# Self-Stereotyping in the Context of Multiple Social Identities

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This research examines self-stereotyping in the context of multiple social identities and shows that self-stereotyping is a function of stereotyped expectancies held in particular relationships. Participants reported how others evaluated their math and verbal ability and how they viewed their own ability when their gender or ethnicity was salient. Asian American women (Experiment 1) and European Americans (Experiment 2) exhibited knowledge of stereotyped social expectancies and corresponding self-stereotyping associated with their more salient identity. African Americans (Experiment 3) exhibited some knowledge of stereotyped social expectancies but no corresponding self-stereotyping. Correlational evidence and a 4th experiment suggest that self-stereotyping is mediated by the degree to which close others are perceived to endorse stereotypes as applicable to the self.

*Keywords:* shared reality, self-stereotyping, relationships, stigma, self-categorization

> Properly speaking, a man has as many social selves as there are individuals who recognize him and carry an image of him in their mind. (James, 1890, p. 294)

Gordon Allport (1954) argued that one inevitable consequence of common prejudice is that people apply cultural stereotypes to the self—a phenomenon we will refer to as self-stereotyping. Yet despite a wealth of knowledge about how stereotypes are used in evaluations of others (for reviews see Fiske, 1998; Hamilton & Sherman, 1994; Hilton & von Hippel, 1996), relatively little is known about how and when stereotypes are used in evaluations of the self. This research represents a step toward understanding the conditions under which people may use common stereotypes in self-evaluation according to the relative salience of the two social identities typically important in contemporary American society: gender and ethnicity. In addition to providing the first experimental evidence of self-stereotyping in the context of multiple social identities, we found evidence that the influence of stereotypes on self-evaluation depends on the perceived expectations of close others. As such, these experiments suggest that the perceived views of close others are one conduit by which cultural stereotypes may or may not be translated into stereotyped self-evaluations.

## Self-Stereotyping and Multiple Social Identities

Although there is a growing body of research examining the effects of stereotypes on members of stereotyped groups (see Crocker, Major, & Steele, 1998; Greenwald et al., 2001; Swim & Stangor, 1998; Wheeler & Petty, 2001, for reviews), only a portion of this work examines the degree to which stereotypes are incorporated into the self-concept. Most prominent of these efforts are findings that self-stereotyping is a function of the cognitive accessibility of one's social group membership (Hogg & Turner, 1987; James, 1993; Levy, 1996; Simon & Hamilton, 1994; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and the strength of the associative link between ingroup stereotypes and group identity (Greenwald et al., 2001; Nosek, Banaji, & Greenwald, 2002; Rudman, Greenwald, & McGhee, 2001). Taken together, this research suggests that self-stereotyping is a function of cognitive associations and social-identity salience.

Extant research examining the effects of stereotypes on self-evaluation, however, does not explicitly address the fact that individuals are simultaneously members of many social groups (see Ambady, Shih, Kim, & Pittinsky, 2001; Shih, Pittinsky, &

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Ambady, 1999, for an examination of stereotype-relevant behavior). To see the import of this question, one should imagine, for example, an Asian American woman evaluating her ability to succeed in college courses the upcoming year. Will she be influenced by the common stereotype that Asians excel at math, or will she be influenced by the equally common stereotype that women have difficulty with math? To answer this question, we have adopted a perspective that integrates classical observations that the self is dynamic and interpersonal in nature with contemporary theory and research emphasizing the role of social identification in cognitive representations of the self.

George Herbert Mead (1934) proposed that self-concepts are formed and regulated by situationally adopting others' perspectives on the self. Because individuals are members of any number of social relationships, self-understanding is not only fluid but also context-appropriate, corresponding pragmatically to the social expectations relevant to the given situation. Because stereotypes about the groups to which one belongs represent commonly shared perspectives on the self, self-evaluation may be influenced by the stereotypes associated with one's most salient social group membership, consistent with popular contemporary theories that implicate cognitive accessibility in self-understanding (e.g., Higgins & King, 1981; Turner, Oakes, Haslam, & McGarty, 1994). For example, self-categorization theory contends that the self-concept is highly flexible and changes as a function of situational cues that activate different social identities (Turner et al., 1987). Research from this perspective has shown that individuals' self-evaluations become more stereotype-consistent when one's in-group identity versus one's individual identity is made salient (e.g., K. James, 1993). In the context of multiple social identities, this perspective implies that self-evaluations may become more consistent with the stereotypes associated with a given social identity when it is salient but can become more consistent with the stereotypes associated with an alternative social identity when that identity becomes salient. Hence, self-categorization theory suggests that an Asian American woman may feel better about her math ability when her ethnicity is salient but feel better about her verbal ability when her gender is salient.

Our research program is guided by shared reality theory, an approach that is congruent with the notion that self-views are derived from interpersonal perspective taking (e.g., Mead, 1934). It also implies that stereotype-relevant self-evaluations should vary as a function of social-identity salience (Hardin & Conley, 2001; Hardin & Higgins, 1996). According to shared reality theory, individual beliefs and interpersonal connection are bound together by the achievement of shared perspectives held among social interactants. On the one hand, social bonds are established and maintained to the degree that participants are able to share experiences and beliefs. On the other hand, beliefs are established and maintained to the degree that they are perceived to be shared with others. The achievement of "shared reality" thus serves the dual functions of structuring both individual beliefs and social relationships. Hence, shared reality theory postulates that the reason individuals see themselves as they do is because specific people in their lives share their self-views, a proposition supported by evidence suggesting that self-understanding is influenced by interpersonal relationship salience (e.g., Baldwin, Carrell, & Lopez, 1990; Hinkley & Andersen, 1996).

Applied to the domain of self-stereotyping, shared reality theory concurs with cognitive accessibility theories that self-evaluations should generally correspond to commonly shared stereotypes associated with one's most salient social identity. However, the two theories postulate different mechanisms by which this may occur. Cognitive accessibility theories suggest that self-stereotyping is a function of the most accessible group memberships or stereotypes applicable to the self (e.g., Higgins & King, 1981; Markus & Wurf, 1987; Turner et al., 1987). Although shared reality theory is compatible with this claim, it makes the additional prediction that the relationship between cultural stereotypes and self-evaluation should be mediated by the degree to which people perceive particular close others to endorse the stereotypes as applicable to the self. Guided by this perspective in previous research, we found self-stereotyping as a product of interpersonal interactions with liked or close others. For example, individuals were more apt to see themselves, and behave, in a stereotypic manner when they wanted get along with another social actor who seemed to hold stereotypic views of their social group (Huntsinger & Sinclair, 2005; Sinclair & Huntsinger, 2005; Sinclair, Huntsinger, Skorinko, & Hardin, 2005). Also, unobtrusively increasing the salience of important others thought to hold stereotypic views of the self yielded self-stereotyping (Sinclair & Lun, in press). Thus, according to a shared reality theory analysis, to the extent that culturally shared perspectives on the self (i.e., cultural stereotypes) bring close others thought to hold these views to mind, the perceived views of these close others should be the more proximal basis of stereotypic self-evaluations.

## Overview and Hypotheses

The present research investigated self-stereotyping in the context of multiple identities as guided by predictions of both cognitive accessibility theories and shared reality theory. Concurrently run experiments examined self-stereotyping in the context of ethnic and gender identities among three samples of college students—Asian American women (Experiment 1), European American women and men (Experiment 2), and African American women and men (Experiment 3)—each of which is subject to different stereotypes about math and verbal ability. With either their own gender or ethnic identity unobtrusively made salient, participants evaluated how both people in general and close others viewed their math and verbal ability as well as how they viewed their own math and verbal ability. This procedure allowed us to examine effects of social-identity salience on stereotype salience, perceived expectancies of close others, and self-evaluations—as well as the relationships among them. Hence, each experiment afforded tests of the hypotheses that social expectancies and self-evaluations are influenced by the relative salience of particular social identities and that self-stereotyping may be mediated by perceived expectancies of close others. In Experiment 4, we sought experimental support for the shared reality theory explanation of self-stereotyping by examining self-evaluations after manipulating the salience of specific relationships with individuals thought to hold stereotypic or counterstereotypic views of the self.

## Experiment 1

According to common stereotypes in the U. S., Asian Americans have higher math ability than verbal ability, but women have higher verbal ability than math ability (e.g., Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Jackson, Lewan-

dowski, Ingram, & Hodge, 1997; Ruble, 1983). Accordingly, we expected Asian American women to exhibit awareness of these stereotypes and report that both people in general and close others viewed their verbal ability more favorably when their gender was salient than when their ethnicity was salient but viewed their math ability more favorably when their ethnicity was salient than when their gender was salient.[1] Moreover, we expected that the salience of these of stereotyped social expectancies would yield corresponding self-stereotyping. Finally, consistent with predictions derived from shared reality theory, we expected the perceived evaluations of close others to mediate the relationship between the stereotyping of people in general and self-evaluations among Asian American women.

## Method

*Participants.* Sixty-two Asian American women in a social psychology class at the University of California, Los Angeles (UCLA), participated in this study for course credit. Two participants were omitted from the analysis because they had been in the United States for less than 1 year, leaving 60 participants in the final sample.

*Materials and procedure.* Participants were told that the study examined how students reacted to stressful academic situations and were given a small packet of materials. Social-identity salience was manipulated by having participants write either their gender or their ethnicity at the top of the first four pages of this packet as part of a short "demographics section" that also included their age and year in college (Steele & Aronson, 1995). No participant revealed any suspicion whatsoever that this might have influenced their responses.[2]

On the first page of the packet, participants read a scenario in which the protagonist was about to take a very difficult GRE-type exam and were asked to take a minute or two to imagine as vividly as possible that they were in this situation. On the following three pages, participants then estimated how "people in general" and "people in the best position to know" evaluated their math and verbal ability and how they evaluated their own math and verbal ability. Self-evaluations and perceived evaluations of people in general were counterbalanced across participants, and the perceived evaluations of people who know them best were indicated last.

Items referring to the perceptions of "people in general" were intended to reflect participants' knowledge of the stereotypes commonly applied to them. Items referring to the perceptions of "people in the best position to know" were expected to reflect the perceived evaluations of close others. This strategy allowed us to define close others idiographically, according to the perceptions of participants, rather than normatively, according to our assumptions about the types of relationships people feel are important and relevant to this situation. We chose to define close others idiographically because to do so normatively would unnecessarily constrain our ability to capture which of the many eligible individuals (e.g., peers, teachers, family) students have developed shared understandings with regarding their math and verbal ability. Consistent with the assumption that "people in the best position to know" are close others, pilot testing demonstrated that Asian American women judged the opinions of people in the best position to know versus people in general to be more trustworthy, more important, and reflecting greater knowledge of them.[3] In addition, as one might suspect with close others in the domains of math and verbal ability, participants were more likely to have their teachers in mind when reporting the perceived views of people in the best position to know versus people in general, but they were more likely to have acquaintances or general groups (e.g., people at work, strangers) in mind when reporting the perceived views of people in general versus people in the best position to know.[4]

Perceptions of math ability and verbal ability from the perspective of people in general, people in the best position to know, and the self were assessed with two items each: "I/people in general/people in the best position to know think my math/verbal ability is. . ." (on a 7-point scale, with 1 labeled *extremely low* and 7 labeled *extremely high*) and "I/people in general/people in the best position to know expect [me] to get __% of the math/verbal questions correct." To create indices of ability, we transformed each Likert-type item representing a given perspective in a given domain into a 100-point scale and averaged with the corresponding percent correct item (math evaluation $\alpha$s = .83 to .92; verbal evaluation $\alpha$s = .82 to .86).

On the fifth, and final, page of the packet, participants rated the importance of math and verbal ability on separate 7-point scales (with 1 labeled *not at all important* and 7 labeled *extremely important*) and reported their math and verbal SAT scores. These measures were included to control for participants' degree of investment in math and verbal ability in the reported analyses. Participants also indicated how many years they had lived in the U. S. and whether they, their parents, and/or their grandparents were born in the U. S.

After completing the packet of materials, participants were given a written debriefing and thanked for their participation.

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[1] These predictions are consistent with pilot data ($N = 32$) that indicated that, stereotypically, women are thought to have higher verbal ability ($M = 5.81$, $SD = 0.90$) than Asian Americans ($M = 3.56$, $SD = 1.22$), $t(1, 31) = 8.47$, $p < .001$, and Asian Americans are stereotypically thought to have higher math ability ($M = 6.53$, $SD = 0.76$) than women ($M = 3.34$, $SD = 1.43$), $t(1, 31) = 5.46$, $p < .001$.

[2] Adopting a distinction from memory research (e.g., Richardson-Klavehn & Bjork, 1988; Roediger, 1990; Schacter, 1987), contemporary theory in social cognition recognizes a broad distinction between *implicit* and *explicit* varieties of cognition (Greenwald & Banaji, 1995). In contrast to deliberate, conscious, and aware judgment (i.e., explicit), implicit judgment is said to occur when participants are unaware of the influence of prior experience on their judgment (Banaji & Greenwald, 1994). In light of this criterion, any effects of our social-identity salience manipulation on social expectancies and self-evaluations can be considered implicit, because participants were unaware that writing in their gender or ethnicity could influence subsequent responses.

[3] Participants were given the same packet of materials used in this experiment with one exception. After participants reported the perceived evaluations of people in general and people in the best position to know, they also reported the person or persons they were thinking about. After completing this questionnaire, participants completed another questionnaire in which they described their relationship to each of the imagined people and rated how much they trusted each person and how important and accurate each person's opinion of them was ($N = 33$). A series of separate analyses of variance (ANOVAs) with intellectual domain (math vs. verbal) and perspective (best position vs. general) as within-subject variables indicated that, across domain, people in the best position to know were thought to be more trustworthy ($M = 5.50$, $SD = 1.06$) than people in general ($M = 4.52$, $SD = 1.82$), $F(1, 31) = 16.94$, $p < .001$, more important ($M = 5.39$, $SD = 1.29$) than people in general ($M = 4.48$, $SD = 1.99$), $F(1, 30) = 6.89$, $p = .01$, and more accurate ($M = 5.44$, $SD = 0.92$) than people in general ($M = 4.23$, $SD = 1.38$), $F(1, 32) = 24.43$, $p = .01$.

[4] With the pilot data described in Footnote 3, a series of separate ANOVAs with intellectual domain (math vs. verbal) and perspective (best position vs. general) as within-subject variables examining the number of times acquaintances, parents, other family, friends, roommates, teachers, or unspecified groups were reported indicated that teachers were more likely to be people in the best position to know ($M = 0.33$, $SD = 0.44$) than people in general ($M = 0.007$, $SD = 0.25$), $F(1, 32) = 8.80$, $p < .01$. Acquaintances, on the other hand, were more likely to be people in general ($M = 0.20$, $SD = 0.35$) than people in the best position to know ($M = .001$, $SD = .12$), $F(1, 32) = 9.93$, $p < .01$. The same pattern was found for unspecified groups ($M = 0.12$, $SD = 0.31$, for people in general; $M = 0.002$, $SD = 0.009$, for people in the best position to know), $F(1, 32) = 3.52$, $p = .07$.

### *Results and Discussion*

Congruent with predictions derived from both self-categorization theory and shared reality theory, we expected social-identity salience to affect perceived evaluations of people in general, perceived evaluations of close others, and self-evaluations in a stereotype-consistent manner. To examine these hypotheses among Asian American women, we submitted perceived evaluations of people in general, perceived evaluations of close others, and self-evaluations to separate mixed-model analyses of covariance (ANCOVAs), with salient social identity (gender vs. ethnicity) as the between-subjects factor and intellectual domain (math vs. verbal) as the within-subjects factor. Because research indicates that the degree to which stereotypes impact performance in relevant domains depends on participant investment (Levy, 1996; Steele & Aronson, 1995), judgments of the importance of math ability and verbal ability were used as covariates. The importance of math ability was significantly related to evaluations in every analysis [people in general, $F(1, 56) = 35.57$, $p < .001$; close others, $F(1, 56) = 35.11$, $p < .001$; self, $F(1, 55) = 41.62$, $p < .001$] as well as the importance of verbal ability [people in general, $F(1, 56) = 11.51$, $p = .001$; close others, $F(1, 56) = 8.78$, $p < .005$; self, $F(1, 55) = 13.20$, $p = .001$]. For this reason, all means presented are adjusted for these covariates.

*Stereotyped social expectancies.* As expected, social-identity salience affected the perceived evaluations of people in general, as indicated by a significant interaction between salient social identity and intellectual domain, $F(1, 56) = 5.26$, $p < .05$, $\eta = .29$. Although the simple effects are largely not statistically significant (see Table 1), the significant, predicted interaction indicates that Asian American women thought that people in general evaluated their verbal ability more favorably when their gender was salient than when their ethnicity was salient, but thought that people in general evaluated their math ability more favorably when their ethnicity was salient than when their gender was salient (Rosenthal, Rosnow, & Rubin, 2000).

A corresponding stereotype-consistent pattern was found for perceived evaluations of close others, as indicated by a significant interaction between salient social identity and intellectual domain, $F(1, 56) = 6.61$, $p = .01$, $\eta = .33$. The predicted, significant interaction indicates that Asian American women thought that people in the best position to know about their abilities evaluated their verbal ability more favorably when their gender was salient than when their ethnicity was salient, but thought that people in the best position to know evaluated their math ability more favorably when their ethnicity was salient than when their gender was salient (see Table 1).

*Self-stereotyping.* Because Asian American women's perceptions of the evaluations of close others were stereotyped, shared reality theory predicts that their self-evaluations should be stereotyped as well. As shown in Table 1, we also found this pattern with self-evaluations, as indicated by a marginally significant interaction between salient social identity and intellectual domain, $F(1, 55) = 3.24$, $p = .08$, $\eta = .24$. This marginally significant interaction suggests that Asian American women evaluated their own verbal ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their own math ability more favorably when their ethnicity was salient than when their gender was salient.

*The interpersonal foundation of self-stereotyping.* According to shared reality theory, the relationship between knowledge of cultural stereotypes (i.e., evaluations of people in general) and self-stereotyping should be mediated by the social expectancies of people that participants believe would know their math and verbal abilities best (i.e., close others). A series of regression analyses examined this hypothesis for both math and verbal evaluations (see Baron & Kenny, 1986). Relevant standardized regression coefficients are reported below.

The perceived math evaluations of people in general were significantly correlated with both math self-evaluations ($\beta = .57$, $p < .01$) and perceived math evaluations of close others ($\beta = .82$, $p < .01$). However, when perceived math evaluations of people in general and close others were allowed to simultaneously predict math self-evaluations, the relationship between perceived math evaluations of people in general and math self-evaluations became nonsignificant ($\beta = .13$, $p = .18$), but the relationship between perceived math evaluations of close others and math self-evaluations remained strong and highly significant ($\beta = .75$, $p < .001$). A significant Baron and Kenny modified Sobel test ($z = 4.66$, $p < .001$; Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998) confirmed that the relationship between the evaluations of people in general and self-evaluations concerning math was indeed mediated by the perceived evaluations of close others, consistent with shared reality theory.

Perceived evaluations of close others also mediated the relationship between knowledge of stereotypes and self-stereotyping of verbal ability. The perceived verbal evaluations of people in general were significantly correlated with both verbal self-evaluations ($\beta = .63$, $p < .01$) and perceived verbal evaluations of close others ($\beta = .81$, $p < .0l$). However, when perceived evaluations of people in general and close others concerning verbal ability were allowed to simultaneously predict verbal self-evaluations, the relationship between perceived evaluations of people in general and self-

Table 1
*Asian American Women's Social Expectancies and Self-Evaluations as a Function of Social-Identity Salience*

| | People in general | | | | Close others | | | | Self | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gender | | Ethnicity | | Gender | | Ethnicity | | Gender | | Ethnicity | |
| Category | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Math | 69.22 | 2.97 | 74.07 | 3.07 | 64.38 | 3.12 | 73.79* | 3.23 | 66.10 | 2.92 | 73.21 | 2.97 |
| Verbal | 67.80 | 2.90 | 61.08 | 3.01 | 67.36 | 2.93 | 64.41 | 3.03 | 62.52 | 3.22 | 60.56 | 3.27 |

* $p < .05$.

-evaluations became nonsignificant ($\beta = .13$, $p = .24$), but the relationship between perceived verbal evaluations of close others and verbal self-evaluations remained highly significant ($\beta = .72$, $p < .001$). Again, a significant modified Sobel test ($z = 5.05$, $p < .001$) confirmed that the relationship between the evaluations of people in general and self-evaluations concerning verbal ability was mediated by the perceived evaluations of close others.

In sum, we found support for the hypothesis that self-evaluations and perceptions of others' evaluations are linked to stereotypes associated with one's more salient social identity, consistent with cognitive accessibility theories and shared reality theory. Moreover, uniquely consistent with shared reality theory, mediational analyses suggested that cultural stereotypes affect self-evaluations via the perceived views of close others for both math and verbal ability. Although the impact of multiple identities on self-stereotyping among Asian American women is striking because stereotypes regarding math and verbal ability of Asian Americans are the opposite of stereotypes of women, we concurrently replicated the study on a sample of European American women and men in an attempt to generalize the social foundations of self-stereotyping. Although the stereotypes about math and verbal ability are different for European Americans, we anticipated that they too would self-stereotype according to their most salient social identity. Like Asian American women, we also expected to find that self- stereotyping among European American participants would be mediated by perceptions of close others' evaluations.

## Experiment 2

Common gender stereotypes suggest that men are better at math than women and that women are more verbally skilled than men (e.g., Broverman et al., 1972). In contrast, math and verbal ability do not seem to be differentially associated with being European American (Jackson et al., 1997). Accordingly, we predicted that European American women would evaluate themselves, and expect others to evaluate them, more favorably regarding their verbal ability when their gender was salient than when their ethnicity was salient, but more favorably regarding their math ability when their ethnicity was salient than when their gender was salient. Consistent with gender stereotypes, we predicted the opposite pattern of results for European American men. We predicted that European American men would evaluate themselves, and expect others to evaluate them, more favorably regarding their math ability when their gender was salient than when their ethnicity was salient, but more favorably regarding their verbal ability when their ethnicity was salient than when their gender was salient. These predictions are consistent with our pilot data documenting stereotypes UCLA undergraduates recognize regarding the math and verbal ability of European Americans, women, and men.[5] Finally, as with Asian American women, we expected to find evidence congruent with the prediction that European Americans' self-judgments are mediated by the perceived evaluations of close others.

### *Method*

Individuals who appeared European American were approached on the UCLA campus and asked to complete a short questionnaire about student reactions to stressful situations. Although all participants subsequently identified themselves as either "White" or "European American," 12 people were not included in the analyses because they were not born in the United States and, thus, were likely to be White immigrants (e.g., of Middle Eastern origin) to whom stereotypes of European Americans do not necessarily apply. Thus, the final sample included 42 female and 43 male participants. Otherwise, the procedure was identical to Experiment 1. As before, no participants expressed any awareness that the social-identity salience manipulation may have influenced their evaluations.

### *Results and Discussion*

To examine the effects of social-identity salience on European American women's and men's stereotype-relevant self-evaluations, perceived evaluations of people in general, and perceived evaluations of close others, we submitted ratings from each perspective (math $\alpha$s = .84 to .88; verbal $\alpha$s = .67 to .76) to separate mixed model ANCOVAs, with participant gender (male vs. female) and salient social identity (gender vs. ethnicity) as between-subjects factors and intellectual domain (math vs. verbal) as the within-subjects factor. Because the importance of math ability was significantly related to evaluations in every analysis [people in general, $F(1, 79) = 17.76$, $p < .001$; close others, $F(1, 78) = 20.14$, $p < .001$; self, $F(1, 78) = 28.92$, $p < .001$] as well as the importance of verbal ability [people in general, $F(1, 79) = 13.39$, $p < .001$; close others, $F(1, 78) = 18.09$, $p < .001$; self, $F(1, 78) = 11.89$, $p = .001$], all means presented are adjusted for these covariates.

*Stereotyped social expectancies.* We found effects stemming from the temporary salience of gender stereotypes about math and verbal abilities on the perceived evaluations of people in general, as well some chronic stereotyped effects. Independent of effects of the social-identity salience manipulation, perceived evaluations of people in general partially corresponded to common gender stereotypes, as indicated by a significant interaction between participant gender and intellectual domain, $F(1, 79) = 8.19$, $p = .005$, $\eta = .31$. Perceptions of how people in general evaluated their math ability tended to be more favorable for men ($M = 74.13$, $SE = 2.54$) than women ($M = 67.37$, $SE = 2.54$), $F(1, 79) = 3.52$, $p = .06$, $\eta = .21$, but women did not think that people in general evaluated their verbal ability more favorably ($M = 78.16$, $SE = 1.97$) then men did ($M = 74.77$, $SE = 1.97$), $F(1, 79) = 1.47$, $p = .23$, $\eta = .13$.

However, of focal interest to us, chronic awareness of gender stereotypes was qualified by an effect of social-identity salience, as indicated by a significant Participant Gender × Salient Social Identity × Intellectual Domain interaction, $F(1, 79) = 6.22$, $p < .05$, $\eta = .27$. Although the simple effects are largely not statistically significant, this significant interaction indicates that European American men reported that people in general evaluated their math ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their verbal ability more favorably when their ethnicity was salient than when their

[5] The predictions are consistent with pilot data ($N = 32$) which indicated that, stereotypically, women may be thought to have higher verbal ability ($M = 5.81$, $SD = 0.90$) than European Americans ($M = 5.56$, $SD = 0.91$), though this difference was not statistically significant, $t(31) = 1.35$, $p = .19$. European Americans are thought to have higher math ability ($M = 4.47$, $SD = 0.95$) than women ($M = 3.34$, $SD = 1.43$), $t(31) = 4.13$, $p < .001$. Men are thought to have higher math ability ($M = 5.91$, $SD = 0.86$) than European Americans ($M = 4.47$, $SD = 0.95$), $t(31) = 6.29$, $p < .001$. Lastly, European Americans are stereotypically thought to have higher verbal ability ($M = 5.56$, $SD = 0.91$) than men ($M = 4.03$, $SD = 1.33$), $t(31) = 5.46$, $p < .001$.

gender was salient. In contrast, European American women reported that people in general evaluated their verbal ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their math ability more favorably when their ethnicity was salient than when their gender was salient (see Table 2).

A virtually identical pattern was found regarding European American perceptions of the expectations of close others. It is interesting that men thought close others viewed them more favorably ($M = 78.44$, $SE = 1.61$) than women did ($M = 73.68$, $SE = 1.60$), regardless of intellectual domain, as indicated by a main effect of participant gender, $F(1, 78) = 4.38$, $p < .05$, $\eta = .23$. This effect, however, was qualified by a two-way interaction between participant gender and intellectual domain, $F(1, 78) = 4.41$, $p < .05$, $\eta = .23$. Men thought close others evaluated their math ability more favorably ($M = 78.13$, $SE = 2.42$) than women did ($M = 69.12$, $SE = 2.40$), $F(1, 78) = 6.92$, $p = .01$, $\eta = .29$, but women did not think that close others evaluated their verbal ability more favorably ($M = 78.24$, $SE = 1.83$) than men did ($M = 78.75$, $SE = 1.85$), $F(1, 78) < 1$, *ns*.

These findings were qualified by the predicted Participant Gender × Salient Social Identity × Intellectual Domain three-way interaction, $F(1, 78) = 7.72$, $p < .01$, $\eta = .30$, which indicates that European American men reported that close others evaluated their math ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their verbal ability more favorably when their ethnicity was salient than when their gender was salient. In contrast, European American women reported that close others evaluated their verbal ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their math ability more favorably when their ethnicity was salient than when their gender was salient (see Table 2).

*Self-stereotyping.* Because European American men and women's perceived evaluations of close others were stereotyped, shared reality theory predicts that their self-evaluations will be stereotyped as well. Indeed, replicating findings in Experiment 1 with Asian American women, we found that self-evaluations corresponded to social expectancies.

As with the perceived evaluations of close others, men viewed themselves more favorably in general ($M = 76.03$, $SE = 1.84$) than women did ($M = 69.38$, $SE = 1.82$), as indicated by a main effect of participant gender, $F(1, 78) = 6.56$, $p = .01$, $\eta = .28$. This finding was qualified by the predicted Participant Gender × Salient Social Identity × Intellectual Domain three-way interaction indicating that the social-identity salience manipulation influenced application of gender stereotypes to the self, $F(1, 78) = 10.99$, $p = .001$, $\eta = .35$. As shown in Table 2, this interaction indicates that European American men evaluated their own math ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their own verbal ability more favorably when their ethnicity was salient than when their gender was salient. In contrast, European American women evaluated their own verbal ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their own math ability more favorably when their ethnicity was salient than when their gender was salient.

*The interpersonal foundation of self-stereotyping.* To examine how cultural stereotypes and the perceived expectancies of close others function in the self-stereotyping exhibited by European Americans, we conducted mediational analyses identical to the ones used in Experiment 1 with Asian American women. We expected results to replicate the basic finding that the relationship between cultural stereotypes (i.e., evaluations of people in general) and self- stereotyping was mediated by the social expectancies of people that participants believed knew their math and verbal abilities best (i.e., close others).

The perceived math evaluations of people in general were significantly correlated with both math self-evaluations ($\beta = .76$, $p < .001$) and the perceived math evaluations of close others ($\beta = .77$, $p < .001$). However, when the perceived math evaluations of people in general and close others were allowed to simultaneously predict math self-evaluations, the relationship between perceived math evaluations of people in general and math self-evaluations was virtually eliminated ($\beta = .18$, $p < .01$), but the relationship between the perceived math evaluations of close others and math self-evaluations remained highly significant ($\beta = .75$, $p < .001$). A modified Sobel test ($z = 6.99$, $p < .001$) showed that the relationship between the evaluations of people in general and self-evaluations concerning math was indeed mediated by the perceived evaluations of close others (see Baron & Kenny, 1986).

Similarly, the perceived verbal evaluations of people in general were significantly correlated with both verbal self-evaluations ($\beta = .58$, $p < .001$) and the perceived verbal evaluations of close others ($\beta = .57$, $p < .001$). When perceived verbal evaluations of

Table 2
*European American Men's and Women's Social Expectancies and Self-Evaluations as a Function of Social-Identity Salience*

| | People in general | | | | Close others | | | | Self | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gender | | Ethnicity | | Gender | | Ethnicity | | Gender | | Ethnicity | |
| Category | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Math | | | | | | | | | | | | |
| Men | 77.24 | 3.29 | 71.02 | 3.87 | 78.94 | 3.18 | 77.33 | 3.65 | 78.09 | 3.36 | 73.28 | 3.88 |
| Women | 65.63 | 3.51 | 69.10 | 3.67 | 65.97 | 3.32 | 72.26 | 3.46 | 63.44 | 3.52 | 68.10 | 3.68 |
| Verbal | | | | | | | | | | | | |
| Men | 73.13 | 2.55 | 76.41 | 3.00 | 74.17 | 2.43 | 83.34* | 2.78 | 71.06 | 2.73 | 81.70* | 3.15 |
| Women | 80.53 | 2.73 | 75.80 | 2.84 | 80.95 | 2.53 | 75.52 | 2.64 | 76.47 | 2.86 | 69.50 | 2.99 |

* $p < .05$.

people in general and close others were allowed to simultaneously predict verbal self-evaluations, however, the relationship between perceived verbal evaluations of people in general and verbal self-evaluations was substantially reduced ($\beta = .28$, $p < .005$), but the relationship between the perceived verbal evaluations of close others and verbal self-evaluations remained as strong ($\beta = .55$, $p < .001$). Again, a modified Sobel test ($z = 4.39$, $p < .001$) indicated that the relationship between the perceived evaluations of people in general and self-evaluations concerning verbal ability was mediated by the perceived evaluations of close others, consistent with shared reality theory.[6]

To this point, experiments involving Asian American women and European American women and men found that individuals see themselves, and believe that others see them, in a manner consistent with their more salient social identity. Although the specific simple main effect comparisons were not always significant, a meta-analysis showed that, indeed, individuals' social expectancies (i.e., perceived beliefs of people in general and close others) were consistent with their more salient social identity across Experiment 1 and 2 ($z = 27.07$, $p < .005$). Similarly, individuals' self-evaluations were consistent with their more salient social identity across Experiments 1 and 2 ($z = 17.25$, $p < .005$). In addition, the hypothesis that perceived evaluations of close others mediated the relationship between cultural stereotypes and self-evaluations was supported in both samples.

In light of the pivotal role of perceptions of close others in stereotyped self-evaluations, it is interesting to consider groups in which the perceived views of close others do not correspond to salient stereotypes. According to shared reality theory, close others who are thought to hold nonstereotypic views may mitigate the influence of stereotypes on self-evaluations. To explore the potential protective effects of having close others who subvert the implications of cultural stereotypes, we concurrently examined self-stereotyping among African Americans, who have a long-recognized cultural tradition of challenging racist stereotypes within the family and community (e.g., DuBois, 1903). In addition, because stereotypes about intellectual ability are different for African Americans than Asian Americans or European Americans, this experiment allows a conceptual replication of effects of differential social-identity salience on social expectancies.

## Experiment 3

Relative to the social groups examined in Experiments 1 and 2, African Americans endure a particularly vicious form of prejudice (Jones, 1997; Sears, Citrin, & van Laar, 1995), which includes the stereotype that they are generally intellectually inferior (Devine & Elliot, 1995; Gilbert, 1951; Hernstein & Murray, 1994; Katz & Braly, 1933). It had been argued that one way members of social groups that are subject to prolonged and virulent discrimination contend with the potentially negative effects of a hostile environment is by cultivating social relationships in which they are viewed in a positive, stereotype-inconsistent manner (e.g., Claire & Fiske, 1998; Frable, Platt, & Hoey, 1998, but see Ogbu, 1986). These interpersonal relationships may mitigate effects of a prejudiced environment by alerting constituents to the potential bias of others' evaluations, supplying a forum for the discussion of strategies to combat prejudice, and, most relevant to this work, providing a social foundation for nonstereotypic self-evaluations.

Although African American's stereotype-relevant self-evaluations are negatively impacted when interacting with individuals who hold stereotypic views of them (Sinclair et al., 2005, Experiment 3), some research suggests that members of this ethnic group have successfully cultivated a protective social network in which stereotype-inconsistent views are the norm. First, according to work on racial socialization, the notion that one may be unfairly judged or treated by society at large is transmitted throughout the African American community via close interpersonal relationships and interpersonal cultural practices (e.g., Bowman & Howard, 1985; Sanders, 1997; Thornton, 1997). For example, Phinney and Chavira (1995) found that African American parents counsel their children more vigilantly about racial prejudice than parents of other ethnic groups. Second, this social network by which African Americans collaboratively challenge pervasive beliefs about their ethnic group may account in part for findings indicating that African Americans are more likely than other ethnic groups to believe that society's treatment and evaluations of them are illegitimate (Hunt, 2000; Ogbu, 1997; Sidanius, Sears, & Brewer, 1993, 1997). Third, Jackman (1994) reported the results of survey research showing that African Americans do not apply stereotypic traits (e.g., unintelligent, undependable, lazy) to their ethnic group, whereas women tend to endorse stereotypic evaluations of women (e.g., emotional, talkative, unintelligent). Consistent with the protective social network argument, she postulates that the segregation that often isolates modern African American communities enables them to collaboratively develop means of interpreting their disadvantaged status that do not require internalizing negative stereotypes. In contrast, women work, socialize, and live with men. For this reason, they do not have as much physical and mental space to develop such collaborative protective strategies.

Finally, our own pilot data show that African Americans think close others see them in a less stereotypic light than people in general, consistent with the notion that their immediate social network may help insulate them from prevalent stereotypes. When asked who they were thinking about when reporting how "people in the best position to know" and "people in general" viewed their academic ability, with either ethnicity or gender salient, a sample of African Americans reported that close others viewed them as having higher academic ability than people in general. In contrast,

[6] Although the counterbalancing strategy used in Experiments 1–3 cannot account for the priming effects, it presents a challenge for the mediational analyses. However, a follow-up study using White women ($N = 49$) showed that the evidence for mediation could not be accounted for by the counterbalancing strategy we used. In a fully counterbalanced design, when perceived math evaluations of people in general and close others were allowed to simultaneously predict math self-evaluations, the relationship between perceived evaluations of people in general and self-evaluations was eliminated ($\beta = .03$, $p = .66$), but the relationship between the perceived math evaluations of close others and math self-evaluations remained strong and highly significant ($\beta = .91$, $p < .001$). Similarly, when perceived verbal evaluations of people in general and close others were allowed to simultaneously predict math self-evaluations, the relationship between perceived evaluations of people in general and self-evaluations was only marginally significant ($\beta = .19$, $p = .11$), but the relationship between the perceived verbal evaluations of close others and verbal self-evaluations remained strong and highly significant ($\beta = .63$, $p < .001$).

a sample of Whites who completed the same materials did not distinguish between the perceived evaluations of close others and people in general.[7]

To the extent that African Americans do benefit from a social network in which stereotypes are collaboratively challenged, shared reality theory predicts that self-stereotyping may be mitigated. The hypothesis that African Americans will not report stereotype-consistent self-evaluations is in line with research on stereotype threat (e.g., Steele & Aronson, 1995). In particular, although European American women exhibited both stereotype-consistent behavior and stereotype-consistent self-evaluations when stereotype accessibility was increased (Spencer, Steele, & Quinn, 1999), African Americans exhibited stereotype-consistent behavior when stereotype accessibility was increased but did not report stereotype-consistent self-evaluations (Steele & Aronson, 1995).

In sum, although we anticipated African Americans would exhibit knowledge of the stereotyped expectations that people in general hold of them, we did not expect them to report that close others viewed them in a stereotype-consistent manner because of the protective social network established within the African American community. Finally, because shared reality theory posits that perceived beliefs of close others hold greater sway over self-evaluations than knowledge of stereotyped expectations, we did not expect African Americans to self-stereotype with regard to their salient social identity.

Because ethnic stereotypes about African Americans have negative implications regarding general intellectual ability (regardless of domain), and gender stereotypes have both negative and positive implications about math versus verbal ability for women versus men, predictions regarding the perceived expectancies of people in general for African Americans were not as simple as they were for Asian Americans and European Americans. In the cases of African American women's verbal ability and African American men's math ability, the predictions were clear because these gender and ethnic stereotypes have opposing implications about ability. Gender is positively associated with verbal ability for women, but ethnicity is negatively associated with intellectual ability (including verbal ability) for African Americans. Similarly, gender is positively associated with math ability for men, but ethnicity is negatively associated with intellectual ability (including math ability) for African Americans. Accordingly, we anticipated that African American women would expect people in general to evaluate them more favorably regarding their verbal ability when their gender was salient than when their ethnicity was salient. Similarly, we predicted that African American men would expect people in general to evaluate them more favorably regarding their math ability when their gender was salient than when their ethnicity was salient. On the other hand, the cases of African American women's math ability and African American men's verbal ability are less clear-cut because the implications of gender and ethnic stereotypes overlap. In this case, our pilot data suggested that ethnic stereotypes about math and verbal ability are more negative than corresponding gender stereotypes.[8] Hence, we expected that African American women and men would report that people in general evaluate both their math and verbal ability less favorably when their ethnicity was salient than when their gender was salient.

### *Method*

The procedure was identical to Experiment 2. Individuals who appeared African American were approached on the UCLA campus and were asked to complete a short questionnaire about students' reactions to stressful situations. Although all participants subsequently indicated that they identified as African American, 9 people were excluded from the analyses because they were not born in the United States. Thus, the final sample included 46 women and 41 men who participated as volunteers. As before, no participants expressed any awareness that the social-identity salience manipulation may have influenced their evaluations.

### *Results and Discussion*

To examine the hypothesis that African Americans' perceptions of how they are viewed by people in general, but not their perceptions of how close others view them or their self-evaluations, are shaped by their more salient social identity, judgments from these three perspectives (math $\alpha$s = .85 to .91; verbal $\alpha$s = .79 to .89) were submitted to separate mixed-model ANCOVAs. Participant gender (male vs. female) and salient social identity (gender vs. ethnicity) were between-subjects factors and intellectual domain (math vs. verbal) was the within-subjects factor in each analysis. Because the importance of math ability was significantly related to evaluations in every analysis [people in general, $F(1, 78) = 17.43$, $p < .001$; close others, $F(1, 80) = 25.85$, $p < .001$; self, $F(1, 78) = 24.42$, $p < .001$] as well as the importance of verbal ability [people in general, $F(1, 78) = 30.15$, $p < .001$; close others, $F(1, 80) = 36.30$, $p < .001$; self, $F(1, 78) = 26.91$, $p < .001$], all means presented were adjusted for these covariates.

*Stereotyped social expectancies.* Consistent with stereotypes of this group, African American perceptions of the evaluations of people in general regarding their intellectual ability were lower when their ethnicity was salient ($M = 63.46$, $SE = 2.42$) than when their gender was salient ($M = 70.13$, $SE = 2.05$), as

[7] In this pilot study, African American participants completed a packet of materials that differed from those used in Experiments 1–3 in two ways. First, participants were asked to report how they, people in general, and people in the best position to know perceived their "academic ability" rather than their math and verbal ability. Second, after participants reported the perceived evaluations of people in general and people in the best position to know, they also reported the person or persons they were thinking about, their relationship to the person(s) and the perceived academic expectancies of the person(s) with regard to their salient ingroup (e.g., ethnicity when ethnicity was made salient; $N = 40$). A main effect of perspective (best position vs. general) showed that African Americans thought that people in the best position to know viewed their salient in-group as having higher academic ability ($M = 5.83$, $SD = 1.22$) than people in general ($M = 4.93$, $SD = 1.59$), $t(39) = 11.32$, $p < .01$. In contrast, a sample of Whites ($N = 57$) that completed the same materials revealed no such main effect of perspective, $t(56) = 1.40$, $p = .24$.

[8] Our pilot data ($N = 32$) indicate that African Americans are stereotypically considered to have lower math ability ($M = 3.09$, $SD = 1.17$) than men ($M = 5.91$, $SD = 0.86$), $t(31) = 9.00$, $p < .001$, and lower verbal ability ($M = 3.38$, $SD = 1.41$) than men ($M = 4.03$, $SD = 1.33$), $t(31) = 2.27$, $p < .05$. African Americans may be considered to have lower math ability ($M = 3.09$, $SD = 1.17$) than women ($M = 3.34$, $SD = 1.43$), though this difference was not statistically significant, $t(31) = 1.16$, $p = .26$. Finally, African Americans are stereotypically considered to have lower verbal ability ($M = 3.38$, $SD = 1.41$) than women ($M = 5.81$, $SD = 0.90$), $t(31) = 7.01$, $p < .001$.

indicated by a significant main effect of social-identity salience, $F(1, 78) = 4.38$, $p < .05$, $\eta = .23$. Also, African Americans unexpectedly thought that people in general viewed them as having higher verbal ability ($M = 67.27$, $SE = 1.70$) than math ability ($M = 66.32$, $SE = 1.81$), as indicated by a main effect of intellectual domain, $F(1, 78) = 6.78$, $p = .01$, $\eta = .28$.

Consistent with research suggesting that African Americans cultivate a social network that challenges negative stereotypes, African Americans did not perceive evaluations of close others to conform to ethnic and gender stereotypes as a function of social-identity salience. African Americans did not think that close others viewed their intellectual ability as lower when their ethnicity ($M = 74.31$, $SE = 1.84$) was more salient than their gender ($M = 74.29$, $SE = 1.53$), $F(1, 80) < 1$, *ns*. As in the case of reported perceived expectations of people in general, African Americans thought that close others viewed them as having higher verbal ability ($M = 76.79$, $SE = 1.47$) than math ability ($M = 71.82$, $SE = 1.38$), $F(1, 80) = 4.33$, $p < .05$, $\eta = .23$.

*Self-stereotyping.* Because African Americans' perceived evaluations of close others were not stereotyped, shared reality theory predicts that their self-evaluations will not be stereotyped as well. Consistent with this prediction, African Americans did not evaluate their own intellectual ability as lower when their ethnicity ($M = 71.33$, $SE = 2.13$) was more salient than their gender ($M = 68.20$, $SE = 1.76$), $F(1, 78) = 1.28$, $p = .26$, $\eta = .13$.

*The interpersonal foundation of self-stereotyping.* According to shared reality theory, the same process that fosters self-stereotyping in Asian American women and European Americans should protect African Americans from applying negative cultural stereotypes regarding their intellectual ability to the self. In other words, despite their unique response to the social-identity salience manipulation, African Americans were also expected to show the same mediational pattern demonstrated with Asian American women and European Americans. That is, the relationship between knowledge of cultural stereotypes (i.e., evaluations of people in general) and self-stereotyping should be mediated by the social expectancies of people that participants believed knew their math and verbal abilities best (i.e., close others).

To test this hypothesis, we conducted mediational analyses identical to those in Experiments 1 and 2. Perceived math evaluations of people in general were significantly correlated with both math self-evaluations ($\beta = .46$, $p < .01$) and the perceived math evaluations of close others ($\beta = .66$, $p < .01$). When perceived math evaluations of people in general and close others were allowed to simultaneously predict math self-evaluations, the relationship between perceived evaluations of people in general and self-evaluations was eliminated ($\beta = -.09$, $p = .37$), but the relationship between the perceived math evaluations of close others and math self-evaluations remained strong and highly significant ($\beta = .82$, $p < .001$). A modified Sobel test revealed that the relationship between the evaluations of people in general and self-evaluations concerning math was indeed mediated by the perceived evaluations of close others ($z = 5.95$, $p < .001$).

Similarly, the perceived verbal evaluations of people in general were significantly correlated with both verbal self-evaluations ($\beta = .49$, $p < .001$) and the perceived verbal evaluations of close others ($\beta = .60$, $p < .001$). When perceived verbal evaluations of people in general and close others were allowed to simultaneously predict verbal self-evaluations, the relationship between perceived evaluations of people in general and self-evaluations was eliminated ($\beta = -.06$, $p = .36$), but the relationship between the perceived verbal evaluations of close others and verbal self-evaluations remained highly significant ($\beta = .92$, $p < .001$). A modified Sobel test indicated that the relationship between the perceived evaluations of people in general and self-evaluations concerning verbal ability was mediated by the perceived evaluations of close others ($z = 6.05$, $p < .001$).

Although shared reality theory can account for the social-identity salience effects in all three samples, as well as the mediational role of the perceived evaluations of close others, evidence of the role of close others in self-stereotyping has been correlational thus far. As such, it is vulnerable to alternative causal explanations. Shared reality theory contends that the evaluations of close others provide a conduit for stereotypes to affect self-evaluation; however, false consensus is a plausible alternative explanation of the judgments of Asian American women and European American men and women (e.g., Ross, Greene, & House, 1977). For example, the social-identity manipulation may have affected self-evaluations, which, in turn, may have affected the way these participants thought others evaluated them. The relationship between social expectancies and self-evaluation among African Americans is not vulnerable to this criticism, though one may argue that this group exhibited a type of limited false consensus (e.g., Clement & Krueger, 2002). In other words, African Americans were unresponsive to the social-identity salience manipulation because members of this group do not differentially associate academic ability with their ethnicity versus their gender. This belief, in turn, affected the perceived evaluations of close others. However, it did not affect the perceived evaluations of people in general because African Americans are particularly aware of discrimination against their social group (Phinney & Chavira, 1995; Sidanius et al., 1997).

For this reason, Experiment 4 provided an experimental test of shared reality theory's postulate that the perceived views of close others plays a causal role in self-stereotyping by manipulating whether participants are thinking about close or distant others thought to view them in a stereotypic or counterstereotypic manner.

## Experiment 4

The purpose of Experiment 4 was to test shared reality theory's hypothesis that self-stereotyping is caused by the perceived views held in salient close relationships by manipulating who participants were thinking about when making self-judgments. In doing so, we focused solely on gender rather than examining gender versus ethnic self-stereotyping. We chose to simplify the design in this manner because the previous experiments consistently demonstrated that when multiple social identities are available, social expectancies and, under certain conditions, self-evaluations become consistent with the more salient social identity.

In Experiments 1 and 2, Asian American women and European Americans endorsed self-views that were consistent with the stereotypes of their more salient social identity. Shared reality theory postulates that these individuals saw themselves as they did because they were thinking about specific people in their lives who validated these self-views. In contrast, African Americans in Experiment 3 did not hold self-views that were consistent with the stereotypes of their more salient social identity. According to our perspective, this may have been the case because African Ameri-

cans were thinking about close others who saw them in a stereotype-inconsistent manner. Accordingly, in this experiment, we expected women to view themselves in a more stereotypic manner when thinking about a close other who viewed them in a stereotype-consistent manner than a close other who viewed them in a stereotype-inconsistent manner.

### Method

*Participants.* Fifty-six women in a psychology class at the University of Virginia participated in this experiment for course credit. This sample consisted of 46 European Americans, 6 African Americans, 3 Asian Americans, and 1 "other."

*Materials and procedure.* Participants were told that the study examined people's social interactions and were asked to fully visualize a person who fit the criteria outlined in their packet. They were then given a small packet of materials that contained instructions for the visualization task and space to write a short description of the person they visualized. Relational status was manipulated by having participants describe someone in the "best position to know" or someone in "no position to know" about their math ability. Stereotypicality of perceived views was manipulated by having participants describe someone who thought they were good at math versus someone who thought they were somewhat poor at math.

After visualizing the requested person and writing a short description of him or her, participants responded to the item, "This person thinks my math ability is _" on a 7-point scale, with 1 labeled *extremely low* and 7 labeled *extremely high,* and the item, "This person expects me to get __% of the questions correct on a difficult math test." The Likert-type item was transformed into a 100-point scale and averaged with the percent correct item to serve as a check of the perceived views manipulation ($\alpha = .81$). Next, participants responded to the items, "I think my math ability is - " on a 7-point scale, with 1 labeled *extremely low* and 7 labeled *extremely high*, and, "I expect myself to get ___% of the questions correct on a difficult math test." The Likert-type item was transformed into a 100-point scale and averaged with the percent correct item ($\alpha = .75$). This served as our measure of stereotypic self-evaluation. Lastly, using 7-point scales, with 1 labeled *not at all* and 7 labeled *extremely*, participants reported the importance of math ability, the importance of the visualized person's opinion to them, and how accurate they perceived this person's opinion to be. The latter two items were intended to serve as a check of the relational status manipulation.

After completing the packet of materials, participants were given a written debriefing and thanked for their participation.

### Results and Discussion

*Manipulation checks.* As expected, participants perceived the visualized person to evaluate their math ability less favorably when they were instructed to think of someone who viewed them as poor at math ($M = 64.49$, $SD = 13.53$) versus good at math ($M = 85.47$, $SD = 7.15$), $F(1, 53) = 48.67$, $p < .001$, $\eta = .69$. Commensurate with the notion that participants were closer to people in the best position to know than people in no position to know, they reported that the opinions of people in the best position to know about their math ability were more important to them ($M = 5.63$, $SD = 1.42$) than those of people in no position to know ($M = 4.31$, $SD = 1.93$), $F(1, 54) = 8.40$, $p = .005$, $\eta = .37$. They also thought that the opinions of people in the best position to know about their math ability were more accurate ($M = 4.93$, $SD = 1.14$) than those in no position to know ($M = 3.48$, $SD = 1.50$), $F(1, 54) = 16.20$, $p < .001$, $\eta = .48$.

*Self-stereotyping.* To test the prediction that stereotype-relevant self-evaluations assimilate toward the perceived views of close others but not distant others, we conducted an ANCOVA with relational status (close vs. distant) and perceived views (stereotypic vs. counterstereotypic) as between-subjects factors, and importance of math ability as the covariate. Because the importance of math ability was significantly related to self-evaluations, $F(1, 50) = 17.52$, $p < .001$, $\eta = .51$, all means presented are adjusted for this covariate.

In general, women evaluated their math ability more favorably when they thought about a close other ($M = 76.37$, $SE = 2.14$) than a distant other ($M = 70.30$, $SE = 1.99$), as indicated by a significant main effect of relational status, $F(1, 50) = 4.23$, $p < .05$, $\eta = .28$. This finding was qualified by the predicted interaction between relational status and perceived views, $F(1, 50) = 10.22$, $p < .005$, $\eta = .41$. Women evaluated their own math ability less favorably, consistent with the stereotypes of women, when thinking about a close other who had stereotypic expectations of them ($M = 71.41$, $SE = 2.72$) than when thinking about one who had counterstereotypic expectations of them ($M = 81.32$, $SE = 3.37$), $F(1, 50) = 5.24$, $p < .05$, $\eta = .31$. It is interesting that, in contrast, women evaluated their own math ability more favorably, contrary to stereotypes of women, when thinking about a distant other who had stereotyped expectations of them ($M = 74.82$, $SE = 2.87$) than when thinking about a distant other who had counterstereotypic expectations of them ($M = 65.76$, $SE = 2.72$), $F(1, 50) = 5.26$, $p < .05$, $\eta = .31$. In other words, women's stereotype-relevant self-evaluations were consistent with the perceived views of close others but contrasted away from the perceived views of distant others.

In sum, Experiment 4 provides evidence of the causal role that perceived views of close others can have on stereotype-relevant self-evaluations. When the perceived evaluations of close others are stereotypical, participants view themselves in a more stereotypical manner than when the perceived evaluations of close others are counterstereotypical. On the other hand, participants' self-evaluations contrasted away from the perceived views of distant others.

## General Discussion

This research confirmed predictions of both cognitive accessibility theories and shared reality theory by demonstrating that certain individuals evaluate themselves along lines defined by stereotypes associated with their more salient social identity. In addition, it provided support for the shared reality theory prediction that stereotype-relevant self-evaluations are a function of the perceived expectancies held by close others. We found that the simple act of writing in one's ethnicity or one's gender affected how participants thought they would be viewed by others as well as how the participants viewed themselves. Although the simple effects corresponding to the influence of the manipulation of social-identity salience were often not statistically significant, the veracity of this prediction was substantiated by the following findings from Experiments 1 and 2: (a) five of the six relevant interactions were statistically significant (Abelson, 1995; Rosenthal, Rosnow, & Rubin, 2000); (b) the means with respect to perceived evaluations of people in general, perceived evaluations of close others, and self-evaluations for both math and verbal ability were uniformly in the stereotype-consistent direction; and (c) the simple comparisons of social expectancies and self-evaluations as a function of social-identity salience were signifi-

cantly stereotype-consistent when the results were combined in a meta-analysis.

Evidence across all four experiments suggests that the effect of stereotypes on self-evaluation is mediated by the perceived expectations of close others. This interpretation follows from evidence that (a) Asian American women and European American women and men exhibited self-stereotyping (Experiments 1 and 2) but African Americans, a group thought to collaboratively challenge the negative impact of stereotypes on self, did not (Experiment 3), and (b) the relationship between the stereotyped expectancies of people in general and self-evaluations was statistically mediated by the perceived views of people participants believed were in the best position to know about their academic ability (i.e., close others) in all three of these samples. The fourth experiment also provided experimental evidence that the perceived views of close others had a causal role in determining self-evaluations by showing that women's stereotype-relevant self-judgments corresponded to the conceptions of them thought to be held by specific close others but contrasted away from the conceptions of them thought to be held by specific distant others. We discuss each form of evidence in turn.

Across the first three experiments, participants revealed knowledge of the stereotypes commonly applied to them, as indicated by effects of the social-identity salience manipulation on the perceived evaluations of people in general. In all cases, the expectancies participants perceived people in general to hold of them corresponded to the stereotypes associated with their more salient social identity. Asian American women thought that people in general evaluated their math ability more favorably when their ethnicity was more salient than their gender, but evaluated their verbal ability more favorably when their gender was more salient than their ethnicity, consistent with prevailing stereotypes about Asian Americans and women. European American men thought that people in general evaluated their math ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their verbal ability more favorably when their ethnicity was salient then when their gender was salient, consistent with prevailing stereotypes about European Americans and men. European American women thought that people in general evaluated their verbal ability more favorably when their gender was salient than when their ethnicity was salient, but evaluated their math ability more favorably when their ethnicity was salient than when their gender was salient, consistent with prevailing stereotypes about European Americans and women. Finally, African American women and men thought that people in general evaluated their math and verbal ability less favorably when their ethnicity was salient than when their gender was salient, consistent with prevailing stereotypes of African Americans.

It is important that although Asian American and European American participants believed that people in the best position to know about their academic ability held stereotyped expectations of them, African American participants did not. In other words, although the social expectancy effects regarding close others were stereotyped for Asian American and European American participants, the expectancies of close others were not stereotyped for African American participants. Because shared reality theory postulates that self-views are constructed in the context of relevant interpersonal relationships, we expected to observe self-stereotyping under conditions in which the social expectancies of people in general and close others agreed but not to observe self-stereotyping under conditions in which these social expectancies disagreed. This hypothesis was supported by findings that self-stereotyping obtained for Asian American and European American participants but not for African American participants.

The finding that African Americans did not self-stereotype is striking in part because previous research indicates that having minority status, low social status, and high in-group identification generally increases the likelihood of self-stereotyping (e.g., Simon & Hamilton, 1994; Spears, Doosje, & Ellemers, 1997). At the time these data were collected, African Americans constituted 6% of the UCLA student population, making them a substantially smaller numerical minority on the campus than Asian Americans (35%) or Whites (35%). In addition, African Americans at UCLA have the highest ethnic identity and lowest perceived social status of the three groups (Sidanius et al., 1997).

On the other hand, from our perspective it is quite plausible that African American students at a highly selective university such as UCLA do not self-stereotype. It may be the case that these students are able to succeed academically because they have been particularly effective at cultivating interpersonal networks in which pervading cultural stereotypes are challenged. African American individuals who are unable to cultivate such a network may not fare so well academically. In fact, some research indicates that academic disidentification among African American youth may be due to peer-group networks in which academic achievement is ridiculed (Fordham & Ogbu, 1986; Ogbu, 1986). In light of this research, the generalization of these findings beyond African American college students is an intriguing practical and theoretical question.

Although the patterns of findings differ across the three experiments—both in terms of stereotype content and whether self-stereotyping occurred—shared reality theory is able to integrate the diverse findings in terms of a single underlying process. In short, this perspective suggests that the interpersonal mechanism by which Asian American and European American participants self-stereotyped was the same mechanism that accounted for the finding that African American participants did not self-stereotype. Providing support for this interpretation, evidence across Experiments 1–3 suggested that the relationship between cultural stereotypes (i.e., the perceived expectancies of people in general) and self-evaluations was mediated by the perceived expectancies of close others (i.e., people participants believed knew the most about their academic ability).

Because of the correlational nature of comparisons between social expectancies and self-evaluations, one may argue that false consensus is a plausible alternative explanation of the evidence in support of shared reality theory (e.g., Ross et al., 1977). According to the false consensus interpretation of our findings, the social-identity manipulation may have affected self-evaluations, which in turn affected the perceived evaluations of others. Although this research cannot completely disconfirm the operation of false consensus effects, we do not believe it is the most parsimonious account of the findings reported herein. First, it is notable that shared reality theory provides an account of both the effects of social-identity salience on self-stereotyping and the finding that beliefs about the self perceived to be held by close others mediated self-stereotyping across Experiments 1–3. Although false consensus may provide an account of the mediational role of close others in self-stereotyping, it is silent on effects of the social-identity salience manipulation. Second, although the self and social expect-

ancies of Asian American women and European Americans were stereotype-consistent, African Americans' perceptions of the expectancies of close others and self-evaluations were not. The false consensus account requires additional assumptions to explain this difference. In contrast, the same interpersonal mechanism postulated by shared reality theory accounts for both the self-stereotyping observed among Asian Americans and European Americans, and the lack of self-stereotyping observed among African Americans. Hence, findings across the experiments suggest that the perceived views of close others may have a role in both instantiating and subverting self-stereotyping.

Experiment 4 provides the third source of evidence for the causal role of perceptions of close others' evaluations in self-stereotyping. Consistent with the predictions of shared reality theory, women who thought about specific close others who had stereotypic conceptions of them held more stereotypic self-evaluations than those who thought about specific close others who had counterstereotypic conceptions of them. Hence, this experiment provides converging evidence that the perceived expectations of close others can serve as the basis for stereotypic self-evaluations as well as a basis by which self-stereotyping may be challenged.

It is interesting that Experiment 4 also suggested that self-evaluation may contrast away from the perceived expectancies of distant others. There are several reasons this may have occurred. Participants may have perceived distant others as outgroup members, or dissimilar from themselves, and therefore contrasted their self-evaluations via social comparison processes (Mussweiler, 2001; Mussweiler & Bodenhausen, 2002). This contrast effect may have also stemmed from reactance (Brehm, 1966). In thinking about the perceived views of a person whose opinion was deemed illegitimate, participants may have reported opposing self-views to thwart the imagined person. Our favored explanation, however, is consistent with shared reality theory (see Hardin & Conley, 2001). To the degree that shared reality is a mechanism by which interpersonal relationships are regulated, it stands to reason that social beliefs may contrast away from perceived beliefs of certain individuals as a means to maintain relationship distance (see also Higgins, 1992). In fact, we have found support for this interpretation of the contrast effect in previous research (Sinclair et al., 2005, Experiment 4). Individuals primed with a social distance motive, but not those primed with reactance or need for uniqueness, exhibited "antituning" of the self.

## Conclusion

Much is known about when and how stereotypes are applied in judgments of others (e.g., Fiske, 1998), yet comparatively little is known about when and how stereotypes are applied in judgments of the self. Identifying the circumstances under which self-evaluations are determined by cultural stereotypes is an important question for several reasons. First, the degree to which self-evaluations are stereotype consistent may determine task persistence in stereotype-relevant domains (e.g., Eccles et al., 1983; Frome & Eccles, 1998; Wigfield & Eccles, 2000). Self-stereotyping may also prevent stigmatized individuals from using strategies, such as discounting, which entail perceiving others' evaluations as illegitimate, to protect their self-esteem from negative feedback (e.g., Crocker & Major, 1989; Crocker et al., 1998; Schmader, Major, & Gramzow, 2001). Finally, self-stereotyping may be a mechanism by which members of stigmatized groups justify the existing inequitable distribution of resources, thereby interfering with challenges to discrimination (e.g., Jost & Banaji, 1994; Sidanius & Pratto, 1999). These experiments contribute to research on self-stereotyping by examining self-stereotyping in the context of multiple social identities and providing evidence in support of the shared reality theory hypothesis that self-stereotyping is a function of stereotyped expectancies held in particular relationships.

Shared reality theory represents a relatively new theoretical framework with which to understand stability and change in self-stereotyping. Not only does it explain social category salience effects on self-stereotyping, but it also suggests a psychological mechanism through which self-stereotyping can be initiated, maintained, and averted—the consensus developed to maintain specific interpersonal relationships. This perspective does not deny the causal role of group or institutional causes of self-stereotyping, but it does postulate a mechanism by which they may occur.

With regard to members of negatively stereotyped groups, this perspective on self-stereotyping is both disturbing and encouraging. On one hand, social relationships can provide a conduit through which cultural stereotypes become stereotyped self-evaluations. Given that cultural stereotypes are broadly shared and frequently relied on in social interaction (e.g., Claire & Fiske, 1998; Fiske, 1998), this implies that members of negatively stereotyped groups may frequently be at risk for self-stereotyping. The subtlety of our effects suggests that social relationships may even cause self-stereotyping without the stereotype targets' awareness. On the other hand, if the views held in important social relationships determine whether individuals self-stereotype, self-stereotyping should not be considered a chronic, or inevitable, consequence of widely known cultural stereotypes. Communities, social institutions, and specific interpersonal relationships in which stereotypes are collaboratively challenged may protect self-evaluations from the onslaught of common stereotypes.

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