedback they were given. Using Glick and Fiske’s (2000) analysis of group stereotypes, we predicted that surgery would be seen as related to higher competence and lower warmth when the higher status group scored higher on the trait, but that it would be seen as related to lower competence and higher warmth when a lower status group scored higher on the trait.

Analysis of the surgery-as-competence measure revealed a marginal main effect of group status, $F(1, 63) = 2.98, p < .10$, that was qualified by a significant interaction with group feedback, $F(1, 63) = 12.47, p < .001, \eta^2 = .17$. As we predicted, in the high-status condition, participants viewed surgery as more related to competence when their own school (UCSB) scored higher on the trait ($M = 5.19$) than when City College scored higher on the trait ($M = 4.37$), $F(1, 63) = 6.85, p < .05$. In the low-status condition, on the other hand, participants viewed surgery as more related to competence when Stanford scored higher on the trait ($M = 5.55$) than when their own school scored higher on the trait ($M = 4.79$), $F(1, 63) = 5.66, p < .05$. In contrast to our predictions, participants' perceptions of surgery as social warmth were not affected by the intergroup feedback. Regardless of the relative status of their school, participants viewed surgery as more related to social warmth when their own school scored higher on the trait ($M = 4.90$) than when the other school scored higher on the trait ($M = 4.28$), $F(1, 63) = 9.31, \eta^2 = .13$. No other effects on either measure were significant, $F$s < 2.

---

3 We tested the alternative mediational model, in which differences in career utility are mediated by valuing rather than vice versa. In an initial regression analysis, the interaction between group status and group feedback was significant, $\beta = .49, p < .001$. Furthermore, this interaction remained significant after we controlled for career utility, $\beta = .36, p < .01$, even though career utility was a significant predictor of valuing, $\beta = .38, p < .001$. Thus, there was no evidence that valuing in response to intergroup feedback is an automatic evaluative process that is then justified by cognitive judgments of the utility of the trait.
Thus, participants defined the trait as implying competence only when they learned that the higher status school scored higher on the trait, although the intergroup feedback had no effect on their perceptions of the trait on a more social dimension. Given this pattern of results, we next examined this surgency-as-competence variable as a mediator of group differences in valuing by entering this variable on Step 1 of a regression analysis, followed by the experimental effect on Step 2. Results on the final step revealed that the measure of surgency as competence predicted valuing, $\beta = .35, p < .01$, and the original Group Status × Group Feedback interaction was only marginally significant, $\beta = .22, p < .10$, which constituted a significant reduction in the interaction effect, $z = 2.30, p < .05$. Because the surgency-as-competence measure was correlated with career utility, $r = .50, p < .001$, however, we conducted one final mediational analysis, in which we entered these two potential mediators simultaneously to examine which was the stronger unique predictor of valuing. Results of this analysis reveal that career utility was a significant predictor of valuing ($\beta = .33, p < .05$) but surgency as competence was not ($\beta = .23, p < .10$). In sum, although experimental manipulations influenced how participants defined the domain, perceptions of career utility seemed to be a more viable mediator of experimental effects on valuing.

Self-appraisals. In addition to the perceived meaning of the trait, we also examined participants' self-appraisals as an alternative antecedent of valuing. Consistent with our previous work (Schmader & Major, 1999), participants who learned that their own school had scored higher on the test rated themselves higher in surgency ($M = 4.77$) than did participants who learned that their own school had scored lower than the other school ($M = 4.12$), $F(1, 63) = 9.99, p < .01, \eta^2 = .14$. This main effect of group feedback, however, was qualified by a significant interaction with group status, $F(1, 63) = 4.25, p < .05, \eta^2 = .06$.

Participants in the high-status condition appraised their own level of surgency higher following in-group success ($M = 4.93$), as compared with out-group success ($M = 3.87$), $F(1, 63) = 13.85, p < .001$. In the low-status condition, however, participants' self-appraisals were equivalent regardless of whether they had received group success ($M = 4.60$) or group failure feedback ($M = 4.38$), $F < 1$.

This pattern of self-appraisals suggests that low-status group members might not devalue domains in which their in-group fares poorly relative to higher status groups because they do not infer that their in-group's performance reflects their personal abilities. To examine self-appraisals as a potential mediator of valuing effects, we entered this variable on the initial step of a hierarchical regression analysis, followed by the experimental effects on Step 2. The results on the second step of this analysis show that although self-appraisals predicted valuing, $\beta = .62, p < .001$, the interaction between status and feedback was still significant after controlling for this variable, $\beta = .21, p < .05$. However, a test of the indirect effect indicated that the original interaction effect was significantly reduced by including self-appraisals in the model, $z = 2.16, p < .05$. Thus, there is evidence to support the hypothesis that self-appraisals might also mediate the status value asymmetry observed in this initial experiment.

Discussion

Taken together, these results suggest an asymmetry in how group members respond to intergroup comparisons with higher versus lower status groups. When their in-group compares unfavorably with a lower status group, group members devalue that domain in an ego-defensive manner. However, when their in-group compares unfavorably with a higher status group, they do not engage in this ego-defensive devaluing. Rather, they value the domain under these circumstances, because they assume that the domain has utility for gaining rewards associated with higher status. Although this pattern has been implied in other work (e.g., Spears & Manstead, 1989), this is the first purely experimental demonstration of this status value asymmetry and the first study to explore the appraisals that mediate it. Indeed, one strength of this study is that we were able to manipulate the status of a group to which all participants belonged, ruling out the possibility that stable group differences could account for the status differences in valuing.

Groups based on school affiliation, however, might be qualitatively different from groups that are in a more chronic position of lower status in society. For example, groups that are traditionally thought of as stigmatized (i.e., ethnic minorities, women) are not groups to which one chooses to belong in the same way that one chooses a college to attend. Because we hypothesized that the status value asymmetry applies to intergroup comparison with higher status groups in general, regardless of the permeability or stability of group differences, we conducted a second experimental investigation of the status value asymmetry among members of a group that is more chronically stigmatized: women, as compared with men. There is substantial evidence that men enjoy higher social status than women do, as indicated by factors such as economic outcomes, social power, and occupational attainment (Major, 1994; Ridgeway, 1991). Thus, we predicted that whereas men would devalue a domain in which women perform better than men do, women would not devalue a domain in which men perform better than women do.

Study 2

Method

Participants and Design

Participants were 80 undergraduates who participated in exchange for credit toward a research requirement in their introductory psychology course. Of the original sample, 7 participants were excluded from analyses: 6 participants suspected that surgency was a fictitious trait or that the feedback was bogus, and 1 participant did not complete the majority of the dependent variables. Results were largely unchanged when these participants were included in analyses. The final sample included 40 men and 33 women in a 2 (gender) × 2 (group feedback) between-subjects design.

Procedures

Participants were run in same-gender sessions using procedures identical to those used in Study 1. Before participants received intergroup compar-

---

6 When analyses were conducted on the full sample (including participants who were suspicious of the feedback or domain), the main effect of relative group feedback was still significant, but the interaction was not, $F < 2$, although the pattern of means was similar.
is on information on the surgery test, we reinforced status differences between men and women by showing the participants a data sheet indicating that on average, men earn higher salaries, more promotions, and higher levels of education than do women. Participants then learned that men tend to score higher than women do on surgery or that women tend to score higher than men do on surgery. After receiving this feedback, participants completed the dependent measures, were thoroughly debriefed, and were thanked for their participation.

**Measures**

The same measures used in Study 1 were again used in Study 2, with items reworded when necessary to reflect gender rather than school affiliation. All dependent measures were rated on 7-point scales ranging from 0 to 6, where higher values indicate higher levels of a construct. In addition, three additional items were added to our measure of valuing: “I consider surgery to be a very valuable attribute for me.” “Surgery is not all that valuable in my life” (reverse scored), and “Surgery is not an attribute that is important to me” (reverse scored). This six-item measure was reliable (α = .81).

As we noted previously, we believe that in the absence of delegitimizing information, the default tendency is often to assume that existing status differences between groups are legitimate. Political correctness norms and social desirability pressures, however, are likely to inhibit college students from saying directly that they believe existing status differences between women and men are fair. Accordingly, we assessed the perceived legitimacy of gender-linked status differences indirectly, using a measure of status permeability, a “legitimizing belief” that is believed to contribute to a general justification of the status quo (e.g., Kleugel & Smith, 1986; Sidanius & Pratto, 1993). Specifically, during a pretesting session, we assessed the extent to which students believe that America is an open system in which women as well as men can advance. The items included in this measure were (α = .72) “America is an open society in which both men and women can achieve higher status.” “Advancement in American society is possible for both men and women.” “Individual women have difficulty achieving higher status” (reverse scored), and “Women are often unable to advance in American society” (reverse scored). These items were rated on 7-point rating scales ranging from 0 (strongly disagree) to 6 (strongly agree).

**Results**

All dependent measures were analyzed with 2 (gender) × 2 (feedback) between-subjects ANOVAs. Significant interactions were followed up with simple effects tests.

**Perceived Legitimacy**

Single-sample t tests comparing the grand mean on the perceived legitimacy scale with the midpoint of the scale (3) reveal a significant tendency among participants to agree that women can advance in America (Mgrand = 4.06), t(64) = 8.43, p < .001. There were no gender differences on this measure, t < 1. Thus, consistent with our assumption, both male and female students endorsed beliefs that legitimize prevailing status differences between the genders.

**Manipulation Checks**

Both manipulations were effective. The manipulation of relative group feedback had the predicted main effect on participants’ perceptions of which gender is higher in surgery, F(1, 69) = 443.75, p < .001, η² = .93. No other effects were significant, Fs < 1. Furthermore, participants believed that men had higher status than women: Mgrand = 5.32, which was significantly greater than the midpoint, t(72) = 15.83, p < .001. The perception of gender status differences did not differ by gender or relative group feedback, all Fs < 2.5.

**Primary Hypothesis: Replicating the Status Value Asymmetry**

Analysis of the valuing measure revealed the predicted interaction between gender and group feedback, F(1, 69) = 4.12, p < .05, η² = .06. Men valued surgery significantly less when women scored higher than men did (M = 1.99) than when men scored higher than women did (M = 2.68), F(1, 69) = 4.25, p < .05. In contrast, women valued surgery the same regardless of whether men (M = 3.09) or women (M = 3.39) scored higher on the trait, F < 1. This interaction qualified a significant main effect of gender, F(1, 69) = 13.11, p < .001, η² = .16. The main effect of feedback was not significant, F < 1.

This finding demonstrates that the status value asymmetry generalizes beyond school groups to groups based on gender. Replicating the status value asymmetry with gender groups also bolsters our confidence that this effect is not specific to any particular group but is instead a general phenomenon related to having lower status in a situation of intergroup comparison. The pattern observed in this study also is consistent with a similar but nonsignificant trend observed in our earlier research with gender groups (Schmader & Major, 1999). We suspect this effect might have been stronger in the present research because we made status differences between the genders salient in the experimental situation by priming gender differences in career outcomes.

**Perceived Utility as a Mediator**

Because we primed gender differences in career outcomes, we again predicted that judgments of surgery’s utility for career success (i.e., status-relevant utility) would mediate the effects on valuing. Analysis of career utility judgments revealed significant main effects of both gender, F(1, 69) = 4.38, p < .05, and in-group feedback, F(1, 69) = 5.83, p < .05, that were qualified by a significant interaction, F(1, 69) = 5.83, p < .05, η² = .08. Men rated surgery to be less useful for career success when women scored higher on the trait (M = 2.78) than when men scored higher on the trait (M = 4.09), F(1, 69) = 12.90, p < .01. Women, on the other hand, rated surgery to have equal career utility regardless of whether men (M = 4.00) or women (M = 4.00) scored higher on the trait, F < 1.

In addition, analysis of social utility judgments revealed a marginal main effect of group feedback, F(1, 69) = 3.62, p < .10, that was qualified by a significant interaction with gender, F(1, 69) = 4.06, p < .05, η² = .06. The main effect of gender was not significant, F < 1. Men viewed surgery as having greater social utility regardless of whether men (M = 3.46) or women (M = 3.43) scored higher on the test, F < 1. Women, however, saw surgery as having greater social utility when women scored higher than men (M = 4.08) than when men scored higher than women (M = 3.12), F(1, 69) = 7.00, p < .05.

Taken together, these results suggest that the intergroup feedback led men to evaluate surgery’s utility for career success,
whereas it led women to evaluate surgency's utility for social relationships. This pattern is slightly different from that observed in Study 1, where intergroup feedback only influenced judgments of career utility. This is perhaps to be expected. The most salient distinction between students from different colleges concerns academic competence, whereas men and women are stereotypically distinguished along both competence dimensions and social dimensions. It is interesting to note that each gender was only sensitive to the trait's utility for activities in which that gender is stereotyped positively (career success for men, social success for women).

We predicted that judgments of career utility might mediate the valuing effects, because women's low status in this experiment (and in society more generally) was defined with respect to career outcomes, not social outcomes. Indeed, when both variables were entered into a simultaneous regression analysis, career utility predicted valuing, $\beta = .64, p < .001$, but social utility did not, $\beta = .08, p > .10$. We tested career utility as a potential mediator of the effects on valuing by conducting a hierarchical regression analysis in which career utility was entered on Step 1, followed by variables representing gender, group feedback, and their interaction on Step 2. Results on this final step confirmed career utility as a significant predictor of valuing, $\beta = .63, p < .001$. Furthermore, the original significant interaction between gender and group feedback ($\beta = -.37, p < .05$) became nonsignificant after we controlled for participants' perceptions of the career utility of surgency ($\beta = -.09, p > .10$), and this reduction in the effect of the interaction on valuing was significant ($z = 2.82, p < .05$). Thus, as we found in Study 1, these results are consistent with our hypothesis that women did not devalue surgery as men did, because they perceived it to have high career utility.\footnote{As in Study 1, we tested the alternative mediational model, in which differences in career utility are mediated by valuing rather than vice versa. Unlike the results of Study 1, in this study the original interaction between gender and group feedback predicting career utility, $\beta = -.44, p < .05$, became nonsignificant when we controlled for valuing, $\beta = -.21, p > .10$, which was a significant predictor of career utility, $\beta = .63, p < .001$. Thus, in this study, we cannot rule out the possibility that participants' judgments of the utility of the trait occurred as post hoc justification for a more automatic evaluation of the trait.}

**Addressing Alternative Explanations**

**Domain definition.** As in Study 1, we again examined the possibility that intergroup feedback influenced how participants defined surgency. However, analysis of participants' perceptions that surgency was related to competence traits or social warmth traits yielded no significant main effects or interactions, all $F$s < 2. Thus, differences in the value placed on surgency or the perceived utility of the trait were not mirrored by, and thus could not be explained by, differences in how the trait was defined.

**Self-appraisals.** Analysis of participants' self-appraisals revealed that women appraised themselves higher in surgency ($M = 3.92$) than did men ($M = 3.28$), $F(1, 69) = 8.86, p < .01$. In addition to the main effect of gender, there was also a marginal main effect of group feedback, $F(1, 69) = 2.86, p < .10$, and a marginal interaction, $F(1, 69) = 3.02, p < .10$. Examination of cell means suggests that when women scored higher in surgency, women's self-appraisals ($M = 3.92$) were higher than men's were ($M = 2.91$). However, when men scored higher in surgency, women ($M = 3.91$) and men ($M = 3.65$) had equivalent self-appraisals. Although only marginally significant, this pattern parallels the interaction observed in Study 1 and suggests that members of lower status groups might resist using their in-group as an indicator of their personal ability when their in-group fails relative to a higher status group.

Because this pattern might also explain the effects observed on valuing, we conducted a mediational analysis in which self-appraisal was entered on the first step of the hierarchical regression analysis predicting valuing, followed by variables representing gender, group feedback, and the interaction on Step 2 of the analysis. Results on the final step reveal that self-appraisals predicted valuing, $\beta = .58, p < .001$. Furthermore, the original interaction between gender and group feedback predicting valuing, $\beta = -.37, p < .05$, became nonsignificant after we controlled for self-appraisals, $\beta = -.18, p > .10$, and this reduction in the interaction effect on valuing was significant, $z = 2.34, p < .05$. Thus, similar to the pattern observed in Study 1, women might have not devalued surgency when it appeared to be a trait possessed more by men both because they saw the domain as having utility for gaining higher status and because they did not rate themselves as being low in surgency. These findings seem to suggest that a woman might value male-dominated domains if she believes that excelling in those domains will improve her status and if she believes that as an individual, she will be more successful in those domains than the average woman is.

**Discussion**

**Status Legitimacy**

Results of these initial two experiments demonstrate that group members do not always devalue domains in which their in-group does poorly relative to higher status groups. Instead, they show a tendency to value domains in which higher status groups excel, perhaps because they believe those domains have greater utility for gaining rewards associated with higher status and perhaps because they believe that the average performance of an in-group member underestimates their own ability in a domain. It is interesting to note that this same pattern was observed with members of a group whose status was situationally constructed and with members of a group who find themselves in a more chronic or salient position of lower status.

Furthermore, there was evidence in both studies that the groups in both the lower and the higher status position tended to endorse beliefs that legitimize the status hierarchy rather than perceiving the status hierarchy as largely illegitimate. We hypothesized, however, that if the illegitimacy of status differences was made salient in the situation, members of a lower status group would cease to use the accomplishments of the higher status group to define what is valuable to them as individuals. Thus, in our third experiment, we again used groups based on school affiliation, but we manipulated participants' perceptions that the status differences between the schools are legitimate. We hypothesized that when status differences were legitimized, students would devalue surgery if a lower status group scored higher than their own group, but not if a higher status group scored higher than their own. This is the
status value asymmetry we demonstrated in Studies 1 and 2. In contrast, we hypothesized that when status differences between groups were delegitimized, students would devalue surgency if another group scored higher than their own, relative to when their own group scored higher, regardless of the relative status of the in-group to the out-group. This is the pattern predicted by ego-defense perspectives.

Study 3

Method

Participants and Design

Participants were 142 introductory psychology students at UCSB (50 men, 90 women, 2 unrecorded) who participated in partial fulfillment of a research requirement for their course. The design was a 2 (relative group status: high or low) × 2 (relative group feedback: in-group success or out-group success) × 2 (legitimacy of group status: illegitimate or legitimate) between-subjects factorial. Fifteen participants were excluded from analyses, because they suspected that the attribute was fictitious or that the feedback was not veridical or because they had applied to the comparison school. Results of analyses on all dependent variables were unchanged when these participants were included.

Procedure

Participants were tested in groups of 7 to 12 people. The same procedures used in Study 1 were again used in Study 3. For example, participants learned that UCSB students would be compared with students at Stanford (low-status condition) or City College (high-status condition). The only change in procedures was the additional manipulation of status illegitimacy. As in the first two studies, while participants' responses to the surgery test were ostensibly being scored, the experimenter passed out a data sheet that contrasted career and educational outcomes of students from the two schools. Attached to this sheet, however, was a bogus research article that expanded on the data sheet. In the illegitimacy condition, evidence was summarized to support the claim that students at the two schools are of equal intelligence and academic potential. For example, the concluding paragraph for the illegitimate, low-status condition read as follows:

The conclusion that we draw from this research is that students who attend Stanford rather than UCSB do not have more academic ability or intelligence. The fact that they tend to be more successful in their careers after college is not due to superior abilities or intellect but is probably due to the perception held by employers and graduate school admissions officers that a student with a degree from Stanford University is more intelligent than a student with a degree from UC Santa Barbara. Our research suggests that this perception is inaccurate and places UCSB students at an unfair disadvantage. In short, we find no evidence that Stanford students deserve to have higher status than UCSB students.

In the legitimacy condition, in contrast, the evidence summarized in the article suggested that students attending the higher status school perform better and appear to have higher intelligence than students attending the lower status school do. In this version of the article, the conclusion for the legitimate, low-status condition read as follows:

The conclusion that we draw from this research is that students who attend Stanford rather than UCSB appear to have greater academic ability and intelligence that lead them to be more successful in their future careers.

This method of manipulating attitudes using mock research reports has been used successfully in previous studies (e.g., Amato, Crocker, & Major, 1995). In the high-status condition, City College took the place of UCSB, and UCSB took the place of Stanford.

After reading the article, participants received the relative group feedback on the surgery test, completed the same set of dependent measures used in Study 1, and were fully debriefed.

Results and Discussion

All variables were analyzed using a series of 2 (relative group status) × 2 (status illegitimacy) × 2 (relative group feedback) between-subjects ANOVAs. Significant interactions were followed up with simple effects tests.

Manipulation Checks

All three manipulations were successful. First, participants rated their own school as being higher in surgency in the in-group success condition ($M = 6.81$) than they did in the out-group success condition ($M = 1.54$), $F(1, 117) = 1,503.29, p < .001, \eta^2 = .93$. Second, participants rated their school as having higher social status when it was compared with the local city college ($M = 6.47$) than when it was compared with Stanford University ($M = 1.65$), $F(1, 119) = 3,244.79, p < .001, \eta^2 = .92$. No other effects were significant for either of these two manipulation checks, $p > .12$. Finally, participants who read that students at the two schools are equally intelligent perceived the status differences between schools to be less legitimate ($M = 4.12$) than did participants who read information suggesting that the higher status school has more intelligent students than the lower status school does ($M = 4.74$), $F(1, 117) = 7.71, p < .01, \eta^2 = .06$. In addition, status differences were seen as more legitimate in the high-status condition ($M = 5.07$) than in the low-status condition ($M = 3.79$), $F(1, 117) = 3,314, p < .001, \eta^2 = .22$. It is important to note that no other effects were significant, $F < 1$, suggesting that the effect of the illegitimacy manipulation was equally effective among both high- and low-status group members, although low-status group members perceived their situation as more illegitimate, overall.

Primary Hypothesis: Eliminating the Status Value Asymmetry

Our primary prediction was that the status value asymmetry observed in the prior two studies would be eliminated when individuals received information that delegitimized status differences. Results confirmed this prediction. Analysis of the value placed on the domain yielded a significant main effect of relative group feedback, $F(1, 119) = 12.71, p < .001, \eta^2 = .10$, which was qualified by the predicted three-way interaction, $F(1, 119) = 5.45, p < .05, \eta^2 = .02$ (see Figure 2). No other main effects or two-way interactions were significant, all $F$s < 2. We investigated the nature of the three-way interaction by testing the simple main effects of group feedback on personal valuing within each combination of group status and status illegitimacy. It is important to recall that in Studies 1 and 2, individuals devalued surgency when their in-group scored lower than a lower status out-group did, whereas they valued surgency when their in-group scored lower than a higher status out-group did. In the present experiment, when the status differences were explicitly described as being legitimate,
we observed this status value asymmetry. Simple effects tests revealed that students valued surgency less when their own school was outperformed by a lower status school (M = 2.90) than when their own school did better than a lower status school (M = 4.29), F(1, 119) = 10.15, p < .01. In contrast, when intergroup comparisons were made with a school of higher status, students valued surgency equally regardless of whether the higher status school (M = 3.60) or their own school scored higher on the test (M = 3.81), F < 1.

However, when information suggested that the status differences were illegitimate, the status value asymmetry was eliminated. As predicted by an ego-defense perspective, students in the low-status condition valued surgency less when a higher status school was higher in surgency (M = 2.74) than when their own school was higher in surgency (M = 4.02), F(1, 119) = 7.57, p < .01. It is interesting to note that when status differences were delegitimized, students in the high-status condition valued surgency equally, regardless of whether a lower status school (M = 3.65) or their own school had scored higher on the test (M = 4.00), F < 1.

This study provides clear evidence that the status value asymmetry observed in the first two studies occurs when status differences between groups are perceived to be legitimate (i.e., linked to group differences in inputs or abilities). However, when status differences are delegitimized, the status value asymmetry is eliminated and individuals devalue domains in which their in-group fares poorly, regardless of the relative status of the comparison out-group. Thus, when the legitimacy of the status hierarchy is explicitly undermined, attributes possessed by those of higher status cease to contain value in the eyes of lower status groups. It is interesting to note that results of this study also suggest that members of higher status groups may also be affected by status illegitimacy. Specifically, they are more likely to value a domain in which a lower status group is superior to their own group if they perceive status differences to be illegitimate than if they perceive status differences to be legitimate. Although this unexpected result awaits replication, it might indicate a tendency among higher status groups who feel their position may be unjustified to see value in attributes possessed by lower status groups.

**Perceived Utility as a Mediator**

The first two studies provided evidence that intergroup comparisons affect judgments of the status-relevant utility of a domain, which in turn mediate effects on valuing. In the present study, we predicted that this pattern would be observed when status differences were legitimate but not when they were illegitimate. Specifically, we predicted that when status differences were delegitimized, group members would not assume that a trait associated with a higher status group has utility for gaining rewards enjoyed by members of higher status groups. Analysis of career utility judgments yielded a main effect of status legitimacy, F(1, 119) = 4.50, p < .05, η² = .04, and a Group Status × Group Feedback interaction, F(1, 119) = 8.76, p < .05, η² = .07, both of which were qualified by the predicted three-way interaction, F(1, 119) = 4.81, p < .05, η² = .04.

Replicating results of Study 1 in the status legitimacy condition, participants in the higher status position were more likely to see surgency as useful for career success when their own school scored higher on surgency (M = 4.77) than when the lower status school scored higher (M = 3.39), F(1, 119) = 11.79, p < .001. Likewise, participants in the lower status position tended to see surgency as more useful for career success when the higher status school scored higher on surgency (M = 4.48) than when their own school scored higher (M = 3.71), F(1, 119) = 3.22, p < .10. Under conditions of status illegitimacy, however, there was only a main effect of relative group status, F(1, 119) = 4.32, p < .05. Surgency

---

* It is interesting to note that the interaction of experimental manipulations on valuing manifested itself primarily under conditions of relative in-group failure. When individuals learned that their own group was more successful in a domain than a comparison group was, the relative status of their group and the perceived legitimacy of that status had little effect on their tendency to see the domain as valuable, F < 1. What these manipulations did do is alter individuals' construals of their own group's failure in light of the other group's success, F(1, 119) = 6.36, p < .05. This pattern of results enables us to make interpretations about variables that moderate tendencies to devalue attributes or domains, even though no initial level of value was assessed in these studies by which to assess change.
was seen as more useful for career success by participants in the high-status condition \((M = 4.83)\) than by participants in the low-status condition \((M = 4.22)\). This main effect is difficult to interpret, but the lack of an interaction with group feedback suggests that when status differences were delegitimized, participants no longer saw a connection between the high-status school possessing the attribute and its usefulness for future career success. Analysis of participants' perceptions of the social utility of surgery revealed no significant effects, all \(Fs < 2.2, \text{ all } ps > .20\).

As in our previous studies, we examined career utility judgments as a mediator of valuing. Career utility was entered on Step 1 of a hierarchical regression analysis predicting valuing, followed by all experimental manipulations and their interactions on Step 2. Results on this final step revealed that career utility was a significant predictor of valuing, \(\beta = .41, p < .001\), and the original three-way interaction between the experimental manipulations, \(\beta = .20, p < .05\), was significantly reduced, \(z = 1.96, p < .05\), and became nonsignificant, \(\beta = .13, p = .12\), after controlling for career utility. Thus, as in the previous two studies, results support the hypothesis that career utility mediates the effects on valuing. When group members learn that their in-group is outperformed by a higher status group in a domain, they seem to value that domain when status differences are legitimate, because they believe the domain is useful for gaining higher status. But when status differences are delegitimized, group members no longer see domains in which higher status groups excel as having greater utility, and, perhaps as a result, they devalue the domain.9

**Addressing Alternative Explanations**

As in our previous studies, we examined how participants defined the domain and their self-appraisals in the domain as alternative antecedents to valuing.

**Domain definition.** Analysis of participants' definition of surgery revealed a main effect of group feedback on receiving surgery as competence, \(F(1, 119) = 6.39, p < .05, \eta^2 = .05\), which was qualified by significant two-way interactions both with status legitimacy, \(F(1, 119) = 3.83, p = .05, \eta^2 = .03\), and with group status, \(F(1, 119) = 5.70, p < .05, \eta^2 = .02\). The three-way interaction that was necessary for this variable to account for the effects on valuing was not significant, \(Fs < 2.61\). Furthermore, when the perceived meaning of surgery as competence was tested in a hierarchical regression analysis as a possible mediator of effects on valuing, the original three-way interaction observed on valuing was not significantly reduced, \(z = -.44, p > .05\), and remained significant, \(\beta = .19, p < .05\). Thus, as in Study 2, there was little evidence that participants differed in the value they placed on surgery purely because the intergroup feedback they received altered the meaning of the trait.

**Self-appraisals.** In our prior studies, relative group performance feedback affected self-appraisals made by members of higher status groups but not by members of lower status groups. In the present study, however, only the main effect of relative group feedback was significant, \(F(1, 119) = 11.87, p < .001, \eta^2 = .09\). Participants who learned that their own group was higher in surgery \((M = 4.63)\) rated themselves higher in that trait than did participants who learned that the other group was higher in surgery \((M = 4.06)\). No other effects, including the three-way interaction, were significant, \(Fs < 2.80, ps > .05\). Thus, unlike the results of Study 1 and 2, patterns of self-appraisals in this study did not directly correspond to the value participants placed on the domain and, thus, could not offer a convincing counterexplanation for the valuing effects.

**General Discussion**

In previous research, we documented a general tendency for individuals with no personal experience in a domain to devalue that domain when their in-group performs more poorly than another group of equal status (Schmader & Major, 1999). Crocker and Major (1989) referred to this phenomenon as selective devaluing and speculated that this strategy might be used by members of low-status or stigmatized groups to protect their self-esteem against negative outcomes that they experience because of their disadvantaged position. Results of the present experiments qualify and extend prior theory and research by articulating the conditions under which this ego-defensive strategy is used. We have demonstrated that in the absence of delegitimized information, when members of lower status groups do more poorly in a domain than do members of a higher status group, they tend not to devalue the domain. Rather, they value the domain just as much as when their own group is superior. Only when they have reason to believe that the status hierarchy between the groups is illegitimate do they show a selective devaluing strategy of devaluing domains in which their group does more poorly than a higher status group does.

These results represent a significant extension of current theoretical positions that assert that members of lower status groups selectively devalue domains in which their in-group is at a disadvantage relative to a higher status out-group (e.g., Crocker & Major, 1989; Ogbug, 1991; Steele, 1997). Rather than contradicting these current perspectives, our results clearly highlight the role played by group status and the perceived legitimacy of that status in devaluing processes. To reconcile our present results with these past theories, one might assume that in developing their respective

---

9 As in the prior two studies, we tested the alternative model in which effects on career utility are mediated by valuing. When valuing was entered as a predictor of career utility (along with all experimental main effects and interactions), the original three-way interaction on career utility, \(\beta = .18, p < .05\), became nonsignificant, \(\beta = .11, p > .10\). Thus, when an illegitimate, high-status group excels in a domain, low-status group members might automatically devalue the domain and then justify the reaction by believing that the domain has little utility. Because there was also support for the hypothesis that career utility mediates experimental effects on valuing, the causal ordering of these two variables remains unclear.

10 These interactions are somewhat difficult to interpret. Low-status group members saw surgery as equally related to competence, regardless of whether their in-group \((M = 4.79)\) or the higher status out-group scored higher in surgery \((M = 4.78)\), \(F < 1\). High-status group members, however, saw surgery as more related to competence when their in-group scored higher in surgery \((M = 5.61)\) than when the lower status group scored higher in surgery \((M = 4.59)\), \(F(1, 119) = 12.63, p < .001\). Furthermore, when status differences were legitimate, surgery was seen as equally related to competence regardless of whether one's own group \((M = 5.03)\) or the other group \((M = 4.87)\) scored higher in surgery, \(F < 1\), but when status differences were illegitimate, surgery was seen as more related to competence when one's in-group scored higher in surgery \((M = 5.40)\) than when the out-group scored higher in surgery \((M = 4.47)\), \(F(1, 119) = 9.93, p < .01\).
theories of stigmatized, negatively stereotyped, or minority groups. Crocker and Major (1989), Ogbu (1991), and Steele (1997) worked from an assumption that members of lower status groups would perceive their low status as illegitimate. Given this assumption of illegitimacy, our results provide support for these existing theories: when group status differences were delegitimized in Study 3, group members did devalue a domain in which their in-group performed more poorly than a higher status out-group did, as would be predicted by ego-defense theories of devaluing.

Processes Involved in the Status Value Asymmetry

In all three experiments, we showed that individuals made inferences about the status-relevant utility of a domain on the basis of intergroup comparisons, and we found support for our hypothesis that these utility judgments might mediate group differences in valuing. Thus, when group members observe that a higher status group excels in a given domain, they infer causation from the correlation and, perhaps as a result, believe that that domain is useful for gaining rewards associated with higher status. This judgment of utility might be what prevents them from devaluing the domain's importance, in spite of evidence that their in-group is lacking in that domain.

We also found some support (although less consistent across studies) that group members are more likely to resist inferring their personal abilities from in-group performance when their in-group is compared with a higher status out-group. Together, these two beliefs might allow members of lower status groups to remain optimistic that they personally possess attributes that their low-status in-group might not possess on average and that those attributes are useful for advancing one's status. When people are confronted with explicit information showing that status differences between groups are not based on merit, this optimism fades. When we delegitimized status differences between schools in Study 3, students at the lower status school ceased to assume that attributes possessed by students at the higher status school would be equally useful for advancing their own careers and, in turn, showed the ego-defensive strategy of devaluing the domain. In short, these individuals seem to feel that possessing attributes associated with a higher status group has no special advantage to them as a member of a lower status group.

In addition to the implications for members of lower status groups, these results also have implications for the phenomenology of higher status groups. In all three studies, members of the higher status group devalued domains in which a lower status group excelled. One surprising finding, however, was that members of the higher status group did not show this ego-defense pattern when their higher status position was delegitimized. One possible interpretation of this result is that members of a higher status group develop more egalitarian attitudes when faced with knowledge that their own advantaged position may be undeserved (e.g., Levin & Sidanius, 1997). For example, in Study 3, delegitimating the status differences between groups altered the perception that attributes possessed more by higher status groups are more useful for attaining the rewards typically enjoyed by those groups. Future research on the role of perceived illegitimacy in shaping perceptions of those in high-status groups is needed to corroborate this interpretation.

In each study, we explored the alternative possibility that the effects of intergroup comparisons on devaluing are mediated by how the domain is defined. Although there was limited support for this explanation in Study 1, there was no evidence in Studies 2 and 3 that the status value asymmetry could be explained purely by the meaning assigned to the domain. Instead, results across all three studies were more consistent with the hypothesis that group members develop a favorable evaluation of domains in which a higher status group excels because they develop the belief that excelling in that domain has utility for gaining rewards associated with higher status. Thus, changes in value and perceived utility are distinct from changes in the semantic association with the domain. We point out, however, that only in Study 1 were we able to provide greater support for our assertion that perceived utility mediates valuing than for an alternative causal ordering in which valuing mediates effects on perceived utility. Thus, we cannot conclude that beliefs about utility precede the evaluation of the domain.

Future Directions

These studies extend our understanding of how group members perceive and react to intergroup comparisons with groups of higher or lower status. Not only are they the first direct experimental tests of patterns that have been suggested in other studies using different groups and different domains (Major & Schmader, 1998; Schmader & Major, 1999; Schmader, Major, & Gramzow, in press; Voelkl, 1997), they are also the first studies to address what appraisals might mediate status differences in valuing. The present studies are also the first to demonstrate experimentally that perceptions of legitimacy moderate the extent to which lower status group members value domains dominated by higher status groups. Taken together, the findings presented here clarify existing theoretical perspectives on devaluing among lower status groups (e.g., Crocker & Major, 1989; Ogbu, 1991; Steele, 1997). Our hope is that future research will be conducted to examine several additional parameters of the status value asymmetry that we were unable to address with these initial experiments.

For example, additional studies are required to determine how self-appraisals of lower status group members are affected by intergroup comparisons. Although we see clear and consistent patterns of results on valuing and perceived utility across the three experiments, self-appraisals yielded more inconsistent patterns. Furthermore, direct manipulations of perceived utility are necessary to show that beliefs about utility causally influence valuing, and not vice versa.

In addition, one must be careful not to interpret the results of this research as suggesting that members of low-status or disadvantaged groups are, in general, less likely than are members of high-status groups to selectively devalue domains in response to either group or personal failure. The results of these studies pertain only to situations in which the failure of one's own group also implies the success of some other group. In the absence of information about how other groups perform or when comparing groups of equivalent status, it is reasonable to assume that low-status group members would devalue a domain in which their group performed poorly by some objective standard, because under such circumstances, there is no force to inhibit devaluing.
Finally, these studies focus exclusively on a situation in which an individual has no personal experience in a domain but only has information about the performance of his or her in-group relative to an out-group on which to make assessments of himself or herself and the attribute. These results are likely to be complicated by an individual’s personal experiences. For example, members of low-status groups who experience personal failure in a domain in which a higher status group is superior to their in-group might avoid the status value asymmetry and devalue the domain on the basis of the threat of their personal failure alone.

Conclusions

Past research on selective devaluing has tended to assume that attributes and domains are valued or devalued in a social vacuum—that appraisals of one’s own personal abilities are the primary and perhaps even the exclusive predictor of the value individuals place on ability domains or attributes. This appeared to be James’s (1890/1950) perspective in his writing on the subject over 100 years ago. As we see in the present research, however, processes of self-definition are rarely so straightforward. The value individuals place on domains is a function of more than just personal performance or an attempt to defend their egos against self-threatening feedback. It is also a function of the perceived utility of a domain. In the present research, we have shown that believing that the status hierarchy is legitimate inhibits members of lower status groups from devaluing domains in which their in-group is outperformed by a higher status group, because those domains are believed to be useful for gaining higher status. Thus, James (1890/1950) was not necessarily wrong in asserting that people will always devalue domains in which their “disappointment is incessant and the struggle unending” (p. 187). It is under these circumstances of prolonged negative outcomes that members of low-status or disadvantaged groups may be most likely to develop the perception that status differences are illegitimate and that domains in which higher status groups excel have little value for them as individuals.

References


Received September 11, 2000
Revision received October 1, 2000
Accepted October 5, 2000