Stereotypes Focus Defensive Projection

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Defensive projection is the process of perceiving one's undesirable qualities in others. The present research shows how stereotypes guide and justify the projection of specific traits onto specific group members. In four studies, the authors demonstrated that people who experienced a threat to a specific dimension of their self-concept selectively activated this dimension in a stereotype and derogated stereotyped others on this dimension. They further showed that stereotyped individuals are more likely to serve as targets of projection than are nonstereotyped individuals. These results demonstrate the functional role of stereotypes in guiding and constraining motivated self-enhancement.

Keywords: *projection; stereotyping; accessibility; self-threat; compensatory self-enhancement*

Can stereotypes reveal more about a perceiver than a person perceived? According to theories of defensive projection, stereotypes may do just that (Allport, 1954; Newman & Caldwell, 2005). Projection is the process of perceiving one's undesirable qualities in others as a way to protect one's self-image (A. Freud, 1936; S. Freud, 1924/1956; Holmes, 1968, 1978). Similar to other psychodynamic concepts, projection has recently experienced a resurgence in interest from social and cognitive perspectives (e.g., Kawada, Oettingen, Gollwitzer, & Bargh, 2004; Newman, Caldwell, Chamberlin, & Griffin, 2005; Schimel, Greenberg, & Martens, 2003). The goal of this article is to examine the role of stereotypes in guiding and justifying projection.

Defensive Projection: Psychodynamic and Social-Cognitive Interpretations

Projection was initially conceptualized as a defense against the conscious recognition of a negative trait[1] (S. Freud, 1924/1956). Several controversies have surrounded the concept throughout the years. One such controversy was over conscious awareness. Consistent with the notion of unconscious denial, many psychoanalytic treatments of projection assumed the individual was unaware of possessing the traits he or she projected onto others (Campbell, Miller, Lubetsky, & O'Connell, 1964; Murstein & Pryer, 1959; Singer, 1963; cf. Horney, 1939). However, in a review of the contemporary literature on projection, Holmes (1968) found no empirical evidence for these assumptions. Rather, evidence for projection was found only when persons were aware of the trait in themselves (e.g., Feshbach & Singer, 1957).

A second controversy has concerned the defensive properties of projection. Although some research points to the benefits of projection for the self (Burish & Houston, 1979; Schimel et al., 2003), other studies failed to find similar effects (Halpern, 1977; Holmes & Houston, 1971). The controversies regarding awareness and defensive consequences can be seen more clearly by considering a modern theory of defensive projection that reinterprets the classic effect in terms of basic social-cognitive principles (Newman, Duff, & Baumeister, 1997). This theory shares with psychodynamic theories the motivational origin of projection: A threat to the self instigates a motivation to avoid recognizing negative qualities in the self. But unlike psychodynamic theories, Newman and colleagues argue that the next step in the process is not an expelling of personality traits by the unconscious to deceive the ego but it is instead thought suppression. A substantial body of research has shown that when people attempt to suppress a thought it often becomes hyperaccessible (for a review, see Wegner, 1992). By this model, the heightened accessibility of thoughts related to the undesired trait then affects the

way new impressions of other people are formed. For example, a man who is insecure about his own masculinity may try to avoid thinking about his own unmasculine thoughts and behaviors. This will render those thoughts more accessible and make him more likely to construe other men's ambiguous behaviors as effeminate.

In contrast to psychoanalytic notions of projection, the model of Newman and colleagues does not predict that seeing one's unwanted traits in others will necessarily make a person feel better about the self. Because the effects on impression formation are simply a side effect of accessibility, they may or may not have causal effects for the self. Having construed another person's behaviors in terms of unwanted traits, a person is likely to reap self-esteem benefits to the extent that he or she engages in social comparison with that person. Therefore self-enhancement is a possible consequence of projection, but not a necessary one. Still, Newman and colleagues consider the phenomenon to be defensive projection because the process is motivated by attempts to defend the self from a threat. We follow this conceptualization in the present research, considering projection to be defensive to the extent that it is motivated by a desire to defend the self-concept from a threat.

Stereotypes and defensive projection. Every projector needs a focusing lens. We propose that stereotypes serve that function when a person projects onto other people. More specifically, for projection to take place, people need to feel justified in attributing a negative trait to others. Allport (1954) suggested that stereotypes may provide such justification. Consequently, stereotyped individuals are more likely to serve as targets of projection than are nonstereotyped individuals. According to Allport, stereotypes inform a perceiver "which qualities he should project upon one group and which upon the other" (p. 386). Thus, a person projecting onto stereotyped targets may not feel that he or she is distorting reality because stereotypes provide assurance that one's judgment is realistic. Using a slightly different metaphor, Allport memorably referred to stereotyped individuals as "living inkblots" to whom one can attribute one's own unfavorable qualities. For example, a person who does not want to see himself or herself as lazy may emphasize this quality in Mexicans. A person motivated to deny his or her own greed may describe Jews as greedy. However, cultural stereotypes would make it much less likely that someone would project greed onto Mexicans. Thus, Allport was clear in emphasizing that specific stereotypes are projected to specific groups. Consistent with Allport's theorizing, Holmes (1968) concluded that "the type of projection used would in large part be determined by the nature of the stimulus persons who are available to be projected upon, that is . . . whether their cultural role includes the characteristics to be projected"
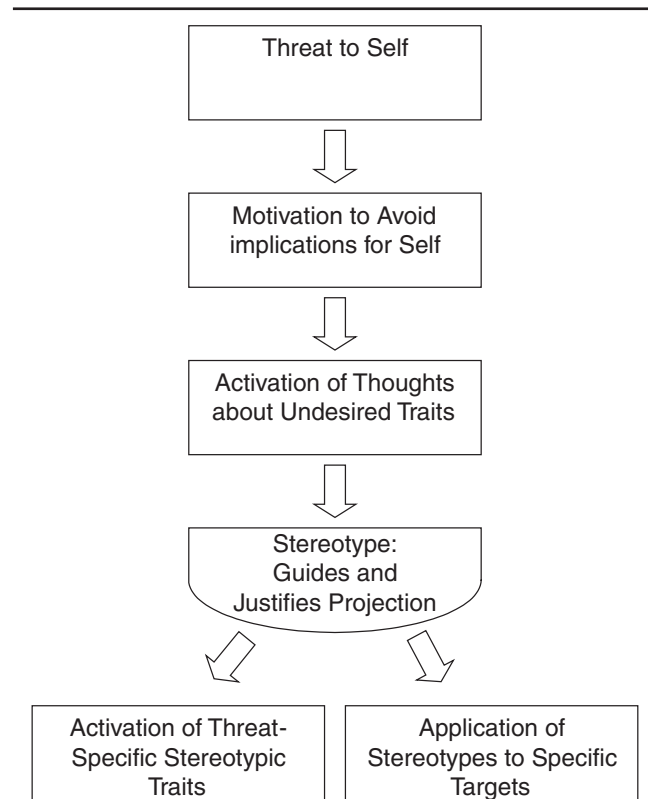

Figure 1   Schematic illustration of proposed sequence from self-threat to stereotypic projection.

(p. 259). Surprisingly, although Allport articulated how stereotypes may serve as justifications for projection, our review of the literature found no research directly testing this idea. Thus, our goal was to test whether stereotypes act as a focusing lens by guiding and constraining how people project, and onto whom.

Figure 1 provides a schematic summary of the proposed role of stereotypes in focusing projection. A threat to a person's self-concept instigates motivation to avoid seeing oneself in negative terms. This motivation, in turn, leads to heightened accessibility of threat-related thoughts. This is where we propose that stereotypes play a role. When specific negative information about the self is easily accessible, people are likely to be highly attuned to related thoughts about stereotyped others for two reasons. First, the related traits will draw more attention in a stereotyped than nonstereotyped target due to being consistent with the shared cultural knowledge. Second, to the extent that the perceiver needs to feel justified in attributing negative traits to others, stereotypes may provide reassurance that a perceiver's judgment is realistic.

When interpreting the behavior of a person who belongs to a stereotyped group, these processes conspire to boost the salience of traits that the (feared) self and the stereotyped person might share. We suggest that this

should have two kinds of consequences. First, the perceiver will preferentially activate aspects of the stereotype that are relevant to the self-threat. For example, a person whose work ethic has been threatened may find thoughts about laziness particularly accessible when interacting with an African American sales clerk. Although many other traits belong to the stereotype, the perceiver's own defensive concerns may render laziness the most accessible. The second consequence is that projection is most likely to be aimed at groups whose stereotype is relevant to the unwanted traits. Because stereotypes are culturally shared images of what various groups are like, stereotypes provide justification for projecting particular traits onto particular groups, as Allport (1954) argued.

Summary. Given that empirical investigations of projection-driven stereotyping have not kept up with theorizing on the topic, the present set of studies is the first to test Allport's (1954) hypothesis that stereotyped individuals serve as projective inkblots. Specifically, we will examine whether projection leads to selective activation and application of stereotypes and whether stereotyped individuals are more likely to be targets of projection than nonstereotyped individuals. Studies 1 and 2 concern specificity of stereotype activation. Studies 3 and 4 focus on selective application of stereotypes and on evaluations of stereotyped versus nonstereotyped targets.

STUDY 1

Pretesting

In Study 1, we chose to focus on the attributes of intelligence and leadership in the stereotype of sorority women. In a pretesting session, 18 participants were asked to rate intelligence, lack of intelligence, leadership, and lack of leadership on how well each attribute described a stereotype of sorority women using a scale from 1 (*not at all*) to 7 (*extremely well*). Participants identified lack of intelligence as a stereotypical trait of sorority women (*M* = 6.49) and intelligence as a counterstereotypical trait (*M* = 2.76); leadership (*M* = 6.35) and lack of leadership (*M* = 6.44) were rated as equally descriptive of the stereotype.

Method

PARTICIPANTS

One hundred thirty-two students (39 women, 93 men) participated in the experiment for extra credit in stereotyping and prejudice and introductory social psychology courses.

PROCEDURE

Participation was solicited during a regular class period. Students were told that they would take a survey of college experiences and that their responses would be used to construct materials for psychology studies. Students were ensured of the confidentiality of their answers. Those who volunteered to participate were given questionnaire packets.

Participants first indicated whether they had ever been or were currently a member of a fraternity or a sorority and how much contact they had with members of sororities and fraternities. Participants were then asked to describe in detail an experience from their lives in college. Half of the participants were requested to think of a time when they failed, whereas the other half were requested to recall a time when they succeeded. Crossed with the outcome was the domain of the experience—participants wrote about having succeeded or failed at either an intellectual or a leadership task. Participants were given 5 min to describe the experience. These manipulations constituted a 2 (outcome: success vs. failure) × 2 (domain: intelligence vs. leadership) between-participant design.

After finishing their essays, participants were told that the researchers also were interested in the beliefs college students had about various groups on campus. Participants were informed that each of them would describe a commonly held stereotype of a randomly determined student group. In reality, all participants were provided with the group of sorority women. Participants were asked to think about the stereotype that students in their university had of sorority women and list one-by-one the traits included in the stereotype. Because we were interested in accessibility of category information and not personal beliefs, participants were asked to describe the common stereotype irrespective of whether they endorsed it. Participants were given 5 min to list the traits in the order in which they came to mind on 20 numbered lines. The purpose and the results of the study were explained during another class meeting a week after the study was conducted.

Results

Having an affiliation with sororities or contact with sorority members did not moderate any of the effects. Similarly, participant gender did not affect results in this or any other studies and thus will not be discussed further.

Coding of the traits. The traits participants listed in their descriptions of the sorority women stereotype were coded by one of the authors and a research assistant on whether they were related to lack of intelligence (e.g., unintelligent, ditzy) or lack of leadership (e.g., cliquish,

lacking initiative). Both coders were blind to the experimental conditions. The coders agreed on classifying 92% of the traits; their disagreements were resolved through discussion.

Stereotype activation. To assess the hypothesized changes in stereotype activation in response to specific self-threats, we examined the number of traits relevant to lack of intelligence and lack of leadership as well as accessibility of these traits. Consistent with prior research (e.g., Higgins, 1996), trait accessibility was computed as output primacy. We reasoned that the traits listed first were more accessible than the traits listed later. Because participants could list a total of 20 traits, the first trait received a score of 20, the second trait received a score of 19, and so on. Participants who did not list any traits related to lack of intelligence or lack of leadership received a score of 0. If participants listed more than one trait related to either lack of intelligence or lack of leadership, we considered only the accessibility score of the first trait.[2] We first report the analyses for the number of traits and then for trait accessibility.

NUMBER OF TRAITS

We predicted that participants will be more likely to list traits relevant to the dimension on which they experienced a threat in describing the stereotype of sorority women. Specifically, participants were hypothesized to list more traits implying lack of intelligence after experiencing a threat to their intelligence and to list more traits related to lack of leadership after experiencing a threat to their leadership skills. To investigate these hypotheses, we conducted a 2 (outcome) × 2 (domain) × 2 (trait dimension) ANOVA with repeated measures on the last factor. This analysis revealed a significant three-way interaction, $F(1, 127) = 4.51$, $p = .04$. To localize the effect, we conducted separate analyses on the number of traits related to lack of intelligence and lack of leadership.

Number of traits related to lack of intelligence. An Outcome × Domain ANOVA did not reveal any significant main effects or interactions, all $ps > .14$. This indicates that participants in all conditions listed an equal number of traits related to lack of intelligence when describing sorority women, which is inconsistent with our prediction. It is likely that the number of traits did not differ across conditions because lack of intelligence is a strong associate of the stereotype and thus most participants mentioned related traits ($Mode = 1$, $M = .80$). Even though the number of traits related to lack of intelligence did not differ across conditions, the proportion of these traits may be higher among participants who experienced a threat to their intelligence. Thus, we conducted an additional analysis on the proportion of traits related to lack of intelligence among all listed traits. This analysis showed

a significant Domain × Outcome interaction, $F(1, 128) = 4.14$, $p = .04$. Post hoc comparisons indicated that participants who recalled their failure at an intellectual task listed a greater proportion of traits related to lack of intelligence ($M = .19$) than participants in any of the remaining conditions ($Ms = .11, .14, .13$), all $ps < .05$. The remaining conditions did not significantly differ from each other, all $ps > .20$. Thus, support for the hypothesis was obtained on the proportion of traits related to lack of intelligence but not their number.

Number of traits related to lack of leadership. An Outcome × Domain ANOVA revealed a significant interaction, $F(1, 128) = 4.17$, $p = .04$. Consistent with our predictions, participants who recalled failing at a leadership task listed more traits related to lack of leadership than did participants in any other conditions, all $ps < .02$. The number of traits in the remaining conditions did not differ significantly from each other, all $ps > .20$.

ACCESSIBILITY OF TRAITS

We hypothesized that participants will show greater accessibility of the trait dimension on which they experienced a threat in describing the stereotype of sorority women. To investigate this hypothesis, we conducted a 2 (outcome) × 2 (domain) × 2 (trait dimension) ANOVA with repeated measures on the last factor. This analysis revealed a significant three-way interaction, $F(1, 128) = 11.64$, $p = .001$. We further conducted separate analyses on the number of traits related to lack of intelligence and lack of leadership.

Accessibility of traits related to lack of intelligence. An Outcome × Domain ANOVA revealed a significant main effect of domain, $F(1, 128) = 4.02$, $p = .05$, such that participants who wrote about intelligence showed greater accessibility of traits related to lack of intelligence than participants who wrote about leadership. This effect was further qualified by a significant Domain × Outcome interaction, $F(1, 128) = 6.26$, $p = .01$ (see Figure 2). Consistent with our predictions, post hoc comparisons indicated that participants who recalled their failure at an intellectual task showed greater accessibility of traits related to lack of intelligence than did participants in any of the remaining conditions, all $ps < .01$. The accessibility scores in the remaining conditions did not significantly differ from each other, all $ps > .35$.

Accessibility of traits related to lack of leadership. An Outcome × Domain ANOVA on accessibility of traits related to lack of leadership showed a significant main effect of domain, $F(1, 128) = 6.24$, $p = .01$, such that participants who wrote about leadership showed greater accessibility of traits related to lack of leadership than did participants who wrote about intelligence. This main effect was qualified by a significant Domain   × Outcome
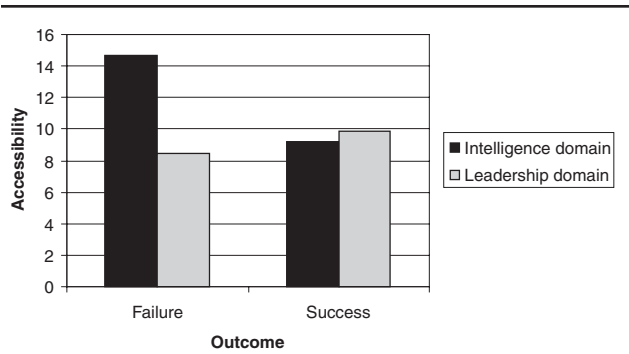
Figure 2   Accessibility of traits related to lack of intelligence in the ste-reotype of sorority women as a function of outcome and do-main, Study 1.
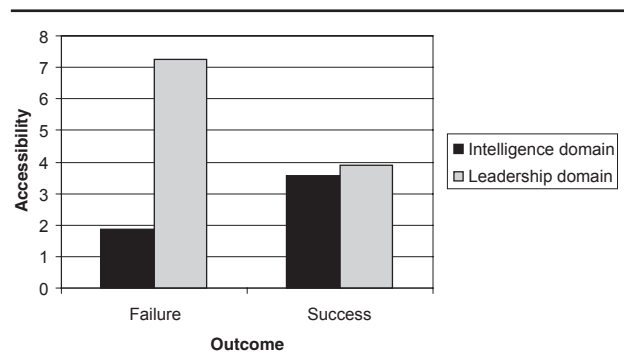NOTE: Higher numbers indicate greater accessibility.

Figure 3   Accessibility of traits related to lack of leadership in the ste-reotype of sorority women as a function of outcome and do-main, Study 1.
NOTE: Higher numbers indicate greater accessibility.

interaction, $F(1, 128) = 4.97$, $p = .03$ (see Figure 3). As hypothesized, post hoc comparisons indicated that participants who recalled failing at a leadership task showed greater accessibility of traits related to lack of leadership than did participants in all other conditions, all ps < .03. The remaining conditions did not differ significantly from each other, all ps > .40.

Discussion

Study 1 showed that participants activated stereotypical traits related to the dimension on which they felt threatened. Specifically, in listing stereotypes of sorority women, participants who recalled their own intellectual failures showed greater accessibility of the traits implying lack of intelligence, whereas participants who recalled their own failures to demonstrate leadership showed greater accessibility of the traits implying poor leadership. A similar pattern was obtained on the number of traits related to lack of leadership and on the proportion of traits related to lack of intelligence. These findings suggest that specific aspects of stereotypes are activated in response to self-concept threat. The dimensions of the stereotype of sorority women that were most accessible were those directly related to the threat.

It should be noted that for traits implying lack of intelligence, the effects of stereotype activation were only observed on the accessibility measure but not on the number of traits. This may be due to the fact that lack of intelligence is strongly associated with the stereotype of sorority women. We would not expect significant changes in the content of a stereotype based on projection because participants have a large base of cultural knowledge that would place limits on plausible traits belonging to a stereotype. Nonetheless, our findings pertaining to accessibility have important consequences. Indeed, social-cognitive research suggests that more accessible constructs have a stronger influence on thoughts and behaviors than less accessible constructs

(for reviews, see Bodenhausen & Wyer, 1987; Higgins, 1996; Wyer & Carlston, 1979; Wyer & Srull, 1989). Thus, the more accessible content of a stereotype will exert greater influence on interpersonal judgments than the less accessible content. Furthermore, although participants in the intellectual threat condition did not list more traits relevant to lack of intelligence, these traits accounted for a greater proportion of the overall number of trait descriptions, which speaks to the importance accorded to these traits. All of these factors lead us to believe that self-threat and stereotypes interact to influence how stereotypic information is retrieved and used.

Our interpretation of the results has depended on a motivational account of reactions to threat. However, it could be argued that the obtained effects reflect semantic priming rather than the motivated activation of stereotypes. According to this explanation, traits specific to the threat were more accessible simply because participants thought about them when recalling their experiences in the essay task. To rule out the semantic priming account and to provide a conceptual replication of Study 1, we conducted a second study in which we manipulated self-relevance of the threat (i.e., the self or an acquaintance is threatened) while keeping its content constant. If stereotype activation is indeed motivated by self-defense, then high accessibility of stereotypes related to the threat will occur only if a threat is self-relevant. If semantic priming accounts for the effect, then the effect should obtain regardless of the self-relevance of the threat. Thus, Study 2 had the following goals: (a) to provide replication of Study 1 in a sample not restricted to students in a prejudice and stereotyping class, (b) to obtain converging evidence of specific stereotype activation using a different measure of accessibility and a different stereotype, and (c) to demonstrate the importance of self-relevant motivation in producing these effects.

STUDY 2

Pretesting

Because in Study 2 we decided to focus on the stereotype of student athletes, we first conducted a pretesting session to select traits stereotypical of student athletes. Twenty-five students rated 40 traits on how well they described a stereotype of student athletes on a scale from 1 (*not at all*) to 7 (*extremely well*). Twenty-four traits whose mean ratings were greater than 5 were chosen for the experiment. Six of 24 traits were related to lack of intelligence; the remaining traits were not.

Method

PARTICIPANTS

One hundred twenty-one introductory psychology students (79 women, 42 men) participated in the study in exchange for course credit.

PROCEDURE

Threat manipulation. The study was described as a survey of college experiences. Upon arriving at the lab, half of the participants were asked to describe in detail a time when either they or their acquaintance failed at an intellectual task. The remaining participants were asked to describe their own or their acquaintance's typical day (control condition). Participants who wrote about experiences of their acquaintance were asked to think about a person who they knew well but who was not their close friend. This was done so that participants chose someone in whom they were not emotionally invested. Participants were given 5 min to complete the task.

Accessibility measurement. After finishing their essays, participants were informed that the rest of the study had to do with the beliefs that Ohio State students had of various campus groups. Participants were told that the researchers had compiled a list of traits they believed to be descriptive of the stereotypes of these groups. Participants were told that their task would be to validate these data and that the computer would randomly determine which stereotype they would review. In reality, all participants were presented with a stereotype of student athletes. The traits were shown randomly one-by-one on the computer and participants were asked to press the key labeled "yes" if they considered a trait to describe the stereotype and the key labeled "no" if they considered a trait not to describe the stereotype. Participants were cautioned to respond based on what the common stereotype was and not in accordance with their personal beliefs about student athletes. We operationalized the accessibility of the stereotype content through response latencies to the traits—more accessible traits were expected to be confirmed faster. After completing the experiment, participants were debriefed and dismissed.

Student-athlete traits. Participants were presented with 24 stereotype-relevant traits. Six of the traits were related to lack of intelligence (e.g., incompetent, stupid), whereas the remaining traits were not (e.g., motivated, cheerful, arrogant, dishonest). In addition, six traits related to intelligence, and hence, inconsistent with the stereotype, were used as fillers. Thus, the overall design of the experiment was 2 (essay topic: failure vs. typical day) × 2 (target: self vs. acquaintance) × 2 (trait dimension: related to lack of intelligence vs. intelligence-irrelevant), with the first two factors manipulated between participants and the last factor manipulated within participants. Of interest was the speed with which participants confirmed that traits related to lack of intelligence are part of the athlete stereotype, compared to other stereotypical traits.

Results

Endorsement rates. As a check that participants were indeed describing a student-athlete stereotype, we examined the overall endorsement of stereotype-consistent traits. Participants endorsed 77% of the stereotype-consistent traits ($M = 18.45$). Furthermore, participants endorsed more traits related to lack of intelligence ($M = 4.40$) than intelligence-related filler traits ($M = 1.70$) as descriptive of the stereotype, $p < .001$. To ensure that endorsement rates did not vary across conditions, we also conducted a 2 (topic) × 2 (target) × 2 (trait dimension) ANOVA with repeated measures on the last factor. This analysis revealed no significant main effects or interactions, all $ps > .30$, showing that experimental manipulations did not affect the content of the activated stereotype.

ACCESSIBILITY OF STEREOTYPIC TRAITS

We operationalized stereotype accessibility as the latency with which stereotype-consistent traits were recognized as part of the stereotype. (Negations, i.e., nonendorsements, of nonstereotypical traits were not informative about the accessibility of stereotype content because these traits were not retrieved from the stereotype category.)

To investigate the focal hypothesis that only participants experiencing a threat to the self will show greater accessibility of traits implying lack of intelligence, we conducted a 2 (topic) × 2 (target) × 2 (trait dimension) ANOVA with repeated measures on the last factor on response times to endorsements of stereotype-consistent traits. This analysis revealed a significant Topic × Target × Trait Dimension interaction, $F(1, 117) = 5.56$, $p = .02$. To determine location of the effect, we conducted Topic × Target ANOVAs on accessibility of traits related to lack of intelligence and intelligence-irrelevant traits separately.
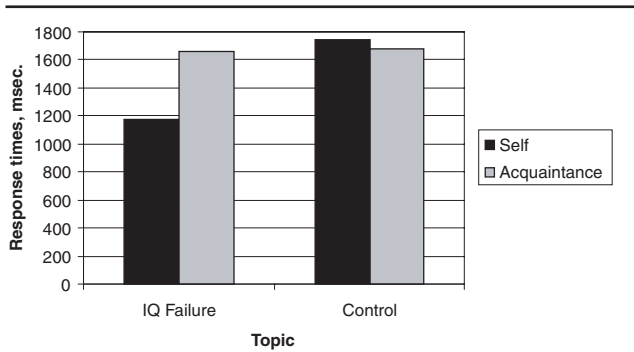
Figure 4   Response times on endorsements of traits related to lack of intelligence in the stereotype of student athletes as a function of topic and target, Study 2.
NOTE: Lower numbers indicate greater accessibility.

Traits related to lack of intelligence. A Topic × Target ANOVA conducted on response times tied to endorsements of traits related to lack of intelligence revealed a significant Topic × Target interaction, $F(1, 117) = 4.55$, $p = .04$ (see Figure 4). Post hoc comparisons indicated that participants who recalled their own intellectual failure were faster to endorse traits implying lack of intelligence as stereotypical of student athletes than were participants in any other condition, $F(3, 117) = 3.55$, $p = .01$. Response latencies in the remaining conditions were not significantly different from each other, all $ps > .86$.

Intelligence-irrelevant traits. An ANOVA conducted on participants' response times to intelligence-irrelevant traits did not reveal any significant effects, all $ps > .18$. This showed that participants who experienced a threat to their intelligence activated only that part of the stereotype that corresponded to the threat and not the entire content of the stereotype.

Discussion

Study 2 showed that in response to recalling their own intellectual failures, participants were faster to identify traits implying lack of intelligence as stereotypical of student athletes. Participants who described their acquaintance's intellectual failure did not show similar facilitation; in fact, their response times were identical to those of participants in the control conditions. These findings rule out the semantic priming account and support the argument that stereotype activation is motivated by self-threat. Furthermore, there were no overall speed differences beyond the predicted effects on stereotypical traits related to self-threat, which provides evidence that stereotype activation is specific to the dimension under threat.

Together, Studies 1 and 2 show that trait activation is the initial stage of projection-driven stereotyping. The activation stage may be followed by the application stage, where an accessible trait affects evaluation of a target

(Gilbert & Hixon, 1991; Higgins, 1996; Kunda & Spencer, 2003). Because in projection only a threat-related trait receives activation (Newman et al., 1997), we predicted that participants would be more likely to derogate a target on the dimension they wish to deny in themselves than on other dimensions. To test this prediction, in Study 3, we provided participants with an opportunity to rate a target on stereotype-consistent traits and, hence, overtly apply the stereotype.

An additional goal of Study 3 was to test whether stereotyped persons are more likely to be targets of projection than are nonstereotyped persons. Our reasoning was that stereotypes enhance projection because they provide a cultural-consensus justification for attributing negative traits to others. Such justification may be essential for projection to take place at the application stage, where participants are especially concerned about appropriateness of their responses. Therefore, we predicted that participants will derogate those individuals who belong to a stereotyped group and that such derogation will be specific to the threat.

STUDY 3

Method

PARTICIPANTS

Eighty-three students (46 women, 37 men) participated in the experiment for extra credit in a stereotyping and prejudice course.

PROCEDURE

Participation was solicited during a regular class period. Those who volunteered completed an experimental questionnaire. In the first part of the questionnaire, half of the participants were asked to describe an instance when they failed intellectually, whereas the remaining participants were asked to describe their typical day. Both groups were given 5 min and were encouraged to provide as much detail as possible.

Next, participants were presented with a paragraph that the researchers ostensibly based on a randomly chosen diary entry of another student. Participants were requested to read the paragraph carefully, form an impression of the student, and decide how typical his day was of other students at their university. Prior to reading the paragraph, participants reviewed demographic information about the student. Half of the participants were informed that the paragraph was about a Black man named Tyrone, whereas the other half were informed that the student was a White man named Eric. After reading the paragraph, participants rated the student on a set of traits. The purpose of the study and its results were explained to students during another regu-

lar meeting of the class, a week after the study was conducted.

Target paragraph. The paragraph was based on materials from Lambert, Cronen, Chasteen, and Lickel (1996). The paragraph target was described in ambiguous terms with respect to his intelligence and hostility, the two dimensions central to the stereotype of African Americans (e.g., Devine, 1989). For example, the student had not received any As for the third consecutive quarter but had made a resolution to work harder to be accepted into graduate school. These behaviors were meant to create an ambiguous portrayal of student's intelligence. To create an ambiguous portrayal of hostility, the student was described as having told a car mechanic that he would take his car elsewhere if it was not repaired the same day.

Target trait ratings. Participants rated the target of the paragraph on a set of 18 traits. Six were related to intelligence (e.g., intelligent, bright, incompetent), another six were related to hostility (e.g., cooperative, easy to get along with, aggressive), and the remaining six did not concern either dimension and were nonstereotypical of Blacks (stereotype-irrelevant traits, e.g., shy, sociable). The trait ratings were made on a 5-point scale where 1 corresponded to *does not describe the protagonist at all* and 5 corresponded to *describes the protagonist extremely well.* The traits were presented to participants in a random order.

Thus, the experiment had a 2 (essay topic: failure vs. typical day) × 2 (target race: Black vs. White) × 3 (trait domain: intelligence, hostility, stereotype-irrelevant) design with the first two factors manipulated between participants and the last factor manipulated within participants.

Results

Results presented below did not change appreciably when Black participants (4% of the sample) were excluded from the analyses or when only the data of White participants (82% of the sample) were analyzed.

Participants' ratings in each of the trait domains showed high consistency (αs > .87) and thus were averaged for analyses in each domain. Results were analyzed using a 2 (topic) × 2 (target) × 3 (trait domain) ANOVA with repeated measures on the last factor. This analysis revealed a significant Topic × Target × Trait Domain interaction, $F(2, 79) = 3.33$, $p = .039$. To investigate the location of the effect, we conducted ANOVAs on each of the trait domains.

Stereotype-irrelevant traits. A Topic × Target ANOVA conducted on stereotype-irrelevant traits revealed a main effect of target, $F(1, 80) = 11.13$, $p = .001$, such that Tyrone ($M = 3.79$) was evaluated more positively than Eric ($M = 3.38$). Neither the main effect of topic nor the
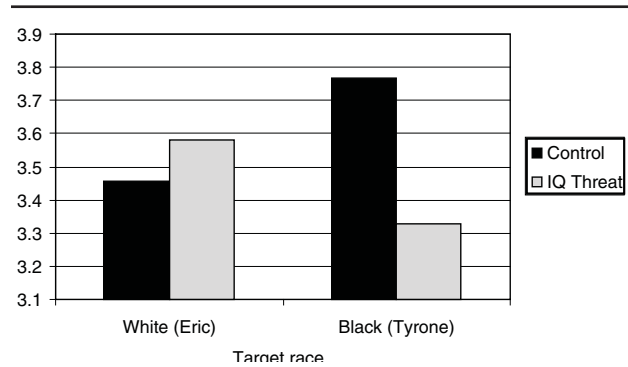

Figure 5   Intelligence ratings as a function of topic and target race, Study 3.

Topic × Target interaction was significant, ps > .65. The fact that the Black target was rated more favorably than the White target may be indicative of participants' motivation to appear nonprejudiced. Such motivation is easy to understand given that the survey was administered in a stereotyping and prejudice class. In addition, the absence of the Topic × Threat interaction on control traits shows that participants were not generally more derogative of the Black target in the threat condition.

STEREOTYPE-RELEVANT TRAITS

Hostility ratings. A Topic × Target ANOVA on the hostility-related traits revealed only a main effect of target, $F(1, 79) = 13.16$, $p = .001$, such that Tyrone ($M = 1.95$) was rated as less hostile than Eric ($M = 2.49$). Neither the main effect of threat nor the Topic × Target interaction reached significance, ps > .25. These results suggest a motivation to appear nonprejudiced. They also show that projection did not occur on the stereotype-relevant trait on which participants were not directly threatened.

Intelligence ratings. As predicted, a Topic × Target ANOVA on intelligence ratings revealed a significant Target × Topic interaction, $F(1, 80) = 6.26$, $p = .014$ (see Figure 5). Decomposition of this interaction for each target showed that Eric was rated somewhat more intelligent in the threat than in the control condition, $t(1, 80) = 1.70$, $p = .09$, whereas Tyrone was rated significantly less intelligent in threat than in the control condition, $t(1, 80) = 3.00$, $p = .003$. That participants rated Tyrone as less intelligent under threat than under no threat indicates that derogation was specific to the dimension on which participants felt threatened. No evidence of projection was found for the White target.

Discussion

Results showed that participants who experienced a self-threat derogated a stereotyped target only on the dimension specific to the threat. In particular, participants whose intellectual ability was brought into ques-

tion evaluated the Black target as less intelligent than participants whose intelligence was not threatened. This pattern reversed when the target of evaluation was White: Participants showed a marginally significant tendency to evaluate the White protagonist as more intelligent in the threat than in the control condition. These results suggest that the motivation to appear nonprejudiced toward a stereotyped target in the control condition may have been weaker than the motivation to defend the self in the threat condition. Of importance, participants in the threat condition did not evaluate the Black target as more hostile or more negatively overall. Thus, Study 3 provides evidence that stereotyped individuals are more likely to serve as targets of projection than are nonstereotyped individuals and that projection-driven derogation is specific to the threat.

A finding requiring further attention is the marginally significant tendency for participants to evaluate the White protagonist as more intelligent in the threat than in the control condition. Study 4 was conducted to explore the reliability of this finding. An additional aim of the study was to use a different operationalization of threat induction and to demonstrate generalizability of the effect outside a stereotyping and prejudice course.

STUDY 4

Method

PARTICIPANTS

One hundred eight students (52 women, 56 men) participated in exchange for research credit. Participants were recruited from a general subject pool.

PROCEDURE

Participants completed experimental surveys in groups of 20 to 30. All of the instructions were included in the survey and participants were told to read them very carefully. The study was run at the end of the academic quarter and we took advantage of such timing in creating the manipulation of intellectual threat. Specifically, participants in the threat condition read the following:

> Studies conducted at this and other universities show that students who participate in experiments at the end of the quarter are ACADEMIC UNDERACHIEVERS. They have lower GPA, are less interested in intellectual tasks, and are less active contributors to class activities. Instructors evaluate their academic abilities less favorably than academic abilities of other students. In short, available evidence suggests that students who participate in experiments at the end of the quarter are less intellectually and academically competent than other students.

Participants in the threat condition were then told that although researchers have data about academic achievement of students who participate in experiments at the end of the quarter, less is known about their personality characteristics. Participants in the control condition did not read the paragraph and were simply told that little is known about personality characteristics of students who participate in experiments at the end of the quarter. It was then explained to all participants that the tasks they would complete in the experiment would reveal some aspects of their personality.

Participants then read a paragraph ambiguously describing a Black or White target and rated the target on a series of traits as described in Study 3. Thus, the experiment had a 2 (threat: IQ threat vs. no threat) × 2 (target race: Black vs. White) × 3 (trait domain: intelligence, hostility, stereotype-irrelevant) design with the first two factors manipulated between participants and the last factor manipulated within participants. All participants were fully debriefed before being excused.

Results

The reported analyses were conducted on all participants. They remained significant after removal of Black participants (12% of the sample) and when conducted on only White participants (76.9% of the sample). As in Study 3, results were analyzed using a 2 (topic) × 2 (target) × 3 (trait domain) ANOVA with repeated measures on the last factor. This analysis revealed a significant Topic × Target × Trait Domain interaction, $F(2, 103) = 2.90$, $p = .05$. To determine the location of the effect, we conducted ANOVAs on each of the trait domains.

Stereotype-irrelevant traits. A Threat × Target ANOVA conducted on participants' ratings of the target on stereotype-irrelevant traits revealed no significant effects, all $ps > .20$. Thus, participants in the threat condition did not report a more negative overall impression of the Black target.

STEREOTYPE-RELEVANT TRAITS

Hostility ratings. A Threat × Target ANOVA revealed no significant effects on hostility ratings, all $ps > .32$. Consistent with Study 3, participants did not derogate the stereotyped target on a dimension not specific to the threat.

Intelligence ratings. As predicted, a Threat × Target ANOVA on intelligence ratings revealed a significant Target × Threat interaction, $F(1, 104) = 5.95$, $p = .016$ (see Figure 6). Post hoc comparisons showed that Eric was rated similarly in the control and threat conditions, $t(1, 104) = 1.33$, $p = .19$, whereas Tyrone was rated less intelligent in the threat than in the control condition, $t(1, 104) = 3.59$, $p < .001$. This finding shows that participants projected lack of intelligence only onto the stereotyped target, replicating Study 3.
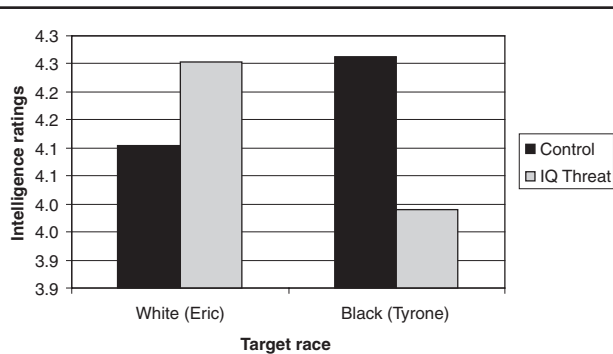
Figure 6   Intelligence ratings as a function of topic and target race, Study 4.

Discussion

Study 4, which used a different operationalization of threat induction, showed that threatened participants derogated the Black target only on intelligence, the trait central to the threatening feedback they received. Furthermore, no evidence was found for derogation of the Black target on hostility-related or general evaluative traits. As in the previous study, participants did not project lack of intelligence onto the White protagonist. The trend among participants to rate the White target as more intelligent in the threat than in the control condition did not replicate.

Two findings of Study 3 and 4 deserve further discussion. The first is the absence of projection onto the White target, even though his behavior was ambiguous with respect to the threatened dimension. We believe that this lack of projection can be explained by the fact that the ambiguous behavior of the White target was perceived by participants as an insufficient justification for evaluating him unfavorably. At the same time, when identical information was associated with the Black target, participants felt more justified in their evaluations. The second finding is the absence of the overall stereotyping effect. As we mentioned earlier, participants were students in social psychology and stereotyping courses who may have been particularly concerned about appearing nonprejudiced. Furthermore, absence or even reversal of the stereotyping effect is consistent with the literature on shifting standards (Biernat & Manis, 1994) and aversive racism (Gaertner & Dovidio, 1986, 2000). In this context, projection effects are all the more remarkable given that participants were told that their responses would reveal some aspects of their personality and yet they rated the stereotyped target less intelligent than the White target under threat. Thus, projection emerged despite the possible evaluation apprehension that the warning may have induced.

GENERAL DISCUSSION

Prior research on projection has convincingly shown that the motivation to deny a negative trait leads people to attribute the trait to others (Kawada et al., 2004; Mikulincer & Horesh, 1999; Newman et al., 1997, 2005; Schimel et al., 2003). This article concerned the often-speculated but little-researched question of how projection relates to the activation and application of stereotypes. Two specific issues were of interest. The first was whether projection leads to activation and application of a particular part of stereotype or its entire content. The second was whether stereotyped individuals are more likely to serve as targets of projection than are nonstereotyped individuals. Study 1 showed that participants activated primarily that dimension in a stereotype that corresponded to the threat they experienced. When the threat was related to intelligence, participants showed greater accessibility of traits implying lack of intelligence in describing sorority women, but when the threat was related to leadership, participants showed greater accessibility of traits related to lack of leadership. These findings provided evidence for specific stereotype activation, yet they also could be accounted for by semantic priming. To rule out this alternative, in Study 2, we manipulated not only the content but also the target of the threat. We found that participants activated the dimension of the stereotype corresponding to the threat only if the threat was self-relevant. If the threat concerned another person, no activation occurred. Finally, in Studies 3 and 4, we showed that activated traits are applied only to evaluations of stereotyped targets. Specifically, we found that participants derogated a target on the dimension of self-threat only if he belonged to a stereotyped group; if no applicable stereotype existed about the target, projection did not occur. Thus, we found evidence for specific activation and application of stereotypes and for selective derogation of stereotyped individuals. As a whole, these findings have implications for research on projection-driven stereotyping and compensatory self-enhancement, which we will discuss next.

Projection and Stereotyping

As described in the introduction, early research on projection did not directly test Allport's (1954) idea that stereotyped individuals are more likely to serve as targets of projection than are nonstereotyped individuals. To the best of our knowledge, the present research is the first to show the validity of Allport's supposition. Our findings suggest that stereotypes facilitate projection through helping individuals justify their unfavorable evaluations of others (Fein & Spencer, 1997). These findings are important because, unlike previous work, they emphasize the variability in activated stereotype

content and relate it to the specific needs of the perceiver.

Furthermore, due to the new measurement techniques that were not available to the early projection researchers, we were able to peek into the cognitive processes involved in projection-driven stereotyping. Specifically, we showed that projection activates a specific component of a stereotype, which then becomes accessible and affects interpersonal evaluations. We were also able to rule out a semantic priming account by demonstrating that stereotype activation occurs only in response to a threat to the self. Our findings were consistent across different stereotypes and different operationalizations of accessibility and threat.

Situational variability of the activated stereotype content. Congruent with the research on the importance of the motivational states of the perceiver for stereotyping (Kunda, Davies, Adams, & Spencer, 2002; Kunda & Spencer, 2003), the present work focuses on situational variability in the activated content of a stereotype. Specifically, despite a culturally shared meaning of stereotypes, each person may arrive at somewhat different evaluations of stereotyped individuals depending on whether he or she feels threatened and what kind of threat he or she experiences. Consistent with the present results, Newman et al. (2005) showed that projection also may contribute to content variability in the newly formed stereotypes. Specifically, Newman et al. found that participants attributed to the outgroup the very trait they were instructed to suppress about their own group. Thus, research on projection may open a new line of inquiry on how content of stereotypes reveals perceivers' own fears and insecurities. Allport may have foreseen this development by pointing out that "accusations and feelings of revulsion against both groups [Jews, Blacks] symbolize our dissatisfaction with the evil in our own nature" (p. 199).

Compensatory self-enhancement. A unique finding of our research is that individuals derogate stereotyped others on the specific dimension on which they experience a threat. Participants did not evaluate the stereotyped targets more unfavorably on threat-unrelated stereotypical dimensions, although such derogation could have been just as potent. This is consistent with the literature showing that threatened individuals project an undesired trait onto others but do not otherwise evaluate them negatively (e.g., Bramel, 1963; Edlow, & Kiesler, 1966). Thus, people seem to have a preference for direct compensatory self-enhancement, or bolstering the self on the dimension that was threatened (Stone, Wiegand, Cooper, & Aronson, 1997; Tesser, 1988, 2000).

Existing research suggests two reasons why people under threat may prefer to derogate a stereotyped group on the dimension on which they are threatened. First, research on self-esteem maintenance suggests that restoring one's standing on the dimension that has been undermined accrues the most benefit to one's self-regard (Stone et al., 1997; Tesser, 2000). Specifically, Tesser (2000) argued that self-affirmation in the same domain directly targets the origin of negative affect, whereas self-affirmation in a different domain may alleviate the negative affect but does not reduce the original discrepancy and eliminate the threat to one's integrity. Second, activating a single stereotyped trait rather than many conserves cognitive resources (Gilbert & Hixon, 1991). After experiencing a specific self-threat, people do not need to activate all that is associated with the stereotype; instead, they may only activate the dimension that helps them restore their self-esteem most directly.

Selective stereotype activation and application. If a stereotyped target cannot be derogated on a threat-related dimension because it is not consistent with the stereotype, individuals may resort to derogating the target on other stereotypical dimensions. For example, Fein and Spencer (1997, Study 2) found that participants who received negative feedback about their intelligence rated a gay character less assertive and more feminine but not less intelligent compared to control participants. In this case, participants derogated the target on a stereotype-relevant dimension, although not on the dimension they were threatened. One reason the gay character was not derogated on intelligence may be because this dimension is not relevant to the gay stereotype. As a result, participants may have chosen the indirect route to self-enhancement and evaluated the target unfavorably on traits stereotypical of gays. Had participants experienced a threat on a stereotype-consistent dimension (e.g., a threat to masculinity among men), we predict that they would have derogated the target selectively on that dimension. To be clear, our argument is not that people never derogate on dimensions irrelevant to self-threat or to a stereotype but that these routes are less likely to be used when a more direct route is available. This reasoning is consistent with the view of self-affirmation as a flexible system that substitutes direct strategies with indirect ones (Steele & Liu, 1981; Steele, Spencer, & Lynch, 1993; Tesser, 2000, 2001). Future studies should address this possibility by presenting participants with stereotyped targets whose roles either include or do not include the dimension on which participants experience a threat. Evaluations of these targets should reveal the different strategies participants adopt in coping with negative feedback.

Limitations and future directions. Our studies did not explore the consequences of projection for the self, although the benefits of projection for the perceiver

pose interesting questions. Some research clearly documents such benefits. For example, Epstein and Baron (1969) showed that projection led to decreases in anxiety and depression, and Schimel et al. (2003) found that participants who were given an opportunity to project negative feedback subsequently showed its decreased accessibility and thought of it as less self-relevant. Some other research, however, questions the effectiveness of projection. For example, Holmes and Houston (1971) and Halpern (1977) found no evidence that projecting a negative trait onto others reduced participants' anxiety and helped them get rid of the negative feelings about the self. In two of our own (yet unpublished) studies that included self-ratings after the ratings of a stereotyped target, we failed to find that projection led participants to evaluate themselves more positively on the threatened dimension (Govorun, Fuegen, & Payne, 2005). Perhaps this is not surprising because many of the defensive responses people undertake in an effort to feel better do not actually deliver any relief. For example, people sometimes react to self-esteem threats by aggression, risk taking, overeating, overeating, or taking drugs (Twenge, Cantanese, & Baumeister, 2002). Presumably people expect these activities to repair their feelings in some sense, although they often tend to backfire (Baumeister & Scher, 1988). The boundary conditions determining when projection will enhance self-regard are not well understood and provide an interesting topic for future research. But we also believe that despite the unresolved issue of the benefits of projection for the self, projection falls under the purview of defensive processes because it is set into motion by the desire to suppress negative information about the self.

Our research also poses the question of whether projection-driven stereotyping can permeate ingroup-outgroup boundaries (Tajfel & Turner, 1986). For most participants in the present studies, the target to be projected onto was a member of an outgroup. We found, however, that participants belonging to the same group as the target also showed projection (e.g., sorority participants in describing the sorority women stereotype). The question thus becomes whether a self-threat can be a potent incentive for people to forego their group identity and project a negative trait onto members of the ingroup. Alternatively, certain traits may become so accessible that ingroup status of the target may become less of a restraining factor and thus ingroup members will too serve as targets of projection. Future studies may thus vary ingroup/outgroup status of a stereotyped target and trait accessibility and explore the consequences of these variables on projection.

Coda. After decades of research, defensive projection continues to intrigue psychologists with its complexity.

We suggest that projection can add new insights to the study of stereotyping by showing how aspects of the activated stereotype are influenced by the needs of the perceiver. In turn, the properties of stereotypes help clarify the process of projection. More broadly, the present research speaks to the validity of Allport's (1954) idea that the stereotyped are often the blank screens on which we project our worst self-fears, sharpened and focused through the stereotypic lens.

NOTES

1. Defensive projection needs to be distinguished from social projection, which refers to the tendency to perceive similarities between self and others, particularly members of ingroups (Clement & Krueger, 2002; Robbins & Krueger, 2005). Unlike defensive projection, social projection does not have a strong motivational component and is viewed as an egocentric cognitive bias.

2. Accessibility scores also were computed by weighing the accessibility score of each trait by its appearance on the list (e.g., a trait listed first received a weight of 1, a trait listed second listed a weight of .9, a trait listed third received a weight of .8, and so on) and then adding the weighted accessibility scores. These analyses closely paralleled the ones reported here.

REFERENCES

Allport, G. W. (1954). *The nature of prejudice.* Reading, MA: Addison-Wesley.

Baumeister, R. F., & Scher, S. J. (1988). Self-defeating behavior patterns among normal individuals: Review and analysis of common self-destructive tendencies. *Psychological Bulletin, 104,* 3-22.

Biernat, M., & Manis, M. (1994). Shifting standards and stereotype-based judgments. *Journal of Personality and Social Psychology, 66,* 5-20.

Bodenhausen, G. V., & Wyer, R. S. (1987). Social cognition and social reality: Information acquisition and use in the laboratory and the real world. In H. J. Hippler, N. Schwarz, & S. Sudman (Eds.), *Social information processing and survey methodology* (pp. 6-41). New York: Springer Verlag.

Bramel, D. (1963). Selection of a target for defensive projection. *Journal of Abnormal and Social Psychology, 66,* 318-324.

Burish, T. G., & Houston, B. K. (1979). Causal projection, similarity projection, and coping with threat to self-esteem. *Journal of Personality, 47,* 57-70.

Campbell, D., Miller, N., Lubetsky, J., & O'Connell, E. (1964). Varieties of projection in trait attribution. *Psychological Monographs, 78,* 15.

Clement, R. W., & Krueger, J. (2002). Social categorization moderates social projection. *Journal of Experimental Social Psychology, 38,* 219-231.

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56,* 5-18.

Edlow, D. W., & Kiesler, C. A. (1966). Ease of denial and defensive projection. *Journal of Experimental Social Psychology, 2,* 56-69.

Epstein, R., & Baron, R. M. (1969). Cognitive dissonance and projected hostility toward outgroups. *Journal of Social Psychology, 79,* 171-182.

Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology, 73,* 31-44.

Feshbach, S., & Singer, R. D. (1957). The effects of fear arousal and suppression of fear upon social perception. *Journal of Abnormal and Social Psychology, 55,* 283-288.

Freud, A. (1936). *The ego and the mechanisms of defense.* London: Hogarth.

Freud, S. (1956). Further remarks on the defense neuropsychoses. In *collected papers of Sigmund Freud* (Vol. 1). London: Hogarth. (Original work published 1924)

Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In S. L. Gaertner & J. F. Dovidio (Eds.), *Prejudice, discrimination, and racism* (pp. 61-89). New York: Academic Press.

Gaertner, S. L., & Dovidio, J. F. (2000). *Reducing ingroup bias: The common ingroup identity model.* Philadelphia: Psychology Press.

Gilbert, D. T., & Hixon, G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60,* 509-517.

Govorun, O., Fuegen, K., & Payne, B. K. (2005). [The effect of projection on self-ratings]. Unpublished raw data.

Halpern, J. (1977). Projection: A test of the psychoanalytic hypothesis. *Journal of Abnormal Psychology, 86,* 536-542.

Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 133-168). New York: Guilford.

Holmes, D. S. (1968). Dimensions of projection. *Psychological Bulletin, 69,* 248-268.

Holmes, D. S. (1978). Projection as a defense mechanism. *Psychological Bulletin, 85,* 677-688.

Holmes, D. S., & Houston, B. K. (1971). The defensive function of projection. *Journal of Personality and Social Psychology, 20,* 208-213.

Horney, K. (1939). *New ways in psychoanalysis.* New York: Norton.

Kawada, C. L. K., Oettingen, G., Gollwitzer, P. M., & Bargh, J. A. (2004). The projection of implicit and explicit goals. *Journal of Personality and Social Psychology, 86,* 545-559.

Kunda, Z., Davies, P. G., Adams, B., & Spencer, S. J. (2002). The dynamic time course of stereotype activation: Activation, dissipation, and resurrection. *Journal of Personality and Social Psychology, 82,* 283-299.

Kunda, Z., & Spencer, S. J. (2003). When do stereotypes come to mind and when do they color judgment? A goal-based theory of stereotype activation and application. *Psychological Bulletin, 129,* 522-544.

Lambert, A. J., Cronen, S., Chasteen, A., & Lickel, B. (1996). Private vs. public expressions of prejudice. *Journal of Experimental Social Psychology, 32,* 437-459.

Mikulincer, M., & Horesh, N. (1999). Adult attachment style and the perception of others: The role of projective mechanisms. *Journal of Personality and Social Psychology, 76,* 1022-1034.

Murstein, B. I., & Pryer, R. S. (1959). The concept of projection: A review. *Psychological Bulletin, 56,* 353-374.

Newman, L. S., & Caldwell, T. L. (2005). Allport's "living inkblots": The role of defensive projection in stereotyping and prejudice. In J. F. Dovidio, P. Glick, & L. A. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport* (pp. 377-392). Malden, MA: Blackwell.

Newman, L. S., Caldwell, T. L., Chamberlin, B., & Griffin, T. (2005). Thought suppression, projection, and the development of stereotypes. *Basic and Applied Social Psychology, 27,* 259-266.

Newman, L. S., Duff, K. J., & Baumeister, R. F. (1997). A new look at defensive projection: Thought suppression, accessibility, and biased person perception. *Journal of Personality and Social Psychology, 72,* 980-1001.

Robbins, J. M., & Krueger, J. I. (2005). Social projection to ingroups and outgroups: A review and meta-analysis. *Personality and Social Psychology Review, 9,* 32-47.

Schimel, J., Greenberg, J., & Martens, A. (2003). Evidence that projection of a feared trait can serve a defensive function. *Personality and Social Psychology Bulletin, 29,* 969-979.

Singer, R. D. (1963). A cognitive view of rationalized projection. *Journal of Projective Techniques, 27,* 236-243.

Steele, C. M., & Liu, T. J. (1981). Dissonance avoidance and the expectancy of a value-affirming response: Making the dissonant act unreflective of the self. *Personality and Social Psychology Bulletin, 7,* 393-397.

Steele, C. M., Spencer, S. J., & Lynch, M. (1993). Self-image resilience and dissonance: The role of affirmational resources. *Journal of Personality and Social Psychology, 64,* 885-896.

Stone, J., Wiegand, A. W., Cooper, J., & Aronson, E. (1997). When exemplification fails: Hypocrisy and the motive for self-integrity. *Journal of Personality and Social Psychology, 72,* 54-65.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & L. W. Austin (Eds.), *Psychology of intergroup relations.* Chicago: Nelson-Hall.

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 181-227). New York: Academic Press.

Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review, 4,* 290-299.

Tesser, A. (2001). On the plasticity of self-defense. *Current Directions in Psychological Science, 10,* 66-69.

Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology, 83,* 606-615.

Wegner, D. M. (1992). You can't always think what you want: Problems in the suppression of unwanted thoughts. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 193-225). San Diego, CA: Academic Press.

Wyer, R. S., & Carlston, D. E. (1979). *Social cognition, inference, and attribution.* Hillsdale, NJ: Lawrence Erlbaum.

Wyer, R. S., & Srull, T. K. (1989). *Memory and cognition in its social context.* Hillsdale, NJ: Lawrence Erlbaum.