
Coping With Negative Stereotypes About Intellectual Performance: The Role of Psychological Disengagement

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Two experiments tested the hypothesis that members of negatively stereotyped groups psychologically disengage their self-esteem from feedback received in stereotype-relevant domains. In both experiments, African American and European American college students received performance feedback on a bogus intelligence test and completed measures of self-esteem. In Experiment 1, European American students had higher self-esteem after success than after failure, whereas African American students had similar levels of self-esteem regardless of feedback. Whether the test had been described as racially biased or culturally fair had no effect. Experiment 2 examined the extent to which lesser responsiveness among African Americans is the result of chronic disengagement from intelligence tests or situational disengagement initiated by priming racial stereotypes. Results indicate that both chronic disengagement and racial priming engender less responsiveness to negative performance feedback among African American, but not European American, students. Performance expectancies, self-evaluations, and beliefs about test bias are discussed as possible mediators of this relationship.

Social stigma is a pervasive aspect of our culture. According to Goffman (1963), people who are stigmatized have a *spoiled identity* in the eyes of others; they bear a *mark* that renders them susceptible to social devaluation. Extensive research has documented that negative stereotypes about members of stigmatized groups are often

widely known in a culture, even to individuals who do not endorse them (e.g., Devine, 1989) and even to those who are targets of these stereotypes (Steele, 1992, 1997). Recently, attention has turned to examining how people who are targets of negative stereotypes understand and interpret their experience as members of socially devalued and disadvantaged groups, how they attempt to cope with this experience, and what consequences these coping strategies have for their self-esteem (e.g., Crocker & Major, 1989; Crocker, Major, & Steele, 1997; Frable, 1989; Jones et al., 1984; Major & Crocker, 1993; Steele, 1992, 1997). The present research extends this focus by examining how negative stereotypes can lead members of stigmatized groups to disengage or disidentify with a self-evaluative domain.

One strategy by which individuals who are targets of negative stereotypes, prejudice, and objective disadvantage in certain domains may cope with their situation is

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by *psychologically disengaging* their self-esteem from those domains. Disengagement is defined here as a defensive detachment of self-esteem from outcomes in a particular domain, such that feelings of self-worth are not dependent on successes or failures in that domain. Disengagement can occur in several ways. Steele (1992, 1997) hypothesized that when individuals are vulnerable to social devaluation and negative stereotypes in certain domains, they may define or redefine their self-concepts in such a way that those domains are no longer a basis of their self-evaluation, a process he called *disidentification*. Similarly, Crocker and Major (1989) theorized that when people face societal devaluation, they may protect their self-esteem by devaluing, or reducing the psychological centrality to their self-concept of, domains that are negatively affected by their stigma. Both of these perspectives share the assumption that the psychological centrality or importance of a domain moderates the impact of feedback and outcomes in that domain on self-esteem (Harter, 1986; James, 1890/1950; Rosenberg, 1979). Another situation in which members of stigmatized groups may disengage their self-esteem from a given domain is when they believe feedback or outcomes they receive in that domain are not valid or diagnostic indicators of their worth or ability (Crocker & Major, 1989; Major & Crocker, 1993). In this situation, they are likely to discount such feedback. Feedback might be dismissed as nondiagnostic if it is perceived as biased, prejudicial, illegitimate, or in other ways not to be a reflection of personal qualities or merit.

Either devaluing a domain or discounting the diagnosticity of feedback in a domain should lead to psychological disengagement from that domain (Major, 1995; Major & Schmader, in press). In other words, discounting and devaluing processes are sufficient, but not necessary, antecedents to disengagement of self-esteem from a domain. It is possible, for example, for people to disengage their self-esteem from performance in a given domain but still value that domain and see it as important (e.g., Major, 1995). This should be especially likely to occur when feedback is perceived as nondiagnostic of ability or merit. Likewise, it is possible for people to disengage their self-esteem from performance feedback that is perceived as diagnostic if the domain is not valued or central to the self-concept.

Psychological disengagement processes occur primarily, but not exclusively, in situations in which relatively poor performance is experienced or anticipated. Tesser (1988), for example, demonstrated that people are more likely to decrease the personal importance of a performance domain after being outperformed by a close other than after outperforming them. The stigmatized are more likely than the nonstigmatized to experience negative outcomes in domains in which they are targets of

prejudice and discrimination and in domains in which the nature of their stigma makes success unlikely or impossible (e.g., a physical disability). Stigmatized individuals may also be more likely to anticipate negative outcomes in domains in which they know members of their group perform poorly or are expected to perform poorly. This may lead them to preemptively disengage their self-esteem from those domains, even if they personally have never experienced a poor outcome in that domain. This process was demonstrated by Peterson, Major, Cozzarelli, and Crocker (1988). They found that students who believed that members of their own gender had scored lower than members of the other gender on a fictitious trait assumed that they, too, had scored lower on the trait, and devalued the trait, relative to students who believed that members of their own gender had scored higher than the other gender.

This disengagement of self-esteem from feedback may also occur in situations in which feedback is perceived to be biased against (or in favor of) the stigmatized. For example, Crocker, Voelkl, Testa, and Major (1991) found that African American students who were rejected by a White peer were more likely to attribute the feedback to prejudice, and were less likely to show a drop in self-esteem, if they thought the peer could see them (and presumably knew their race) than if they believed the peer could not see them (and presumably did not know their race). Interestingly, African American students who received positive interpersonal feedback also were more likely to attribute the feedback to prejudice if the peer could see them than if he or she could not. The former students also, however, showed a decrease in self-esteem, whereas the latter showed an increase in self-esteem. Collectively, this pattern of results suggests that the perception that feedback was prejudicial (and hence not diagnostic) led African American students to disengage their self-esteem from the valence of that feedback. Thus, psychological disengagement may be an important strategy by which members of stigmatized groups cope with the negative stereotypes, prejudice, and objective disadvantage that their stigma engenders (Crocker & Major, 1989; Crocker et al., 1997; Major & Schmader, in press; Steele, 1992, 1997).

Psychological disengagement from a domain may be conceptualized as a relatively fixed, or trait, aspect of a person's self-definition or self-organization. This is consistent with the way that many self-theorists, including James (1890/1950), Rosenberg (1986), Harter (1986), Pelham and Swann (1989), and Steele (1992), have conceptualized the process of defining, or redefining, the self-concept. Disengagement can also be conceptualized, however, as a context-specific response to particular situations—that is, as a temporary state (Crocker et al., in press). This perspective is consistent with more fluid

views of the self (e.g., Markus & Wurf, 1987; Tesser, 1988) and research showing that individuals alter their self-definitions in response to the social environment (e.g., Markus & Kunda, 1986; McGuire & McGuire, 1982). It is quite likely that both forms of disengagement may be demonstrated by members of stigmatized groups. The stigmatized may temporarily disengage their self-esteem from performance feedback in situations in which negative stereotypes are salient and poor outcomes are anticipated or in which feedback is expected to be biased, unfair, or otherwise nondiagnostic of personal merit. Over time, repeated exposure to such situations may lead the stigmatized to chronically disengage with those domains (Steele, 1992, 1997).

In our society, African Americans are likely to experience prejudice, discrimination, and racial bias in a number of settings. The racial devaluation of African Americans is particularly apparent with respect to intellectual ability and academic performance (Brigham, 1974; Gaertner & Dovidio, 1986; Hartsough & Fontana, 1970; Karlins, Coffman, & Walters, 1969; Samuels, 1973). According to Steele (1992, 1997; Steele & Aronson, 1995), negative stereotypes about the intellectual abilities of African Americans are so conditioned in our culture, and so collectively known, that even those who are not strongly prejudiced, and even African Americans themselves, are aware of them. Because of these negative stereotypes, and the prejudice and discrimination that accompany them, African Americans may come to expect racial bias and unfair treatment in intellectual and academic settings. These expectations of racial bias and unfair treatment, in turn, may lead African Americans, more than European Americans, to disengage their self-esteem from their performance in these situations. African American students also are more likely to experience poorer school-related outcomes, on average, than are European American students (Graham, 1994; Steele, 1992). Either personally experiencing poorer school outcomes or observing poorer school performance by members of one's group compared with another group may also lead to increased disengagement of self-esteem from performance feedback in academic settings among African American students. Furthermore, over time, repeated experiences of racial bias and discrimination may lead African Americans to chronically disengage their self-esteem from their performance in intellectual domains. In the current research, we examined whether African American students are more likely than European American students to disengage their self-esteem from performance feedback they receive in intellectual domains. Furthermore, we examined whether disengagement is a chronic response of African American students to performance feedback received in intellec-

tual domains or whether it is a context-specific strategy evoked in response to cues that make race or racial bias salient.

Several authors have speculated that relative to European American students, African American students are more likely to disengage their self-esteem from their performance in academic or intellectual domains (e.g., McCarthy & Yancey, 1971; Porter & Washington, 1979; Rosenberg & Simmons, 1972). We know of no prior experimental evidence, however, that has directly addressed this hypothesis within the academic domain. Several correlational studies have obtained results consistent with this idea. For example, Major (1995) found differences between the scores of African American and European American college students on a measure of intellectual disengagement. This measure included three items, including "How I do intellectually has little relation to who I really am" and "No intelligence test will ever change my opinion of how intelligent I am." Although African American students scored higher on this disengagement measure than did European American students, these groups did not differ in the overall importance or value they attached to doing well in school (indeed, African American students tended to score higher than European American students on the importance measure). The importance measure included items such as "Doing well on intellectual tasks is very important to me" and "I care a great deal about doing well on tests of my intellectual ability." The correlation between the disengagement and importance measures was significant but modest ($r = -.35, p < .05$). African American students also scored lower than European American students on a measure of the perceived diagnosticity of intelligence tests. The diagnosticity measure included items such as "I feel that standardized achievement tests are fair tests of my abilities." The correlation between the diagnosticity and disengagement measures also was significant but modest ($r = -.33, p < .05$), whereas the correlation between diagnosticity and importance was not significant ($r = .11, ns$).

Although the distinction among these constructs is subtle, their modest interrelations underscore the utility of differentiating them. The importance items appear to tap the value that is ascribed to success in intellectual domains, the diagnosticity items appear to tap the extent to which intelligence tests are believed to be valid or diagnostic indicators of ability, and the disengagement items appear to tap the extent to which individuals base their sense of self-worth on their performances in intellectual domains. Thus, although both European Americans and African Americans recognize the importance of success on intellectual tasks, African Americans show less of a tendency to believe that feedback on such tasks

is diagnostic of intelligence and less of a tendency to evaluate themselves on the basis of their performance on those tasks.

Major (1995) also found that higher scores on the intellectual disengagement measure were related to higher global self-esteem, especially if students reported they were performing poorly in school. This is the pattern one would expect if disengagement from performance on intellectual tasks is a self-protective strategy. Surprisingly, although this pattern was significant for both groups, it was stronger for African American than European American students. Furthermore, among African American but not among European American students, higher disengagement also was related to lower reported grade point averages. Thus, among African American college students, greater intellectual disengagement was simultaneously associated with lower reported grade point averages and higher global self-esteem.

Several other studies have observed a lower correlation between global self-esteem and measures of academic achievement, such as grade point average and Scholastic Aptitude Test and achievement test scores, among African American students, particularly African American males, than among European American students, especially if the students are doing poorly in school (Demo & Parker, 1987; Lay & Wakstein, 1985; Osborne, 1995; Rosenberg & Simmons, 1972). This pattern also is consistent with the prediction that African American students' self-esteem is more disengaged from their performance in intellectual domains than is that of European American students.

We conducted two experiments to test the hypothesis that disengagement of self-esteem from performance feedback is more likely to occur among African American students than among European American students. Furthermore, we examined whether this is especially likely to occur when expectations of racial bias are triggered. In this research, we operationalized disengagement as a relative nonresponsiveness of self-esteem to performance feedback on a supposed test of intellectual ability.

EXPERIMENT 1

In our first study, African American and European American college students were given success or failure feedback on a supposed standardized test of intelligence. Prior to taking the test, half the students were told that the test was known to be biased against certain racial and ethnic groups, whereas the other half were told that the test was culturally unbiased. Pretest self-esteem and postfeedback self-esteem were assessed.

Based on the disengagement hypothesis, our first prediction was that the self-esteem of African American students would be less affected by negative and positive test score feedback than would the self-esteem of European American students. That is, we predicted that European American students' performance self-esteem would be higher after success than after failure, whereas African American students' self-esteem would be less reactive to performance feedback. Our second prediction was that these differences in responsiveness of self-esteem to performance feedback would be especially apparent when the test was described as racially biased, as opposed to culture fair. Our reasoning was that describing an intelligence test as racially biased against certain ethnic groups would be likely to prime negative stereotypes of racial abilities and anticipation of poor performance among African American students but not among European American students. Furthermore, we reasoned that describing an intelligence test as racially biased, as opposed to culture fair, would also be more likely to lead African American students, but not European American students, to discount the diagnosticity of performance feedback on that test. Either of these processes should result in African American students being more likely than European American students to disengage their self-esteem from performance feedback in the racially biased condition than in the culture-fair condition.

Method

PARTICIPANTS AND DESIGN

Participants were 77 undergraduates (45 European American and 32 African American) at the State University of New York at Buffalo, who participated in partial fulfillment of a course requirement. All participants were selected on the basis of race using biographical information obtained in a mass testing session earlier in the semester. Each participant was contacted by phone and asked to participate in a 1-hr session. Approximately equal numbers of European American and African American students were assigned randomly to one of four conditions, resulting in a $2 \times 2 \times 2$ (Race \times Feedback \times Test Description) between-subject factorial design.

PROCEDURE

Participants were run in groups of four to eight, with a minimum of two of each race present. Half of the sessions were run by a male and half by a female experimenter, both of whom were European American. Before the participants arrived, the experimenter determined randomly whether the group would be assigned to the biased-test or unbiased-test condition. After seating participants in the experimental room and obtaining informed consent, the experimenter assigned each partici-

pant a subject number to assure anonymity. The experimenter then gave all participants the Rosenberg Self-Esteem Inventory (RSEI; Rosenberg, 1965) to complete. The RSEI is a widely used measure of global feelings of self-worth and has high test-retest reliability (Blascovich & Tomaka, 1991). Respondents indicate their extent of agreement or disagreement with 10 statements such as "I feel that I am a person of worth, at least on an equal basis with others" and "I feel I do not have much to be proud of."

TASK DESCRIPTION AND MANIPULATION

After collecting the RSEI, the experimenter told participants that they were going to take the New York Intellectual Performance Scale (NYIPS), described as a newly developed test designed to measure intellectual ability and to project future academic performance. The experimenter explained that previous research had shown that students who score high on the NYIPS have high academic and intellectual potential, that they generally have been more successful in their academic careers, and that they have more earning potential than those who score lower on the NYIPS.

Depending on the condition to which the group had been randomly assigned, the experimenter then continued with either the biased or the unbiased test description. In the biased-test condition, the experimenter read the following: "So far, our results also suggest that the New York Intellectual Performance Scale may be biased against people belonging to certain ethnic and/or racial groups. This means that scores for these people may be lower than a true test of intelligence would indicate." In the unbiased-test condition, the experimenter read the following: "So far, our results suggest that the scale is culturally unbiased. This means that the scores are a true test of intelligence, regardless of ethnic background." All students were told that they would receive feedback as to how well they did on the NYIPS.

MANIPULATION OF FEEDBACK

All participants were given 10 min to complete 15 items from the Remote Associates Test (RAT) as a bogus NYIPS. Each item on the RAT consists of three words that are indirectly associated. The participants' task is to come up with a fourth word that links the other three. The RAT is designed to provide veridical failure and success feedback, instead of deceptive feedback, thereby reducing suspicion (see McFarlin & Blascovich, 1984). Easy and difficult versions of the RAT were created to manipulate a success and failure experience, respectively. The success condition NYIPS included 80% easy items and 20% difficult items, and the failure condition included 80% hard items and 20% easy items. An example of a hard item was "chamber-staff-box" (the answer

is music). An example of an easy item was "mouse-sharp-blue" (the answer is cheese). Participants were randomly assigned to receive either the easy or the difficult version of the RAT.

Participants were asked to work on a filler task while the experimenter scored each participant's RAT. All participants then received accurate feedback as to how many items they got right and wrong. In addition, the experimenter wrote a note on each RAT, the content of which varied depending on whether the participant was assigned to the success (easy RAT) or failure (difficult RAT) condition. Those in the success condition received a handwritten note saying, "Very Good! You did well above average." Those in the failure condition received a note saying, "Not very good. You did well below average."

Participants were then asked to complete questionnaires assessing self-esteem, perceptions of performance, and attributions for performance. All participants were then fully and carefully debriefed and assured that their feedback was bogus.

DEPENDENT MEASURES

Postfeedback self-esteem was assessed with two measures. First, state self-esteem was measured with the State Self-Esteem Scale (SSES; Heatherton & Polivy, 1991). This 20-item scale has three subscales assessing performance self-esteem (e.g., "I feel confident of my abilities"; "I feel frustrated or rattled by my performance"), social self-esteem (e.g., "I am worried about what other people think of me"; "I feel that others respect and admire me"), and appearance self-esteem (e.g., "I am pleased with my appearance right now"; "I am dissatisfied with my weight"). Agreement with each item is rated on a 5-point Likert-type scale, ranging from 1 (*not at all*) to 5 (*extremely*). The primary subscale of interest in this study was the Performance Self-Esteem scale. Internal reliabilities (Cronbach's alpha) computed from the present data were adequate for this subscale ($\alpha = .82$). Accordingly, the negative items were reverse scored, and the items were averaged to yield a measure of state performance self-esteem. A similar procedure was followed to derive scores for the Social Self-Esteem ($\alpha = .87$) and Appearance Self-Esteem ($\alpha = .75$) subscales. In addition, trait global self-esteem was reassessed with the RSEI ($\alpha = .85$).

Perceived performance was assessed by asking participants to indicate their extent of agreement with two statements: "I feel I did very well on the test" and "I feel I did poorly on the test." Both statements were rated on 5-point Likert-type scales ranging from 1 (*disagree*) to 5 (*agree*). Responses to the two items were averaged ($r = .83$) to create a composite measure of perceived performance. Higher numbers indicated better perceived performance.

Finally, to measure the success of our test description manipulation, participants were asked to rate the extent to which they felt that their performance on the NYIPS was affected by a “biased test” and by “disadvantages due to my race.”¹ Both items were rated on a 5-point scale ranging from 1 (*did not affect it*) to 5 (*affected it very much*). Higher numbers indicated greater attributions to test bias and to racial disadvantage.

Results

Success versus failure feedback was manipulated via easy and difficult versions of the RAT, accurately scored from an answer key, combined with appropriate verbal feedback that was constant within the success and failure conditions. Analyses performed on participants' actual number of correct answers revealed only the expected main effect for feedback condition. Individuals who took the easy test did substantially better ($M = 9.14$) than those who took the difficult test ($M = 4.27$), $F(1, 68) = 183.82$, $p < .001$. No other effects were significant (all $F_s < 2.6$, all $p_s > .12$). All analyses reported below are based on $2 \times 2 \times 2$ (Race \times Feedback \times Test Description) ANOVAs, except in those cases in which initial self-esteem was a significant covariate in the analyses. In these cases, results reported are based on $2 \times 2 \times 2$ ANCOVAs, controlling for initial self-esteem.² Initial trait self-esteem was significantly correlated with both the postfeedback measure of global trait self-esteem ($r = .89$, $p < .001$) and performance state self-esteem ($r = .69$, $p < .001$).

POSTFEEDBACK SELF-ESTEEM

Our primary prediction was that the postperformance self-esteem of African American students would be less affected by success versus failure feedback than would the postperformance self-esteem of European American students, especially when the test was described as racially biased. Results of separate ANCOVAs performed on performance state self-esteem and global self-esteem revealed that the predicted Race \times Feedback interaction was significant for performance state self-esteem, $F(1, 68) = 5.36$, $p < .05$, but was not significant for global trait self-esteem, $F(1, 68) < 1$. As can be seen in Table 1, the performance self-esteem of European American students was significantly higher after success ($M = 4.00$) than after failure ($M = 3.60$) feedback, $F(1, 68) = 6.46$, $p < .05$, whereas the performance self-esteem of African American students did not differ after success ($M = 3.66$) and failure ($M = 3.83$) feedback, $F(1, 68) < 1$. Furthermore, compared with African Americans, there was a marginal trend for European Americans to have higher performance self-esteem after success, $F(1, 68) = 3.52$, $p < .10$, and slightly but nonsignificantly lower performance self-esteem after failure, $F(1, 68) = 1.98$, $p < .20$. Contrary to expectations, there were no significant

TABLE 1: Mean Self-Esteem of African Americans and European Americans as a Function of Academic Feedback, Experiment 1

Dependent Measure	Academic Feedback	
	Success	Failure
Performance self-esteem ¹		
African Americans	3.66 _{ab}	3.83 _{ab}
European Americans	4.00 _b	3.60 _a
Global trait self-esteem ²		
African Americans	5.78	5.87
European Americans	5.81	5.74

NOTE: Means are adjusted for initial self-esteem. Means not sharing a same subscript differ significantly at $p < .05$ in simple effects testing.

1. Ratings could range from 1 to 5; higher numbers indicate higher levels of performance self-esteem.

2. Ratings could range from 1 to 7; higher numbers indicate higher levels of global self-esteem.

main effects or interactions involving the manipulation of test bias. No other effects attained significance on the measures of global or performance self-esteem.³

PERCEIVED PERFORMANCE

A $2 \times 2 \times 2$ ANCOVA performed on the composite measure of perceived performance revealed the expected significant main effect for feedback, $F(1, 67) = 107.56$, $p < .001$. Participants who took the easy test and received success feedback said that they did much better ($M = 4.00$) than those who took the difficult test and received failure feedback ($M = 1.78$). In addition, the Race \times Feedback interaction also was significant, $F(1, 67) = 8.58$, $p < .01$. Although both African American and European American students felt they performed significantly better after success than after failure feedback, $F_s(1, 67) = 23.32$ and 105.48 , respectively, $p_s < .001$, European American students' perceptions of their performance were more strongly affected by the feedback than were those of African Americans. European American students rated their performance marginally significantly higher after success feedback ($M = 4.29$) than did African American students ($M = 3.65$), $F(1, 67) = 3.65$, $p < .10$, and significantly lower after failure feedback ($M = 1.45$) than did African American students ($M = 2.12$), $F(1, 67) = 5.05$, $p < .05$. Recall that these differences occurred despite the fact that both groups received the same verbal feedback and despite the fact that there were no differences between the two groups in actual performance on the tests.

ATTRIBUTIONS TO BIAS

We expected that African American students would be more likely than European American students to attribute their performance to racial disadvantages and to a biased test, especially if they failed and had been told

the test was biased against minorities. The correlation between these two attributions was positive and significant for both African American ($r = .63$) and European American ($r = .50$) students. A $2 \times 2 \times 2$ ANOVA performed on the measure of attribution to racial disadvantage revealed significant main effects of both race and test description, but no significant interactions. Overall, African American students were significantly more likely ($M = 1.50$) than European American students ($M = 1.09$) to attribute their performance to racial disadvantage, $F(1, 69) = 4.49, p < .05$. In addition, irrespective of race and feedback, participants who were told that the test appeared to be biased against people of certain racial groups ($M = 1.50$) were significantly more likely than those who were told that the test was culturally fair ($M = 1.03$) to attribute their own performance to racial disadvantages, $F(1, 69) = 7.12, p < .01$.

An ANOVA performed on the measure of attribution to test bias also revealed a marginally significant main effect of racial group, $F(1, 67) = 3.74, p < .06$. Irrespective of test description and performance feedback, African American students tended to attribute their performance more to test bias ($M = 1.71$) than did European American students ($M = 1.31$). A significant Race \times Feedback \times Test Description interaction also was observed, $F(1, 67) = 7.16, p < .01$. Simple effects tests revealed that this interaction was primarily due to the fact that among African Americans, performance was most likely to be attributed to racial bias if students experienced a success on a supposedly racially biased test. Among European Americans, in contrast, performance was most likely to be attributed to racial bias if students experienced a failure on a supposedly racially biased test. Thus, African Americans who succeeded despite a handicap (a test biased against them) and European Americans who failed despite an advantage (a test biased in their favor) were most likely to make an attribution to bias.

TESTS OF MEDIATION

Our final series of analyses investigated potential mediators of the finding that feedback on a test leads to lesser self-esteem reactivity among African Americans as compared with European Americans. Two potential mediators were examined—performance expectancies and perceptions of racial bias. For any of these variables to qualify as a mediator, four conditions must be met (Baron & Kenny, 1986). First, there must be a significant relationship to be mediated. Second, race and feedback must also interact to predict the mediator variable. That is, for any of the above-mentioned variables to be the psychological mechanism through which disengagement occurs, the effects of race and feedback on that mediator must mirror the effects of these predictor

variables on performance self-esteem. Third, the mediator must bear a significant relationship to performance self-esteem. Finally, if any of these variables is the mediating mechanism of disengagement, then the interaction effect on performance self-esteem should be eliminated or greatly diminished when we control for the mediator variable.

Perceived performance. Recall that parallel interactions of race and feedback were observed for students' perceived performance and performance self-esteem. This means that the first two criteria above for a mediator are met by perceived performance. In addition, the partial correlation between perceived performance and performance self-esteem, controlling for initial trait self-esteem, is marginally significant ($r = .15, p < .10$). So there is some evidence for the third requirement of a mediator—that there is a relationship between perceived performance and performance self-esteem. The fourth criteria of a mediator, however, is not met by perceived performance. When perceived performance, global self-esteem, feedback, race, and the Race \times Feedback interaction are included in a multiple regression, the interaction between feedback and race remains strong ($\beta = .27, p = .058$), and there is little or no remaining relationship between perceived performance and performance self-esteem ($\beta = .08, p < .50$). Taken together, these results suggest that although perceived performance and performance self-esteem are both affected by race and feedback, perceived performance does not mediate performance self-esteem.

We also examined whether the correlation between perceived performance and self-esteem was lower for African American students than for European American students. To explore this possibility, we computed the correlation between perceived performance and performance self-esteem within race and feedback condition, partialing out initial trait self-esteem. This correlation was positive but nonsignificant for African Americans who succeeded ($r = .38, p > .15$), for African Americans who failed ($r = .29, p > .33$), and for European Americans who succeeded ($r = .36, p > .14$), but was negative for European American students who received failure feedback ($r = -.38, p < .06$). This pattern of correlations does not conform to the pattern one would expect if race differences in perceived performance mediated the interaction between race and feedback for performance self-esteem.

Attributions to bias and racial disadvantage. A second possible mediator of the observed Race \times Feedback interaction for performance self-esteem was attributions to bias and/or racial disadvantage. The higher attributions of performance to test bias and racial disadvantage observed among African American students, regardless

of success or failure, raise the possibility that these bias attributions account for the weaker relationship observed between feedback and self-esteem among African American students than among European American students. To examine this possibility, we computed the correlations between performance self-esteem and attributions to racial disadvantage and to test bias. Among African American students, attributions of success to racial disadvantage ($r = .15$) and to test bias ($r = .05$) were unrelated to performance self-esteem, as were attributions of failure to racial disadvantage ($r = -.06$) or test bias ($r = -.30, p > .30$). Likewise, among European American students, attributions of failure to racial disadvantage ($r = .16$) or to test bias ($r = .09$) were unrelated to performance self-esteem, as were attributions of success to test bias ($r = .16$). None of the 19 European American students who received success feedback reported that their performance was due to racial disadvantages; thus, these correlations could not be computed. These correlations offered no support for attributions to bias as a mediator of the observed self-esteem findings.

Discussion

Experiment 1 tested the hypothesis that African American students would be more likely to disengage their self-esteem from their performance on a test described as a standardized test of intellectual ability than would European American students. Postfeedback scores on the performance measure of state self-esteem were consistent with this hypothesis: Corrected for initial self-esteem, European American students' performance state self-esteem was more affected by feedback on the test than was that of African American students. Furthermore, there was a trend for European American students to have significantly higher performance self-esteem following success than did African American students and somewhat lower performance self-esteem following failure, although these between-group differences were not significant. Although perceptions of performance also were more strongly affected by feedback among European American students than African American students, these differences did not account for the interaction between race and feedback for performance self-esteem. Global trait self-esteem (assessed with the RSEI), in contrast, was unaffected by performance feedback for either group.

This experiment also tested the hypothesis that disengagement would be situationally enhanced among African American students by describing the intellectual test as biased against certain ethnic and racial groups, as compared with when it was described as a culturally unbiased "true test of intelligence." We reasoned that this would occur because describing the test as racially biased would

both prime racial stereotypes about poor performance and increase the likelihood that test feedback would be perceived as nondiagnostic of true ability. Contrary to our predictions, however, our description of the test as biased or unbiased did not exert the predicted effects on African American and European American students' responses on the self-esteem measures. No significant effects of our test bias manipulation on self-esteem were observed.

Why did the test bias manipulation not have the predicted effects on African American students' self-esteem? Several hypotheses can be posed. One interpretation of this finding is that African American college students already have chronically disengaged their self-esteem from feedback on tests described as intelligence tests more than have European American students. Consequently, regardless of whether we described the test as biased or not, their self-esteem would be less affected by performance feedback on these tests. This interpretation would be consistent with Major's (1995) finding that African American college students scored higher on a measure of intellectual disengagement than did European American students. A second interpretation of why we did not observe differences between the racial-bias-test and culture-fair-test conditions is that our African American students may not have believed the culture-fair test description—that is, they may have perceived the NYIPS, in both its biased and unbiased forms, to be racially biased. As a consequence, African American students may have discounted the validity of the feedback in both conditions and disengaged their self-esteem from it as a result, regardless of how the test was described. Unfortunately, we did not include a direct measure of whether or not students believed the test was biased against minorities. Our finding that African American students' performance evaluations were less strongly affected by the performance feedback than were those of European American students in both the biased and culture-fair conditions, however, is consistent with the idea that African American students were more likely to discount the validity of the performance feedback than were European American students. Participants' postfeedback attributions for their performance, as well as informal responses obtained during debriefing, also were consistent with the idea that our culturally fair test manipulation did not succeed in creating the perception among African American students that the NYIPS was culturally unbiased. In retrospect, this is not surprising, given our description of the NYIPS as an intelligence test predictive of academic outcomes and earning potential, outcomes on which African Americans have historically been disadvantaged relative to European Americans. Supplementary analyses, however, did not provide support for the idea that perceived performance

mediated the Race \times Feedback interaction observed for performance self-esteem.

A third explanation of our findings is that we caused African Americans to temporarily disengage their self-esteem from their performance in both conditions simply by raising the issue of race and ethnic differences in performance in descriptions of both the biased- and the unbiased-test conditions. That is, we may have unwittingly alerted participants in both conditions to think about race differences in performance or the racial bias of standardized tests, thereby priming racial stereotypes, and promoting disengagement, in both conditions. Such an interpretation is consistent with Steele and Aronson's (1995) finding that simply priming race can raise stereotype threat among African American college students taking a difficult test of intellectual ability. Experiment 2 was designed to investigate these alternative explanations for African Americans' lesser reactivity to the performance feedback in Experiment 1.

EXPERIMENT 2

There were several major differences between the design of Experiments 1 and 2. First, to test the hypothesis that merely suggesting the possibility of racial test bias would prime racial stereotypes and lead to disengagement among African American students, all participants were randomly assigned to one of two priming conditions. In the race-prime condition, we simply stated that we were investigating the possibility that the test might be biased against certain minority groups. In the no-race-prime condition, no mention of race or test bias was made. We hypothesized that when the possibility of racial test bias was primed, African American students' self-esteem would be less negatively affected by a poor performance on the test than would the self-esteem of European American students. However, when race was not primed, we expected that African American students' self-esteem would be just as affected by a poor performance as European American students' self-esteem.

Second, all participants in Experiment 2 completed a measure of chronic intellectual disengagement (Major, 1995) prior to the experiment. Scores on this scale were then used to divide participants into chronically intellectually engaged and disengaged groups. We expected that, regardless of ethnicity, the self-esteem of students who are chronically disengaged from their performance in intellectual domains, as assessed by this premeasure, would be less negatively affected by failure feedback on an intellectual task, relative to that of engaged students. Recall, however, that Major (1995) found that the positive association between intellectual disengagement and self-esteem was stronger for African American students than European American students, especially among

students who reported they were performing poorly in school. This suggests an alternative prediction that the self-esteem of African Americans who are chronically disengaged will be even less affected by negative performance feedback than that of European Americans who are chronically disengaged.

Third, as in Experiment 1, participants completed a supposed standardized test of intelligence and received performance feedback on it. Unlike Experiment 1, however, all participants received feedback that they had done very poorly on the test. If disengagement is a chronic response among African American students to feedback on an intellectual task, disengagement should be unaffected by situational manipulations of the salience of race. If disengagement is a context-specific response, in contrast, features of the situation that increase or decrease the salience of racial stereotypes or racial bias should increase or decrease the extent to which self-esteem is negatively affected by failure feedback.

Finally, we included a measure of performance expectancies prior to taking the test and more direct measures of the perceived racial bias of the test to better explore these as potential mediators of disengagement.

Method

PARTICIPANTS AND DESIGN

Participants were 67 undergraduates (37 European American and 30 African American) at the State University of New York at Buffalo, who participated in partial fulfillment of a course requirement.⁴ Consistent with the first experiment, all participants were selected on the basis of race using information obtained in a mass testing session earlier in the semester. Approximately equal numbers of European American and African American students were assigned randomly to either a race-prime or a no-race-prime condition. In addition, participants were categorized as either engaged or disengaged, based on their scores on a measure of academic disengagement administered prior to the start of the experiment (see below). This resulted in a $2 \times 2 \times 2$ (Race \times Prime Condition \times Chronic Disengagement) between-subject factorial design.

PRELIMINARY MEASURES

The RSEI (Rosenberg, 1965) and the Intellectual Orientation Inventory (IOI; Major, 1995) were administered to students enrolled in introductory psychology classes as part of mass testing at the beginning of the semester. The IOI contains 13 statements dealing with performance on academic and intellectual tasks. Participants are asked to indicate the extent of their agreement or disagreement with each statement on a 1- to 7-point scale. Major (1995) found that the IOI factor analyzed into three subscales: Disengagement of Self-Esteem

From Feedback on Intelligence Tests, Importance of the Academic Domain, and Beliefs About the Diagnosticity of Achievement Tests. The Disengagement subscale was the subscale of interest in the current study. This scale consists of the following three items: "No intelligence test will ever change my opinion of how intelligent I am," "How I do intellectually has little relation to who I really am," and "I really don't care what tests say about my intelligence." Responses to these items were averaged to create a composite disengagement score; higher numbers indicated greater disengagement ($\alpha = .62$).

An ANOVA revealed that there were differences between ethnic groups on both the Disengagement scale and the RSEI among this larger sample ($N = 189$). African American students scored higher on the Disengagement scale ($M = 4.97$) than did European American students ($M = 4.45$), $F(1, 186) = 5.50$, $p < .02$, and also scored higher on the RSEI ($M = 6.03$) than did European American students ($M = 5.61$), $F(1, 185) = 6.17$, $p < .02$. Students from this larger sample were contacted by phone and asked to participate in a 1-hr experimental session ($n = 66$). Within this experimental sample, African American students did not score significantly higher on the Disengagement scale ($M = 4.74$) than did European American students ($M = 4.65$), $F < 1$, but did have higher initial self-esteem ($M = 6.03$) than did European American students ($M = 5.44$), $F(1, 59) = 4.34$, $p < .05$. A median split ($Mdn = 4.67$) on the experimental sample's disengagement scores was used to divide the sample into engaged and disengaged groups. The resulting categorical variable was used as a factor in all subsequent analyses.⁵

PROCEDURE

The procedures of Experiment 2 were very similar to those of Experiment 1. Participants were run in groups of two to six. Half of the sessions were run by a male and half by a female experimenter, both of whom were European American. Before participants arrived, the experimenter determined randomly whether the group would be assigned to the race-prime or no-race-prime condition. As in the previous study, participants were told that they would be taking the NYIPS. In the race-prime condition, the experimenter then read the following: "There is currently a controversy about the performance of certain racial groups on intelligence tests like the New York Intellectual Performance Scale. The purpose of this study is to gather more information on this important test. We are collecting data on students from a variety of different ethnic and racial backgrounds in order to determine whether the NYIPS is racially biased against certain minority groups or is a true test of intelligence." In the no-race-prime condition, no mention was made of any potential racial differences in performance on the test. After describing the test as a measure of intellectual

ability, all participants were simply told that "the purpose of this study is to gather more information on this important test." All students were told that they would receive feedback as to how well they scored on the NYIPS. Prior to actually taking the test, participants indicated on a 7-point scale how well they expected to do on the NYIPS.

All participants then completed the difficult version of the RAT. To ensure that all students experienced negative performance feedback, three items with no known solution were added. After reviewing their performance feedback, participants completed the dependent measures, were fully debriefed to make sure that they knew that the performance feedback was bogus, and were thanked for their participation.

DEPENDENT MEASURES

Global postfeedback self-esteem was again assessed with RSEI (Rosenberg, 1965). Because this trait measure was found to be insensitive to the situational manipulation of success and failure in the first study, however, the instructions and wording of items were modified to make the RSEI a measure of state global self-esteem. Participants were asked to respond in terms of how they were feeling "at this moment," and items that were worded "I usually feel . . ." were changed to read "Right now I feel. . . ." The SSES (Heatherton & Polivy, 1991) was again used to assess state performance self-esteem.⁶

To measure the perceived racial bias of the test, participants were asked the extent to which they felt they had an unfair disadvantage on the NYIPS because of their racial background and the extent to which they agreed with the statement "I think the NYIPS is biased against racial minorities." In addition, participants were asked who they believed generally performs better (minorities or nonminorities) on tests like the NYIPS. Participants rated all of these items on a 5-point Likert-type scale. Postfeedback perceptions of performance were assessed with a single question: "How do you feel you did on the NYIPS?" answered on a scale ranging from 1 (*very poorly*) to 5 (*very well*).

Results

Failure feedback was manipulated by giving all participants the difficult version of the RAT. Analyses of participants' actual number of correct answers revealed one significant effect: European American students answered more items correctly ($M = 4.46$) than did African American students ($M = 2.76$), $F(1, 58) = 13.07$, $p < .001$. As in study 1, initial trait self-esteem was significantly correlated with both our postfeedback measure of global state self-esteem ($r = .65$, $p < .001$) and performance state self-esteem ($r = .40$, $p < .001$). Analyses reported below are based on $2 \times 2 \times 2$ (Race \times Prime Condition \times Chronic

Disengagement) ANOVAs, except in those cases in which initial self-esteem and/or actual performance was a significant covariate in the analyses. In these cases, ANCOVAs, controlling for initial trait self-esteem and/or actual performance, are reported.⁷

POSTFEEDBACK SELF-ESTEEM

We predicted that, controlling for initial levels of self-esteem, the self-esteem of African American students would be less diminished by failure (i.e., would be higher) as compared with the self-esteem of European American students following failure, but only if racial stereotypes had been primed. In addition, we hypothesized that individuals who scored high on a measure of chronic disengagement with intellectual tests would be less reactive to failure feedback on an intellectual test than would those who scored low on this measure. Performance state self-esteem and global state self-esteem were analyzed with a $2 \times 2 \times 2$ (Race \times Prime Condition \times Chronic Disengagement) MANCOVA, controlling for objective performance and initial trait self-esteem. Results revealed that the predicted Race \times Prime interaction was significant for global state self-esteem, $F(1, 58) = 5.92, p < .02$, and was marginally significant for performance state self-esteem, $F(1, 58) = 3.68, p = .06$. Means for these interactions are shown in Table 2. In general, the self-esteem of African American students was more affected by the prime manipulation than was the self-esteem of European American students. Furthermore, in the context of failure, African American students had higher self-esteem than European American students if race had been primed but lower self-esteem than European American students if race had not been primed. Simple main effects tests on the global self-esteem interaction showed that among African Americans, those in the race-prime condition had higher self-esteem ($M = 5.87$) than those who were not primed with race ($M = 5.09$), $F(1, 58) = 4.58, p < .05$. In addition, African Americans in the race-prime condition ($M = 5.87$) had marginally higher self-esteem than European Americans in the race-prime condition ($M = 5.37$), $F(1, 58) = 2.94, p < .10$, whereas in the no-race-prime condition, European Americans ($M = 5.64$) showed a slight tendency to have higher self-esteem than African Americans ($M = 5.09$), $F(1, 58) = 2.52, p < .15$. There were no significant differences between the self-esteem of European Americans in the race-prime and no-race-prime conditions, $F = 1.38, p > .50$.

The predicted main effect of chronic disengagement was marginally significant for both performance self-esteem, $F(1, 56) = 3.66, p = .06$, and global state self-esteem, $F(1, 58) = 3.36, p = .07$. Controlling for initial self-esteem, students who scored high on the premeasure of chronic disengagement tended to have higher

TABLE 2: Mean Performance and Global State Self-Esteem as a Function of Race and Racial Priming, Experiment 2

Dependent Measure	Racial Priming	
	Race Prime	No Race Prime
Performance self-esteem ¹		
African Americans	5.28	4.52
European Americans	4.73	5.31
Global state self-esteem ²		
African Americans	5.87 _a	5.09 _b
European Americans	5.37 _{ab}	5.64 _{ab}

NOTE: Means are adjusted for initial self-esteem and actual performance on the test. Means not sharing the same subscript differ significantly at $p < .05$ in simple effects testing.

1. Ratings could range from 1 to 7; higher numbers indicate higher levels of performance self-esteem.

2. Ratings could range from 1 to 7; higher numbers indicate higher levels of global self-esteem.

global and performance state self-esteem following failure feedback than students who scored low on this measure. The main effect for global self-esteem was qualified, however, by a significant Race \times Chronic Disengagement interaction, $F(1, 58) = 6.46, p < .02$. A similar but nonsignificant interaction was observed for performance state self-esteem, $F(1, 58) = 2.22, p = .14$. Means for these interactions are shown in Table 3. Simple effects tests performed on the global state self-esteem measure revealed that, adjusted for initial self-esteem and actual performance, African American students who scored high on the premeasure of chronic disengagement had higher self-esteem after failure ($M = 5.97$) than did African American students who scored low on this premeasure ($M = 4.99$), $F(1, 58) = 5.43, p < .05$. In contrast, scores on the measure of chronic disengagement did not affect the self-esteem of European American students, $F < 1$. In addition, chronically disengaged African Americans tended to have higher self-esteem ($M = 5.97$) than chronically disengaged European Americans ($M = 5.44$) after receiving failure feedback, $F(1, 57) = 3.37, p < .10$, whereas chronically engaged African Americans ($M = 4.99$) tended to have lower self-esteem than chronically engaged European Americans ($M = 5.56$), $F(1, 58) = 3.02, p < .10$.⁸

POTENTIAL MEDIATORS

Our final series of analyses investigated potential mediators of the finding that priming racial test bias leads to lesser self-esteem reactivity among African Americans as compared with European Americans. Three potential mediators were examined—performance expectancies, self-evaluations of performance, and perceptions of racial bias. For any of these variables to qualify as a mediator, the four conditions outlined above must be met (Baron & Kenny, 1986).

TABLE 3: Mean Performance and Global State Self-Esteem as a Function of Race and Chronic Disengagement, Experiment 2

Dependent Measure	Chronic Disengagement	
	Disengaged	Engaged
Performance self-esteem ¹		
African Americans	5.52 _a	4.28 _b
European Americans	5.13 _{ac}	4.92 _{bc}
Global state self-esteem ²		
African Americans	5.97 _a	4.99 _b
European Americans	5.44 _b	5.56 _b

NOTE: Means are adjusted for initial self-esteem and actual performance. Means not sharing the same subscript differ significantly at $p < .05$ in simple effects testing.

1. Ratings could range from 1 to 7; higher numbers indicate higher levels of performance self-esteem.

2. Ratings could range from 1 to 7; higher numbers indicate higher levels of global self-esteem.

Performance expectancies. One potential pathway by which priming racial test bias could lead to lesser self-esteem reactivity among African Americans than European Americans is by depressing the former students' performance expectancies. That is, priming thoughts of racial test bias might lead African American students to anticipate failure, which, in turn, might lead them to disengage their self-esteem from feedback on that test. Contrary to this hypothesis, however, results of a $2 \times 2 \times 2$ ANOVA on pretest performance expectancies revealed no significant effects on this measure. Thus, the race prime did not lower performance expectancies more among African American students ($M = 4.07$ for race prime, $M = 4.25$ for no race prime) than it did among European American students ($M = 3.81$ for race prime, $M = 4.25$ for no race prime), $F < 1$ for the Race \times Prime interaction. The three-way interaction also was not significant, $F(1, 58) = 2.26, p < .14$, although disengaged African American students in the prime condition ($M = 3.60$) did have slightly lower performance expectancies than students in the other conditions (M s ranged from 3.77 to 4.50). Partial correlations between pretest performance expectancies and posttest self-esteem, controlling for initial trait self-esteem, further revealed that pretest performance expectancies were not significantly related to postfailure global self-esteem ($r = -.09$) or to performance self-esteem ($r = -.03$) among African American students. Among European American students, in contrast, pretest expectancies were positively related to postfailure global self-esteem ($r = .22, p > .20$) and performance self-esteem ($r = .33, p < .06$). These patterns do not support pretest performance expectancies as a cause of the observed differences between African American and European American students in response to failure feedback in the race-prime condition.

Perceptions of racial disadvantage. A second pathway by which priming racial test bias might lead to lesser self-esteem reactivity among African Americans as compared with European Americans is by increasing perceptions of bias and racial disadvantage among African Americans. That is, priming race might lead African American students to feel more personally disadvantaged on the NY-IPS because of their race and lead them to disengage their self-esteem from performance feedback accordingly. ANOVAs performed on the three measures of perceived racial disadvantage, however, revealed only significant main effects of race. Regardless of whether racial bias was primed and regardless of level of chronic disengagement, African American students ($M = 2.26$) were more likely than European American students ($M = 1.16$) to report having an unfair racial disadvantage on the NYIPS, $F(1, 56) = 17.38, p < .001$, were more likely ($M = 2.74$) than European American students ($M = 1.36$) to perceive the test as being biased against minorities, $F(1, 55) = 17.70, p < .0001$, and were more likely ($M = 3.69$) than European American students ($M = 3.11$) to believe that nonminorities perform better than minorities on the NYIPS, $F(1, 57) = 11.11, p < .01$. None of these main effects was qualified by an interaction with the prime condition, or with chronic disengagement, and no other effects were significant on any of the three measures of perceived racial disadvantage.

We also computed partial correlations between the three measures of racial disadvantage (perceptions of racial disadvantage, perceptions of test bias, and perceptions of whether minorities or nonminorities do better on the test) and the two postfeedback self-esteem measures, controlling for initial self-esteem. None of these measures was significantly correlated with global self-esteem for either African American (r s = $-.05, -.20$, and $-.03$, respectively, all p s $> .30$) or European American students (r s = $.20, .13$, and $.22$, respectively, all p s $> .20$). Likewise, none of the three measures was significantly correlated with performance self-esteem for African American (r s = $-.16, -.32$, and $-.05$, respectively, all n s) or European American students (all r s $< .05$, all n s).

In short, we have no evidence that priming the possibility of racial test bias had any effect on African Americans' or European Americans' perceptions of the test as racially biased or perceptions of racial disadvantage. Nor do we have evidence that perceptions of racial disadvantage protected African American students' self-esteem against failure in the race-prime condition. It is difficult, however, to measure perceived racial biases without the measure itself priming the possibility of those very biases. That is, when we asked questions about the racial bias of the tests (assessed after the self-esteem measures), we may have primed thoughts of racial bias in both the race-prime and no-race-prime conditions.

Perceived performance. A third pathway by which priming racial bias may have produced disengagement among African American students is by affecting their self-evaluations of their performance. That is, African American students may evaluate their poor performance on a test less negatively if the possibility that the test is racially biased has been primed than if it is not primed and/or if they are chronically disengaged as opposed to chronically engaged. An ANOVA performed on post-feedback performance evaluations, however, revealed that the only significant effect observed was a main effect of prime condition, $F(1, 58) = 9.62, p < .01$. Regardless of race, students in the race-prime condition evaluated their performance on the test lower ($M = 1.37$) than did students in the no-race-prime condition ($M = 2.14$). We also computed partial correlations between perceived performance and the two measures of self-esteem, controlling for initial trait self-esteem. These revealed that the relationship between perceived performance and global self-esteem ($r = .17, p > .40$) and between perceived performance and performance self-esteem ($r = .27, p < .20$) was positive, but nonsignificant, among African American students. Positive and significant relationships were observed between perceived performance and global self-esteem ($r = .36, p < .03$) and performance self-esteem ($r = .49, p < .01$) among European American students. Inspection of the within-cell correlations revealed that the magnitude of these correlations did not vary substantially by condition. In conclusion, differences in perceived performance do not appear to explain the finding that when race was primed, African American students' self-esteem was less reactive following failure feedback than was that of European American students, especially if the former were high in chronic disengagement.

To summarize, three different potential mediators of the effects of racial priming on African American students' self-esteem in response to negative academic feedback were examined: perceptions of racial bias, performance expectancies, and self-evaluations of performance. Surprisingly, we found no evidence to indicate that any of these factors mediated the effect observed. Further research that pins down the mediators of this effect is needed.

GENERAL DISCUSSION

The present set of studies examined the hypothesis that disengagement of self-esteem from performance feedback received on intellectual tests would be greater for African American students than for European American students. These studies also examined the extent to which this is a chronic or situation-specific response to intellectual testing situations among African Americans.

This hypothesis, although previously suggested by a number of scholars (e.g., McCarthy & Yancey, 1971; Rosenberg & Simmons, 1972; Steele, 1992), had never before been tested experimentally. We argued that psychological disengagement, of either a temporary or a chronic nature, would result in the self-esteem of African American students being less responsive to feedback on a presumed test of intellectual ability than that of European American students. The studies reported here provide some support for this hypothesis.

Experiment 1 demonstrated that the self-esteem of African American students was less reactive to feedback on a supposed test of intelligence than was the self-esteem of European American students. Specifically, whereas European American students had higher self-esteem after success than after failure (corrected for initial self-esteem), African American students did not. The muted responsiveness of African American students to intelligence test feedback may have resulted either from a chronic disengagement with intelligence tests, perhaps stemming from the belief that these types of tests are biased against them, or from a temporary disengagement that occurred when racial bias was situationally primed. Although we had attempted to manipulate the students' beliefs that the test they were taking was either racially biased or culturally fair, it seems that in actuality, we may have primed the idea of racial biases in both conditions of Experiment 1.

Experiment 2 allowed us to investigate both of these interpretations. In this study, we not only measured chronic disengagement with intellectual tests but also manipulated situational disengagement with intellectual tests by priming or not priming racial bias as a potential factor influencing test performance. This study demonstrated that priming racial bias does result in greater situational disengagement of self-esteem from feedback among African American students. Race prime affected the global state self-esteem of African American students, but not of European American students, in response to failure feedback. When racial bias was primed, African American students' self-esteem (corrected for initial self-esteem) tended to be higher after failure on an intelligence test than was that of European American students. When racial bias was not primed, in contrast, African American students' self-esteem tended to be lower than that of European American students. In addition, we found that chronic disengagement with intellectual tests, as assessed by a premeasure taken several weeks prior to the experiment, also is associated with African Americans being less responsive to negative feedback on a specific intellectual tasks—a finding that we did not observe among European Americans.

Taken together, these studies provide support for the idea that under certain circumstances, African American

students are more likely than European American students to disengage their self-esteem from performance feedback received in intellectual testing situations. This disengagement is especially likely to occur, we believe, in situations in which either negative stereotypes and/or expectations of racial bias are primed but may take on more chronic features as African Americans continually confront prejudice and discrimination in their environment. In contrast, European Americans, who do not experience the same racial bias, prejudice, and discrimination in intellectual domains, are relatively unaffected by primes of racial bias and are more likely to remain engaged by intellectual tasks.

Although we have speculated that situational factors may lead to disengagement with intellectual tasks among African Americans and that these factors may over time lead to chronic disengagement with intellectual tasks, we unfortunately were not able to specify the process by which this occurs in the present study. Our inability to demonstrate mediation may be due, in part, to insufficient power as a result of relatively small sample sizes. There are at least three possible mediating mechanisms that can be considered. One potential mediating mechanism is that when the possibility of racial bias is primed, African American students may believe the feedback is less accurate and hence evaluate their poor performance less negatively, and their good performance less positively, than do European American students with similar performances. We did find a Race \times Feedback interaction for perceived performance in Experiment 1 that followed this pattern. Less extreme evaluations of performance may then translate into less extreme affective responses to performance feedback. Our tests of mediation, however, provide no evidence to support this as an explanation for the Race \times Feedback interaction observed for performance self-esteem in Experiment 1. Furthermore, African American students in Experiment 2 did not evaluate their performance less negatively than did European American students overall or as a function of prime or disengagement condition. Thus, there is no evidence that performance evaluations mediated the patterns observed in the current research.

A second possibility is that prejudice and discrimination could lead African Americans to expect poor performance on intellectual tasks, and it is this expectation of poor performance that promotes disengagement with these tasks. Unfortunately, we did not measure performance expectancies in Experiment 1. We did measure performance expectancies in Experiment 2, but we found no evidence for this type of mediation. That is, priming racial bias did not significantly affect expected performance for African Americans or European Americans. Furthermore, African American students' self-esteem following failure was unrelated to their previous expecta-

tations for their performance. This pattern does not suggest that African American students' nonresponsiveness to negative feedback in Experiment 2 was mediated by expectations of poor performance, at least as we measured this construct.

A third possible mediating mechanism is that when racial bias was primed, African Americans were more likely to believe that the test was biased against them and was thus an illegitimate basis on which to evaluate their self-worth. Although we suspect that this is the mediational pathway that underlies the effects we observed, we were unable to provide an adequate test of this mechanism in the present studies. Ideally, one would want to measure perceptions of racial bias on the test before assessing self-esteem. However, doing so would run the risk of priming racial bias in both conditions. This is a difficult issue that we hope future research will address. Our measures of racial bias assessed after the self-esteem measures indicated that African American students, more so than European American students, generally believe that intellectual tests of this type are biased against minorities and believe that minorities do worse on these types of tests than do members of the majority group. We might expect the correlation between these measures to be strong, especially for African American students. Interestingly, however, the correlation between believing that nonminorities perform better on the NYIPS and believing that the NYIPS was racially biased was similar, and nonsignificant, for both European Americans ($r = .21, p > .20$) and African Americans ($r = .22, p > .25$). Thus, African Americans' greater belief that nonminorities outperform minorities on the NYIPS did not appear to be more strongly linked to their belief that the test was racially biased. Either of these beliefs may lead to disengagement from performance feedback on tests of this type.

This study has several limitations. One is that our manipulation of racial test bias simultaneously primed both race and racial biases. Research by Steele and Aronson (1995) suggested that simply priming race in the context of an intellectual testing situation may generate racial stereotypes, and raise stereotype threat, among African American students. Thus, priming race alone, without mention of racial bias on the test, might be expected to lead to anxiety and potentially defensive detachment of self-esteem from performance feedback among African American students. Although it is difficult to prime the possibility of racial test bias without also priming racial stereotypes, in the present studies, we are unable to disentangle the effects of racial stereotypes, in and of themselves, from the effects of priming potential race biases. Again, it is our hope that we will be able in future research to distinguish between cultural stereo-

types and perceptions of bias as antecedents to psychological disengagement.

A second limitation of these studies is that they do not directly address the issue of change in self-esteem as a function of feedback and racial primes. Neither experiment included a control group in which no feedback was provided about performance. Hence, we cannot determine if success elevated, or failure reduced, self-esteem relative to baseline levels. Furthermore, although global self-esteem was assessed pre- and postfeedback in both studies, performance self-esteem was assessed only postfeedback. No effects were observed on the measure of global self-esteem in Experiment 1, and the response format for global self-esteem was changed in Experiment 2 to make it a measure of state self-esteem, making direct comparisons of change in global self-esteem impossible in Experiment 2.

A third limitation of these studies is that we measured students' reactions to performance on an intelligence test only in a laboratory setting. It might be particularly easy to dismiss performance on a test that is seen as relatively contrived and for which there are no future implications. It is unclear whether students will so easily disengage their self-esteem from performance feedback received on other intellectual tasks that determine future opportunities. Some recent evidence suggests they may. Major (1995) found that the lower African American students reported their grade point averages as being, the more likely they were to score high on the Disengagement scale. This correlational finding is consistent with the notion that intellectual disengagement can have academic implications.

The Nature and Consequences of Disengagement

In this article, we have defined disengagement as a defensive detachment of one's self-esteem from outcomes in a particular domain, such that feelings of self-worth are not dependent on successes or failures in that domain. We have operationalized disengagement in the current studies as a nonresponsiveness (or lesser responsiveness) of self-esteem to feedback on an intelligence test. Furthermore, we have pointed out that, although they are interrelated processes, it is important to distinguish disengagement from devaluing and discounting. We believe that it is possible for people to disengage their self-esteem from their performance on an intelligence test but still value intelligence and continue to feel that intelligence is a central and important part of their self-concept. This should be especially likely to occur if intelligence tests are perceived as biased or prejudicial. Likewise, we believe it is possible for people to disengage their self-esteem from performance feedback received on an intelligence test, even though they

perceive that feedback as highly valid and diagnostic of merit. This should be especially likely to occur if the domain is devalued or regarded as a less central aspect of the self-concept. Disengagement can occur on a very limited basis, or across a number of domains, depending on how many aspects of one's life are affected by one's membership in a stigmatized group.

The current research indicates that when racial bias is primed, disengagement of self-esteem from performance on intelligence tests tends to occur for African Americans. Furthermore, it demonstrates that African American college students perceive intelligence tests of this sort as biased and perceive themselves as racially disadvantaged on these types of tests. This research does not, however, address whether African American students devalue intelligence or view intellectual and academic domains as less central or important to their self-concept. Indeed, recent research suggests that they do not. Major (1995) found that African American students reported that success in intellectual and academic domains was more important to their self-concept than did European American students. These same students, however, also scored higher on a questionnaire measure of disengagement of self-esteem from performance on intellectual tasks and lower on a measure of perceived diagnosticity of intelligence tests compared with their European American peers. This pattern of findings is not surprising given that academics is a domain that is highly valued by society, yet is a domain in which African Americans are vulnerable to negative stereotypes, biases, and discrimination.

Given that African Americans are likely to face discrimination, prejudice, and objective disadvantage in school settings in this country, disengagement of self-esteem from feedback about one's performance on intellectual tasks may be a coping strategy that is highly appropriate. Steele (1992, 1997), however, has argued that disidentification from a domain may, over time, be one of the factors that undermines African American students' school achievement. Thus, disengagement can have costs: African American students may protect their self-esteem by disengaging from intellectual tests but pay for this protection through its negative impact on school achievement. A hopeful note sounded by the present research is that disengagement can be affected by the situations that people encounter. Some situations are more likely to promote disengagement, whereas others may diminish it.

NOTES

1. These items were embedded within several other filler questions.
2. Prior to conducting each ANCOVA reported in this article, we tested whether the assumption of homogeneity of regression was met

in the analysis—that is, that the relationship between the covariate and the dependent variable was same in all treatment conditions (for a detailed discussion of this test, see Winer, 1971, pp. 772-779). For those variables for which the covariate was significant and the assumption of homogeneity of regression was met, we used a standard ANCOVA procedure in which the regression terms for the various cells of the analysis were pooled. We tested the assumption of homogeneity of regression by including each covariate as a continuous factor in the design using a multiple regression approach to the analysis. The covariate did not interact with any of the factors or their interactions in the analyses with performance self-esteem and perceived performance as the dependent variable, suggesting that there was homogeneity of variance. In the analysis with global trait self-esteem as the dependent variable, the covariate did interact with the three-way interaction between race, feedback, and test description creating a four-way interaction. This interaction is difficult to interpret but appears to have little bearing on the results reported in this article, given that there were no other effects and very little reactivity for the global trait self-esteem variable.

3. Analyses were also performed on the Appearance Self-Esteem and Social Self-Esteem subscales of the SSES. These analyses revealed only a significant main effect of race on the Appearance Self-Esteem subscale, $F(1, 68) = 4.13, p < .05$. African American students had higher appearance self-esteem ($M = 3.68$) than did European American students ($M = 3.34$). No significant effects were observed on the Social Self-Esteem subscale.

4. Data from one participant was dropped from analyses because this person showed an antagonistic attitude toward the experiment (e.g., when asked for his race, he responded that his race was "green").

5. Analyses performed on the other two subscales of the IOI revealed that European Americans ($M = 3.89$) were more likely than African Americans ($M = 3.24$) to believe that intelligence tests are diagnostic of ability, $F(1, 64) = 3.94, p < .05$, but that African Americans ($M = 6.11$) were significantly more likely than European Americans ($M = 5.65$) to be invested in the academic domain, $F(1, 64) = 4.03, p < .05$. Dividing participants into groups based on either of these subscales, however, did not affect how African American and European American students responded on the self-esteem measures.

6. In Experiment 2, the SSES was assessed on a 7-point scale rather than a 5-point scale.

7. Prior to conducting each ANCOVA, we tested whether the assumption of homogeneity of regression was met in the analysis. We tested this assumption by including each covariate as a continuous factor in the design using a multiple regression approach to the analysis. None of the covariates interacted with any of the factors or their interactions, suggesting that there was homogeneity of variance.

8. Significant Race \times Feedback interactions also were observed for participants' appearance and social self-esteem. Simple effects tests revealed a pattern paralleling the interactions observed for global state and performance self-esteem—African American students' social and appearance state self-esteem was higher in the race-prime condition than the no-race-prime condition, whereas the self-esteem of European American students was unaffected by prime condition. The Race \times Chronic Disengagement interaction also was significant for appearance self-esteem. Simple main effects tests again revealed a pattern of results identical to those observed for global and performance self-esteem. African American students who were highly engaged had lower appearance self-esteem than African American students who were disengaged, whereas there were no differences between European American students as a function of chronic disengagement.

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