

## A New Look at Motivated Inference: Are Self-Serving Theories of Success a Product of Motivational Forces?

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People construct idiosyncratic, self-serving models of excellence or success in social domains, in part, to bolster self-esteem. In 3 studies, participants tended to articulate self-serving theories of success under experimental conditions in which pressures to maintain self-esteem were present, but not under conditions in which such pressures were absent. Participants assigned to role-play being a therapist were more self-serving in their assessments of the characteristics needed to be a "successful therapist" than were participants assigned to observe the role play (Study 1). Participants failing at an intellectual task articulated self-serving theories about the attributes crucial to success in marriage (Study 2) and evaluated targets similar to themselves more favorably than they did dissimilar targets (Study 3), tendencies not observed for participants succeeding at the task. Discussion centers on issues for future research suggested by these findings.

People differ in the models and theories they possess about success, excellence, and competence in social domains. They disagree, for example, on the attributes and behaviors most closely associated with being a successful leader (Dunning, Perie, & Story, 1991). They differ on the characteristics they think indicate future success in marriage (Kunda, 1987).

People differ in these models of excellence, in part, because they create them in their own image. Ask people, for example, to articulate their prototype of a leader, and they tend to describe a person who resembles themselves. People who describe themselves as ambitious and persistent view those characteristics as more important for effective leadership than do people who do not claim to possess those attributes. People who are pleasant and friendly describe these sensibilities as more central for being an excellent leader than do individuals who do not find these attributes to be self-descriptive (Dunning et al., 1991). Such tendencies for self-serving models of excellence have been found in a variety of trait domains (Dunning & Cohen, 1992; Dunning & McElwee, 1995; Dunning et al., 1991; Kunda, 1987).

This tendency to possess self-serving models of excellence in social domains carries many implications for self and social judgment. It explains, in part, why and when people disagree in their assessments of others (Dunning & Cohen, 1992; Dunning & Hayes, 1994; Dunning & McElwee, 1995; Dunning et al., 1991), as well as why they differ in their attributions for another's performance (Kunda, 1987). It also explains why people tend to possess apparently inflated views of their own abilities

(Alicke, 1985; Dunning, Meyerowitz, & Holzberg, 1989; Weinstein, 1980). One survey of college professors, for example, found that 94% said they did above-average work—a perception that cannot possibly be true (Cross, 1977). Self-serving definitions of success are crucial in producing such inflated self-views. In trait domains in which people have wide latitude in defining the attributes crucial for competence, they tend to reach overly positive self-assessments. In domains in which people have little freedom to differ on the attributes crucial for competence (for example, the behaviors relevant for judging one's punctuality are rather clear), people show no discernible bias in their self-evaluations (Dunning et al., 1989).<sup>1</sup>

Although there is growing evidence that people possess idiosyncratic, self-serving models of success in social domains (see Dunning, 1993), little is known concerning why or when people construct these egocentric templates of excellence. Several accounts of these self-aggrandizing tendencies have been proposed. People may be exposed to different objective circumstances throughout their lives, which lead them to inculcate different qualities in themselves and to assume that those same qualities would lead to success for others. For example, drivers from large cities (e.g., Boston) are exposed to different situations and demands than are drivers from rural areas. As such, they learn a different template of what it means to be a good driver and strive to match that template. In addition, people

<sup>1</sup> The "above average" effect, in of itself, does not necessarily mean that people are biased or distorted in their self-assessments. If people define being a good professor or good leader differently, then it is possible for most people to be above average: Each individual can truly be above average under his or her specific definition of competence (see Dunning, 1993; Dunning et al., 1989, for discussions of this issue). However, one of us (Dunning, 1993; Dunning et al., 1989) has argued in the past that self-serving definitions of excellence can produce many costly consequences to the extent that people use these self-serving definitions in their judgments of others—a tendency commonly observed in research on this issue (Dunning & Cohen, 1992; Dunning & McElwee, 1995; Dunning et al., 1991).

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from different cultural backgrounds may be taught differing values and traditions about the type of person they should be in a given social domain and may be taught that others should be the same type of person as well (see Dunning, 1993, for an extended discussion).

In this article, we examine one rather direct factor that may prompt people to construct self-serving models of success in social domains. This factor is the motive to maintain or bolster self-esteem. Personality and social psychology has a long history showing that people expend a great deal of effort maintaining a positive image of the self (see Kunda, 1990, for a review). They value ability domains they excel in and devalue those in which they do not (Crocker & Major, 1989; Rosenberg, 1965; Tesser, 1988), and they often choose to compare themselves to other people who will make them feel better off (Taylor, 1983). They hold more positive views of people in their own groups than they do of people in other groups (Tajfel & Turner, 1986). They associate themselves with people of prestige (Brown, Collins, & Schmidt, 1988; Cialdini et al., 1976), perform altruistic acts to validate a positive self-image (Brown & Smart, 1991; Carlsmith & Gross, 1969), and actively search through memory for past behaviors indicating they have desirable qualities (Ross, McFarland, & Fletcher, 1981; Santioso, Kunda, & Fong, 1990). They easily accept information that suggests pleasant outcomes and closely scrutinize and critique information that suggests aversive ones (Ditto & Lopez, 1992).

We propose that the construction of self-serving models of success in social domains grows, in part, from the desire to maintain or bolster self-esteem. If people's positive images of self are put at risk, they respond by stating that their own idiosyncratic attributes are the ones necessary for proficiency in a domain. They will do so in two separate ways. First, when self-esteem is threatened, people will explicitly endorse their own attributes as more important toward achieving success than those characteristics they fail to possess. Second, when self-esteem is put at risk, people will be more likely to manage the judgments they make of others, to ensure that those judgments reflect favorably on the self.

In this article, we place self-esteem factors under close scrutiny by borrowing from Kunda's (1987) work on motivated inference. In her work, she discovered that people's explanations for another's success tended to reflect favorably on the self. For example, when asked the extent to which various factors had contributed to the success of a target's marriage, respondents tended to rate their own attributes as more crucial (e.g., being the youngest child, having an employed mother, or being dependent) than those characteristics they did not possess; that is, their templates of success in marriage were self-aggrandizing. In the first two studies to be described below, we explored whether this tendency is exacerbated under conditions in which people should be pressed to maintain their self-esteem. In the third study, we examined whether similar tendencies would arise when people were asked directly to evaluate another person. When self-esteem was placed in jeopardy, would people revise their impressions of other people in order to maintain a favorable view of self?

This strategy of research also fulfilled a secondary purpose—to provide more direct support for Kunda's (1987) account of the genesis of these self-serving causal theories about social out-

comes. In her research, Kunda suggested that people tend to take optimistic stances toward their ability to achieve positive outcomes because the motive to maintain self-esteem guides people as they generate causal theories linking personal attributes to positive outcomes. For example, when people are asked "How likely are you to achieve a long-lasting marriage?", the motive to maintain self-esteem leads them to spin theories that would link their own attributes to success. They conduct a biased search of their memories and world knowledge to find beliefs about their own attributes and the outcome in question that would suggest that their own characteristics are the ones most likely to bring about the desired event. People spend less effort searching for evidence that would suggest that those characteristics they fail to possess would also lead to success.

Of key importance were two assertions of this account. The first assertion is that motivation prompts the generation of self-serving causal theories. The second is that these theories are constructed spontaneously, on the spot, in reaction to questions being imposed. People do not bring self-aggrandizing theories about social outcomes into the laboratory, but they construct them rather easily when asked a direct question with self-esteem implications.

However, the studies that Kunda (1987) conducted, although supportive of her general account, did not conclusively demonstrate that self-esteem motives prompt people to construct, on the spot, self-serving theories of social outcomes. Her studies were often correlational in nature and, as a consequence, did not "completely rule out an entirely cognitive interpretation" (Kunda, 1987, p. 646) that would focus on processes occurring before the participant entered the laboratory.

Thus, in the present series of studies, we aimed at providing more direct tests of the motivational account presented by Kunda (1987). We did so by expressly manipulating the degree to which an individual was motivated to maintain self-esteem, randomly assigning individuals to their motivational state. If people construct self-serving theories of success in reaction to motivational pressures, then they should do so to a greater degree when their self-images are threatened. In Study 1, we placed participants' self-esteem at risk by assigning them to perform the role of a therapist in front of others. We predicted that, in response, participants would articulate more self-aggrandizing theories of competence in that domain than would a group of participants merely assigned to observe the role play. In Study 2, we exposed participants to success or failure on a test of intellectual ability that purportedly had some future consequences for them and then asked them to articulate their theories of success in an unrelated social domain (i.e., marriage). We expected that the failure group, their self-esteem at risk, would articulate more self-serving models of success than would their success counterparts. Study 3 extended this work by examining whether success or failure would influence how people judge others. In particular, we examined the hypothesis that people after failure, as opposed to success, would be more egocentric in their evaluations of others, viewing similar others as more competent than dissimilar others. To the extent that these predictions were confirmed, we would have evidence that people define success in self-serving ways because of self-esteem motives. We also would have evidence that people spontane-

ously construct self-serving theories in response to motivational pressures.

### Study 1: Self-Serving Theories of Success After Being Assigned a Role

If self-serving conceptions of excellence are prompted by the desire to maintain self-esteem, then people should articulate self-aggrandizing theories of competence only to the extent that they care about success in the domain. If they have little desire for success, then they should not be motivated to construct egocentric images of competence. Kunda (1987, Study 2) tested this notion by having participants articulate the reasons why a target individual succeeded or failed at professional school. Some participants were planning to go on to professional school; others were not. It was assumed that the group planning to attend professional school would be more involved in the domain, would care more about the outcome for themselves, and thus be more likely to construct theories of success that would reflect favorably on their own abilities. As predicted, only the participants expressing some desire to go on to professional school articulated egocentric explanations for the target's success. In explaining the target's performance in professional school, they viewed their own characteristics to be more indicative of success than they did attributes they did not possess. Participants not planning to go on were not self-aggrandizing in their explanations.

Although supportive of a motivational view, this study could not be considered conclusive. Because of the correlational design of Kunda's (1987) study, students planning to go to professional school may have systematically differed from their counterparts who were not planning to go on in many different ways besides their motivational involvement. Students bound for professional school may simply have been better students than those without such plans. Success in academics would likely allow one to entertain the possibility of law, medical, or graduate school in the first place. Moreover, if one is a proficient student, then it is reasonable to use one's self as a model of what a successful student looks like; no motivation is necessary for this cognitive interpretation. Second, self-selection might account for the differences between student groups. People tend to gravitate toward situations that they believe match their personal characteristics (Niedenthal, Cantor, & Kihlstrom, 1985). As a consequence, only participants who believed that their personal characteristics were similar to the prototypical professional school student would select themselves into the group considering the idea. Thus, it would be this perceived similarity that led them to choose their condition (i.e., considering professional school), not their condition that led them to perceive similarity between themselves and the successful professional school student. This process could produce the correlations observed by Kunda, without invoking a motivated search for self-bolstering theories. Finally, there is Kunda's notion that people considering professional school may have simply thought about it more, and thus possessed "elaborate and biased cognitive structures related to this outcome" (p. 647). People who failed to care about a domain, if prodded to think about the area sufficiently, may have arrived at theories that were just as self-

aggrandizing as those articulated by people who were motivationally involved.

As a consequence, a stricter test of the motivational account would not compare two groups in a correlational format, but would rather manipulate one group into caring about a domain while the other remains relatively unconcerned. That was the rationale for Study 1, which was conceived as a conceptual replication of Kunda's Study 2 in an experimental format. The specific domain of interest was being a therapist. Participants were brought into the laboratory and told that they were to participate in a role play session focusing on therapy. Some participants were told that they would role-play the part of a therapist. Others were told that they would merely observe the role play. While waiting for the session to begin, all participants were given a description of a successful therapist and asked to articulate why the therapist had succeeded. It was predicted that putting some participants on the spot by asking them to role-play being a therapist would motivate them to desire to be competent in the domain. As a consequence, they would articulate self-serving theories of success in the domain, rating their own attributes as more important for success than attributes they did not possess. Participants assigned the role of observer would not be as motivated and so would be less self-aggrandizing in their theories, if at all.

### Method

*Participants.* Participants were 32 Cornell University undergraduates enrolled in psychology and human development courses. They received extra credit for their participation. Data from 4 other participants were omitted: 2 displayed suspiciousness, 1 claimed to possess all attributes that the target possessed (making her data unsuitable for the analyses described below), and 1 provided ratings on dependent measures that averaged nearly six standard deviations away from the relevant group mean.

*Procedure.* Participants were tested in groups of 3 to 8. The session was introduced as an experiment on group decision making, focusing on how people interact with one another in certain roles, working together to solve problems. The group was to participate in a role play session in which a therapist and two clients interacted to solve a problem. At this point, the experimenter went around the room asking each participant to select an index card from her hand. They were told that their assigned part for the role play was indicated on the bottom side of the card. The initial "T" assigned them to play the role of the therapist, whereas "P" or "K" meant they would play one of two friends in conflict. "O" meant that they were merely to observe the role play of the others. In actuality, three people in each group were assigned to be therapists ( $n = 16$ ), with each led to believe that he or she was the only one playing that role. The rest were assigned to be observers ( $n = 16$ ). At this point, participants completed consent forms to take part in the role play.

The experimenter then took the three individuals assigned to be therapists (each of whom thought the others were "P" and "K", respectively) to individual cubicles. There, they filled out some preliminary questionnaires. The packet started by asking some background questions (e.g., "How interested are you in a career as a therapist?") and continued by presenting the main dependent measures of the study. In this section of the questionnaire, in order to give them a "feel for your role," participants were given a summary of an interview with "Beth," one of many successful therapists who had been purportedly described in the book *The Compleat Therapist*, by J. A. Kottler. Of central focus, she was described as (a) the youngest in her family, (b) about 5 ft. 11 in.

(180.3 cm) tall, (c) doing "quite well" on the verbal part of the Scholastic Aptitude Test (SAT), (d) being active in extracurricular activities during her undergraduate years, (e) having a leadership position in those activities, and (f) having a 3.7 undergraduate grade point average.

After reading the description of Beth, participants were asked to rate the importance of each of these characteristics toward achieving success as a therapist. Participants rated each characteristic from 1 (*not at all relevant to success*) to 9 (*made success much more likely*). After completing this portion of the questionnaire, participants next provided some information about themselves. They indicated whether they (a) were the youngest child, (b) were taller than 6 ft (182.9 cm) if male or 5 ft 7 in. (170.2 cm) if female, (c) had scored higher than 630 on the verbal SAT, (d) had a grade point average over 3.3, (e) were involved in any extracurricular activities, and (f) held any leadership positions in those activities. After providing this personal information, participants were given a brief scenario of a role play. They also filled out probes for suspicion.

Observer participants were told that they would concentrate on one of the active role players, noting how many times he or she spoke, what body language he or she used, and how loudly the role player talked. They then filled out the exact same questionnaires as did participants assigned to be therapists. They read about Beth, rated the importance of the same personal characteristics for her success, and provided the same personal information. They also then read an account of the role play and filled out probes for suspicion.

When all participants were done with these measures, the experimenter returned everyone to the same room and debriefed them concerning the aim and rationale of the study.

### Results and Discussion

Gender did not influence the results described below and thus receives no further mention.

In all, participants rated the importance of six different attributes of interest. We standardized these ratings for each individual item. This allowed us to remove any noise in the analysis due to different ratings the items received (participating in extracurricular activities, for example, was generally seen as more important than being tall). Standardization also ensured that any egocentric pattern of ratings we observed was due to idiosyncratic differences among participants as opposed to general trends across items. For example, if all participants rated being active in extracurriculars as more important than being tall and also described the former trait as self-descriptive and the latter as not, then we would observe apparently self-serving ratings despite the lack of real individual differences. That is, participants would rate self-descriptive attributes as more important than non-self-descriptive ones, but this would be a function of the importance of the specific traits used, not the degree to which participants viewed them as uniquely self-descriptive.

For each participant, we calculated the average standard importance rating given to attributes that he or she possessed. We did the same for attributes the participant reported not possessing. These average importance ratings were then submitted to a 2 (therapist vs. observer role)  $\times$  2 (participant shares or does not share attribute with target) analysis of variance (ANOVA), with the last factor serving as a within-subject variable. Only one effect of interest emerged—the expected interaction between role and attribute type,  $F(1, 30) = 4.82, p < .04$ . As can be seen in Table 1, only participants assigned to be therapists showed a self-serving pattern of importance ratings, perceiving

Table 1  
*Standardized Importance Ratings Given to Features Shared Versus Not Shared With the Target as a Function of Role Assignment (Study 1)*

Assigned role	Participant shares feature with target		Difference
	Yes	No	
Therapist	.39	-.08	.47**
Observer	-.23	-.09	-.14

\*\*  $p < .05$ .

self-descriptive attributes to be more indicative of success than non-self-descriptive ones,  $t(15) = 2.35, p < .04$ . Observer participants showed no such pattern,  $t > -1$ .

This study provided evidence, in an experimental format, of motivated inference. Participants articulated self-aggrandizing theories of success in a domain only when they were about to perform in that domain, and thus should care about their competence. Those assigned only to watch others perform revealed no such pattern of self-serving bias. In summary, people constructed self-serving definitions of success under conditions where they would be motivated to do so.

### Study 2: Self-Serving Theories After Failure and Success

Study 2 was designed to garner convergent evidence for the role of motivational forces in self-serving definitions of success in social domains. If people construct egocentric templates of excellence in order to maintain self-esteem, they should be most likely to do so after their positive self-views have been called into question, such as when they fail at a task that has some consequences for them. The literature supports the notion that people work to reestablish favorable self-views after they have experienced a failure. After failure, as opposed to success, people are more likely to associate themselves with prestigious individuals (Brown et al., 1988; Cialdini et al., 1976) or to help others in socially desirable ways (Brown & Smart, 1991). To a greater degree after failure than after success, people are more likely to claim that others will fail as well (Agostinelli, Sherman, Presson, & Chassin, 1992; Tesser & Campbell, 1982) and to sabotage the performances of friends on the same task (Tesser & Smith, 1980).

In this study, we examined whether people would articulate more self-serving definitions of competence in marriage after failure as opposed to success. We chose the domain of marriage because success in the domain is highly valued, and Kunda (1987, Study 1) demonstrated that people possess egocentric notions about the attributes that lead to positive outcomes in the domain. As such, participants in the study were presented with a target individual and were asked how indicative several of his or her attributes were toward achieving success in marriage. Participants also noted which attributes they shared with the target and which they did not.

Of key importance, participants completed the questionnaire just after succeeding or failing at a task they were told was of

some consequence to them. They were given a test that purportedly measured an intellectual ability and were told that it was being incorporated into examinations used by postgraduate schools to select applicants for admission (e.g., Graduate Record Examination [GRE] and the Law Scholastic Aptitude Test [LSAT]). Virtually all participants in the study indicated that they were thinking about pursuing graduate or professional studies after graduation, and recent research has suggested that this instruction causes participants to become more involved in their performance on the test (Dunning, in press).

### Method

**Participants.** Participants were 24 Cornell University undergraduates enrolled in psychology or design and environmental analysis classes. Participants earned extra credit toward their course grades for participation in the experiment. Data from 3 additional participants were omitted due to responses on probes for suspicion.

**Procedure.** On entering the lab, participants were greeted and instructed that the experiment centered on integrative orientation ability. The ability was defined as "an individual's capacity to integrate data, that is, to see interconnections among different kinds of information in order to solve intellectual problems." Participants were to complete some tests of integrative ability following well-validated methods designed by University of Michigan psychologists in the 1960s. Participants were told that the focus of the study had to do with comparing certain types of tests (e.g., multiple choice, open ended, interviews, verbal, and nonverbal).

At this point, participants were instructed that the researchers were interested in the ability because it "is one of the most stable, least changeable, intellectual abilities around" and that "either you have it or you don't." The experimenter then went on to instruct participants about the importance of the ability. They were asked if they were interested in going to law, medical, or graduate school (all participants said they were at least considering it). The experimenter then went on to say that "the test is of interest to you. Tests like the one you'll be doing today are scheduled to become part of the standardized tests used in the GREs, MCATs [Medical College Admissions Tests], and LSATs starting next year."

After this, participants were told that they would be taking two different tests for integrative orientation. The first test would be a verbal test for the ability, and the second would be a nonverbal version. They were further told that the verbal version of the test consisted of a series of three words (e.g., elephant-lapse-vivid), for which they would be asked to identify the fourth word commonly associated with the triad (e.g., memory). They would be given 10 triads of this sort and 5 min to solve them. Participants were given three examples of test items, and then they filled out a consent form and some preliminary questions. These questions asked participants to estimate how many of the 10 items they would get right and to indicate on a 9-point scale how important they believed the ability to be.

Participants then took the verbal test. Participants in the success condition were given an easy version of the test, whereas participants in the failure condition were given a far more difficult version. After the test was completed, the experimenter scored the test, told the participant how many items he or she had correctly completed, and gave him or her an answer sheet to look over. In the success condition ( $n = 11$ ), participants were further instructed that their performance fell "within the top 15% of people who took this test in a national sample." In the failure condition ( $n = 13$ ), participants were told that their performance fell "within the bottom 30%."

Participants in both success and failure conditions then completed questions centering on their reaction to the test. They were asked to rate

on 9-point scales their satisfaction in their performance, their overall level of integrative orientation ability, and their certainty in that last assessment. They also completed questions focusing on demographic information (e.g., year in school, age, and major).

The experimenter then instructed participants that they were about to receive the nonverbal version of the test, but that they would do so only after a 10-min break. The experimenter asked if participants could help out a graduate student by filling out a questionnaire for her while they waited for the second phase of the session to begin. All participants agreed. They were then given a survey that dealt with "opinions and beliefs about marriage." The questionnaire's instructions stated that researchers at Cornell had followed students from the 1960s and had investigated the personalities of those who had entered long-term, stable marriages versus those who had been divorced. They had found that there were personal characteristics that predicted success and failure in marriage. The questionnaire that participants would complete was designed to investigate people's opinions about which factors "are more likely to facilitate successful marriages and which are likely to prompt divorce." Participants were to read a "blurb" about one of the 1960s respondents and rate how important various characteristics were in that respondent's outcome.

Participants then read a short description of "Edward" or "Elizabeth," who had remained married for 25 years. Half the participants were told that the character had an unemployed mother while growing up, had a distant father, was the youngest child, was not religious, was independent, and had no serious relationships before entering college (Set A). The remaining participants were told that the target had an employed mother, a close father, was the oldest child, was religious, was dependent, and had a serious relationship before entering college (Set B). Participants rated each attribute on its importance from 1 (*made divorce much more likely*) to 9 (*made stable marriage much more likely*). Participants next provided information about themselves, such as age and current marital status. They were asked if their parents had divorced or stayed married while they were growing up, if their mothers and fathers had been employed outside the home, whether they had a close or distant relationship with their father and with their mother, and whether they had had a serious romantic relationship before college. All questions of this sort were posed in a yes-no forced-choice format. Participants also reported whether they were the youngest, oldest, or middle child of their family. They next described themselves along 10 personality dimensions, such as introverted-extraverted. These questions, again, were two-option forced-choice inquiries, that included the dimensions religious-not religious, and dependent-independent.

Participants then completed probes for suspicion and then were debriefed regarding the aim and rationale of the study.

### Results and Discussion

Participant and target gender had no influence on any analyses and receive no further mention.

Manipulation checks revealed that the failure experience did, indeed, differ from the success experience. Failure participants solved many fewer items ( $M = 2.1$ ) than did success participants ( $M = 6.7$ ),  $t(22) = -5.58, p < .0001$ . They were much less satisfied with their performance than were their success counterparts ( $M_s = 2.0$  and  $7.3$ , for failure and success participants, respectively),  $t(22) = -9.52, p < .0001$ . They also stated that they possessed much less integrative orientation ability than did success participants ( $M_s = 2.9$  and  $7.4$ , for failure and success participants, respectively),  $t(22) = -6.01, p < .0001$ .

What of theories of success in marriage? Within each set of attributes, Set A or B, participants' importance ratings were standardized. For each participant, we then calculated the aver-

age standard importance rating given to attributes the participants termed self-descriptive, and the average standard importance rating given to attributes considered non-self-descriptive. We then submitted these to a 2 (success vs. failure)  $\times$  2 (Set A or B)  $\times$  2 (self-descriptive versus non-self-descriptive attributes) ANOVA, with the last factor serving as a within-subject variable.

As can be seen in Table 2, two effects emerged. Participants overall rated self-descriptive attributes as more indicative of success ( $M = .26$ ) than they did non-self-descriptive ones ( $M = -.15$ ),  $F(1, 20) = 8.68, p < .01$ . This trend, however, was qualified by a performance  $\times$  attribute type interaction,  $F(1, 20) = 4.37, p < .05$ . As predicted, the tendency for self-aggrandizement was greater after failure than it was after success. Only in the failure condition did participants endorse self-descriptive characteristics as more related to success than non-self-descriptive ones,  $t(12) = 2.83, p < .02$ . After success, the tendency was far from achieving statistical significance,  $t < 1$ . Thus, Study 2 provided evidence that participants would produce egocentric theories of marital success only when motivated to bolster their self-esteem.

### Study 3: Self-Serving Judgments of Others

Study 3 was designed to fulfill two major goals. The first goal centered on the potential implications of the above findings for judgments of other people. The first two studies suggested that putting people's self-esteem at risk influenced the abstract theories they generated about the determinants of success and excellence in social domains. Participants were more likely to state that their attributes were linked to success after their positive views of self were rendered vulnerable than when they were not. However, would people apply these more self-serving theories of success to their explicit judgments of other people? That is, after threat, would they evaluate another person in a way that suggested that their own attributes were crucial for achieving competence and positive outcomes by evaluating others sharing their attributes more favorably?

Study 3 looked directly at the degree to which the need to bolster self-esteem altered the judgments people made of others. On entering the laboratory, participants either failed or succeeded in the task used in Study 2 and then were asked to evaluate a number of target individuals along several dimensions, such as leadership ability and creativity. Some of the targets pos-

sessed attributes that were similar to the participant; others exhibited attributes that were dissimilar. We examined whether participants after failure would be more self-aggrandizing in their evaluations than would participants after success. More specifically, we investigated whether participants after failure, relative to those experiencing success, would be more likely to judge similar others more positively than dissimilar ones.

The second major aim of Study 3 centered on a methodological note. It is our contention, following Kunda (1987) and Dunning (1993), that the threat to self-esteem contained in our studies prompts people to alter their theories concerning the attributes that lead to success in social domains. However, a careful reader could claim that participants appeared more self-aggrandizing in their theories of success not because they had altered those theories, but because they had revised how they described themselves. After articulating templates of success (e.g., doing well on the verbal SAT is indicative of success as a therapist), participants could have altered their self-ratings to possess valuable attributes. This possibility is open because we asked participants for self-description information after they had experienced the motivation manipulations and after they had articulated their theories of success for the relevant social domains. Although this could be possible, we should note that we asked participants to describe themselves in as specific and concrete a way as possible. This reduced the possibility of any changes in self-descriptions in the two previous investigations. For example, in Study 1, we did not ask participants whether they did well on the verbal SAT, but rather asked for their specific score. We did not ask them if they were tall, but rather asked them for their specific height.

However, ruling out this account more rigorously required conducting a study in which participants were asked to describe themselves before entering the laboratory for the experimental session. Thus, in Study 3, we asked participants for self-ratings several days before entering the lab. If judgments of others are more self-aggrandizing after failure than after success, this would indicate that people were, indeed, altering their theories of success as a response to threats to self-esteem. Any self-aggrandizing pattern of judgments could not be due to changes in self-description. This would not rule out the possibility that people tend to change their self-descriptions in order to achieve motivational ends, but it would suggest that people also change their theories of success and excellence, as well.

### Method

**Participants.** Participants were 20 Cornell University undergraduates enrolled in an intermediate level psychology course. They received extra credit toward their course grade for participation.

**Procedure.** The participants of the study were drawn from a larger pool of individuals who had completed a background survey entitled "Personality Characteristics." This pretest presented participants with 25 trait terms and asked them to (a) circle the eight attributes that they possessed or exhibited the most, (b) cross out the eight items that they exhibited the least, and (c) leave the remaining nine unmarked.

Of participants who filled out the survey, 20 were contacted by phone and scheduled for an experimental session approximately 1 to 2 weeks after filling out the background survey. They were then run through the exact procedure described in Study 2, with 11 experiencing failure and 9 confronting success.

Table 2  
Standardized Importance Ratings Given to Features Shared Versus Not Shared With the Target as a Function of Performance (Study 2)

Performance	Participant shares feature with target		Difference
	Yes	No	
Failure	.43	-.24	.67**
Success	.06	-.05	.11

\*\*  $p < .05$ .

Study 3 differed from Study 2, however, in the questionnaire participants were asked to complete as a favor for a graduate student while they purportedly waited for the nonverbal version of the integrative orientation test. Participants were told the following:

Over the past several semesters, we have been asking students to describe their personalities in terms of traits. They were asked to describe the 5 most general, characteristic, and enduring traits of their personality. On the next four pages can be found four of these descriptions. Based on these five traits used to describe each person, we'd like you to imagine the person, and then to make a judgment on the questions at the bottom of the page.

In all, participants used 7-point scales to rate each character on leadership ability, creativity, potential success in marriage, potential success as a student, and general likability.

The descriptions of two of the four targets were based on the pretest responses of the participant. The description of one target, the similar one, consisted of a random selection of five of the eight characteristics that the participants had endorsed as "like me." The description of the other target, the dissimilar one, consisted of a random selection of five of the eight attributes that the participant had indicated were "not like me." The two other targets were similar and dissimilar characters that had been fashioned from the self-descriptions of another participant in the study, randomly selected.

Each participant rated the four targets in random order. They then completed probes for suspicion and were debriefed.

### Results and Discussion

Participant gender had no impact on the results reported below.

Manipulation checks documented that participants experiencing failure rated their experience more negatively than did participants encountering success. Participants experiencing failure solved many fewer items ( $M = 2.3$ ) than did participants experiencing success ( $M = 7.0$ ),  $t(18) = -5.57$ ,  $p < .0001$ . They were much less satisfied with their performance than were their success counterparts ( $M_s = 2.4$  and  $7.1$ , for participants experiencing failure and success, respectively),  $t(18) = -7.32$ ,  $p < .0001$ . They also stated that they possessed much less integrative orientation ability than did participants experiencing success. ( $M_s = 2.9$  and  $6.6$ , for participants experiencing failure and success, respectively),  $t(18) = -7.87$ ,  $p < .0001$ .

Would this failure experience translate into egocentrism in judgments of others? We averaged the five evaluative ratings each participant provided for the similar and dissimilar target fashioned after the self. We then submitted these overall averages to a 2 (success vs. failure)  $\times$  2 (similar vs. dissimilar target) mixed-model ANOVA. Two effects of interest emerged. First, there was a marginal tendency for similar targets to be evaluated more favorably than dissimilar ones ( $M_s = 4.9$  and  $4.4$  for similar and dissimilar targets, respectively),  $F(1, 18) = 3.69$ ,  $p = .07$ . However, this marginal trend was qualified by the predicted Performance  $\times$  Target Similarity interaction,  $F(1, 18) = 4.42$ ,  $p < .05$ . Similar interactions were observed when we performed similar ANOVAs on the individual items of leadership,  $F(1, 18) = 4.64$ ,  $p < .05$ , and creativity,  $F(1, 18) = 5.02$ ,  $p < .04$ , as well as a marginal one for success in marriage,  $F(1, 18) = 3.49$ ,  $p < .08$ .

As can be seen in Table 3, this interaction arose because participants more positively evaluated similar targets than they did dissimilar ones only in the failure condition. Across all ratings, participants experiencing failure evaluated the similar target more favorably than the dissimilar one,  $t(10) = 3.49$ ,  $p < .01$ . They also rated the similar target higher on success in marriage,  $t(10) = 4.22$ ,  $p < .002$ , and marginally higher on leadership ability,  $t(10) = 2.05$ ,  $p < .07$ , and likability,  $t(10) = 1.92$ ,  $p < .10$ . No such tendencies for self-aggrandizement were observed in the success condition. Indeed, the only effect to achieve marginal significance was a tendency to rate the similar target as less creative than the dissimilar one,  $t(8) = -2.14$ ,  $p < .07$ .

There exists, however, an alternative explanation for this effect. It could be the case that similar targets displayed traits that were more socially desirable than those exhibited by dissimilar targets. After all, people tend to ascribe desirable characteristics to the self enthusiastically (Alicke, 1985; Brown, 1986; Dunning et al., 1989; Kunda & Sanitioso, 1989), and so the similar targets may have simply been more admirable characters than dissimilar ones. As a consequence, any apparent egocentrism in ratings may be due to this general social desirability, with any person confronted with any similar character perceiving him or her more favorably than any dissimilar one, regardless of whether that similar target had been fashioned after the self. With failure, this tendency to rate positive people favorably and negative individuals unfavorably may have been exaggerated.

Further data analysis, however, ruled out this interpretation. Recall that we also had each participant rate another person's similar and dissimilar target. For each of these yoked characters, we averaged the five evaluative ratings that each participant provided. When we submitted these average ratings, depicted in Table 3, to a 2  $\times$  2 (Performance  $\times$  Target Similarity) ANOVA, we found no hint of a tendency to rate similar targets more favorably,  $F(1, 18) = .08$ , nor a trend for this tendency to be more pronounced in the failure condition, interaction  $F(1, 18) = .00$ .<sup>2</sup>

<sup>2</sup> Evaluations of these yoked targets can also be used to construct a more rigorous analysis of the self-aggrandizing judgments being offered in the failure condition. Participants in the failure condition rate similar targets, based on the self, more favorably than they do dissimilar ones. But it is possible that this occurred because the descriptions of similar targets contained more socially desirable attributes than did descriptions of dissimilar ones. The lack of a similar effect for success participants and for the yoked targets speaks against this possibility. However, to make sure that self-aggrandizing pattern of judgments observed in the failure condition were not due to this factor, we conducted a 2 (similar vs. dissimilar target)  $\times$  2 (targets based on self vs. on yoked other) ANOVA in the failure condition. Our theoretical account suggests an interaction between these two factors. Participants in the failure condition would discriminate between similar and dissimilar targets based on the self, but not between targets based on a yoked other. Such an interaction was observed for overall evaluations of the various targets,  $F(1, 30) = 6.50$ ,  $p < .05$ . As such, the pattern of responses participants gave in the failure conditions appears to be due to self-aggrandizement and is not based on the general desirability of the similar and dissimilar target descriptions. A similar analysis in the success conditions reveals the interaction described above to be nonsignificant,  $F = .01$ , *ns*.

Table 3  
*Ratings of Similar Versus Dissimilar Target as a Function of Performance (Study 3)*

Performance-measure	Target fashioned to characteristics of					
	Self			Yoked other		
	Similar	Dissimilar	Difference	Similar	Dissimilar	Difference
Failure						
Leadership	5.5	4.1	1.4*	5.1	4.4	.7
Creativity	4.4	3.5	.9	4.2	4.0	.3
Marriage	5.4	3.7	1.6***	4.4	4.6	-.3
Student skills	5.5	5.3	.3	4.1	4.8	-.7
Likableness	5.5	4.3	1.2*	4.5	4.6	-.1
Overall	5.2	4.1	1.1***	4.5	4.6	-.1
Success						
Leadership	4.2	5.0	-.8	4.4	5.3	-.9
Creativity	3.7	4.4	-.8*	3.2	3.2	.0
Marriage	4.6	4.4	.1	4.9	4.1	.8
Student skills	5.0	4.6	.4	5.2	5.1	.1
Likableness	5.1	4.7	.4	4.9	5.2	-.3
Overall	4.5	4.6	-.1	4.5	4.6	-.1

\*  $p < .10$ . \*\*\*  $p < .01$ .

In summary, Study 3 found further evidence of motivated egocentrism in judgments of others. After failure, when participants should be more motivated to bolster self-esteem, participants evaluated people exhibiting the same proficiencies and attributes as the self more positively than they did people who were different. No such tendency was evident when participants succeeded.

### General Discussion

We began this article by noting the tendency people have to generate self-serving models of success and excellence in social domains. We noted that this tendency is often attributed to the need to bolster self-esteem, but we also observed a lack of experimental evidence supporting such an account.

The three studies in this article provide strong evidence that egocentric definitions of success are, indeed, prompted by the motive to maintain positive images of self. In Study 1, participants assigned to play the role of a therapist displayed more self-aggrandizement in their theories about success in that domain than did participants asked merely to observe others perform. In Study 2, failure at an intellectual task prompted participants to articulate more self-serving notions about the attributes crucial for success in marriage than did success. In Study 3, failure prompted participants to display more egocentrism in their evaluations of others than did success. After failure, participants assessed similar others more positively than they did dissimilar ones. No such tendency was observed after success.

Indeed, a meta-analytic analysis of the results of these three studies speaks to the impact of motivational forces in producing egocentric definitions of success. Across the three studies, participants exhibited a great deal of egocentrism on our primary dependent measures under those conditions designed to promote bolstering of self-esteem,  $Z = 4.12$ ,  $p < .0001$ , weighted by the number of participants in each study. The difference in self-aggrandizement found in the motivated versus nonmoti-

vated conditions was also marked,  $Z = 3.43$ ,  $p < .0005$ . Perhaps most telling of the strength of these factors, however, was the number of participants we had to test in each study to observe a significant difference between motivated and nonmotivated conditions. In all three studies, we tested what we thought would only be a first wave of participants, stopping to make sure we were on track, only to find that the effects we had predicted had already achieved statistical significance.

Taken together, these studies suggest that the tendency for people to define excellence in social domains in self-serving ways, with all attendant implications for self-evaluation and social judgment (see Dunning, 1993), is prompted, at least in part, by their desire to bolster their self-esteem. These studies also provide more direct evidence for Kunda's (1987, 1990) assertions regarding the impact of motivation on social inference. Kunda proposed that motivational factors guide the inferences and evidence that people consider as they respond to questions with implications for self-esteem. Her studies, however, were correlational in nature and were thus open to alternative explanations. In contrast, the present studies manipulated participants into caring about their competence within a particular domain. As such, the differences we found between motivated and nonmotivated participants cannot be explained by possible individual differences between the participants in each group. Because of random assignment, participants presumably walked into the laboratory with the same knowledge and experiences in the domains we asked about.<sup>3</sup>

Additionally, because participants articulated self-serving

<sup>3</sup> As an added precaution, we checked this assertion. Participants in motivated conditions did not differ from their nonmotivated counterparts in the attributes they endorsed as self-descriptive. They also provided roughly equivalent ratings of importance (in the first two studies). In summary, randomization worked. Furthermore, the variances associated with all dependent measures across all three studies were roughly the same in motivated and nonmotivated conditions.

theories of evidence only when faced with a threat to self-esteem, we can be more confident that people's self-aggrandizing assessments can be spontaneously constructed in reaction to questions with self-esteem implications. People's theories need not be a product of a slow, incremental process, happening outside the laboratory and prompted potentially by both motivational and nonmotivational processes (Dunning, 1993). Instead, they generate these self-aggrandizing models on the spot in order to bolster self-esteem that has been called into question.

### *Are People Maintaining or Maximizing Self-Esteem?*

We propose that participants in these three studies constructed self-serving models of excellence to bolster their self-esteem. However, we should note that this simple conclusion contains an ambiguity that is receiving increasing attention in work on self-processes. When self-esteem considerations are involved, *bolstering* can mean two differing things.<sup>4</sup> It can mean that people are trying to maximize their positive views of self, enhancing their esteem at every given opportunity. Alternatively, it can mean that people are trying to maintain or recapture a positive view of self that has temporarily been lost—a process they stop once a positive view of self has been restored. The distinction is not trivial, as people can be expected to act differently depending on whether it is believed they are maximizing versus maintaining their self-esteem (Swann, 1990; Swann & Schroeder, in press; Tesser & Cornell, 1991).

In our studies, we cannot tell conclusively whether participants were engaged in self-esteem maximization or maintenance. A few suggestive hints do exist, however. In our nonmotivated conditions, we were surprised to see little, if any, egocentrism in the theories participants articulated about success and excellence. Indeed, a meta-analytic index of egocentrism is slightly negative across the three studies for participants in nonmotivated conditions,  $Z = -.30$ , *n.s.* This lack of self-aggrandizement is striking given repeated demonstrations of egocentric thought across a wide variety of domains found in previous research (Dunning & Cohen, 1992; Dunning et al., 1989, 1991; Kunda, 1987).

This finding, in and of itself, suggests that participants were engaged in self-esteem maintenance as opposed to maximization. On failing, or being called on to perform a role, participants were striving to recapture a positive sense of self that had been made vulnerable, and so they constructed self-aggrandizing theories of success when given the opportunity. In the nonmotivational conditions (succeeding, or being asked to observe someone else perform), self-esteem was not threatened, there was no positive self-view that had to be recaptured and protected, and so people did not bother to generate self-aggrandizing theories. A maximization account would not have predicted this lack of self-aggrandizement in the nonmotivated conditions: People were given another chance to self-enhance, and they should have taken it. Indeed, a strict self-esteem maximization account would predict no differences at all between our motivated and nonmotivated conditions, because people should eagerly capitalize on every given opportunity to bolster their views of self.

Although provocative, this finding deserves more rigorous study. We included no control condition, and so we could not

see whether success actually reduced the degree of egocentrism that participants were predisposed to display or whether we were merely observing the operation of random chance. For our purposes, no such control condition was necessary. Our theoretical tests of motivation merely required comparing a motivated condition to a nonmotivated one. However, in future research, it might be interesting to explore whether our nonmotivational conditions, particularly the success manipulation used in the last two studies, reduced the degree to which people self-aggrandized. Perhaps receiving news congenial to one's self-esteem diminished the need for people to prove themselves in the theories and judgments they provided for other people. Similar results have been observed for related phenomena. For example, when people are given a chance to affirm values and attitudes central to their self-concepts, they feel less of a need to engage in dissonance reduction (Steele, 1988).

The distinction between self-esteem maximization and maintenance also suggests another line of research that would be profitable to pursue. Not all people have positive impressions of the self that they need to maintain. Some individuals have low self-regard and do not harbor beliefs that they are effective and masterful people (Rosenberg, 1965). How might these low-self-esteem individuals respond to the circumstances we presented to participants in the three studies above? Maximization and maintenance accounts make different predictions about how low-self-esteem people will behave (Swann, 1990; Swann & Schroeder, in press). A maximization perspective suggests that low-self-esteem individuals would be self-aggrandizing in their assessments, whereas a maintenance account would propose that low-esteem individuals would be self-denigrating in their assessments of others. That is, they would articulate models of excellence for social domains that suggested that they themselves have little ability or potential. After all, low-esteem individuals tend to prefer interaction partners (Swann, Wenzlaff, Krull, & Pelham, 1992) and marriage partners (Swann, Hixon, & De La Ronde, 1992) who have low regard for them. Future research could explore this possibility.

Further research could also explore whether people with low self-esteem are motivated to maintain their negative images of self, in a mirror image of the effects observed in the studies above. That is, success might threaten a low-self-esteem individual's self-image. Thus, after success, low-esteem individuals might be more eager to generate theories of competence that place themselves in a bad light than they would be after experiencing failure.

### *Concluding Remarks: On Costs and Benefits of Self-Serving Theories*

Another issue our research cannot address centers on the potential costs that people incur because they tend to construct self-serving theories of success as a response to esteem-threatening events. It would appear straightforward that being self-aggrandizing in one's judgments of others, and thus overly confident about one's abilities, would carry many grave conse-

<sup>4</sup> We thank an anonymous reviewer for pointing out this ambiguity and its implications.

quences (Dunning, Griffin, Milojkovic, & Ross, 1990; Dunning & Story, 1991; Vallone, Griffin, Lin, & Ross, 1990). Being self-serving in one's views of self could prompt people to take risks or commit resources to courses of action that could be damaging (Kunda, 1987, 1990). Being overly sanguine about one's ability can prevent a person from taking precautions that make him or her less vulnerable to folly or disaster (Weinstein, 1982).

However, motivated inferences may also confer some benefits (see Taylor & Brown, 1988, for example). Let us consider one here that we feel has yet to be discussed in the literature. The net effect of the egocentrism found in the studies above may be that people are quick to label themselves with positive characteristics (e.g., good leader, successful therapist, and intelligent) while avoiding self-labeling with negative traits (e.g., aloof, and submissive). Past social psychological work suggests that this self-labeling has a profound impact on people's subsequent behaviors, in that people often work to have their actions correspond to these social labels. For example, telling children they are clean and tidy is a more effective way to stop them from littering than trying to persuade them of the virtues of a clean environment (Miller, Brickman, & Bolen, 1975). Once college students state that they are charitable individuals, they are more predisposed to give to a charitable request than they are without such self-labelling (Sherman, 1980).

With these past research findings in mind, it is tempting to think that motivated inference, and the self-labeling it allows, may prompt people to inculcate in themselves the very qualities they claim to have. People who espouse that they are good leaders may work on their interpersonal skills in order to ensure that they can indeed lead people. A person who is motivated to claim to be a good therapist may also motivate himself or herself to achieve that distinction in actuality. In summary, if one wanted a social world in which people were good, moral, and successful, one would want a world in which people were eager to assume such labels. The consequences of the alternative are stark in comparison.

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