

1 Introduction

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5 Stereotype threat is one of the most widely studied social psychological
6 concepts of the past 20 years. In this introductory chapter, we provide a
7 broad overview of the theory and introduce the goals of this volume. The
8 significance of the theory lies in its ability to offer a more optimistic account
9 of group differences in performance. By side-stepping the nature–nurture
10 debate entirely, stereotype threat seeks to identify how factors in the imme-
11 diate performance situation contribute to—if not create—the appearance
12 of systematic differences in ability. Interest in these effects is not restricted
13 to academic circles but has gained broad recognition in the popular press
14 with applications beyond education to intergroup interactions, organiza-
15 tional behavior, and clinical diagnoses. We review the four main sections of
16 the book: an examination of basic processes that trigger and mediate how
17 negative stereotypes impair performance, a discussion of recent theoretical
18 extensions to the original formulation of the theory, a review of the variety
19 of groups in which stereotype threat has been documented, and a descrip-
20 tion of how the theory can be applied to alleviate the debilitating effects that
21 negative stereotypes can have in academic contexts. The book is intended
22 for anyone with an interest in the behavioral science of performance,
23 whether from an academic, organizational, or social policy perspective. To
24 facilitate application of basic theory to the field, each chapter provides
25 policy recommendations stemming from the research reviewed. To inspire
26 future research, we conclude the chapter with a review of unanswered ques-
27 tions that await further inquiry.

28 **Keywords:** Stereotype threat, stigma, academic performance, black–white
29 test score gap, male–female science gap

30 The 21st century has brought with it unparalleled levels of diversity in the classroom
31 and the workforce. It is now not uncommon to see in elementary, high school, and
32 university classrooms—not to mention boardrooms and factory floors—a global
33 mixture of ethnicities, races, genders, and religious affiliations. This is the case in
34 countries all over the globe, and is only enhanced by technological advances that
35 enable global communication, collaboration, and education. In addition, many
36 countries have come to embrace not only the idea of basic human rights but also
37 egalitarian principles of equal opportunity extended to each and every member of
38 that society. With these increases in academic and economic opportunities came the

1 promise of not only greater intergroup harmony, but also the elimination of group
2 disparities in academic performance, career opportunities, and levels of advance-
3 ment. This promise has not been met.

4 Even a quick glance at national statistics reveals sobering results. According
5 to the most recent data collected by the U.S.-based National Assessment of
6 Educational Progress (2009), blacks and Latinos continue to trail whites in stan-
7 dardized measures of reading and mathematics at all age levels. Although this
8 achievement gap has narrowed since these data were first collected in 1973, the
9 race gap has not changed in any significant way since about 1990. Despite ever-
10 increasing opportunities, then, measurable progress has not been made in perfor-
11 mance in nearly two decades. Lest one concludes that this is an American
12 phenomenon, data indicate that similar gaps exist worldwide, whether black-
13 white achievement gaps in Canada (Duffy, 2004), socioeconomic gaps in France
14 (Croizet & Millet, 2011, Chapter 12, this volume), Christian-Muslim gaps in the
15 Netherlands (Levels & Dronkers, 2008), or Ashkenazi-Sephardic gaps in Israel
16 (Peleg & Adler, 1977).

17 Data reveal some similarities in the gender gap in math and science achievement
18 and engagement. Although there is only a narrow gender gap in standard measures
19 of math achievement in high school (National Assessment of Educational Progress,
20 2009), this gap is large and significant on university entrance tests like the Scholastic
21 Assessment Test (SAT); College Board, 2010). What is more problematic, perhaps,
22 is that this gender gap has not diminished since 1994, despite women now being
23 better high school students overall, over-representing men in the top 10% of their
24 2010 classes. Women also remain a minority in the fields of science, technology,
25 engineering, and mathematics, earning about 25% of the highest degrees in these
26 fields despite approaching equality with men in the fields of medicine, business, and
27 law. Even in fields in which women are more evenly represented, there is still a dearth
28 of women in top leadership positions (Eagly & Carli, 2007).

29 ■ WHAT CAUSES THE ACHIEVEMENT GAP?

30 Standard explanations for these disparities, vehemently debated in the scientific
31 community and popular press, typically invoke either nature or nurture, either bio-
32 logical and genetic explanations, or ones based on culture and socialization. In their
33 controversial book, *The Bell Curve*, for example, Herrnstein and Murray (1994)
34 claim that the race gap in academic achievement has at its root real biological differ-
35 ences that contribute to variation in IQ. Blacks and Latinos, in other words, perform
36 worse than whites because they are genetically endowed with inferior intelligence.
37 Similar suggestions have been made to explain women's under-representation in
38 math and sciences (Benbow & Stanley, 1982), with Harvard University president
39 Lawrence Summers' controversial allusions to women's inferior intrinsic aptitude
40 being only the most high-profile of recent examples.

41 On the nurture side of the debate is the view that racial, ethnic, and religious
42 minorities and women are products of sociocultural environments that frustrate

1 the development of the appropriate skills, values, and motivation needed for
 2 success. For instance, being raised in a low-income family—which is highly associ-
 3 ated with race—often means having less access to educational resources, in addition
 4 to limited access to health care and nutrition, both of which contribute to lower
 5 academic performance (e.g. Kleinman et al., 2002; Kozol, 1991; see Croizet &
 6 Millet, 2011, Chapter 12, this volume). Cultural and socialization pressures may
 7 also contribute to the gap. Mothers, for example, are more likely to encourage their
 8 sons than daughters to work hard in math and science, despite evidence indicating
 9 that their daughters are as skilled in these domains as their sons (Eccles, Jacobs, &
 10 Harold, 1990).

11 Although these existing explanations differ along a continuum of nature versus
 12 nurture, they share a presumption that a majority of our population, due to their
 13 gender, racial, or ethnic background, lacks the potential to achieve academic and
 14 career success to the same degree as their white (and Asian) male counterparts. The
 15 message coming from these explanations, in other words, is that, whether due to
 16 biology or the accrued effects of upbringing, people belonging to marginalized
 17 groups have less ability. These explanations also share an assumption that the
 18 evidence most often the subject of debate—scores on standardized tests of intelli-
 19 gence or achievement—is a valid and unbiased indicator of a person’s true ability.
 20 Indeed, the assessment literature has taken great pains to eliminate cultural bias in
 21 the selection and construction of test items, and research suggests that race differ-
 22 ences persist even after controlling for socioeconomic status (Loehlin, Lindzey, &
 23 Spuhler, 1975).

24 But the theory that is the focus of the present volume assumes that even cultur-
 25 ally fair and valid measures can still be subject to variables that systematically impair
 26 performance for some individuals and not others. Even if we could match students
 27 on genetic predispositions, educational background, and personal values, *something*
 28 in the situation itself—be that the testing center, the laboratory, or the boardroom—
 29 holds marginalized groups back from reaching their full potential.

30 This *something* is the existence of social stereotypes. During the past 15 years,
 31 research suggests that the mere existence of stereotypes asserting the intellectual
 32 inferiority of marginalized groups creates a threatening intellectual environment for
 33 stigmatized individuals—a climate in which anything they say or do could be inter-
 34 preted through the lens of low expectations. This *stereotype threat* (Steele, 1997) can
 35 ultimately interfere with intellectual functioning and academic engagement, setting
 36 the stage for later differences in educational attainment, career choice, and job
 37 advancement. The edited volume you have in your hand presents a focused look on
 38 this situational explanation, on stereotype threat.

39 ■ STEREOTYPE THREAT

40 *Stereotype threat* (Steele & Aronson, 1995) is defined as a situational predicament in
 41 which individuals are at risk, by dint of their actions or behaviors, of confirming
 42 negative stereotypes about their group. It is the resulting sense that one might be

1 judged in terms of a negative stereotype that is “in the air” (Steele, 1997). For exam-
2 ple, because African Americans are well aware of the negative stereotypes impugn-
3 ing their intellectual ability, whenever they are in a situation requiring them to
4 display said ability—say, a standardized testing situation—they may fear confirming
5 the stereotype. Ironically, this fear of stereotype confirmation can hijack the cogni-
6 tive systems required for optimal performance and result in low test performance
7 (Schmader, Johns, & Forbes, 2008; see Schmader & Beilock, 2011, Chapter 3, this
8 volume). In the original studies documenting this effect, Steele and Aronson (1995)
9 endeavored to show that if situations themselves are creating or magnifying group
10 differences in performance, then black college students should perform much
11 better when the situation is cast in a less stereotype relevant way. Indeed, African
12 Americans in their sample performed much better on a set of verbal ability problems
13 when they were described as a simple laboratory task than when they were described
14 as a diagnostic measure of intelligence.

15 Research over the past 15 years has shown, time and time again, that stereotype
16 threat contributes to low performance not only among African Americans (Steele &
17 Aronson, 1995), but also Latinos (Gonzales, Blanton, & Williams, 2002) and the
18 poor in standardized testing (Croizet & Millet, 2011, Chapter 12, this volume),
19 women in math and science (Logel, Peach & Spencer, 2011, Chapter 10, this volume),
20 the elderly in memory (Chasteen, Kang, & Remedios, 2011, Chapter 13, this
21 volume), and whites in athletics (Stone, Chalabaev, & Harrison, 2011, Chapter 14,
22 this volume). This is a robust phenomenon, then, well-replicated in different groups,
23 on different tasks, and in different countries. Even groups that are not traditionally
24 marginalized in society (e.g., white men) can exhibit these effects if they are led
25 to believe that their performance on a math test is being used to examine Asian
26 superiority at math (Aronson et al., 1999).

27 The phenomenon of stereotype threat has proved to be incredibly popular in
28 academic psychology as well as among the lay public. The first empirical article
29 on stereotype threat was published in the *Journal of Personality and Social*
30 *Psychology* in 1995, by Claude Steele and Joshua Aronson and is now widely hailed
31 as a modern classic. For example, when the editors of *Psychological Inquiry* asked
32 prominent social psychologists to nominate articles published in the 1990s that are
33 now considered classics of the field, more than one contributor nominated the Steele
34 and Aronson (1995) paper (Devine & Brodish, 2003; Fiske, 2003). And it is no
35 wonder. Since the appearance of this first paper, stereotype threat has become one of
36 the most vigorously explored topics of the past decade in social psychology.
37 Searching for metrics of impact in October 2010 confirms the importance of this
38 seminal work. According to *PsycInfo*, the Steele and Aronson article has been cited
39 over 1,200 times, with over 450 separate publications having “stereotype threat” as
40 keywords. A Google search with the keywords “stereotype threat” generates 66,000
41 unique hits; an entire website is devoted to summarizing the empirical science on
42 the topic (www.ReducingStereotypeThreat.org), and dozens of symposia have been
43 centered on the topic of stereotype threat in conferences worldwide. There is no

1 indication that this frantic rate of citation will abate; to the contrary, it is likely
2 to increase.

3 But the interest in stereotype threat is not confined to academic debates among
4 social psychologists. The audience for this research is broad and extends beyond
5 academic psychology to other disciplines and beyond the walls of academia alto-
6 gether to members of the public. The work has been the subject of essays in
7 the *Atlantic Monthly* and *New Yorker*, featured in a segment on the television show
8 *20/20*, and discussed in articles in the *New York Times*, *Washington Post*, *Los Angeles*
9 *Times*, and the *Wall Street Journal*, among others. It has also sparked research in other
10 disciplines on issues ranging from race differences in athletic performance to the
11 best methods for administering diagnostic tests when studying cognitive deficits
12 due to aging, disease, or drug use. In 2005, when the National Academies of Science
13 held a convocation to discuss research on Biological, Social, and Organizational
14 Contributions to Science and Engineering Success, stereotype threat was one of the
15 topics of interest.

16 Why has this topic been of so much interest? According to Fiske (2003), one
17 of the reasons an idea takes hold is that it makes people uncomfortable, pointing to
18 a natural hole in the literature that people did not realize even existed. There
19 are other reasons, of course. Part of the enthusiasm, we believe, stems from the
20 fact that the theory of stereotype threat avoids the nature versus nurture trap by
21 suggesting that situations themselves can bring about apparent group differences in
22 performance. Although the existence of stereotype threat does not preclude other
23 factors that could also contribute to group differences in performance, it avoids
24 labeling people with trait-like, immutable abilities, which, for underperforming
25 groups, can only lead to frustration and disidentification (Dweck, 1999). Instead, it
26 points to the power of the situation—the very basis of much social-psychological
27 theorizing—by suggesting that the mere existence and awareness of cultural stereo-
28 types creates a fundamentally different experience for those who are stereotyped to
29 be less competent, an experience that systematically impairs their ability to perform
30 up to their potential. The appealing consequence of this situational approach is that
31 the performance of under-represented groups can be increased, sometimes dramati-
32 cally, by relatively simple interventions designed to remove those threats. So, now
33 we can do something about underperformance. Although we cannot change peo-
34 ple's biology or upbringing, we can change the situations they find themselves in.
35 And more and more, research is doing just this, finding that even subtle changes to
36 situations can have profound effects on the real-life performance of traditionally
37 underperforming groups (see Cohen, Purdie-Vaughns, & Garcia, 2011, Chapter 18,
38 this volume).

39 Certainly another aspect of its appeal is the phenomenon's broad applicability.
40 Not long after publication of this first paper, researchers started noticing that the
41 theory could be applied to many different groups and to many different situations.
42 So, there is now evidence that stereotype threat could be used to explain the perfor-
43 mance not only of blacks and women in school, but also of gay daycare workers

1 (Bosson, Haymovitz, & Piel, 2004), female automobile drivers (Yeung & Von
 2 Hippel, 2008), and white athletes (Stone, Chalabev, & Harrison, 2011, Chapter 14,
 3 this volume). We also know that threat can be elicited in a broad range of situational
 4 cues, from the mere presence of men in a room (Inzlicht & Ben-Zeev, 2000) to the
 5 content of television commercials (Davies, Spencer, Quinn, & Gerhardstein, 2002;
 6 see Murphy & Jones Taylor, 2011, Chapter 2, this volume). This broad applicability
 7 then spawned more research, the most important of which may be how and why
 8 stereotype threat operates as it does, exploring not only the psychological mecha-
 9 nisms (Schmader & Beilock, 2011, Chapter 3, this volume), but also the biological
 10 ones (Berry Mendes & Jamieson, 2011, Chapter 4, this volume). Despite this broad
 11 appeal, however, not one single book or edited volume has been devoted to stereo-
 12 type. Not until now, that is.

13 ■ ORGANIZATION OF THE BOOK

14 *Stereotype Threat: Theory, Process, and Application* offers to fill this need by examining
 15 this popular topic not only at the level of basic processes and theory, but also at the
 16 level of application in the real world. It provides a contemporary and systematic treat-
 17 ment of research on the impact of negative stereotypes and devalued social identities
 18 on performance, engagement, sense of belonging, and self-control. We believe that
 19 now is the right time for such an edited volume. Work on the theory is sufficiently
 20 mature—we have insights into the mechanics of the process, including issues of
 21 mediation and moderation—and so perhaps the time has come to take a step back to
 22 reflect on what we have accomplished thus far and how to move forward in the future.
 23 It is our hope that this volume will afford you the opportunity to do just that.

24 *Stereotype Threat: Theory, Process, and Application* is organized into four sections,
 25 containing ~~two to five~~ chapters each. The first section, *Basic Processes*, introduces
 26 definitions and conceptualizations of stereotype threat, including issues related to
 27 environmental triggers, questions of mechanism, and the biology and neuroscience
 28 of threat. Section two, *Theoretical Extensions*, explores how the initial theory has
 29 been refined to acknowledge stereotype threats (plural) as opposed to threat (singu-
 30 lar), how threat affects a sense of belonging, how it has implications that extend
 31 beyond the stereotyped domain, and the comparison of performance impairments
 32 due to motivational versus automated processes. Section three, *Manifestations of*
 33 *Stereotype Threat*, shows the breadth of the theory by exploring many of the different
 34 groups and performances to which the phenomenon of stereotype threat has been
 35 applied, including women in math and the workplace, athletes, the elderly, and even
 36 whites trying to control their prejudice. Section four, *Stereotype Threat in the Real*
 37 *World*, examines issues of applied importance, taking a critical approach to under-
 38 standing the extent to which stereotype threat has real-world consequences outside
 39 the lab, and the personal and institutional strategies needed to reduce stereotype
 40 threat and unlock the hidden potential of those who are socially stigmatized.
 41 Finally, the originator of the theory, Claude Steele, provides a final essay in which he
 42 reflects upon the theory, from its origin to its implication.

1 ■ INTENDED AUDIENCE AND SPECIAL FEATURES

2 We edited this book thinking that it would have a number of audiences. First, this
 3 book is for an academic audience, for whom it can serve as a handbook for not only
 4 social, developmental, and organizational psychologists, but also for other social sci-
 5 entists, such as sociologists and education researchers. This book could serve as a
 6 text in both undergraduate and graduate seminars in social psychology, education,
 7 public policy, organizational behavior, and sociology. We hope that it will also act as
 8 a source book for psychologists interested in conducting research on stereotype and
 9 social identity threat. Second, this book is also for those people who are involved in
 10 creating public policy, be that in education, immigration, or business practice. Each
 11 chapter of this book has a government policy audience in mind, with an explicit
 12 discussion of the effective strategies for equipping students and workers with tools
 13 they can use to combat the negative effects of stereotypes and suggestions for spe-
 14 cific methods and interventions that bridge the gap between theory and practice.
 15 Finally, this book is for people on the ground, the teachers and managers who want
 16 to provide a safe classroom and workplace so that their students and employees can
 17 thrive and flourish.

18 This book incorporates a number of special features that we think you will appre-
 19 ciate. First, all the chapters in this book are short, very short. Taking a page from the
 20 enormous success of the journal *Psychological Science*, we have asked (and some-
 21 times cajoled!) authors to keep their word count down. We do this because we
 22 believe that authors do their best writing and thinking when they need to get to their
 23 main points quickly. We think you'll agree that the authors have succeeded here,
 24 with the chapters being a real pleasure to read. All chapters also include short
 25 abstracts, so that even casual readers can quickly peruse chapters to find what they're
 26 looking for. Abstracts are useful, and we're unsure why it is not common custom to
 27 include them in edited books. Finally, each chapter contains what we are calling
 28 "policy boxes." These contain short paragraphs, written in plain language, describing
 29 the public policy implications of the research described in the chapter. These policy
 30 boxes are self-contained units in which the reader can quickly get a snapshot of the
 31 policy implications for each chapter, without having to dig too deeply. We hope that
 32 these will be especially useful to policy makers, to teachers and managers, and to
 33 undergraduate students.

34 ■ FUTURE DIRECTIONS

35 Over a decade of research on the phenomenon of stereotype threat has taught us a
 36 great deal about when and where it arises, the mechanisms that underlie its effects,
 37 and the ways to alleviate it. You can think of this book as a "halftime report" on the
 38 state of that research, but let's also spend a few minutes mapping out the strategy for
 39 the next stage of inquiry. Of course, doing so requires a recognition that many inter-
 40 esting lines of research are already under way that we simply didn't have the time or
 41 space to include in this volume.

1 First, stereotype threat has its roots as a theory applied to educational outcomes
2 and experiences, specifically when it comes to test performance. But there is
3 a need for more research examining other ways in which the threat of academic
4 inferiority shapes processes of identification and motivation, ultimately affecting
5 people's decisions of when to enter and exit certain academic spheres. Such research
6 needs to explore when situations of threat motivate additional effort in an attempt
7 to disconfirm the stereotype (Forbes & Schmader, 2010; Jamieson & Harkins,
8 2007) as opposed to a withdrawal of effort as a means of self-handicapping (Keller,
9 2002; Stone, 2002) or a decision to avoid that domain altogether (Cheryan,
10 Plaut, Davies, & Steele, 2009). Emerging models of the role of motivation might
11 further capitalize by considering how people negotiate a threatened sense of
12 identity (Pronin, Steele, & Ross, 2004; Rosenthal & Crisp, 2006; Rydell, McConnell,
13 & Beilock, 2009; von Hippel et al., 2005). In essence, this also touches on the
14 need for more research to distinguish self-reputational threat ("I don't want to be
15 seen stereotypically") from group-reputational threat ("I don't want to contribute
16 to a stereotype about my group"), a distinction nicely laid out in Shapiro's chapter
17 (2011, Chapter 5, this volume; see also Steele, 2011, Chapter 19, this volume).

18 Another future direction for research on stereotype threat as it is studied in edu-
19 cational contexts is to consider the role it plays not just in demonstrating perfor-
20 mance on tests, but also in learning new information. Rydell and colleagues (Rydell,
21 Rydell, & Boucher, 2010; Rydell, Shiffrin, Boucher, Van Loo, & Rydell, 2010)
22 have recent research showing learning impairments under threat that can be distin-
23 guished from effects on performance. Other recent work reveals that young girls'
24 (but not boys') math performance is predicted by the math anxiety of their female
25 teachers (Beilock, Gunderson, Ramirez, & Levine, 2010). So, gender stereotypes
26 may affect not only how academic content and strategies are learned, but also how
27 emotional reactions to that content are learned as well. The positive implication,
28 however, should be that successful role models might better model effective coping
29 strategies that counteract threat. Delineating the ways in which threat affects learn-
30 ing is an exciting new area of inquiry.

31 A third direction for future research is to expand upon our understanding of the
32 physiological and neurological mechanisms that underlie acute experiences of
33 threat. Mendes and Jamieson (2011, Chapter 4, this volume) provide the founda-
34 tional overview of research in this area. But more work is needed to then consider
35 how chronic exposure to stereotype threatening contexts could lead to negative
36 health consequences as a result of frequent activation of a stress response. Such work
37 would have implications across of a range of situations as the threat of negative ste-
38 reotypes can be encountered in any cross-group interaction (Richeson & Shelton,
39 2011, Chapter 15, this volume). New research in this area could be informed by par-
40 allel inquiries into the health consequences of having lower socioeconomic status
41 (Miller, Chen, & Cole, 2009), as some of these effects might be partly accounted for
42 by lack of resources but partly by those processes that are the focus of the volume.

43 Finally, as research on stereotype threat expands outward from an original focus
44 on academic testing, there is a greater need to understand the other consequences

1 of the basic psychological processes elicited in threat situations. Inzlicht, Tullett,
 2 and Gutsell (2011, Chapter 7, this volume) identify how the impairments to basic
 3 executive-level cognitive processes can then have implications for decision making
 4 and the control of negative or maladaptive impulses. These broader effects on self-
 5 regulatory processes have profound implications for how stereotype threat can be
 6 applied to a variety of domains in which threat effects have not yet been investigated.
 7 For example, in health care interactions, does threat experienced by stigmatized
 8 patients discussing treatment with nonstigmatized doctors impair their interpreta-
 9 tion of, as well as their ability and motivation to follow, a recommended change in
 10 health behavior? In close relationships, does the experience of stereotype threat lead
 11 to interpersonal conflict that can counteract the potential for social support from a
 12 partner? In an organizational context, how does the experience of stereotype threat
 13 affect decision making in ways that can impair productivity? Work on these broader
 14 consequences might also consider the unique ways in which threat might be experi-
 15 enced by those with concealable stigmas (Quinn, Kahng, & Crocker, 2004; Smart &
 16 Wegner, 1999). And most importantly, once identifying these effects, what remedies
 17 can be transported from the foundational work on academic interventions to
 18 alleviate threat in these broader contexts?

19 To sum up, research on stereotype threat continues to be a vibrant growth indus-
 20 try for academic research. The power of the original theory to explain the experience
 21 of being socially devalued and negatively stereotyped is still being fully realized. It is
 22 our sincere hope that reading through the compelling chapters of this book
 23 will spark your interest in expanding the theoretical and practical implications of
 24 these ideas.

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