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Evidence that blatant versus subtle stereotype threat cues impact performance through dual processes

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Abstract

An experiment tested three competing hypotheses for how blatant and subtle stereotype threat cues influence the performance of female sports participants on a golf-putting task. A "predominant" model predicts that blatant threat cues have a more negative effect on performance than subtle threat cues, whereas an "additive" model predicts that both cues combine to have a greater negative effect than either threat cue alone. However, a "dual process" model predicts that each threat cue has an independent negative influence through separate mechanisms. To test these predictions, we varied the presence of blatant (e.g., the task frame) and subtle cues (e.g., the gender of the experimenter) for negative stereotypes about female athletes, and then measured both the number of strokes required to finish the course and accuracy on the last putt of each hole. The results supported the dual process model prediction: females required more strokes to finish the golf task when it was framed as measuring gender differences compared to racial differences in athletic ability, and females performed less accurately on the last putt of each hole in the presence of a male versus a female experimenter. The discussion focuses on how the presence of multiple stereotype threat cues can induce independent mechanisms that may have separate but simultaneously deleterious effects on performance.

Keywords: Stereotype threat; Female; Athlete; Sports; Dual process

The theory of stereotype threat proposes that for individual members of a stigmatized group, the salience of a negative stereotype in a performance context causes concern about confirming the validity of the negative characterization (Steele, 1997; Steele, Spencer, & Aronson, 2002). Numerous studies now show that the salience of negative stereotypes in a performance context can impair the performance of African-American students on standardized tests of verbal ability (Steele & Aronson, 1995), women on tests of math ability (Schmader & Johns, 2003; Spencer, Steele, & Quinn, 1999), and the performance of other groups (e.g., White men) on other tasks (golf-putting, see Beilock, Jellison, Rydell, McConnell, & Carr, 2006).

The purpose of the current study was to examine how stereotype threat processes unfold when multiple cues for threat are present in a performance situation. Steele et al. (2002) proposed that when stigmatized targets are in a stereotype relevant situation, their assumptions about the existence and application of negative stereotypes to their group—their "theory of context"—causes targets to become vigilant about detecting the presence of bias. To accomplish this goal, targets "evaluate a broad set of cues in the setting" to assess the potential for a negative characterization. Little is know, however, about how targets detect and react to the presence of multiple stereotype threat cues in a performance context.

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We speculate that the way multiple threat cues impact performance depends in part on the nature of the cues themselves. Some cues for threat are relatively blatant, such as when a task is explicitly framed as measuring attributes that relate to a negative ingroup stereotype (e.g., Steele & Aronson, 1995; Stone, Lynch, Sjomeling, & Darley, 1999), or when targets are directly told that their group tends to perform more poorly on the task in comparison to some other group (e.g., Spencer et al., 1999). Other cues for threat, however, present the potential for bias in a subtler manner. For example, research indicates that the performance of stigmatized targets can be adversely affected when they hold minority status in the performance context (Inzlicht & Ben-Zeev, 2000; Sekaquaptewa & Thompson, 2002), or when the task is administered by an outgroup member (e.g., Danso & Esses, 2001; Marx & Goff, 2005). This suggests that the theory of context held by targets includes not only knowledge about the content of the negative ingroup stereotypes, but also information about the conditions under which the stereotypes are likely to bias perceptions of their behavior.

It is also possible that different threat cues negatively impact performance through different mechanisms. For example, the subtle nature of cues like the outgroup identity of the test administrator may cause targets to focus part of their cognitive and emotional resources on reducing uncertainty about the presence of bias. The cognitive load that results from the attention paid to subtle cues impacts working memory capacity, which then reduces performance on the task. Thus, when the threat is induced through subtle cues in the situation, performance is more likely to be mediated by the negative impact on working memory (Croizet et al., 2004; Schmader & Johns, 2003). In contrast, when negative stereotypes are blatantly tied to performance, targets do not have to expend cognitive resources assessing the potential for bias, it is clearly present. Instead, blatant cues cause targets to adopt a prevention focus orientation designed to minimize mistakes and avoid the failure that would confirm the negative stereotype (Keller & Dauenheimer, 2003; Seibt & Forster, 2004). However, their attempt to avoid failure can backfire if it causes them to adopt strategies that disrupt the effective execution of task-relevant skills. Thus, blatant cues for threat may reduce performance by inducing prevention focus processes that negatively impact their approach to the task.

If blatant and subtle stereotype threat cues impact performance through their effects on separate processes, then there are at least three predictions that can be made for how the presence of both cues influence performance. One possibility is that when both cues are present in a performance context, one cue has more influence on performance than the other. Targets may perceive both cues as a source of bias, but one may be perceived as a more likely threat than the other. An obvious prediction is that blatantly framing a task as measuring a negative stereotype makes the threat more concrete, and as a result, prevention focus processes consume more cognitive and emotional resources than does the cognitive load a subtle threat cue. This "predominant cue" model predicts when both types of cues are present during performance, blatant cues have a greater negative impact on performance than subtle cues.

A second possibility is that blatant and subtle threat cues operate together to influence task performance. The assumption in an "additive cues" model is that all cues are perceived as a potential source of threat and that both cognitive load and prevention focus strategies work in tandem to impact the processes that determine performance on the task. When an outgroup member frames the task in terms of a negative ingroup stereotype, targets are simultaneously overloaded by assessing the meaning of the subtle cue and motivated to avoid being negatively characterized as per the blatant cue information (Seibt & Forster, 2004). Thus, an additive cues model would predict that two threat cues have a greater negative impact on performance than when either cue is presented alone.

A third possibility is that blatant and subtle threat cues operate independently of each other to influence task performance (e.g., Strack & Deutsch, 2004). Here the assumption is that each cue induces processes that influence different aspects of performance. Those aspects of performance that depend on effortful processing skills for successful execution may be more influenced by reductions in working memory, whereas those aspects of performance that require fluent, automatic execution are influenced more by prevention focus processes (Beilock et al., 2006). Whereas some tasks may depend more heavily on one set of skills than another, other tasks may require both skills for a successful performance. However, because most studies to date have focused on manipulating a single cue to measure its mediational effect on one performance measure, previous research has not addressed a "dual process" explanation for the effect of multiple threat cues on performance.

The current study tested the three competing predictions for how multiple threat cues impact performance by using the golf-putting task from previous research on stereotype threat in sports (e.g. Stone et al., 1999). Performance on the putting task can be measured in two ways: As the total number of putts needed to complete the course, which is the standard measure of performance in golf, and it can also measure how accurate participants are as they putt the ball into the hole on their last shot (Beilock et al., 2006). Accordingly, cognitive load or prevention focus processes may influence each of these outcomes independently. For example, if blatant cues such as framing the task in terms of a negative ingroup stereotype induce a prevention focus orientation, targets should become motivated to try to avoid failure during the task. A "try not to miss" strategy on each putt would focus them on the micro elements of their putting stroke, but if this response disrupts the automatic and fluent elements of execution, targets might "choke" under the pressure. As a result, the blatant task frame would increase the number of strokes they would

need to complete the overall course (e.g., Stone et al., 1999).

In contrast, if subtle cues such as the outgroup identity of the test administrator induce cognitive load, this could influence the accuracy of their final putt into the hole. After getting close to the hole on the previous putt, accuracy on the last putt takes considerable concentration, which is likely to be influenced by working memory capacity. Note that in addition to providing a task that can measure the potential independent effect of dual processes on performance, the putting task permits a test of the competing models as well. That is, if one cue is predominant, the results will reveal a main effect for the predominant cue, or if both cues add up to create more threat than either alone, then the results will show an additive effect for both cues on both performance measures.

A second purpose of the proposed study was to examine the influence of negative stereotypes on the performance of female athletes. Research indicates that whereas ''poor athletic ability'' is a negative stereotype about North American White athletes (Sailes, 1996; Stone, Perry, & Darley, 1997), it is perhaps more widely held as a negative stereotype about female athletes (Biernat & Vescio, 2002; Knight & Guiliano, 2001). We believe that in the domain of sports, women have considerably more experience being negatively compared to men than they have being compared to females from other ethnic or racial groups. For example, in the United States, women's sports received less funding and institutional support than men's sports until Title IX legislation was passed in 1972. Whereas Title IX has significantly increased the number of girls and women who participate in organized sports, women still occupy fewer administrative, management, and training positions than men, implying that off the field, men are more qualified than women to run the show (Roper, 2002). The belief that women are less athletic than men is also conveyed in the media, as women's sports at the high school, college and professional level receive less media attention than men's sports at the same level (Tuggle & Owen, 1999). A third source for negative stereotypes about female athleticism is transmitted interpersonally when people participate in sports, such as when a coach admonishes a young player to ''stop throwing like a girl'' (Fredrickson & Harrison, 2005). These various sources instantiate and support the culturally held belief that females possess less athletic ability than males. Racial differences between female athletes, in comparison, do not have the same history of discourse or institutionalized segregation and discrimination, and therefore, do not carry the same burden that gender does for female athletes.

It was hypothesized in the present research that blatantly framing the golf task as a measure of gender differences in athletic ability would be perceived as more threatening to White female participants than would framing the task as a measure of racial differences in athletic ability. In addition to manipulating the type of blatant cue present, the presence of a subtle threat cue was manipulated by having either a male or female experimenter conduct the putting task. Thus, the procedure was designed to test three competing hypotheses for how multiple threat cues influence the performance of female sports participants on a task that was capable of revealing more than one mediational process.

Method

Participants

Participants were 110 female undergraduates at the University of Arizona who participated in the study for partial course credit. All were recruited after they identified their ethnicity as ''Caucasian American'' during a mass pre-testing of the introductory psychology courses. Participants also rated their athleticism as above average but reported they played golf no more than one day per week (see Stone et al., 1999). Thus, the sample consisted of women who perceived themselves to be athletic but novice golfers.

Procedure

Participants completed the procedures individually. When they arrived at the laboratory, they were greeted by one of two male or two female experimenters (who were blind to the experimental hypothesis[1]), which served as the *subtle cue manipulation*. The experimenter explained that they would complete brief questionnaires and perform a sports test based on the game of golf.

The athletic test was based on the golf task described in Stone et al. (1999). Participants first read a handout that described the athletic task as a standardized measure of sports aptitude. Ostensibly, performance on the test had been shown to correlate with actual performance on many of the physical and mental activities relevant to most college varsity sports, such as basketball, hockey and golf. At this point, the instructions changed course according to condition.

Blatant cue manipulation

Participants were randomly assigned to one of three task frame conditions. Participants in one of the two athletic ability conditions read that the test was designed to measure ''personal factors correlated with natural athletic ability''. Natural athletic ability was defined as ''one's natural ability to perform complex tasks that require hand-eye coordination, such as shooting, throwing, or hitting a ball or other moving object''. It was explained that as test difficulty increased, so would the demand on their natural athletic ability or hand-eye coordination.

[1] The experimenters were kept blind to the primary hypothesis by telling them that the purpose of the study was to investigate personality differences in reactions to how the task was framed. Thus, the experimenters were led to believe that they could not guess how a specific participant would react to the task frame manipulation and they were carefully trained to treat every participant in the same manner.

Within the two athletic ability frame conditions, those assigned to the *Gender-differences* frame were told the following: ''Now you are probably aware that there are gender differences in sports performance. Previous studies using this test of natural athletic ability have reported differences in the performance of men and women. So even though there may be gender differences on this test, we ask that you give 100% effort on the task so we can accurately measure your natural skills. Do you have any questions?''

Those in the athletic ability condition that were assigned to the *Racial-differences* frame were told the following, ''Now you are probably aware that there are racial differences in sports performance. Previous studies using this test of natural athletic ability have reported differences in the performance of Blacks and Whites. So even though there may be racial differences on this test, we ask that you give 100% effort on the task so we can accurately measure your natural skills. Do you have any questions?''

Participants randomly assigned to the *Sport psychology* control condition read that the test was designed to measure ''psychological factors correlated with general sports performance''. The handout explained that as test difficulty increased, so would the demand on the psychological factors that correlate with general sports performance.

After they read the handout, the experimenter reiterated the instructions verbally and answered questions. They were then led into an adjoining room to complete the golf-putting task.

The golf-putting task

Based on Stone et al. (1999), the task was designed to resemble a miniature golf course on which participants used a putter to hit a golf ball down a 3 ft × 10 ft stretch of carpet into a hole apparatus—an inclined felt mat with a hole 5 in. in diameter, a hole 4 in. in diameter, and a hole 3 in. in diameter. To complete each ''course layout'' in the test, participants were told the ball had to roll up the incline and stop in one of the holes.

Participants were told they would complete eight different holes that would be created by placing 2 × 4s either on or under the carpet and by moving the hole apparatus. Once the test began, the experimenter said he or she would change the putting surface according to a pre-tested pattern of increasing difficulty.

Participants were told that their goal on each course layout was to putt the ball into the smallest hole using the fewest strokes possible. In addition to the number of strokes, they were told that the hole that received the ball would be recorded, and that both strokes and the hole would be summed to yield an overall performance score for each layout.

Participants were then allowed to ''warm up'' by practicing on the first course layout three times. When finished practicing, the experimenter directed participants to the wall where the diagram of each course layout was displayed. Before they played each layout, participants were instructed to examine the diagram and estimate how many strokes they would need to complete it. They were also instructed to predict which hole the ball would stop in. Participants were instructed to make their predictions on a sheet while the experimenter set up each new layout.

After participants made their prediction for the first layout, the task proceeded with participants making a prediction for each new layout, putting until their ball stopped in a hole, and then making their predictions for the next layout, until all eight layouts had been finished. After the last putt, the experimenter announced that the study was complete, and provided participants with a full debriefing and course credit as compensation for their time.

Results

The data were initially analyzed to examine if variability due to the two different male and female experimenters influenced the results. All of the performance and self-report data were analyzed using a 3 (Blatant Cue) × 4 (Experimenter) between-subjects analysis of variance (ANOVA). No main or interactive effects were found for the experimenter variable. Thus, we collapsed this variable to reflect the gender of the experimenter in order to test the influence of the subtle cue on performance. Unless otherwise noted, all of the data were analyzed using a 3 (Blatant Cue) × 2 (Subtle Cue) ANOVA.

Achievement: strokes

The number of strokes needed to complete each of the eight holes of the golf course was summed to create one overall performance score. The ANOVA revealed only a significant main effect for the Blatant Cue manipulation, $F(2, 104) = 3.34$, $p < .04$. As seen in Table 1, a planned contrast of the mean differences between each group showed that when the task was framed as a measure of gender differences in athletic ability, female participants performed significantly worse ($M = 27.38$, $SD = 8.33$) compared to when the task was linked to racial differences in athletic ability ($M = 23.58$, $SD = 4.62$) or to sports psychology ($M = 25.03$, $SD = 5.09$), $F(1, 104) = 5.67$, $p < .02$. The difference between the racial-differences task frame and the sport psychology control condition did not approach significance, $F < 1$. The subtle cue manipulation did not mod-

Table 1
Average number of achieved and expected strokes required to complete the course for the blatant threat cue conditions

	Blatant cue			
	Gender	Race	Control	
Strokes				
Achieved	27.38[a]	23.58[b]	25.03[b]	$p < .05$
Expected	25.90	23.58	24.15	$p < .10$

Higher numbers indicate a poorer performance. Different superscripts indicate which means are significantly different from each other a $p < .05$.

erate the effect of blatant cue on achieved strokes, Blatant Cue × Subtle Cue interaction $F < 1$. This latter finding does not support the additive model of how blatant and subtle cues impact performance. The main effect for the blatant cue, however, supports both the "predominant" and "dual process" predictions. Sorting these out requires analyzing the effects of the subtle cue manipulation on achieved accuracy.

Achievement: accuracy

The hole they stopped the ball in on the final putt was analyzed by assigning the small, medium and large holes a score of 1, 2 and 3, respectively. To create an overall measure of accuracy, the scores received on each final putt were summed and averaged across the eight course layouts. The ANOVA revealed a main effect for the Subtle Cue manipulation, $F(1, 104) = 3.93$, $p < .05$, which as seen in Table 2, revealed that on average, female participants were less accurate (i.e., stopped the ball in a larger hole) when the experimenter was male ($M = 2.02$) compared to when the experimenter was female ($M = 1.88$). Neither the main effect nor the interaction with the Blatant Cue manipulation reached significance, all $ps < .12$. When put together with the data on achieved strokes, the results for achieved accuracy provide support for the dual process model over the "predominant" model of how multiple threat cues impact performance.

Performance expectancies

Participants' predictions for the number of strokes they would need to complete each hole were summed and subjected to the ANOVA. The analysis revealed only a marginal main effect for the Blatant cue manipulation, $F(2, 104) = 2.26$, $p < .10$. The data shown in Table 1 mirrored the number of strokes required to finish the course, with participants told the task measured gender differences in athletic ability making somewhat higher predictions ($M = 25.90$) than those told the task measured racial differences in athletic ability ($M = 23.18$) or sports psychology ($M = 24.15$). No other effects approached significance.

A similar analysis of which hole participants predicted that the ball would stop in revealed only a significant main effect for the Subtle Cue manipulation, $F(1, 104) = 7.22$, $p < .008$. As shown in Table 2, female participants predicted they would be less accurate when the experimenter was male ($M = 2.22$) compared to female ($M = 2.20$). Neither the main effect nor the interaction with the blatant cue manipulation reached significance, all $ps < .12$. As with the achievement scores, the two sources of threat exerted independent influences on expectancies for strokes and accuracy on the overall course.

Correlational analyses

Examination of the correlations within the stroke and accuracy performance measures revealed that in general, expectancies and achievement were moderately related. For example, as seen in Table 3, the correlation between expected and achieved strokes was moderate and significant, $r(110) = .44$, $p < .0001$, as was the correlation between expected and achieved accuracy, $r(110) = .60$, $p < .0001$. However, the performance measures were relatively less related to each other. For example, the correlation between achieved strokes and achieved accuracy was significant but small, $r(110) = -.28$, $p < .003$, while expected strokes and expected accuracy were not related to each other, $r(110) = .03$, $p > .72$. As predicted by a dual process model, these patterns indicate that the two measures of performance were relatively independent of each other at the within subjects level.

Discussion

The overall results provide support for a dual process model of how multiple stereotype threat cues impact performance. When both blatant and subtle cues signal the potential for a negative ingroup stereotype to characterize the meaning of a poor performance, each source can induce relatively independent processes that impact different aspects of performance. The data suggest that blatant cues, such as framing the task as a measure of a negative ingroup stereotype, induced a prevention focus orientation whereby targets became more conservative in their approach to the task. However, their prevention strategies tended to interrupt the fluid processes that facilitate successful performance on this aspect of the task, and they performed more poorly, even when an ingroup member (i.e., a female experimenter) blatantly made the negative stereotype salient.

Table 2
Average achieved and expected accuracy on the last putt of each course layout for the subtle threat cue conditions

	Subtle cue	
	Male experimenter	Female experimenter
Accuracy		
Achieved	2.05	1.91
Expected	2.23	2.02

Lower numbers indicate higher accuracy (smaller hole).

Table 3
Bivariate correlations between the achieved and expected performance measures

	1	2	3	4
1. Achieved strokes	—			
2. Expected strokes	.44***	—		
3. Achieved accuracy	−.28**	−.10	—	
4. Expected accuracy	−.21*	.03	.60***	—

* $p < .01$.
** $p < .005$.
*** $p < .0001$.

The effect of the blatant cue on performance also supports the hypothesized link between athletic ability and negative gender stereotypes about female athletes. Specifically, White female participants required more strokes to finish the course, and therefore performed more poorly, when the task was framed as measuring gender differences in athletic ability, compared to when the task was framed as measuring racial differences in athletic ability or a non-stereotype relevant attribute (i.e., sports psychology). This is consistent with the hypothesis that negative group comparisons to men represent a more prominent concern for White females who play sports relative to negative group comparisons to females from other racial or ethnic groups. Given the long history of gender differences and inequities at all levels of international sports competition, it is likely that poor athletic ability operates as a "universal" negative stereotype about female athletes, which when made salient by blatant cues in the performance context, can reduce their performance in sports.

Also as predicted by the dual process model, the outgroup gender of the experimenter caused participants to perform less accurately on the final putt, and this occurred regardless of how the task was framed. This supports the hypothesis that when subtle threat cues are simultaneously present in the situation, they are capable of influencing performance through a separate mechanism. Subtle cues appear to operate primarily as distractions that create cognitive load demands, which in turn, influence those aspects of task performance that depend upon working memory capacity. Trying to stop the ball in the smallest hole on the last putt requires substantial concentration, but if the cognitive processes are disrupted by thoughts about how one is being evaluated by an outgroup member, accuracy can suffer. Thus, when more than one source of stereotype threat is present in a performance situation, each source can impact different aspects of performance through different processes (e.g., Strack & Deutsch, 2004).

The pattern of correlations between the two achievement and expectancy measures provided further evidence for a dual process interpretation of the multiple cue effects. First, the small correlation observed between achieved strokes and achieved accuracy, and the zero-order correlation between expected strokes and expected accuracy, indicates that these two aspects of performance were processed somewhat independently of each other. However, the moderate correlations between expected and achieved strokes, and between expected and achieved accuracy on the final putt, suggests that participants were consciously and deliberating processing their progress toward these goals. This is not surprising given the sequential nature of the task; for each hole on the course, participants started by making a prediction for the number of strokes they would use and also for how accurate they would be on the last putt. They then played the hole, and subsequently used their achieved strokes and accuracy from the previous hole to generate predictions for these outcomes on the next hole. Nevertheless, the reciprocation between achievement and expectancy on strokes and accuracy was negatively impacted by different threat cues, suggesting that these conscious strategic processes were operating through separate channels. The threat induced by the blatant cue caused lower expectations and performance on one set of task-relevant skills, while the threat induced by the subtle cue lowered expectations and performance on a different set of task-relevant skills.

If so, then the observed relationship between expectancy and performance also suggests that the dual process effect of multiple threat cues may be limited to situations in which each cue is processed consciously and deliberately. An intriguing possibility is that under some conditions, targets may process one or more multiple threat cues in a relatively heuristic or implicit manner. Such may be the case, for example, on tasks like a math test or other cognitive performance measure, during which targets are not asked to predict their performance on each item before they attempt it. When one or more cues are processed through less deliberate mechanisms, the impact of multiple cues may operate as predicted by a predominant or additive model. Thus, an important direction for future research is to explore how the presence of multiple threat cues influence performance on other types of tasks while varying the type of cue and how it is processed.

Another potential limitation to the current research is that it focused on novice golfers. Beilock and colleagues (2006) have argued that stereotype threat can impact the performance of experts and novices on tasks that require sensimotor skills through different mechanisms. Specifically, because the lack of experience of novice golfers requires them to concentrate more attention on their execution of the task, stereotype threat cues are most likely to reduce their performance through distraction processes. In contrast, because the performance of experts is more proceduralized and automatic, the salience of a negative stereotype is more likely to reduce performance by increasing their attention to the task via explicit monitoring or "choking under pressure" processes. Indeed, studies have shown that when a single blatant threat cue is made salient before a golf-putting task, the performance of experts is reduced, unless they simultaneously perform a second task that distracts them from monitoring their execution of the primary task (Beilock et al., 2006). This might predict that when both blatant and subtle threat cues are salient, the distracting presence of the subtle threat cue could improve the performance of experts on a sensimotor task like golf putting. However, we believe subtle threat cues distract because they represent a source of ambiguity about threat; they attract attention because they represent a separate source of evaluation apprehension. Thus, the distraction processes induced by subtle threat cues are different than those induced by backwards counting or other memory intensive tasks. We might then expect multiple threat cues to cause experts to perform as poorly as novices, assuming that both groups are highly engaged in doing well on the task (Stone, 2002; Stone et al., 1999).

Finally, if multiple threat cues can operate as independent sources of concern, then our findings have important implications for reducing the effect of negative stereotypes on the performance of targets. For example, the data suggest that the presence of a positive source cue, like an ingroup role model, may not overcome the effect of a blatant threat cue (Marx & Roman, 2002; Steele et al., 2002). Whereas it is possible that our female experimenters were not perceived to be the type of ''athletically gifted'' role models that may imbue a sense of confidence in novice female athletes (Marx & Roman, 2002), another determining factor may be the attribute under investigation. For example, Li and colleagues (2004) reported that females are more likely to view athleticism as a fixed entity than men. As the research by Aronson and colleagues (2002) showed, viewing performance in a domain as a fixed entity induces higher susceptibility to stereotype threat compared to perceived the domain as malleable. Thus, if athletic ability is perceived by women to be immutable to effort, blatant cues may cause them to suffer stereotype threat and perform more poorly even when in the presence of a female role model. Overcoming this problem likely necessitates framing gender differences in athletic ability as amendable through effort or as irrelevant to how performance in sports is evaluated.

In conclusion, sports, like the academic domains of math, computer science and engineering, have a long history of conveying the message that women are less capable than men. Consequently, the domain of sports is replete with negative stereotypes about the athletic ability of females that place them at risk for stereotype threat when they perform a sports task. The current data show that this can occur in two different ways: By the presence of a male who is in a position to evaluate their performance, and by explicit statements about the poor athletic ability of females. Importantly, each source of threat appeared to operate independent of the other to simultaneously impact different aspects of performance, and potentially through different mechanisms. These dual processes suggest that in some performance situations, stigmatized targets may be forced to cope with more than one social identity threat at a time while they attempt to show their potential.

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