whistling vivaldi

how stereotypes affect us and what we can do

CLAUDE M. STEELE

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Whistling Vivaldi

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WHISTLING VIVALDI

AND OTHER CLUES TO HOW STEREOTYPES AFFECT US

Claude M. Steele

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To Dorothy and, in order of their arrival in the clan,
Jory, Ben, Dayna, Sidney, Coleman, and Matthew

And to my parents, Ruth and Shelby Steele

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Whistling Vivaldi

CHAPTER 1

An Introduction: At the Root of Identity

1.

I have a memory of the first time I realized I was black. It was when, at seven or eight, I was walking home from school with neighborhood kids on the last day of the school year—the whole summer in front of us—and I learned that we "black" kids couldn't swim at the pool in our area park, except on Wednesday afternoons. And then on those summer Wednesdays, with our swimming suits wrapped tightly in our towels, we filed, caravan-style, out of our neighborhood toward the hallowed pool in the adjoining white neighborhood. It was a strange weekly pilgrimage. It marked the racial order of the time and place—Chicagoland, the 1950s and early 1960s. For me it was what the psychologist William Cross calls an "encounter"—with the very fact that there was a racial order. The implications of this order for my life seemed massive—a life of swimming only on Wednesday afternoons? Why? Moreover, it turned out to be a portent of things to come. I next found out that we black kids—who, by the way, lived in my neighborhood and who had been, until these encounters, just kids—couldn't go to the roller rink, except on Thursday nights. We could be regular people but only in the middle of the week? These segregations were hard to ignore. And mistakes were costly, as when, at thirteen, after arriving at six in the morning, I waited all day to be hired as a caddy at an area golf course, only to be told at the end of the day that they didn't hire Negroes. This is how I became aware I was black. I didn't know what being black meant, but I was getting the idea that it was a big deal.

With decades of hindsight, I now think I know what was going on. I was recognizing nothing less than a condition of life—most important, a condition of life tied to my race, to my being black in that time and place. The condition was simple enough: *if* I joined the caravan and went to the pool on Wednesday afternoons *then* I got in; *if* I went to the pool any other time, *then* I didn't get in. To my seven-or eight-year-old self, this was a bad condition of life. But the condition itself wasn't the worst of it. For example, had my parents imposed it on me for not taking out the garbage, I wouldn't have been so upset. What got me was that it was imposed on me because I was black. There was nothing I could do about that, and if being black was reason enough to restrict my swimming, then what else would happen because of it?

In an interview many years later, a college student, whom you will meet later in this book, would describe for me an experience that took a similar form. He was one of only two whites in an African American political science class composed of mostly black and other minority students. He, too, described a condition of life: if he said something that revealed an ignorance of African American experience, or a confusion about how to think about it, then he could well be seen as racially insensitive, or…worse; if he said nothing in class, then he could largely escape the suspicion of his fellow students. His condition, like my swimming pool condition, made him feel his racial identity, his whiteness, in that time and place—something he hadn't thought much about before.

From experiences like these, troubling questions arise. Will there be other conditions? How many? In how many areas of life? Will they be about important things? Can you avoid them? Do you have to stay on the lookout for them?

When I encountered my swimming pool restriction, it mystified me. Where did it come from? Conditions of life tied to identity like that still mystify me. But now I have a working idea about where they come from. They come from the way a society, at a given time, is organized around an identity like race. That organization reflects the history of a place, as well as the ongoing individual and group competition for opportunity and the good life. The way Chicagoland was organized around race in the late 1950s and early 1960s—the rigid housing segregation, the de facto school segregation, the employment discrimination, and so on—meant that black people in that time and place had many restrictive conditions of life tied to their identity, perhaps the least of which was the Wednesday afternoon swimming restriction that so worried my seven-or eight-year-old self.

This book is about what my colleagues and I call *identity contingencies*—the things you have to deal with in a situation because you have a given social identity, because you are old, young, gay, a white male, a woman, black, Latino,

politically conservative or liberal, diagnosed with bipolar disorder, a cancer patient, and so on. Generally speaking, contingencies are circumstances you have to deal with in order to get what you want or need in a situation. In the Chicagoland of my youth, in order to go swimming I had to restrict my pool going to Wednesday afternoons. That's a contingency. In his African American political science class, my interviewee had the added pressure that his ignorance could cause him serious disapproval. That, too, is a contingency. What makes both of these contingencies identity contingencies is that the people involved had to deal with them because they had a particular social identity in the situation. Other people in the situation didn't have to deal with them, just the people who had the same identity he had. This book examines the role these *identity contingencies* play in our lives, in the broader society, and in some of society's most tenacious problems.

Now, of course, ours is an individualistic society. We don't like to think that conditions tied to our social identities have much say in our lives, especially if we don't want them to. We have a creed. When barriers arise, we're supposed to march through the storm, picking ourselves up by our bootstraps. I have to count myself a subscriber to this creed. But this book offers an important qualification to this creed: that by imposing on us certain conditions of life, our social identities can strongly affect things as important as our performances in the classroom and on standardized tests, our memory capacity, our athletic performance, the pressure we feel to prove ourselves, even the comfort level we have with people of different groups—all things we typically think of as being determined by individual talents, motivations, and preferences.

The purpose of this book is nothing less than to bring this poorly understood part of social reality into view. I hope to convince you that ignoring it—allowing our creed of individualism, for example, to push it into the shadows—is costly, to our own personal success and development, to the quality of life in an identity-diverse society and world, and to our ability to fix some of the bad ways that identity still influences the distribution of outcomes in society.

How do identity contingencies influence us? Some constrain our behavior down on the ground, like restricted access to a public swimming pool. Others, just as powerful, influence us more subtly, not by constraining behavior on the ground but by putting a threat in the air.

2.

At the center of this book is a particular kind of identity contingency, that of

stereotype threat. I believe stereotype threat is a standard predicament of life. It springs from our human powers of intersubjectivity—the fact that as members of society we have a pretty good idea of what other members of our society think about lots of things, including the major groups and identities in society. We could all take out a piece of paper, write down the major stereotypes of these identities, and show a high degree of agreement in what we wrote. This means that whenever we're in a situation where a bad stereotype about one of our own identities could be applied to us—such as those about being old, poor, rich, or female—we know it. We know what "people could think." We know that anything we do that fits the stereotype could be taken as confirming it. And we know that, for that reason, we could be judged and treated accordingly. That's why I think it's a standard human predicament. In one form or another—be it through the threat of a stereotype about having lost memory capacity or being cold in relations with others—it happens to us all, perhaps several times a day.

It is also a threat that, like the swimming pool restriction, is tied to an identity. It is present in any situation to which the stereotype is relevant. And this means that it follows members of the stereotyped group into these situations like a balloon over their heads. It can be very hard to shake.

Consider the experience of Brent Staples, now a columnist for the *New York Times*, but then a psychology graduate student at the University of Chicago, a young African American male dressed in informal student clothing walking down the streets of Chicago's Hyde Park neighborhood. In his own words:

> I became an expert in the language of fear. Couples locked arms or reached for each other's hand when they saw me. Some crossed to the other side of the street. People who were carrying on conversations went mute and stared straight ahead, as though avoiding my eyes would save them….
> I'd been a fool. I'd been walking the streets grinning good evening at people who were frightened to death of me. I did violence to them by just being. How had I missed this…
> I tried to be innocuous but didn't know how…. I began to avoid people. I turned out of my way into side streets to spare them the sense that they were being stalked…. Out of nervousness I began to whistle and discovered I was good at it. My whistle was pure and sweet—and also in tune. On the street at night I whistled popular tunes from the Beatles and Vivaldi's *Four Seasons*. The tension drained from people's bodies when they heard me. A few even smiled as they passed me in the dark.

(Chapter 01)

Staples was dealing with a phantom, a bad stereotype about his race that was in the air on the streets of Hyde Park—the stereotype that young African American males in this neighborhood are violence prone. People from other groups in other situations might face very different stereotypes—about lacking math ability rather than being violence prone for example—but their predicaments would be the same. When they were in situations where those stereotypes could apply to them, they understood that one false move could cause them to be reduced to that stereotype, to be seen and treated in terms of it. That's stereotype threat, a contingency of their identity in these situations.

Unless, as Staples discovered, they devised a way to deflect it. Staples whistled Vivaldi, by his own account a very good version of it. What would that do for him? Would it improve his attitude toward others on the street, make him more understanding? Probably not. What it did for sure was change the situation he was dealing with. And how it did this illustrates nicely the nature of stereotype threat. In a single stroke, he made the stereotype about violence-prone African American males less applicable to him personally. He displayed knowledge of white culture, even "high white culture." People on the street may not have recognized the Vivaldi he was whistling, but they could tell he was whistling classical music. This caused him to be seen differently, as an educated, refined person, not as a violence-prone African American youth. Such youths don't typically walk down the street whistling classical music. While hardly being aware of it, people drop the stereotype of violence-proneness as the lens through which they see him. He seems less threatening. People don't know who he is; but they know he isn't someone to fear. Fear fades from their demeanor. Staples himself relaxes. The stereotype in the air that threatened him is fended off. And the change in the behavior of those on the street, and in his own behavior, reveals the power that a mere stereotype—floating in the air like a cloud gathering the nation's history—was having on everyone all along.

Whistling Vivaldi is about the experience of living under such a cloud—an experience we all have—and the role such clouds play in shaping our lives and society.

3.

Suppose you are invited into a psychology laboratory and asked to play ten holes of golf on a miniature course that has been set up in a small room. Suppose also

that you are a white college student, reasonably athletically inclined. Now suppose that just as you are getting the feel of the golf clubs, you are told that the golf task is part of a standardized sports psychology measure called the Michigan Athletic Aptitude Test (MAAT), which measures “natural athletic ability.” How well do you think you’d do? Would being told that the golf task measures natural athletic ability make a difference?

A group of social psychologists at Princeton University led by Jeff Stone did exactly this experiment several years ago. They found something very interesting: white students who were told the golf task measured natural athletic ability golfed a lot worse than white students who were told nothing about the task. They tried just as hard. But it took them, on average, three strokes more to get through the course.

What was it about thinking of the task as a measure of natural athletic ability that so strikingly undermined their performance?

Jeff and his colleagues reasoned that it had something to do with their being white. In the terms I have been using, it had to do with a contingency of white identity that comes to bear in situations where natural athletic ability is being evaluated. This contingency comes from a broadly known stereotype in this society that, compared with blacks at least, whites may have less natural athletic ability. Participants in Jeff’s experiment would know this stereotype simply by being members of this society. They might not believe it. But being told that the golfing task measured the very trait their group was stereotyped as lacking, just before they began the task, could put them in a quandary: their frustration on the task could be seen as confirming the stereotype, as a characterization both of themselves and of their group. And this, in turn, might be upsetting and distracting enough to add an average of three strokes to their scores.

The stereotype about their group, and the threatening interpretation of their golf frustration that it posed, is not a contingency like the swimming pool restriction of my youth that directly affected behavior. It imposed no extra restrictions on their golfing, or any material impediments. But it was nonetheless a contingency of their identity during the golf task. *If* they experienced frustration at golf, *then* they could be confirming, or be seen to be confirming, the unsavory stereotype. *If* they didn’t experience frustration at golf, *then* they didn’t confirm the racial stereotype. This was an extra pressure they had to deal with during the golfing task, for no other reason than that they were white. It hung over them as a threat in the air, implying that one false move could get them judged and treated as a white kid with no natural athletic ability. (You will learn later in the book how my colleagues and I came to call this kind of threat in the air simply *stereotype threat*.)

With this reasoning in tow, Jeff and colleagues started asking more questions.

If the mere act of telling white Princeton students that their golfing measured natural athletic ability had caused them to golf poorly by distracting them with the risk of being stereotyped, then telling black Princeton students the same thing should have no effect on their golfing, since their group isn't stereotyped in that way. And it didn't. Jeff and his colleagues had put a group of black Princeton students through the same procedure they'd put the white students through. And, lo and behold, their golfing was unaffected. They golfed the same whether or not they'd been told the task measured natural athletic ability.

Here was more evidence that what had interfered with white students' golfing, when it was seen to measure natural athletic ability, was a distracting sense of threat arising from how whites are stereotyped in the larger society.

But Jeff and his research team weren't satisfied. They devised a still cleverer way to make their argument.

They reasoned that if group stereotypes can really set up threats in the air that are capable of interfering with actions as concrete as golfing for entire groups of people—like the stereotype threat Staples had to contend with on the streets of Hyde Park—then it should be possible to set up a stereotype threat that would interfere with black students' golfing as well. All they'd have to do was represent the golfing task as measuring something related to a bad stereotype of blacks. Then, as black participants golfed, they'd have to fend off, like whites in the earlier experiment, the bad stereotype about their group. This added pressure might hurt their golfing.

They tested this idea in a simple way. They told new groups of black and white Princeton students that the golf task they were about to begin was a measure of "sports strategic intelligence." This simple change of phrase had a powerful effect. It now put black students at risk, through their golfing, of confirming or being seen to confirm the ancient and very bad stereotype of blacks as less intelligent. Now, as they tried to sink their putts, any mistake could make them feel vulnerable to being judged and treated like a less intelligent black kid. That was a heavy contingency of identity in this situation indeed, which might well cause enough distraction to interfere with their golfing. Importantly, this same instruction freed white students of stereotype threat in this situation, since whites aren't stereotyped as less intelligent.

The results were dramatic. Now the black students, suffering their form of stereotype threat during the golfing task, golfed dramatically worse than the white students, for whom this instruction had lifted stereotype threat. They took, on average, four strokes more to get through the course.

Neither whites, when the golfing task was represented as a test of natural athletic ability, nor blacks, when it was represented as a test of sports strategic intelligence, confronted a directly interfering contingency of identity in these experiments—nothing that directly affected their behavior like a swimming pool restriction. The contingencies they faced were threats in the air—the threat that their golfing could confirm or be seen to confirm a bad group stereotype as a characterization of their group and of themselves. Still, it was a threat with a big effect. On a course that typically took between twenty-two and twenty-four strokes to complete, it led whites to take three more strokes to complete it, and blacks to take five more strokes to complete it.

At first glance, one might dismiss the importance of something "in the air" like stereotype threat. At second glance, however, it's clear that this threat can be a tenacious force in our lives. Staples had to contend with it every time he walked down the streets of his own neighborhood. White athletes have to contend with it in each competition, especially against black athletes. Think of the white athlete in a sport with heavy black competition. To reach a high level of performance, say, to make it into the National Basketball Association, which is dominated by black players, the white athlete would have to survive and prosper against a lifelong gauntlet of performance situations loaded with this extra race-linked threat. No single good athletic performance would put the stereotype to rest. The effort to disprove it would be Sisyphean, reemergent at each important new performance.

The aim of this book is not to show that stereotype threat is so powerful and persistent that it can't be overcome. Quite the contrary. Its goal is to show how, as an unrecognized factor in our lives, it can contribute to some of our most vexing personal and societal problems, but that doing quite feasible things to reduce this threat can lead to dramatic improvements in these problems.

4.

Now suppose it wasn't miniature golf that you were asked to perform when you arrived at a psychology experiment, and suppose it wasn't your group's athletic ability that was negatively stereotyped in the larger society. Suppose it was difficult math problems that you were asked to solve on a timed standardized test, and suppose that it was your group's math ability that was negatively stereotyped in the larger society. In other words, suppose you were an American woman showing up for an experiment involving difficult math.

Would the stereotype threat that is a contingency of your gender identity in

math-related settings be enough to interfere with your performance on the test? Would you be able to just push through this threat of being seen stereotypically and perform well anyway? Or would the very effort to push hard on a timed test be distracting enough to impair your performance despite the extra effort? Would you experience this threat, this contingency of identity, every time you tried difficult math in settings with males around? Would this contingency of identity in math settings become frustrating enough to make you avoid math-related college majors and careers? Would women living in a society where women's math ability is not negatively stereotyped experience this threat? Would their scores be better?

Or suppose the test you were asked to take wasn't the Michigan Athletic Aptitude Test but was the SAT, and suppose the negative stereotype about your group wasn't about athletic ability, or even about math ability, alone, but about scholastic ability in general. Again, would the stereotype threat you experience as a contingency of your identity in scholastic settings be enough to interfere with your performance on this test? Does the threat cause this interference by diverting mental resources away from the test and onto your worries? Would the stereotype threat you experience in scholastic settings affect other experiences as well, such as your classroom performance and your comfort interacting with teachers, professors, teaching assistants, and even other students not in your group? Would this contingency of identity make these settings so frustrating for you that you might try to avoid them in choosing a walk of life?

The purpose of this book is to describe the journey that my colleagues and I have taken in formulating these and related questions and then in systematically trying to answer them over the past twenty years. The experience has been like trying to solve a mystery. And the approach of the book is to give you an over-the-shoulder view of how that mystery has unfolded, of the progression of ideas and revelations, often from the research itself, about the surprising ways that stereotypes affect us—our intellectual functioning, our stress reactions, the tension that can exist between people from different groups, and the sometimes very surprising strategies that alleviate these effects and thereby help solve some of society's worst problems. And because science is rarely a solitary activity anymore—something long true for me—the story also describes many of the people who have done this research, as well as how they work. You will also meet many interesting people who have experienced this threat—including a famous journalist, an African American expatriate in Paris, a person who rose from sharecropping to wealth in rural North Carolina, students at some of America's most elite universities, and students in some of America's most wanting K through 12 schools.

Although the book deals with issues that can have a political charge, neither it nor the work it reports is propelled by an ideological orientation—to the best of my and my colleagues' ability. One of the first things one learns as a social psychologist is that everyone is capable of bias. We simply are not, and cannot be, all knowing and completely objective. Our understandings and views of the world are partial, and reflect the circumstances of our particular lives. This is where a discipline like science comes in. It doesn't purge us of bias. But it extends what we can see and understand, while constraining bias. That is where I would stake my claim, at any rate. The constant back-and-forth between ideas and research results hammers away at bias and, just as important, often reveals aspects of reality that surpass our original ideas and insights. When that has happened—and it has—that is the direction our research goes in. I would like to see my strongest convictions as arising from that kind of revelation, not from prior belief, and I hope you will get a view of that experience as you read along.

Arising this way, several general patterns of findings have persistently emerged in this research. Seeing these patterns, more than any ideas or hunches I began this research with, has convinced me of the importance of identity contingencies and identity threat in our lives.

The first pattern is that despite the strong sense we have of ourselves as autonomous individuals, evidence consistently shows that contingencies tied to our social identities do make a difference in shaping our lives, from the way we perform in certain situations to the careers and friends we choose. As the white world-class sprinter takes the starting blocks in the 100-meter dash at the Olympic trials, he is as autonomous an individual as the black sprinters next to him. And they all face precisely the same 100 meters of free and open track. Nonetheless, in order to do well in that situation, research suggests that he may have to surmount a pressure tied to his racial identity that the black sprinters don't face.

The second dimension of reality, long evident in our research, is that identity threats—and the damage they can do to our functioning—play an important role in some of society's most important social problems. These range from the racial, social class, and gender achievement gaps that persistently plague and distort our society to the equally persistent intergroup tensions that often trouble our social relations.

Third, also coming to light in this research is a general process—involving the allocation of mental resources and even a precise pattern of brain activation—by which these threats impair a broad range of human functioning. Something like a unifying understanding of how these threats have their effect is emerging.

Finally, a set of things we can do as individuals to reduce the impact of these

threats in our own lives, as well as what we as a society can do to reduce their impact in important places like schools and workplaces, has come to light. There is truly inspirational news here: evidence that often small, feasible things done to reduce these threats in schools and classrooms can dramatically reduce the racial and gender achievement gaps that so discouragingly characterize our society.

These findings have convinced me of the importance of understanding identity threat to our personal progress, in areas of great concern like achievement and better group relations, and to societal progress, in achieving the identity-integrated civil life and equal opportunity that is a founding dream of this society. This book presents the journey that my colleagues and I have taken in getting to this conviction.

Let’s begin the journey where it began—Ann Arbor, Michigan, 1987.

CHAPTER 2

A Mysterious Link Between Identity and Intellectual Performance

1.

In the spring of 1986, when I was a professor of psychology at the University of Washington in Seattle, the University of Michigan offered me a job with two parts. The first part was to be a social psychologist, just as I had been at the University of Washington. I was gratified: the University of Michigan had (and still has) one of the nation's leading graduate programs in social psychology. The second part was to direct an academic-support program for minority students. I was attracted to this too; an interest in the psychological issues surrounding the education of minority students had helped steer me into social psychology. But I worried. How would the "real-time" duties of running a student program affect my research? I visited the program twice to find out.

My second visit to Ann Arbor, toward the end of a steamy July, when the sidewalks radiated heat, proved decisive. I could see how big the program was. It served the advising, tutoring, and financial management needs of over 400 students, and it did so within a large bureaucracy, the kind that it takes to run a university of 36,000 students.

I knew quickly on this second visit that I wouldn't take the job. I would have had to stop being a researcher, and I wasn't close to being ready for that. So I knew what to do. But I also knew, as I flew home, that something had changed for me, that seeing the program had caused a realignment of interests. What I'd seen, I felt, was a core American struggle: an institution trying to integrate itself, racially, ethnically, class-wise. The program staff and faculty had a mission.

They were helping students from underrepresented backgrounds be effective on a demanding campus, one that, for example, had been racially integrated, to any meaningful degree, for only 20 or so years of its 170-year history. My research life, my intellectual life, I knew from this visit, would be headed in a different direction.

Two things, I believe, triggered the change. The first was a new vantage point on a familiar problem, the academic struggles of too many minority students on American college campuses. My Ann Arbor visit made me aware that I had a certain perspective on this problem, that I wasn't neutral. When it came to college student life, I was on the outside looking in, an observer. If asked to explain the academic difficulties of any students, I would, like most professors, have stressed what was in my observer's line of vision and in my psychologist's toolbox—the students themselves, their motivations, expectations, self-esteem, cultural orientation; the value they placed on education; their work habits; their academic skills and knowledge; their families' emphasis on school achievement; and so forth.

Some years ago, two social psychologists, Edward Jones and Richard Nisbett, argued that when it comes to explaining people's behavior—something like achievement problems, for example—there is a big difference between the "observer's perspective"—the perspective of a person observing the behavior—and the "actor's perspective"—the perspective of a person doing the behavior. As observers, Jones and Nisbett said, we're looking at the actor, the person doing the behavior we are trying to explain. Thus the actor dominates our literal and mental visual field, which makes the circumstances to which he is responding less visible to us. In the resulting picture in our minds, the actor sticks out like a sore thumb and the circumstances to which he is responding are obscured from view. Jones and Nisbett held that this picture causes a bias when we try to explain the actor's behavior. We emphasize the things we can see. We emphasize things about the actor—characteristics, traits, and so on—that seem like plausible explanations for her behavior. And we deemphasize, as causes of her behavior, the things we can't see very well, namely, the circumstances to which she is adapting. My second visit to Ann Arbor made me aware of what should have been obvious; I had become an observer of minority students and their achievement struggles. I arrived in Ann Arbor implicitly looking for what the students might be doing, or what characteristics they might have that held back their achievement.

But on the visit I talked to minority students themselves, the actors in the drama of their achievement struggles. They said nothing about expectations, motivation, the value their families placed on education—not even when I

pointedly asked them about these things. They were proud to be students at such a strong university. Their families were proud of them. They had been successful in high school. If they brought low expectations with them, they didn't show them to me. They talked about the university environment. They talked about being a small social minority. They described needing a space where they weren't made so aware of being a minority. They worried that teaching assistants, fellow students, and even faculty might see their academic abilities as less than those of other students. They described how social life was organized by race, ethnicity, social class. They had few close friends across group lines. They felt that black styles, preferences, and interests were marginalized on campus, sometimes even stigmatized. They noted the small number of black or minority faculty. They could have been making excuses. I couldn't know. They seemed earnest, matter-of-fact, not accusatory. But they did seem worried that Michigan was not the right place for them.

The second striking thing I saw on this trip was a graph depicting student grades. It was my first glimpse of an important fact: that the academic troubles of black students at Michigan—and they were indeed having academic troubles—were not entirely due to weaker academic skills and motivations. After forming groups of Michigan graduates (for a period of several years) on the basis of the SAT score they had when they entered Michigan, the graph showed the average grades each of these groups got. Thus one could see the college grades for students who entered Michigan with SATs between 1000 and 1050, between 1050 and 1100, all the way up to those who entered with SATs between 1550 and 1600, then the top of the SAT scale. The graph showed a modest tendency for students with higher SATs to get higher grades. No surprise. The SAT is designed to predict college grades—even though, for this sample of students, the tendency for students with higher SATs to get higher college grades wasn't that strong.

What struck me was something else. To show how black students had done, the graph presented a separate line for black Michigan graduates during this same period. This line showed that black students with stronger entering SATs also graduated with slightly higher grades. Again, no surprise, except for one thing: the line for black students was consistently lower than the line for other students. At every level of entering SATs, even the highest level, black students got lower grades than other students. If we assume the SAT is a rough measure of preparation for college, this meant something dramatic: *that among students with comparable academic skills, as measured by the SAT, black students got less of a return on those skills in college than other students*. Something was suppressing the yield they got from their skills.

The Ann Arbor trip raised questions and provided some clues. There was hard evidence: the achievement problems of black students at Michigan weren't caused entirely by skill deficits. Something about the social and psychological aspects of their experience was likely involved. At the time, I had no idea what it was. There was softer evidence: the students themselves worried about whether or not they belonged, or ever could belong, at Michigan. Martin Luther King once worried that black students in integrated schools might not always be taught by people who "loved them." These students had the same concern. I wondered on that flight home whether these two pieces of evidence—about their grades and about their sense of belonging—had anything to do with each other.

2.

A year later Michigan offered me a professorship in psychology, a chance to pursue my research interests without administering a larger bureaucracy. I was excited. I knew that if I went, intriguing and important questions awaited.

Families can be gracious, and mine certainly was on this occasion. In the fall of 1987, despite the uprooting of two teenagers that it required, my family and I landed in Ann Arbor just in time for the new school year and Michigan football.

Almost immediately, as if on signal, the graph showing black student underperformance at Michigan reappeared in my life. I was appointed to a universitywide committee on minority student retention and recruitment. And there again, in material handed out on the first day the committee met, was the graph showing the underperformance of black students, which was the chief rationale for this committee.

Richard Nisbett—another Michigan social psychologist, the same person who came up with the "actor-observer" difference—and I began talking about this underperformance. Nisbett is a great conversationalist, and not just idly so. He uses conversations to shape a scientific inquiry, to help him link up questions so that they have a narrative form. He starts in on a problem by trying to see how it works in real life. He interviews people. He surveys people over the phone. He snoops in archival records. He reads broadly. He "triangulates" on an understanding. Eventually he does formal experiments to test that understanding and to take the phenomenon further apart to see how it works. Inspired by this approach, I suppressed my normal tendency to proceed quickly to the laboratory.

I kept talking to students. I designed a seminar on the topic of underperformance. I remember that students in the seminar turned up a surprising fact. They stopped a number of black and white students as they

crossed campus and asked them to complete a four-or five-page questionnaire. They wanted to find out how many close friends of a different race students had. The first page of the questionnaire asked students to list their six best friends, and the last page asked them to record their race. (This was so that a possible friend's race couldn't influence whether or not he or she was included on the list of close friends.) The survey revealed that among their six closest friends, neither white nor black students averaged even one friend from the other racial group. Blacks, for example, averaged only two-thirds of a white friend among their top six friends. As students had been telling me, their social networks were organized by race.

I continued to look at grade records. I wanted to see how common black student underperformance was across the curriculum. Sadly, it was everywhere, from English to math to psychology. As some comfort to the University of Michigan, my reading soon revealed that black student underperformance was a national phenomenon. It happened throughout the education system, in college classes, in medical schools, in law schools, in business schools, and often in K through 12 schooling. It was so common and predictable as to be nearly lawful. People who made tests had long known about this phenomenon. They also knew that it happens to more groups than just blacks. It happens to Latinos, Native Americans, and to women in advanced college math classes, law schools, medical schools, and business schools.

This is, of course, an unhappy fact. And standing at the ready I found many explanations, largely from the observer's perspective: that these students lack the motivation or cultural knowledge or skills to succeed at more difficult coursework where underperformance tends to occur, or that they somehow self-destruct because of low self-expectations or low self-esteem picked up from the broader culture, or even from their own families and communities. These accounts weren't implausible, if not entirely handsome. I had to keep them on the table of possibilities. But I had doubts. Could they fully explain the occurrence of underperformance in so many groups, at so many levels and types of schooling?

Nor could I shake a suspicion that, to a larger extent than I and others had realized, underperformance had something to do with what underperforming groups were experiencing in school. Something was causing their strengths to let them down consistently—even the strongest among them. Something in the air on campus seemed part of their problems.

3.

A few years later I was invited to give a talk on my research at a small, distinguished liberal arts college in the Northeast. The school also took the occasion to consult me about the progress of their minority students, which, in the early 1990s, meant largely black students. This would turn out to be something I did often in the years to come. Invariably, I learned a lot on these trips. They always edified, showing me things about the problems I was working on that I hadn't understood before.

This early trip was especially interesting. I talked to black student groups and to faculty and administrators in rapid succession—a dramatic display of different perspectives.

The faculty and administrators worried about the problems of black students: lower grade performance, greater likelihood of dropping out, a greater tendency to downgrade their professional ambitions as their schooling went on, a tendency to avoid quantitatively based fields, less social integration into campus life, significantly segregated friendship networks, and so on. Their list was nearly identical to the list drawn up by the Michigan recruitment and retention committee.

We talked in a small conference room paneled in light maple. One entire wall was floor-to-ceiling windows that brought in slants of early spring light and the sight of patchy snow in the woods outside. The atmosphere was friendly, even warm, but also serious, careful—conducive to a trusting conversation among the adults. These were busy people. The problems of black students on this privileged campus weren't their only concerns. They wanted their school to work well, however, and to work well for everyone.

They used primarily "observer" theories to understand these problems. Were they admitting the right students? Should they weigh academic skills even more heavily in admissions? Was family background critical? They hadn't heard of the underperformance phenomenon. They weren't sure about its implication that the problems of these students weren't entirely academic. I also felt a presence in the room during the faculty and administrator meetings; it was as if a flame burned in the corner. The flame was the possibility that, inadvertently, they might do something or condone something that could be seen as racist. It was a searing flame. They didn't want to get close to it. They wanted me to talk. Did I have any ideas?

The black students, for their part, were distressed. I met them in a long, narrow, low-ceilinged room on the first floor of a campus house that had been converted to student service offices and meeting rooms. Students crowded in for the session, probably seventy-five or so in number, a fair portion of their population on this small campus. They wanted me to talk too, but mainly they

wanted to talk. They wanted to describe their experience at the college, the stress they felt. They said that too much of the time they felt that they didn't belong. They said they were unhappy a lot of the time. They often went home on weekends. Did I have any ideas?

Sometimes black students said the school had racist elements. They fanned the flame. They would cite an incident with a teaching assistant, a comment by a professor or fellow student. But as the day went on and I got to look over their shoulders more—take the "actor's" perspective—it seemed to me that they were affected more by the ways campus life was racially organized than by the racism of particular people.

There was, for example, their sense of marginalization. They were a small minority on campus. Campus culture—its ideas of who and what were "cool," its prevailing values, social norms, preferences, modes of dress, images of beauty, musical preferences, modes of religious expression, and the like—was dominated by whites, the most numerous group on campus and the group most historically identified with the school. Against this backdrop, black students worried about belonging, about whether they could find a valued place in campus life. Could they be valued for who they were in this setting? Would they be seen as socially desirable? Numbers played a big role in this sense of marginalization. The cultural domination of whites followed from their numbers.

Friendships and social life were also significantly organized by race. Black students were clearly party to this, even as they seemed to sense its costs. Over 85 percent of Americans, for example, get their jobs through acquaintance contacts. Racially homogeneous friendship networks can segregate people out of important networks, and thus out of important opportunities. They also noted the small number of black faculty and administrators. Was this irrelevant? Did it say something about the possibility of their belonging on this campus?

The sociologist William Julius Wilson has explained the creation and maintenance of large African American ghettos in northern cities as due to a "concentration" of factors, such as the long period of migration of blacks from the South to the North, inadequate and poorly funded public schools, the movement of jobs outside of the cities and to foreign countries, job discrimination, and geographic and social isolation. These things combine, in the philosopher Charles Mills's term, to "downwardly constitute" people living in ghettos, to so disadvantage them as to make them less effective agents in their own behalf.

This tidy, well-off college was no racial ghetto. And the factors that "downwardly constitute" black students there were less commonly understood than factors like distance from jobs or discrimination. But listening to these

students, it seemed that a “concentration of factors” provided a better way to understand what might be causing their underperformance. The major standing explanations seemed incomplete. Underperformance didn’t seem to be fully explained by racism on the part of teachers and fellow students. The instances of possible racism that black students described weren’t nearly as lawful and widespread as their underperformance. Nor did it seem to be caused simply by motivational or cultural deficits that black students brought with them. These students were the academic vanguard of their group, for the most part selected against the highest academic standards. Rather, a concentration of factors seemed to be involved: a concentration of racialized aspects of campus life—racial marginalization, racial segregation of social and academic networks, group underrepresentation in important campus roles, even a racial organization of curriculum choices, all reflecting, to some degree, the racial organization of the larger society.

This seemed like a reasonable hunch. Still, as I said, these weren’t “hard” factors like unemployment and unequal school financing. They were dimensions of social organization. How bad could they be? Could they really be powerful enough to interfere with grade performance of black students, especially of black students very likely reared with the value of trying “twice as hard” in the face of racial adversity?

4.

On April 4, 1968, Martin Luther King Jr. was assassinated. On the next day, a third-grade teacher in Iowa named Jane Elliott was looking for a way to show her class the importance of Dr. King’s life and work. She lived in Riceville, Iowa, a small farming community with a population so homogeneous that many of her students had never seen an African American. To show them the experience of being discriminated against, she divided her class into brown-eyed and blue-eyed students. On the first day, she discriminated against the brown-eyed students. She put felt collars around their necks to identify them. She said that blue-eyed students were smarter, cleaner, and better behaved than brown-eyed students. She gave blue-eyed students seats in the front of the classroom and first dibs on playground equipment during recess. She encouraged the blue-eyed students not to associate with the brown-eyed students, in class or on the playground. She gave blue-eyed students first access to lessons and materials used in the lessons. The entire exercise was eventually reenacted and made into an ABC News documentary entitled “The Eye of the Storm.”

Even in the reenactment, the emotion on the faces of the brown-eyed students on that first day was upsetting. You knew this exercise wouldn't be repeated much. The students were humiliated; they huddled together on the playground, coat collars turned up to hide their faces from the documentary's camera. They said almost nothing in class and barely spoke all day. The blue-eyed students, meanwhile, were relaxed, happy, unself-conscious participants in class.

On the second day Ms. Elliott turned the tables. She put the felt collars around the necks of the blue-eyed students and treated them the same way she'd treated the brown-eyed students the day before. The blue-eyed students now lost the energy they'd had the day before and behaved the way the brown-eyed students had on that day, huddled and downcast. The brown-eyed students, for their part, were once again eager learners.

Tucked away in this documentary are several scenes showing a fascinating intellectual implication of Ms. Elliott's experiment. These are the scenes in which she gives arithmetic and spelling lessons to small groups of students. They show how poorly the stigmatized students did. They barely paid attention. They receded to the back of even these small groups. They spoke only if spoken to. They didn't remember the instructions. They were slow to respond. They got a lot of answers wrong. But on the day they were not stigmatized, these same students responded like the exuberant, cognitively adept children they apparently were. The environment, and their status in it, seemed to be an actual component of their ability.

Ms. Elliott deliberately set out to downwardly constitute her students, temporarily. She was making a point. The college I visited was not making a point. It did not purposely set out to do things that would downwardly constitute black students. Quite the contrary. It saw itself as committed to their inclusion. The school was bewildered by the problems that followed that inclusion. But after I thought about group underperformance for a number of years, and talked to countless students along the way, two things occurred to me. First, like many institutions of higher education in the United States, this school had inherited a social organization from the larger society and from its own history that might well place black students under downwardly constituting pressures—powerful pressures not well understood within the traditional frameworks of prejudice and racism, on the one hand, or student deficits, on the other. Second, these downwardly constituting pressures might have the power to interfere directly and indirectly with *intellectual* performance. That is, they might have the power to cause underperformance.

5.

By this time, I was working with a University of Michigan graduate student named Steven Spencer (now a distinguished professor at the University of Waterloo). Steve is a high-energy, enthusiastic person. He grew up on a Michigan farm. He knows how to throw himself into things. He loves to talk psychology. He is quick and incisive. We had been working on the question of how people maintain a perception of personal adequacy in the face of information that could threaten that perception. The effort to do this, we theorized, is a major driver of mental life, causing us to reexamine our beliefs and assumptions, to reintegrate understandings, sometimes even to prod growth. Our approach to understanding these questions had earlier been pulled together in a theory of self-affirmation. That theory and an unrelated, but equally interesting theory of how the pharmacological and psychological effects of alcohol could foster alcohol addiction, had been the foci of my research at the University of Washington. These were captivating problems, fun to work on. Steve and I, along with Robert Josephs (another graduate student at the time, now a distinguished professor at the University of Texas), were making great progress in both areas.

But for some reason, at this new university, it was the problem of group underperformance that had begun to preoccupy me. I kibitzed and kibitzed about it, and eventually, as I had hoped, Steve began to pick up this preoccupation too.

Despite the image of science as a formal and prescribed affair, scientific inquiries have choice points, places where the investigator has to decide what to do next without much formal guidance. Intuition and best guesses come into play. We needed a better look at what caused underperformance, and my best hunch was that it was stigmatization, the downward constitution that some groups might experience in a school environment. Of course, underperformance could just as well come from something about the group itself. I favored the stigmatization idea. I confess that I liked it better than the idea that underperformance was rooted in some biological difference between groups—to me a discouraging and potentially dehumanizing idea. But there was also the fact that scholastic underperformance happened in several groups—blacks, Latinos, Native Americans, women in math classes. Could there be something biological about all of these groups that caused them to underperform? Possibly, but I could also imagine that these groups shared an experience of stigmatization—different in form, of course, but nonetheless a group-based stigmatization in precisely those areas where they underperformed. A reasonable inference, but only an inference. I knew it was time to test this idea.

To do this, Steve and I needed a situation like Jane Elliott's classroom. We had to compare a group's intellectual performance when its members were stigmatized with their intellectual performance when they were not stigmatized—like comparing the blue-eyed students' performance on the day they wore collars and were seated in the back of the classroom with their performance on the day they wore no collars and were seated up front. If the group members underperformed when they were stigmatized, but not when they were not stigmatized, we'd have evidence that stigmatization alone—a devalued social status—had the capacity to impair intellectual performance.

It soon occurred to us that a natural experiment of precisely this sort might be going on in our own backyard, the college classroom, specifically in the different experiences of women in math-oriented versus humanities-oriented classes. Considerable research shows that in math classes, especially at the college level and especially in more advanced classes, women report feeling what the sociologists Nancy Hewitt and Elaine Seymour called a "chilly climate." That is, they feel that their abilities are under suspicion, that feminine characteristics discredit their seriousness, that they have to prove themselves constantly, that their career commitment is questioned, and so on. Yet in English classes, and in humanities classes more generally, women report fewer such pressures, even in advanced coursework.

Steve and I weren't focused on the question of why these differences exist. This book returns to that question at various points. At the time, though, he and I were focused on a simpler idea: the natural experiment this situation would allow.

We could compare how much women underperformed in advanced math classes, where they reported feeling more stigmatization from a "chilly climate," with how much they underperformed in advanced English classes, where they reported feeling considerably less stigmatization of their abilities. The experiment was just that simple. If stigmatization can impair intellectual performance, as Steve and I were guessing, then women in advanced math classes should underperform more than women in advanced English classes. That is, the gap between women's and men's grades should be greater in advanced math classes than in advanced English classes.

The data we could assemble were less than perfect. (It is important to stress that once the data were assembled, the names of all students were replaced with identification numbers to protect their anonymity.) There were very few women in advanced math classes. Some students had to be dropped because we couldn't retrieve SAT scores for them and, thus, couldn't put them into an SAT score grouping.

Still, a pattern that mirrored the scenes in Jane Elliott's classroom emerged. Women tended to underperform in advanced math classes, where evidence suggests they feel the collar of gender stigma, but not in advanced English classes, where evidence suggests the collar is less felt.

Seeing underperformance, especially among such talented and motivated people in real-life classrooms, is disheartening. But this time, at least, the pattern of when it happened and when it didn't happen told us something about its causes. It encouraged our thinking about stigma and intellectual performance.

Nonetheless, the quality of the data was worrisome, and we knew that our results could be explained in other ways than by our theory. Perhaps the men in the English classes were less interested than the men in the math classes. Maybe that's why they didn't outperform the women in those classes. Or maybe the work in the English classes was just easier than the work in the math classes, enabling all students to get higher grades. In the real world of college classes, many factors could be at play.

We needed a more precise test of whether or not stigma impaired intellectual performance. We also knew that if the effect was real and we could reliably produce it—if we could "bottle" this effect in the laboratory, so to speak—we could use the laboratory procedure to answer other important questions: What factors worsened this effect? What exactly does stigmatization do to people that impairs their intellectual functioning? Are some kinds of people more susceptible to this effect than others? Does it happen for all stigmatized groups or just some? Does it happen for other kinds of performance, in addition to intellectual performance? Does it happen for low-stakes performances or just high-stakes performances? And, most important, what can be done to eliminate it?

Our approach was to reproduce our math and English study in the laboratory. We set up a very simple situation. First, we recruited men and women students at the University of Michigan, largely freshmen and sophomores, who were good at math—they had quantitative SAT scores in the top 15 percent of their entering class, had gotten at least a B in two calculus classes, and indicated that math was important to their personal and professional goals. This gave us a group of men and women students who were essentially equal and strong in math skills and in commitment to math. We then brought them into the laboratory one at a time and gave them a very difficult intellectual test alone in a room.

That was the core of the experiment. But, of course, we wanted half of these participants to take the test under stigmatizing or potentially stigmatizing conditions and the other half to take the test under nonstigmatizing conditions.

Again, we mimicked our field study. We varied the topic of the test, math

versus English. Half of the participants took a math test, a thirty-minute section of the GRE (Graduate Record Examination) in math; the other half took an English test, a thirty-minute section of the GRE in English literature, a heavily knowledge-based test. (These sections were taken not from the general quantitative or verbal portion of the GRE but from the more difficult GRE subject tests in math and English.)

We reasoned as follows: On the basis of negative stereotypes of women's math ability, simply taking a difficult math test puts a woman at risk of stigmatization, of being seen as limited at math *because she is a woman*. Frustration on such a test inherently reinforces this worry.

By contrast, no stereotype says men *as a group* lack math ability. They might lack it as individuals. Frustration on the test could reflect that. But it wouldn't mean that they lacked math ability because they were men.

And for the same reason, there should be no threat of group stigmatization for either men or women taking the English literature test. The ability of neither group is strongly stigmatized in this area, although we did wonder whether men might feel some threat of group stigmatization on the literature test.

We had, then, a laboratory facsimile of our real-life field study. If having the collar on—being at risk of group stigmatization—was enough to interfere with intellectual performance, then the women should underperform in relation to the men on the math test, where they were subject to stigmatization, but not on the English literature test, where neither group was subject to stigmatization. And, lo and behold, that's exactly what happened.

We were encouraged. Not because we'd proved anything—there was at least one especially plausible alternative explanation that I will describe just ahead. But now we had laboratory procedures that reproduced what we'd seen in the real world. And they were relatively safe. We didn't have to put participants through anything they didn't go through all of the time; it was just test taking. Moreover, by explaining the experiment to them after it was over—"debriefing" them—we might help them better cope with these pressures in their own lives. We had a safe version of Jane Elliott's classroom, a place where the possible effect of stigmatization on intellectual performance could be looked at up close, where we could learn how it happened and, possibly, how to reduce it.

6.

We believed it was the pressure not to confirm a stigmatizing view of oneself that made women underperform in this experiment. But there was a compelling,

if disturbing, alternative possibility that had been brought gingerly to our attention: perhaps women's lower performance reflected a lesser biological capacity for math that manifests itself on difficult math.

In the early 1980s, two psychologists, Camilla Benbow and Julian Stanley, conducted several large studies of sex differences in math performance that were reported in the prestigious journal *Science*. Interestingly, the design of their study was not unlike the design of our study. They, too, selected students who were very good at math. Theirs were eighth-grade boys and girls who had had essentially the same coursework in math up to that point, and who had scored in the top 3 percent of test takers on the standardized math exam given to eighth-graders at their schools. They then gave students a math test that was very difficult for eighth-graders, the math section of the SAT. Their results looked like ours. The girls underperformed in relation to the boys. And because the boys and girls in this study had been so carefully selected for having equal math skills and equal exposure to math instruction up to that point, Benbow and Stanley were pushed to a difficult conclusion: perhaps the lower performance of girls in their study reflected a lesser biological capacity for math among women that reveals itself when the math was difficult.

Our society is fascinated by genetic explanations of everything from alcoholism and hyperactivity to happiness. The idea that genetics underlies the sex difference in math performance—just like the racial differences in athletic performance that I mentioned earlier—seems destined to fascinate us. For example, in January of 2005, in a speech given at the Massachusetts Institute of Technology (MIT) to kick off a conference on women's presence in science, the then president of Harvard University, Larry Summers, said,

> There are three broad hypotheses about the sources of the very substantial disparities that this conference's papers document and have been documented before with respect to women in high-end scientific professions. One is what I would call the high-powered job hypothesis. The second is what I would call *the differential availability of aptitude at the high end*, and the third is what I would call different socialization and patterns of discrimination in a search. And in my view their importance ranks in exactly the order I have just described.

In the middle of his speech, Nancy Hopkins, a distinguished biologist from MIT, walked out. Soon the conference was in turmoil—largely in argument over the intended meaning of Summers's "second hypothesis." Within hours the

media had begun to cover the turmoil, interviewing conferees as witnesses to Summers's remarks. Within days op-ed pages, television and radio talk shows, and media pundits had all focused attention on his remarks and on the arguments of his supporters and detractors. Soon some people called on Summers to resign. Protests at Harvard University intensified in the weeks and months that followed the conference. On March 15 of that year, the members of the Faculty of Arts and Sciences at Harvard voted 218 to 185 that they no longer had confidence in Summers as president of Harvard University. He weathered this vote, supported by the Harvard Corporation, the body of trustees that governs Harvard. But a year later, to forestall another faculty vote of no confidence, Summers resigned. By this time, other issues in his presidency had surfaced. The debate over his leadership had broadened. But few would argue that the unraveling of the Summers's presidency began with what he thought was a passing reference to his "second hypothesis"—that sex differences in math and science achievement were substantially rooted in sex differences in a genetically based capacity for math.

Steve Spencer and I weren't especially interested in the genetic explanation of sex differences in math. Our idea was that stigma had more to do with these differences than people commonly thought. But we knew, long before the Summers episode, that the genetic question carried huge cultural weight. Also, it stood as a possible alternative explanation for our experimental findings. We had to address it.

This was no small moment in our nascent research program. We'd gotten to a point where two plausible, but very different, ideas could explain our simple finding that, after we had carefully selected women and men who had strong and equal math skills, the women did worse on a difficult math test we gave them than the men—that is, classic underperformance. Our explanation was that frustration during a difficult math test made women worry about confirming, or being seen to confirm, the societal view about women's poor math ability, and that this worry, in turn, interfered with their performance. This is how we saw the "collar" of stigma interfering with math.

The other explanation was simply that women's underperformance was caused by something about women, a psychological vulnerability, or something perhaps akin to Summers's "second hypothesis."

We needed an experiment that could tell us which of the two was the better account of our findings. This is both a fun and a tense part of science: pitting two ideas against each other in an empirical test. If you come up with a good empirical test, you hope to get a clear answer. In this case, a clear answer would have implications. It would tell us whether our earlier experiments had found a

truly undiscovered influence on women's math performance—a stigma-related contingency of gender identity in the United States—or whether they merely point to a long-surmised limitation in women's math capacity that manifests itself on difficult math. It would be an experiment with real stakes.

But what would that experiment be?

In trying to figure that out, we realized something else about our explanation. For motivated women taking a difficult math test, we were arguing that the pressure not to confirm the stereotype was part of their *normal* experience in taking difficult math tests. All it took for them to feel this pressure was frustration, inevitable on a difficult math test. Frustration would make the cultural stereotype come to mind and be seen as relevant to them personally. This meant that nothing extra was needed to impose this pressure. Just give math-motivated women a hard math test and they'd feel it automatically—in our laboratory, and presumably, in real life.

Thus the challenge in setting up a good experiment was not that of finding something extra to real life that would put this pressure on women during a math test. The challenge was to find something extra to real life that would lower the pressure women normally feel during such tests, that would somehow remove the "collar" of stigma during difficult math tests.

If lowering this pressure improved women's test performance, then we'd know that it was this pressure that undermined their performance in our earlier experiments.

But how to lower this pressure?

We first thought of trying to persuade them that the negative stereotype about women and math was false. If they didn't believe the stereotype, perhaps they wouldn't worry about confirming it. But then we realized that, even if we could convince them of this, it was doubtful we could convince them that other people didn't believe the stereotype, broadly held as it is. And if we couldn't convince them of that, they could still worry that their test performance would cause other people—the experimenter perhaps—to see them stereotypically.

We stewed, feet on our desks; then we had a simple idea. We'd present the test in a way that made the cultural stereotype about women's math ability irrelevant to their performance. We'd say something like this: "You may have heard that women don't do as well as men on difficult standardized math tests, but that's not true for the *particular* standardized math test; on this *particular* test, women always do as well as men." (This is a close rendition of what was actually said in the real experiment.)

It was a simple instruction. But presenting the test this way changed the meaning of any frustration women experienced. It made it not a sign of anything

about being a woman, because this “particular test” couldn’t measure anything about being a woman, or about gender in general, for that matter. They were now in the same boat as men taking this test. Their frustration could confirm that they weren’t good at math as individuals, but it couldn’t confirm that they weren’t good at math because they were women.

A change of instruction and a contingency of their gender identity that normally haunted them during difficult math would be gone.

So we had a plan. We would do the experiment as before. We would recruit strong women and men math students at Michigan. We would give them all a difficult math test alone in a room. And for the group in which we didn’t want the women to experience the risk of stigma, we’d present the test as not showing gender differences.

This would put in place all of the elements we needed to pit the two big ideas against each other in an empirical test. If women for whom stigma pressure was lowered performed as well as equally skilled men in this experiment, we’d know that stigma pressure had worsened their performance in the earlier studies. We’d know that this pressure could have a big effect on women’s math performance. But if lowering this pressure had no effect on women’s test performance—if the women still performed worse than equally-skilled men—then we’d know that this pressure wasn’t a factor in our earlier findings, that something else was. Perhaps something about how women are socialized, or perhaps…Summers’s “second hypothesis.”

At this point in our research, Steve and I weren’t especially focused on larger implications. But for this experiment we knew the stakes were high. We were excited but tense.

And the results were dramatic. They gave us a clear answer. Among participants who were told the test did show gender differences, where the women could still feel the threat of stigma confirmation, women did worse than equally skilled men, just as in the earlier experiment. But among participants who were told the test *did not* show gender differences, where the women were free of confirming anything about being a woman, *woman performed at the same high level as equally skilled men. Their underperformance was gone*.[*]

It is no exaggeration to say that these findings changed the course of our research lives. It gave us the first empirical signal that the stigma pressure we had been theorizing about was actually powerful enough to affect the ordinary experience of women doing math, especially math at the limits of their skills, where frustration is inevitable. It simultaneously told us that women’s underperformance in math, where it happened, might be more fixable than

people thought. Removing the threat of stereotype confirmation that normally hangs over the heads of women doing difficult math, dramatically improved their performance—the way removing the collar from Jane Elliott's students improved their performance.

By no means did we have a complete explanation of these findings. This book will have a lot more to tell about that. Also, we had to be careful about generalizing our findings. They did not mean, for example, that removing stigma threat would eliminate all sex differences in math performance. Most observed sex differences in math performance are not between samples of men and women selected for being similar in math skills and motivation, as they were in our experiments. They are between samples of men and women who may differ in skills and motivation, because of differential exposure to math curriculum, different interest in math, different exposure to stigma threat over a lifetime, and so on. Taking off the collar of stigma threat on one occasion might well reduce these differences on that occasion, but not necessarily eliminate them altogether.

Still, the findings clearly told Steve and me that we had an important phenomenon to figure out, one that might be playing an especially unfortunate role in women's progress in math-related fields.

Research has shown that the further women go in mathematics, the harder it is for them to persist. Many factors contribute to this—the sex roles women are socialized into, perhaps discrimination against women in math, perhaps low expectations about their abilities. Steve and I felt we'd found another possibility: the threat of confirming, or being seen to confirm, society's darker suspicions about their math ability, a threat that reoccurs at precisely the worst point in their progression from stage to stage in math achievement—that next frontier of their skills.

It was this finding that changed our research lives, and that gave us marching orders.

But we had to admit that our idea was unusual. The crumbs leading to it were consistent: my student interviews, the data showing the underperformance phenomenon, and now our experiments with women in math. Still, it was an unusual idea—suggesting, as it did, that stereotypes of groups (for example, stereotypes about women's math ability) could cause enough disruption to interfere with the math performance of strong women math students on a standardized test, and possibly with their persistence in math altogether.

It was also unusual because it suggested this could happen without bad intentions, without the agency of prejudiced people, for example. Our test takers were alone in a room. They had no reason to believe that the experiment was run by people biased against women. What they did know, of course, was the culture

of this society. They knew how people in this culture tend to see math ability, as something men have more of than women. They knew their performance could confirm that view. And for these women invested in math, this conjunction of thoughts was upsetting and distracting enough to interfere with their performance.

Nor was our idea in general use. It didn't appear on the list of reasons in the research literature as to why few women reach elite levels of math and science. We presented developing versions of the idea at conferences. People liked the finding that women's math performance could be dramatically improved by removing the risk of confirming the negative view of women's math ability. But they had a difficult time keeping our explanation in mind as a distinct idea. They'd boil it down to something else. They'd say, "Aren't you just saying that women have lower *expectations* for their math performance, and that when they encounter difficult math they just *self-fulfill* those low expectations?" We'd thought about this point. But it didn't explain our results. The women in our experiments were selected for having strong expectations. They had always been good at math, and they performed well when told the test couldn't detect gender differences. If difficult math triggered low expectations that, in self-fulfillment, caused women to underperform, then these women, too, should have underperformed. They didn't.

We thought we had something distinct. Still, we recognized that we knew more about what it wasn't than about what it was. There were many questions. How did this pressure impair performance? Through memory impairment? Extra cognitive load? Physiological impairment? Did it affect only people who cared about the performance? Did it affect only women in relation to math, or did it also affect other groups and other types of performance? Could it be overcome with more effort, or did that effort just make matters worse? Were there things that schools and teachers could do to relieve these pressures? Were there things that individuals could do to relieve them?

Important questions—all of which, in time, would be researched, and many of which would be answered. But at the time, in the context of a different collaboration, my curiosity turned back to the question of minority student achievement. Could the same process that affected women math students be a factor in the underperformance of minority students?

CHAPTER 3

Stereotype Threat Comes to Light, and in More than One Group

1.

In 1978, when I lived in Seattle, the Seattle Supersonics came within one game of winning the NBA championship. The next year, they won. Their ascent to glory followed a long period of mediocrity. The 1978 season, in fact, began in mediocrity, 5 wins and 17 losses during the opening weeks of the season. Then the Sonics' front office fired the coach and hired a new one—a young Lenny Wilkens, who had been a player-coach with the team several years earlier. No player changes, just Wilkens. Instantly the team began to win, 42 season victories and only 18 losses under Wilkens. The regular season ended with a 47–35 record before the Sonics lost the NBA title by just 6 points in the final seconds of the seventh game of the championship series. A single personnel change—the addition of Wilkens—and the pieces of the team came together.

What's interesting here is how the team was written about before and after its turnaround. Before the turnaround, the local sportswriters described player characteristics in the worst terms. The point guard could pass okay, but couldn't drive to the basket. The strong forward shot from too far out and missed easy rebounds under the basket. The center had too little mobility and couldn't get midrange shots. The sportswriters were observers. To make sense of things, they used what was in their line of vision—the players and their characteristics. And they had losses to explain. Sensibly, they stressed negative player deficiencies.

With a coaching change, the Sonics changed. Now the sportswriters had to explain winning, not losing. Their player characterizations changed. They

valorized the same players they had derided a month earlier. The players' weaknesses became their strengths. The point guard's poor driving ability became a testament to his brilliance as a floor general; the strong forward's lack of rebounding was a minor cost of his beautiful outside shot; and the center's immobility made him a rock of stability under the basket. By the time the team reached the finals, the sportswriters saw genius in every position.

Explanations of underachievement by minority and women students are under the same constraints as explanations of the early 1978 Sonics. Almost invariably, they take an observer's perspective, and they are trying to explain poor performance, not success. Under these constraints, student deficiencies make sense as causes of these troubles, just as player deficiencies made sense as causes of the troubles of the early 1978 Sonics. There was then, like a specter hanging over our research, a long-standing tradition of how to explain the psychology of poor achievement among disadvantaged minorities and women.

2.

In his book *Contempt and Pity*, the intellectual historian Daryl Scott describes this social science tradition with a focus on the experience of African Americans. Like the sportswriters, social science observers have been trying to explain poor outcomes—economic, social, educational, medical—experienced by blacks throughout the twentieth century. Like the sportswriters, Scott argues, they have tended to focus on deficiencies, one of which dominates all others—what he calls "psychic damage."

It will be a familiar idea. Gordon Allport, the great mid-twentieth-century social psychologist, put it succinctly: "One's reputation, whether false or true, cannot be hammered, hammered, hammered, into one's head without doing something to one's character" (chapter 8). The psyche of individual blacks gets damaged, the idea goes, by bad images of the group projected in society—images of blacks as aggressive, as less intelligent, and so on. Repeated exposure to these images causes these images to be "internalized," implicitly accepted as true of the group and, tragically, also perhaps of one's self. This internalization damages "character" by causing low self-esteem, low expectations, low motivation, self-doubt, and the like. And in turn, this damage contributes to a host of bad things, such as high unemployment, poor marriage success, low educational achievement, and criminality.

The idea, as Scott notes, is more than just a scientific idea. It's conventional wisdom, a virtual stereotype of what causes members of negatively regarded

groups to fail. So if something causes black and women college students to perform less well than you'd expect from their skills, it must be—the idea goes—these psychic deficiencies, deficiencies of confidence and expectation, self-sabotaging deficiencies. This explanation followed logically from an observer's perspective, and it was supported by the weight of tradition. It pressed hard on my thinking as I thought about what to do next.

3.

Eventually the Seattle sportswriters broke set in 1978. They saw the Sonics for what they were. This wasn't due to their perceptiveness. The Sonics started to win with the same players. That made it clear. Player deficiencies couldn't have been the sole cause of the team's losing. The sportswriters, of course, hadn't been all wrong. The players had deficiencies, which surely contributed to their losing. But winning showed that these deficiencies weren't the sole cause. Something else was involved, something that Wilkens had figured out.

Like that of the Seattle sportswriters when the Sonics began to win, my own observer's perspective on the achievement of minority and women college students had been consistently unsettled by facts. It wasn't that these students had no deficiencies. Education is not equal in this society, in either access or quality. Socioeconomic disadvantage, segregating social practices, and restrictive cultural orientations have all dampened the educational opportunities of some groups more than others, historically and in ongoing ways. These differences might well yield corresponding group deficiencies in skill—enough to affect a group's college achievement, and enough for observers to point to. Still, the facts in my path consistently pointed away from these deficiencies as the sole cause.

And perhaps foremost among these facts was the type of students who participated in our research. They weren't underskilled, poorly motivated students from bad educational backgrounds. By any normal standard, they had no significant psychological or skill deficits. They were among the nation's top college students, admitted to one of its most selective universities. Also, I had seen underperformance among stronger as well as weaker students in Michigan's classrooms, and it clearly happened in most college classrooms, as the larger research literature revealed. The facts were stacking up against the deficiency idea as an adequate account of what I had seen and of what our experiments were showing.

But before getting too concerned about this, I knew I had to answer a more

fundamental question first. I needed to know whether the effect of stigma pressure that Steve and I had observed in our experiments with women and math would generalize to other groups. Would this pressure affect the performance of other groups whose intellectual abilities were negatively viewed in the larger society? Would it affect the performance of, say, African Americans on a difficult standardized test—the group whose academic troubles hand launched this research?

4.

At about this time, in 1991, I moved again, from the University of Michigan in Ann Arbor to Stanford University—a move back to the family's beloved West Coast. Joining me was another wonderful collaborator, a freshly minted Ph.D. from Princeton University named Joshua Aronson (now an eminent professor at New York University). Josh had signed on as a postdoctoral student to research issues related to self-affirmation theory, which I mentioned my students and I had developed some years earlier. He had just completed an insightful dissertation on the topic. He has an intuitive feel for social psychology and for how to do experiments. But, like Steve earlier, Josh found himself working with a preoccupied professor, someone immersed in issues of underperformance, women in math, the possible effects of stigma on intellectual performance and persistence. These were the puzzles on the table. And Josh, intrigued by them and full of ideas, joined in trying to move the pieces around, trying to find a solution. I felt lucky. A shared puzzle gets solved much faster.

We considered the facts in front of us: the underperformance phenomenon, my interviews with women and black students, and the results of the Michigan experiments I had done with Steve. We lined up our questions. Of first importance was the generalization question: Would the effect of stigma pressure that Steve and I had observed with women and math generalize to another group whose intellectual abilities where not well regarded, such as African Americans, the group whose academic troubles had launched this research? If it did, we'd have good reason to believe that the effect of stigma pressure on intellectual functioning was a general phenomenon—that it could happen to members of any group some or all of whose intellectual abilities were viewed negatively in the larger society. If it didn't, we'd have to reconsider the possibility that women had some special vulnerability to this pressure.

A second question was whether an effect of stigma pressure, if it happened for black students, would happen for strong black students, as it had for strong

women math students in the experiments with Steve. There was reason to wonder. In fact, reviewers of the grant proposal I had submitted to get funding for this research doubted this possibility altogether. They found it hard to believe that stigma pressure of the sort we had described could seriously disrupt the intellectual performance of strong, motivated black students at the nation's most prestigious universities. These students, they reasoned, would just be too strong or too motivated to be knocked off their game by such a pressure. We could see their point. It was, after all, less our intuition than our facts that had led us to this possibility. So we knew our challenge had two parts: first, to test whether the effects that Steve and I had gotten with women math students would also happen for black students and, second, to test whether, if they happened, they would happen with strong black students. It turned out that we were in precisely the right place to test these questions: Stanford University, one of the nation's most selective universities.

In no time we had an experiment. We invited black and white Stanford students, predominantly sophomores, into our laboratory one at a time and gave them a very difficult test of verbal reasoning made up of items from the verbal section of the Advanced Graduate Record Examination. It was a difficult test for students at this stage; student samples similar to those in our experiment had gotten only 30 percent of the items correct in pretest administrations of the test. It would cause frustration. As for women taking a difficult math test, we assumed, this frustration would worry our black participants, signaling as it might that they could be confirming the stereotype of their group's lesser intellectual ability. We administered the test as it is administered in real life, nothing out of the ordinary, and assumed that the frustration it caused would be enough to make black students feel this threat.

White students wouldn't like frustration either. But they wouldn't worry that it was confirming anything about their group, since there is no broadly held negative stereotype in this society about whites' having lower intelligence.

What happened is what was expected: white students did a lot better on this difficult test than black students. They got, on average, four more items correct on this thirty-item, half-hour section of the GRE—a large difference that, if sustained over the whole GRE exam, would be very substantial.[*] As Steve and I had captured women's underperformance in math in the laboratory, Josh and I had now captured black student underperformance in verbal reasoning in the laboratory.

This result, of course, had other possible explanations. We had equated black and white participants as to their test-relevant knowledge and skill. But maybe

black participants just weren't as motivated as whites to push through the frustration. Maybe they didn't take the test as seriously. Or maybe the test items were culturally biased against them. We couldn't know from this finding alone which explanation was best.

To find that out, we needed another part of the experiment that eliminated the stigma pressure blacks might feel while taking the test. As in the experiments with women and math, our challenge wasn't to figure out how to impose this pressure—that would happen automatically under ordinary testing conditions, we assumed, as soon as the test got frustrating—but how to remove it for blacks on a difficult intellectual test.

We came to a solution different from the one Steve and I had used for the women and math experiments. We used the same test on which blacks had underperformed under ordinary testing conditions. But we told a different group of participants that the test was a "task" for studying problem solving in general, and emphasized that it did not measure a person's intellectual ability. With this instruction, we made the stereotype about blacks' intelligence irrelevant to interpreting their experience on this particular "task," since it couldn't measure intellectual ability. With this instruction we freed these black participants of the stigma threat they might otherwise have experienced on a difficult test of verbal reasoning.

And they responded accordingly. They performed at the same higher level as white test takers with equal skills and knowledge, and significantly higher that the black test takers for whom the test had been presented as a test of verbal ability. With no risk of confirming the negative stereotype about their group's intelligence, any underperformance they might have shown on this test was gone, completely gone.

With this finding, we felt we knew three important things with reasonable confidence. First, we knew that the effect of stigma pressure on intellectual performance was general. It didn't happen just for women. It happened for at least two groups, women and blacks. In critical testing situations, in this society and at this time, this pressure was a contingency of these groups' identities just as much as swimming pool restrictions were a contingency of my racial identity in the Chicago of my youth. And it is a contingency with a serious toll—impaired performance on the kind of test on which one's opportunities can depend.

Second, we knew that despite the concerns of our grant reviewers and our own concerns, this contingency was powerful enough to affect the test performance of the strongest students in these groups, those with the fewest academic and motivational problems. Like the Seattle sportswriters when the

Sonics began to win, we were pushed by the facts on the ground to look past the deficiencies of these groups in explaining their underperformance. More and more, it seemed that stigma pressure was involved.

And third, in finding a reliable means of reproducing in the laboratory the black student underperformance we'd seen in real life, we knew we could examine it up close—tear it apart and see how it worked. Going directly at our reasoning we had a burning question: did people experiencing stigma pressure actually worried about confirming the negative group stereotype.

We explored this in a simple way. We again asked black and white Stanford students to take a difficult verbal test. Just before the test began, we gave them a few sample test items so they could see how difficult the test would be, and then a list of eighty word fragments. Each fragment was a word with two letters missing. Their job was to complete each fragment as fast as they could, as in a free-association game. We knew from a preliminary survey that twelve of the fragments could be completed with words that reflected the stereotype about blacks' intellectual ability—for example, the fragment "—mb could be completed as "dumb" or the fragment "—ce" could be completed as "race." If simply sitting down to take a difficult test of ability was enough to make black students mindful of stereotypes about their race, these students might complete more fragments with stereotype-related words. They did. When black students were told that the test measured ability, they completed more of these fragments with stereotype-related words than when they were told the test was not a measure of ability. Being under stigma pressure clearly brought the stereotype about their group's ability to mind. Being under no such pressure during this test, whites made almost no stereotype-related completions in either case.

Josh devised another probe to find out what kind of worry the stereotype caused. Again, we asked black and white participants, just before taking the test, to make a rating, this time of their preferences for various types of music and sports. Some of these were associated with black imagery—for example, basketball, jazz, and hip-hop—and others were not—for example, swimming, tennis, and classical music. Interestingly, when black students expected to take a test of ability, they tended to spurn things black, reporting less interest in, for instance, basketball, jazz, and hip-hop than white students. But when the test was presented as unrelated to ability, black students strongly preferred things black. They seemed to be eschewing these things when preferring them would have encouraged a stereotypical view of themselves. It was the spotlight of the negative group stereotype they were avoiding.

Finally, there was evidence that the threat of the stereotype pressured a search for excuses, a search for something other than oneself to blame poor

performance on. We asked participants how much sleep they'd gotten the night before the experiment. Black students expecting to take the ability test, reported getting fewer hours of sleep than black students expecting to do a nonability task, and fewer hours of sleep than whites with either expectation. At risk of a stereotype judgment, these students understandably sought some means of softening its blow should it befall them.

In addition to whatever skills and motivation they had, in addition to whatever expectations they had about being able to perform on this test, in addition to whatever capacities and tendencies they had, these black students were fending off a judgment about their group, and about themselves as members of that group. They were taking this test, and others like it, under the weight of history.

5.

These early experiments made it abundantly clear that you didn't need to have academic deficiencies to be disrupted by stigma pressure—so clear, in fact, that they raised the ironic, opposite possibility: that what makes you susceptible to stigma pressure may be less your academic deficiencies than your academic strengths! If this was so, it would be immensely important to know. It would help us better understand the nature of this pressure and whom it affects the strongest. Our experiments to that point couldn't answer these questions, because they had all included only strong students. We didn't know what would have happened had we included weaker students. Would they, too, have been affected by stigma pressure—meaning that this pressure affects everyone in the ability-stigmatized group? Or would they not have been affected by this pressure—meaning, instead, that something about being a strong student from one of these groups can make you especially susceptible to this pressure? To answer these questions all we needed was a sample of weaker students from one of the groups we had studied. Then we could redo the experiment and see whether stigma pressure impaired their performance as it had the performance of stronger students from the group. We had only one problem: where to find a sample of weaker students on the highly selective university campus we were on.

Sometimes opportunity walks right through the door—not often enough, but sometimes. Not long after our early experiments were published, a new graduate student, Joseph Brown, and an undergraduate student he had met while working as a teaching assistant, Mikel Jollet, asked whether they could see me. They made an interesting pair—Joseph, a slender, scholarly, African American

graduate student with wire-rimmed glasses who had actually read all the books you wish you had, and Mikel, a highly energetic, hip-hop-style college student who bubbled with confidence and entrepreneurial spirit. (In fact, Mikel was to become, in his not-too-distant future, the lead singer of the highly successful rock band the Airborne Toxic Event.) They were interested in the experiment that Josh and I had done, showing the effect of the racial stereotype on the test performance of black Stanford students. They had a question. Would the same thing have happened if we'd done the experiment in the inner-city Los Angeles high school that Mikel had graduated from three years earlier? As important, they had an opportunity. Mikel was still in contact with his former teachers at the high school. He thought they'd let him try the experiment there. Opportunity knocked.

In no time, armed with packets of experimental materials, Mikel was on a plane to Los Angeles to redo in his old high school the same experiment that Josh and I had done at Stanford. It would be his undergraduate honors thesis. He gave a difficult thirty-minute test (a section of the SAT verbal exam) to groups of white and black students in spare classrooms. For those groups in which he wanted black students to experience the pressure of the racial stereotype, he did as Josh and I had done; he simply said the test was a test of verbal ability. Remember, this minimal statement reminds blacks that this is a test on which their performance could confirm the standing stereotype about their group's intellectual ability. For groups in which he wanted black students to experience no pressure from this racial stereotype, he again did as Josh and had done; he described the test as an instrument to study problem solving in general, not one that was "diagnostic" of individual differences in ability. This made the stereotype about blacks' ability irrelevant to their performance on the task, since, ostensibly, the task wasn't about the thing the stereotype was about (intellectual ability).

Then he did something that Josh and I didn't do. He measured how much his student participants cared about school, how much they identified with being good students. What he found was interesting, and made vivid the irony we had suspected all along. For the half of his participants who cared most about school, Mikel found just what Josh and I had found. Black students performed dramatically worse than equally skilled white students when the test was presented as an ability test, when they were at risk of confirming the negative ability stereotype about their group; but they performed just as well as equally skilled whites when the test was presented as nondiagnostic of intellectual ability, when they were at no risk of confirming the ability stereotype. Blacks in the academic vanguard of Mikel's inner-city high school reacted just like black

Stanford students. They were disrupted by the possibility of confirming the negative stereotype about their group's ability.

But this didn't happen for blacks in the academic rear guard of Mikel's high school sample. The black test takers who cared less about school were unfazed by the stereotype. They performed the same regardless of whether the test was presented as an ability test or as a nondiagnostic laboratory task. And in both of these groups, they performed at the same level as white students who, like them, didn't care much about achieving in school and didn't have strong skills.

Before concluding that not caring about school is a good remedy for the pressure of negative ability stereotypes, we have to note a big hitch—none of these rearguard students did that well on the test. The rearguard black students performed no worse under stereotype pressure than under no stereotype pressure. But, like their white rearguard counterparts, they performed badly in both situations. They simply lacked the skills and motivation to do well. They behaved cooperatively enough. They took the test politely. But when it got difficult, not caring very much, they gave up, looked at the clock on the wall, and waited for the session to be over.

When most people think about the poor school achievement of minority students, they think about Mikel's rearguard students, who have weaker skills and motivation and who are apt to be already alienated from school. To an observer trying to explain their poor test performance, like the Seattle sportswriters trying to explain the faltering Sonics of early 1978, there are deficiencies galore to hang one's hat on—poor prior schooling, distressed communities, the psychic damage of self-doubt and low expectations, a resulting alienation from school, poor academic skills, more school alienation, possible lack of family support, alienating peer cultures, and so on. Any or all of these things could have been behind their giving up and performing badly in Mikel's experiment. For these students, the conventional wisdom seemed right.

The conventional wisdom wasn't right, though, for the vanguard students, the students who had somehow survived these problems to become identified with school even though they were in an inner-city high school. The only thing depressing their performance in Mikel's experiment was the pressure of the negative stereotype—the risk of confirming it, or of being seen to confirm it. It was the same pressure that depressed the test performance of the black students at Stanford, and the same pressure that depressed the math test performance of the strong women math students at Michigan. When that pressure was removed—by presenting the test as a laboratory task—they performed at the top of their skill level.

Here was the irony we had suspected. What made Mikel's vanguard black

students susceptible to stereotype pressure was not weaker academic confidence and skills but stronger academic confidence and skills. Their strengths led them to be identified with school, to care about school and how well they did. But in school, when working on difficult material they understood to be ability diagnostic, they encountered the extra pressure of the stereotype. It wasn't low expectations that made them susceptible to this pressure, then; it was high expectations.

Mikel's experiment showed something else, too. It showed why this extra pressure is hard to see down on the ground of everyday schooling: the black vanguard students, under stereotype pressure, performed at the same low level as the black rearguard students who lacked the skills to perform better regardless of how much pressure they were under. The test performance of the two groups was indistinguishable. It would be easy to miss then—when interpreting these scores from the perspective of a classroom teacher or, even more distantly, from that of an admissions committee—the point that the poor performance of these two groups had different causes. One sector of these students was like the 1978 Sonics in the early part of the season. They might not have been perfect, but they had the skills and motivation to win—in this case, to perform like the academic vanguard they were. All they needed was relief from the pressure of a stereotype.

6.

Though in some ways just beginning, this had been, by then, a research journey of four or so years. And throughout the whole of it we'd gotten no evidence that the underperformance we'd observed came from characteristics of the person who was underperforming. It seemed, instead, to come from the pressure of group stereotypes they had to deal with on tests or in classrooms. We came to think of this pressure as a "predicament" of identity. An American woman in an advanced college math class knows at some level that she could be seen as limited because she is a woman; a black student knows the same thing in almost any challenging academic setting; and a white elite sprinter knows it, too, as he reaches the last 10 meters of a 100-meter race. These people know their group identity. They know how their society views it. They know they are doing something for which that view is relevant. They know, at some level, that they are in a predicament: their performance could confirm a bad view of their group and of themselves, as members of the group.

Over the years we used several working names for this predicament

—“stigmatization,” “stigma pressure,” “stigma vulnerability,” “stereotype vulnerability.” Eventually we settled on “stereotype threat.” This term captured the idea of a situational predicament as a contingency of their group identity, a real threat of judgment or treatment in the person’s environment that went beyond any limitations within.

7.

We had gotten to an understanding of stereotype threat by trying to understand women’s and minorities’ underperformance in school. In the process, we discovered a predicament that affected everyone in one form or another, to one degree or another, in one place or another, and not occasionally but frequently. One thing I liked about this fact was that it gave everyone a chance to see into other groups’ experience. The stereotype threat that blacks felt in taking a standardized test resembles the stereotype threat that women felt in taking a difficult math test. Analogy is often the best route to empathic insight. One’s own stereotype threat can analogize one into understanding the other guy’s stereotype threat.

The reality of stereotype threat also made the point that places like classrooms, university campuses, standardized-testing rooms, or competitive-running tracks, though seemingly the same for everybody, are, in fact, different places for different people. Depending on their group identity, different people would simply have different things to contend with in these places—different stereotype threats, different ambiguities about how to interpret their experience, different goals and preoccupations.

For women in advanced college chemistry, for black students in school in general, for older people returning to school, for white sprinters in elite sprinting, there are stereotypes “loose in the house” that make these situations different for them than for people from other groups. Their persistence in these situations, then, might come up against different calculations. For example, when the young talented white sprinter is deciding whether or not to persist in sprinting, he is deciding to persist in a situation that is fundamentally different from the situation that a young talented black sprinter is deciding to persist in. On a daily basis, as long as he remains in sprinting, he will have to contend with the threat of being negatively stereotyped. And the threat will come at the worst time: in the most pressured situations, when he is at greatest risk of confirming the stereotype about his group’s abilities.

Beneath the particulars of our research, a background story was emerging.

To improve the achievement gaps that launched our research, as well as to know better how we all function, we needed to better understand our social identities and how they work in our lives. Especially in America, perhaps, we stress individuality. We resist seeing ourselves as circumscribed by social identities—our being older, black, white male, religious, politically liberal, and so on. This is probably a good resistance. It pushes us beyond the constraints of identity. Still, our research was revealing a profound importance of social identity: that the contingencies that go with them in specific places at specific times, while often subtle enough to be beneath our awareness, can nonetheless significantly affect things as important as our intellectual functioning. It also suggested, in turn, that these effects might play a significant role in the underperformance in school and on standardized tests of major groups in our society.

These revelations have sparked considerable further research in my lab and in many others as well. Major questions have been explored: What kind of behaviors and capacities does this threat interfere with? What does stereotype threat do to a person that causes this interference? What makes this threat strong or weak? And what can individuals and institutions do to reduce its unwanted effects?

But beneath all of this work is a broadened conception of how our social identities shape who we are, what we do, and how well we do it. The through-line of this book follows this research program in its march toward finding remedies for the ill effects of this threat. And some remarkable remedies do emerge. At this point, however, it might be helpful to briefly step off this through-line for a closer look at this broadened conception of social identity and its role in our lives.[*]

CHAPTER 4

A Broader View of Identity: In the Lives of Anatole Broyard, Amin Maalouf, and the Rest of Us

As our findings came in, I remember struggling to absorb their meaning. As you have seen, they persistently suggested that our social identities influence us, in big part, through the conditions we get exposed to because we have the identity—conditions that might range from swimming pool restrictions to stereotype threat. Our findings offered this interpretation, but I still found it a bit foreign. Perhaps it was because I am a psychologist. Psychologists focus on the internal, the psychological. If women underperform on a difficult math test, our tendency is to look for a characteristic internal to women that could cause it—the observer's perspective again, this time arising from my discipline. I needed more fleshed-out images of just how contingencies of social identity worked in real life. If I could see that, then maybe I could be more persuaded by the direction our explanations were taking.

I was thinking about this when, one day, I picked up a *New Yorker* magazine article by Henry Louis Gates Jr. entitled "White like Me: African American Author Anatole Broyard." I knew as I read along that I was seeing what I needed to see, a real-life version of the processes revealed in our experiments—a man's life in explicit negotiation with some of our history's most powerful identity contingencies. To illustrate, I'll tell here a little of his story.

1.

Anatole Broyard was the daily book reviewer for the *New York Times* for

eighteen years, as well as a consistent contributor to the *New York Times Book Review*. He also wrote stories and essays that appeared in spurts throughout his career, the last spurt of which was a beautiful series of essays on illness that appeared before his death in 1990 of prostate cancer. I had read his work for years, but I was especially impressed with the illness essays. They were funny, erudite, profound. If their charm had a formula, it came from Broyard's ability to mix sophisticated literary allusions and street-hip images of modern life with concrete descriptions of managing his illness. There were even elements of the stand-up comic, a comic with the erudition of an English professor talking about life, decline, and death. He reminded me of Saul Bellow, but more Freudian. I had the vague impression he was Jewish, and probably European. Who knew what I was picking up on—his name perhaps, his style of humor. But, mind you, I never thought much about it until I picked up that *New Yorker* magazine in 1996. In it Gates revealed that Broyard was black, that both of his parents were black, and that all of his ancestors were black as far back as the eighteenth century.

I wasn't the only one to have this misconception. Broyard had lived a deception. Though black in every conventional meaning of the term, he had lived his adult life as white. That is, he had "passed"—as it's called in the black community—never revealing his black identity, not even to his children, until just before his death.

Broyard and his immediate family—his mother, father, and two sisters—were part of the Great Migration of blacks from the South to the urban North during the early and mid-twentieth century. For the Broyards, this meant a move from New Orleans to the Bedford Stuyvesant section of Brooklyn. Migration, by definition, involves people leaving the communities in which they and their families are known for new communities in which they and their families are unknown, very likely. It is a move in which, if one has the physical appearance to pull it off, one can leave one's racial identity behind. During the 1920s, the peak years of the Great Migration, it is estimated that ten to thirty thousand blacks shed their black identities each year in precisely this way, passing into a sea of whiteness as they migrated north. Broyard's own father, Paul Broyard, was a practitioner of passing, but only during the workday. He was a highly skilled carpenter. He "passed" as white during the day so that he could join the carpenter's union and get work. At the end of the day, he went back home to a family that, by all accounts, was comfortably black. Revealing both the severity and the absurdity of the color line in that era, this form of daytime passing was then common among light-skinned blacks. The young Anatole had role models, even a close role model, in how to handle the peculiar institution of the

American color line.

There's a joke people tell about Michael Jackson: "Only in America could a poor little black boy grow up to become a rich white woman." Broyard never really got rich (or mistaken for a woman), but he did make the other part of that journey. As a boy growing up he was black, as a student at Boys High School in Brooklyn and at Brooklyn College. It was during this time that he fell in love with literature, European and American, and with both high and popular culture. He wanted to be a writer, a great American writer, and he brought a lot to the table: knowledge of city life through his Brooklyn upbringing, all to be blended with a precocious literary erudition.

Toward the end of World War II, and still living black, Broyard married a black woman. They had a child. He joined the army. It was apparently during his time there—who knows in reaction to what—that Broyard decided to renegotiate his racial identity. The particulars are murky. But when he came out of the army he left his wife and child for Greenwich Village in New York City. There the little black boy from Brooklyn resumed life under a different cover. Anatole Broyard had become white.

In the Village he became a local raconteur, published essays, bought a bookstore, became a writing teacher at the New School for Social Research and New York University, published another spurt of essays, married a white woman, got a huge book contract to write an autobiographical novel (which he never finished), got hired by the *New York Times* as its daily book reviewer, and eventually moved to the suburbs in Connecticut, where his chosen social identity could be even safer from his given social identity.

Broyard could have struggled against the limiting conditions of his life as a black man. But because he had the opportunity, and I am sure for a mix of other reasons, he decided not to. And when he changed his racial identity, he changed the contingencies that went with it—the constraints he had to face, the opportunities he would be given, the pathways he could go down. He would be met with different expectations. He could live in different places—the West Village as opposed to being segregated in Bedford Stuyvesant or Harlem. He could have access to different resources, such as a bank loan to buy or lease a bookstore and a professional network that could yield a job offer from the *New York Times*, neither of which he could ever have had if he had remained black. He could know different people. He could marry different people. His children could have access to different schools. He could become a different kind of writer. As a white man he walked the same streets in the West Village he had walked as a black man. His society had the same laws and institutions. He himself had the same talents, weaknesses, psychological traits, cultural beliefs,

the same preferences, attitudes, values, and so on. All of this was the same. What differed was his social identity. He was now a white man, not a black man. His social location was different. From this location, the pathways his life could take were completely different.

We typically think of race as rooted in essences—possibly biological, possibly cultural—that are intrinsic and defining. But Broyard's story of passing, like thousands of other stories of passing, frustrates this tendency. Nothing of his essence, biological or cultural, changed when he passed into the white world. He was the same person. What differed were the conditions he faced.

In our terms, he had exchanged one set of identity contingencies for another—those that went with being black in that place and time for those that went with being white in that place and time. And with this exchange, his life changed.

As I've said, I am a psychologist with a psychologist's bias—that of looking inside people for the causes of their behavior and achievements. But both our own research, showing how the stereotype threat that goes with certain social identities in school and on tests can dramatically affect intellectual performance, and the Broyard story, showing in real life how changing a social identity can lead to completely different conditions of life, were strengthening my conviction in the idea of identity contingencies—that they are real and that they may be underappreciated as causes of our actions and outcomes.

2.

I borrowed the admittedly jargonistic term "contingencies" from behaviorism, the approach that dominated scientific psychology throughout much of the twentieth century. It refers to those conditions in a setting that reward some behaviors and punish others, and thereby determine how we respond in the setting and what we learn. These contingencies are called response contingencies in behaviorism. In the sense that I am using the term, contingencies are conditions you have to deal with in a setting in order to function in it. And identity contingencies are contingencies that are special to you because you have a given social identity, things like the availability of a bank loan to Broyard only when he was white, or the lowered expectations for mental alertness one might experience as an older person, or the social avoidance a southerner might experience as his accent is heard at a New England cocktail party. These are identity contingencies.

They arise from the way a setting is organized around identity and from the

way identities in the setting are stereotyped. Think about the typical American high school cafeteria, where seating is famously segregated by race. Imagine the identity contingencies this poses for a white student and a black student as they enter—contingencies they know all too well simply by knowing the school culture and the larger society. The white student knows, for example, that if he sits with the black students he could be judged in unsavory ways—as trying too hard to be cool, as being inauthentic perhaps, as being racially insensitive, and so on. He could worry that he'd get a frosty reception, that he'd say something that would be taken the wrong way, that he'd miss cultural references. The black student knows the contingencies of his identity in the cafeteria too. He knows that if he sits with the white students, other black students could see him as disloyal, as wanting to be white perhaps. He could worry that the white students wouldn't understand the pressures he feels at school, that he couldn't be open about them without making them feel blamed. He could worry that being himself would risk disapproval. Both identities have heavy contingencies in this lunchroom, contingencies that bring the racial history of this nation into the everyday experience of these students. To explain the lunchroom's racial segregation, one needn't postulate even an iota of group prejudice on the part of any student in the room. Its segregation could arise solely to avoid the bad contingencies of these two group identities in that place.

You can see the theme here. As in politics, all identities are local. They stem from local particulars, local contingencies.

3.

Yet, as this (contingency-based) view of social identity was developing, I sensed that something implicit in our thinking needed to be made explicit. I noticed that most of the identity contingencies I could think of that were capable of influencing us—our thoughts, feelings, and actions—were contingencies that either threatened the person, as in the case of stereotype threat, or restricted the person's access to opportunity, like swimming pool restrictions. The identity contingencies that made the biggest difference in our functioning seemed to threaten or restrict us in some way.

This idea was in the back of my mind when I got back to my Stanford office after a lecture I'd given at the Radcliffe Institue in Cambridge, Massaschusetts, and opened my email. The Radcliffe Institute used to be Radcliffe College, the distinguished women's college affiliated with Harvard University and located just off Harvard Square. Now it's a distinguished institute for advanced study,

where internationally prominent scholars and scientists pursue projects for a year. My audience, however, was largely students from Harvard and Boston-area colleges. I talked about social identities and the contingencies that went with them. To stress the multiplicity of our social identities, I listed nine of them on a PowerPoint slide, identities like age, sex, sexual orientation, race, profession, nationality, and political affiliation. I thought this enumeration was fairly comprehensive. But when I flew back to California that night and opened the email, the following message was waiting for me:

> Today I had the pleasure of hearing your speech at Radcliffe on Stereotypes and Identity. [So far, I liked it.] I am a Stanford graduate (1998) who suffers from bipolar disorder. I related to a lot of the talk of contingencies and such in this way. Even when I am healthy, I worry that I will be thought of as crazy. I spend much of my time passing for a "normal" society member. However, when I go to a manic-depressive support group, I feel more free and become more open. Yet, I couldn't say this in the question and answer session, for God forbid I should be interviewed at some point in my life for a job from people who heard me speak, and I could be discriminated against. It consumes me whether or not to share this information about my disorder with people I live with (I now live in a house for people with psychiatric disorders, so right now that's easier) or to people I know in other ways, including my family. Mental health status was not mentioned in your list of race, religion, *etc.* It is often left out. However, I took that as a cue, as you called them, that I was not included, that my disorder was more than could even make the list. Please feel free to share my story with others without using my name….

I was glad the student ended with that permission. Here was a glimpse into the experience of social identity threat.

It's not a focused threat. It's not focused on a particular bad thing that could happen. This student didn't know what could happen, didn't even know whether anything would happen, and certainly didn't know, if something did happen, where or when it would happen. She knew only that something could happen, on the basis of her bipolar identity. Negative contingencies were easy to imagine—immediate embarrassment and humiliation if the identity was revealed to this audience, to her friends, even to her family, the possibility of social rejection, awkward interactions, lost career opportunities, of being judged, of being

dismissed.

Identity threat is diffuse—as I've said, like a snake loose in the house. Our bipolar student has to remain vigilant to her social world, combing over it for evidence of how people feel about people who are bipolar. Where will the snake be? How bad is its bite? Will she lose a job or educational opportunities, be shunned, and so on?

A diffuse threat is preoccupying. And it preoccupies one with the identity it threatens. This is the point that had to be made explicit: identity threat—the subset of identity contingencies that actually threaten the person in some way—is a primary way by which an identity takes hold of us, in the sense of shaping how we function and even in telling us that we have a particular identity. In the auditorium that day, a perfectly normal-appearing college graduate, a person who fit seamlessly into the surroundings, was nonetheless preoccupied with her bipolar identity. Identity threat, diffuse and Delphic though it may be, is nonetheless powerful enough to single out an identity and make it the center of a person's functioning, powerful enough to make it more important, for the duration of the threat at least, than any of the person's other identities—more important than her sex, her race, her religion, her being young, her being a Stanford graduate.

4.

The French essayist and novelist Amin Maalouf is a man of many social identities. Born a Christian in Lebanon with Arabic as his mother tongue, he was sent to a French Jesuit school as a boy. In 1976, fleeing war in his homeland, he emigrated to France, where he began a writing career in French and where he has lived ever since. So, at the very least, Maalouf is Lebanese, French, Arab, Catholic, a writer, a male, and an émigré all at the same time. Perhaps it was this multiplicity of identities that enabled him to write a deeply perceptive book entitled *In the Name of Identity: Violence and the Need to Belong*. The book's central question resounds deeply in our times: "[W]hy do so many people commit crimes [and violence] in the name of identity?" Its answer is that, in the name of an identity that one sees as under siege, one can do things that one could never do as an individual, things that one could never do in one's own name. In defense of one's country, one's religion, one's region, one's ethnicity, the image of one's group in the world, one can do things that would otherwise be unimaginable. *In the Name of Identity* offers a powerful thesis, which illuminates the outbreaks of terrorism, war, and genocide that so plague modern life. And in

the process, it describes the power of identity threat to lay claim to our psyches:

> People often see themselves in terms of whichever one of their allegiances [identities] is most under attack. And sometimes, when a person doesn't have the strength to defend that allegiance, he hides it. Then it remains buried deep down in the dark, awaiting its revenge. But whether he accepts or conceals it, proclaims it discreetly or flaunts it, it is with that allegiance that the person concerned identifies. *And then, whether it relates to colour, religion, language or class, it invades the person's whole identity*. Other people who share the same allegiance sympathise; they all gather together, join forces, encourage one another, challenge "the other side." (chapter 2)

Maalouf's emphasis is similar to mine: of all the things that make an identity prominent in one's feeling and thinking, being threatened on the basis of it is perhaps the most important. It was threat of public exposure, of lost relationships and jobs that led the student in my audience to assert her bipolar identity. This threat makes the identity to which it is directed, of all the person's social identities, the one that dominates emotion, thinking, the one that, for that time "invades the person's whole identity."

For Maalouf, then, as for me, threatening identity contingencies have the greatest power. Being *threatened* because we have a given characteristic is what makes us most aware of being a particular *kind* of person.

To see this in your own life, think of the important settings in your life, your school, your workplace, your family. The argument, put most strongly, is that if there is nothing in these settings that you have to deal with because you are a woman, or older, or black, or have a Spanish accent, then these characteristics—being a woman, being older, being black, or having a Spanish accent—will not become important social identities for you in that setting. They'll be characteristics you have. You may cherish them for a variety of reasons. But in that setting they won't much affect how you see things, whom you identify with, how you react emotionally to events in the setting, whom you relate to easily, and so on. They won't become central to who you are there.

I am thus proposing something simple: the sense of having a given social identity arises from having to deal with important identity contingencies, usually threatening or restrictive contingencies like negative stereotypes about your group, group segregations of one sort or another, discrimination and prejudice, and so on, all because you have a given characteristic. What raises a

characteristic we have to a social identity we have are the contingencies that go with the characteristic, most often, threatening contingencies.

Tell me, when I was seven or eight, that I should be more interested in my African American heritage, and I might have listened with modest interest—for a while anyway. But keep me out of a swimming pool because of it, and even at seven or eight, I became consumed with the identity. It was never the burden for me that it was for Broyard. I was of a later generation. I was exposed to different racial contingencies over most of the important situations of my life, and to powerful positive things about this identity, about the people who had lived under its contingencies. This identity influences many things about me—tastes, preferences, perspectives, my sense of self. But I'd be foolish not to remember that the whole consciousness and personhood that goes with it began with a contingency of this identity, the fact of swimming on Wednesdays and sitting home the rest of the week.

Identities do have positive and neutral contingencies too—things one confronts in society because one has a given identity that are not threatening, but just neutral or even positive. Men have to go to men's bathrooms and women to women's bathrooms. This arrangement is indeed a contingency, of sexual identity. Yet it is so routine as to be essentially neutral. We don't notice it. A contingency as neutral as this doesn't make us see, feel, and experience the world in terms of our sexual identity. (Unless we mistakenly go into the wrong bathroom or unless we have an androgynous appearance. Then sex-typed bathrooms could constitute a negative identity contingency that would make one highly aware of one's own sexual identity.)

Positive identity contingencies, too, may do little to make us identity-aware. When people are choosing sides for pickup basketball, I might get chosen early because I am African American and because, in this society, African Americans are positively stereotyped in basketball. Yet because being chosen early disrupts nothing for me, I might not notice it. I might not notice I had an advantage. I might assume I was evaluated the same as everyone else. And not noticing my advantage, I might not become much aware of the identity on which it was based.

So the kind of contingency most likely to press an identity on you is a threatening one, the threat of something *bad* happening to you because you have the identity. You don't have to be sure it will happen. It's enough that it *could* happen. It's the possibility that requires vigilance and that makes the identity preoccupying.

The bipolar student in my audience couldn't put the question aside. She wanted to know. "How could a man who makes a living studying predicaments

of identity fail to mention mine?" "Is being bipolar so bad that it can't be mentioned?" She was reading cues, figuring out the meaning of her identity and how it would affect her life. Even though her identity was concealed, these questions couldn't be taken lightly.

James Comer is the innovator of one of the nation's most successful school reform programs. Time and again, careful implementation of his strategies has transformed poorly performing public schools into outstanding schools, with dramatic elevations in student test scores. He knows that low-income minority students can suffer, among other things, the kind of identity threat I describe. To help alleviate it, he sometimes gives a simple piece of advice. If something happens that might reflect prejudice or unfairness against people from their neighborhood, he tells them, they should ignore it. If it happens again, he tells them they should ignore it. If it happens a third time, he tells them, they should raise all hell.

Comer's advice is a strategy of probabilities. Chances are the first cue that could be a sign of race or class prejudice isn't a sign of prejudice. I remember that Jim and I amused ourselves with speculation: Were 30 percent of these first cues innocent? 70 percent? Was the percentage changing? It's impossible to put a hard number on it. What I liked about his advice was what it illustrated about the psychic burden of the students—that it was, in big part, a worry born of ambiguity, a worry about whether their race and class might affect how they were seen, a worry about identity contingencies. His advice, if they could make it a habit of mind, raises the threshold for how much ambiguity is worth worrying about. Until things become clearer, they can move concerns about identity to the back burner.

For the most part, then, it is threat that allows a given identity to "invade [our] whole identity." My examples show this in relation to serious threats: possible lost jobs, social rejection, public embarrassment, and the like. But are contingencies this serious necessary to make an identity central to our functioning? One of the most dramatic research traditions in social psychology is dramatic precisely because it consistently shows the opposite: that even the most minimal identity threats are enough to make us think and behave like a group member.

5.

In the summer of 1969, shortly after taking a chaired professorship at the University of Bristol in England, the world-famous social psychologist Henri

Tajfel, with the help of Michael Billig, M. G. Bundy, and Claude Flament, brought sixty-four boys, fourteen and fifteen years old, into his new Bristol laboratory in groups of eight. They told the boys that the experiment was about visual judgments and asked them to judge the number of dots in forty-dot clusters flashed on a screen in front them. Ostensibly based on these estimates, each boy was then told that he was either an "over-estimator" or an "underestimator." In fact, these labels were assigned randomly.

Next, the boys were taken to separate cubicles and asked to assign points worth small amounts of money to two other boys. To make these assignments, they were given a table of allocation choices. Each choice was set up so that it gave one boy more points than the other boy. Would the boys favor boys in their own group even though their "group"—being an "over-estimator" or an "underestimator"—was essentially meaningless?

The unsettling answer is yes. When the boys chose allocations between two boys in their own group, they allocated as equally as the table of choices would allow. But when the boys made allocations between a boy in their own "estimator" group and a boy in the other "estimator" group, they invariably favored the boy in their own group. They discriminated in favor of even this minimal identity.

A second study divided another group of similarly aged boys into groups on the basis of their preference for a painting by either Klee or Kandinsky, two early twentieth-century European painters of quite similar style and technique. Again, the boys made allocations. But this time the tables they were given made them choose an overall strategy of allocation: one that always allocated points equally between boys of the two groups; one that always maximized the joint profit of boys from both groups; and one that always maximized the profit of boys from their group over boys from the other group, even when doing so would net "their" boy fewer points than a more equitable strategy.

Again, the boys discriminated. When choosing between maximizing profit for both boys and maximizing profit for the boy from their group over the boy from the other group, they chose to maximize the advantage of the boy from their own group, *even when this strategy gave that boy less money than he would have gotten in a more equitable allocation.* These young boys from Oxford were a competitive lot. They sacrificed profit for group advantage, even though the group they advantaged was made up on an essentially random basis.

And lest you think that only young Oxfordians would behave this way, it's important to stress that in the thirty-five years since these findings were first published, they have been replicated over a thousand times, in hundreds of different samples of people, in dozens of countries of the world. No type of

person or nation of people has shown immunity to this “minimal group effect,” as it is now called.

Why do we discriminate so easily? Tajfel and his student John Turner posited a simple answer: self-esteem. We think well of our group in order to think well of ourselves—even when the group is “minimal,” a passing group, like being an underestimator of dots. When the group is more important, such as the high school we went to, the process is even easier to see. We think well of our high school as part of thinking well of ourselves. This would hold, of course, for all kinds of groups and affiliations—our neighborhood, city, age cohort, income level, and so on. And in liking our groups as part of liking ourselves, we just might favor members of our group over members of other groups—the need for self-esteem driving in-group favoritism. It would happen without our being much aware of it. But it seems to happen.

The experiments of Tajfel and his colleagues made several profound points that weren’t obvious to the naked eye: that our need for self-regard was powerful enough to make us care about even trivial group identities; that we could discriminate against other people about whom we knew nothing except that they weren’t members of a group we were part of, even when the group was trivial; and that all of this is true for virtually everyone on earth (although there is evidence that it is less true for people from collective societies).

How easy it is to ignite human bias. Nothing special about either the perpetrator or the victim is required. Ordinary human functioning—maintaining one’s self-esteem—is enough. This was a revelation about the human psyche.

And in showing the minimal conditions needed for group prejudice, Tajfel also showed the minimal conditions needed for a sense of group identity. To feel a given identity, to have that identity take hold of us and affect how we function, the contingencies tied to it needn’t be dramatic or even consequential. “Minimal” threats will do the job. It’s enough to be classified an “over-estimator”—a minimal threat, to be sure, but enough of a threat to activate an identity, to make it, for a time at least, “pervade the whole identity.” When it comes to identity threat, we humans are a sensitive lot.

6.

Not long ago I heard an interview conducted by Ira Glass during an episode of National Public Radio’s *This American Life* that had a pointed relevance to a central implication of our thinking. The implication is this: if our social identities —our racial, sexual, or political identities, for example—are substantially rooted

in local contingencies, as much as or more than in internal traits, they might not travel well. That is, our sense of being a certain kind of person, and our functioning like a certain kind of person, might be more variable from one context to the next than we would think. Our evolving reasoning implied this. Our experiments had shown that it could happen. Women and blacks underperformed when they were under the identity contingency of stereotype threat, but not when that contingency was removed. The impact their identities had on them changed dramatically from one situation to the next. Still, I worried. It's just difficult to imagine that a change in setting could change the degree to which a given social identity "pervades the whole identity." Could we find phenomena that illustrate a significant malleability of social identity in real life? Finding one would encourage our thinking. Sometimes in problem solving it's not "my kingdom for a horse" but "my kingdom for a good example." And this is where the Ira Glass interview comes in.

The program focused on the question "Why do so many Americans love Paris?" One of Glass's interests was in African American expatriation—the long tradition of expatriation to Paris by African American writers and artists, like James Baldwin, Josephine Baker, Richard Wright, and countless jazz musicians. This is a fabled community dating back to the early twentieth century. Tours of it are offered to this day. Glass asked a young African American woman who had been living in Paris for several years whether African American expatriation was still what it had been cracked up to be.

She began her answer with a description of her life in the United States. She was born in Brooklyn and raised there in a housing project. She was a good student, which hadn't always helped with her peers. She got into a good college and hoped for a better school experience. But there, too, she had problems fitting in. The middle-class black women she tried to befriend saw her as a "project girl." She saw them as "putting the 'B' in 'bougie.'" Tension persisted. Neither were white women a recourse; they, she said, just didn't have much to do with her. And then there was the larger context of race relations in the United States. Our society, reflecting its history and ongoing ways of life, is still sufficiently organized by race to create contingencies of identity for all of us—especially, perhaps, for a black woman from a Brooklyn housing project.

Then, a plane ride to Paris. She went on a lark, but finding it beautiful and comfortable, she moved in, got work, tackled the language seriously, and committed to it her indefinite future.

Ira Glass asked her about her experience of race in Paris. Her mood elevated; a happiness came through. She said she is still black in Paris, but it isn't the most central thing about her when she meets people. Her blackness, she said,

especially as an educated black person, doesn't mean the same thing to people in Paris that it does in the United States. She described Parisians' affection for African Americans, their romance with jazz and African American writers. She says she is met first as a full person in Paris.

She noted quickly that the French are no less prejudiced than anyone else. She described their lack of affection for North African immigrants, former colonials—many of whom look like her. She remarked that her American-accented French helps her avoid being confused as North African. She said the relationship between the French and North Africans has similarities to that between white and black Americans, but that French society is even less open to incorporating its minorities than American society. She said that no matter how good her French gets, she will never be taken in as fully French.

Nonetheless, she said that sometimes riding on the subway she finds herself, beneath her breath, thanking the French for letting her live in their country. She said that she feels at home in Paris and that, in all likelihood, she won't repatriate to the States.

All identities are local, I have been arguing, rooted in local contingencies. When this woman went to Paris, she changed identity contingencies. And with the change, the psychological, everyday importance of her identities changed. In Paris being a black American had considerably less importance to her everyday life. Occasionally, it could even elicit affection. Moreover, she'd left her "project girl" identity, and its conflict with "bougie" girls, completely behind. Absolutely nothing she had to deal with in her Parisian life related to these identities. No contingencies, no identity is the argument. As Glass put it, the central, defining identity conflict of her life in America simply vanished in Paris.

She had achieved there much of what Broyard had achieved by passing. In passing you change your race but keep your country. In expatriation you keep your race but change your country. These strategies are different sides of the same coin—the pursuit of less limiting contingencies of identity.

This is not to say that this African American in Paris had no vestiges of her African American identity. Vestiges would surely remain: preferences for hamburgers and BBQ, for baseball, for the way Americans smile more and say hello, for certain kinds of music, and so on. She might take great pleasure in the company of other American expatriates. But these internal dispositions from her African American identity would be less pertinent to her new life and might even fade with time.

Looking over her shoulder as she talked, I wondered what line is drawn when you can't be taken in as "French." Does it mean you can't run for office, can't be part of the professional class, can't be a doctor or a professor? It also

occurred to me that expatriation is not a tactic you can easily retreat from. To come back from Paris, our expatriate would have to learn the contemporary American contingencies of her old identities, of her gender identity, her racial identity. Contingencies change. The longer she stays away, the more she would have to learn in order to return. Expatriation carries the risk of getting stranded in the new identity. Passing carries this risk too. This may be why it was so difficult for Broyard to reveal his racial identity to his children. Doing so would have committed him to repatriation, to forging some new black identity against new black contingencies. His wife, Sandy, told Gates that she would periodically plead with Broyard to tell the children. He steadfastly refused. The rigors of "coming home"—learning how to handle the new contingencies of his old identity as a black—would have been formidable, especially for one so visible.

These thoughts occurred to me as I listened to the Glass interview of the African American expatriate in Paris. But if they occurred to her, she wasn't yet bothered by them.

The experiments that my colleagues and I were doing showed that something generally thought to emanate from an internal capacity associated with social identity—as the level of women's math performance might emanate from women's math ability—could be changed dramatically by changing contingencies of that identity, by changing, in this research, the degree to which test takers were at risk of confirming bad stereotypes about their group. And the phenomena of identity change—"passing" and expatriation-—suggested that what we were seeing in the lab was the tip of an iceberg, an outcropping of a more fundamental fact about social identity. They suggested that the degree to which a given social identity had any presence in a person's life depended on contingencies, realities down on the ground that the person had to deal with because they had the identity. Take these contingencies away by allowing the person to "pass," or change these contingencies by allowing the person to expatriate out of them, and the whole identity could fall to irrelevance. A relocation to Paris, and a life-defining identity conflict vanishes.

What did this say about social identity? What did it say about what would have to be remedied in order to make progress on the problems that began our research? Two conclusions seemed unavoidable. First, our social identities are adaptations to the particular circumstances of our lives, what I am calling identity contingencies. If we didn't need them to help us cope with these circumstances, the perspectives, emotional tendencies, values, ambitions, and habits that make up the dispositional side of our social identities would just gradually leak out of our psyches and be gone. The second conclusion foreshadows the more pragmatic direction this book is taking. If you want to

change the behaviors and outcomes associated with social identity—say, too few women in computer science—don't focus on changing the internal manifestations of the identity, such as values, and attitudes. Focus instead on changing the contingencies to which all of that internal stuff is an adaptation. Bert Williams, the great African American comedian of the early twentieth century, once said, "I have never been able to discover that there is anything disgraceful about being a Negro, but I have to concede, I have found it inconvenient." In Williams's terms, then, we needn't worry about changing something "disgraceful" about being a Negro; change instead the "inconvenience" of being a Negro, change the contingencies of the identity.

Although our broadening understanding of social identity seemed promising, the game of science is played on the ground, as they say, on the ground of empirical research. And this broadening understanding had a clear and testable implication: if the effects we'd observed first with women and then with blacks were not entirely due to characteristics of these groups, but to stereotype and identity threat, as we argued, then similar effects should be observable in many groups, in relation to many different stereotypes, and in relation to many different performances and behaviors. Evidence showing this would add empirical heft to our emerging understanding. Back, then, to the through-line of this book, the expanding program of research on identity threat and its cures.

CHAPTER 5

The Many Experiences of Stereotype Threat

1.

When Ted McDougal, a white student at a prestigious university, walked into the first meeting of his African American political science class, he found himself counting. There were forty-five students in the class: one other, beside himself, was white; a few Asian students dotted the room; all the others were black. Ted didn't know much about African American experience. He had enrolled in the course to broaden himself. Yet, as he took his seat, he felt a question hanging over his head like a caption in a cartoon: What was this white guy doing in a class on African American politics?

The class began with history. It focused on the role of violence in maintaining whites' political dominance in the South after the Civil War. Photographs of whippings were shown through PowerPoint. The professor pushed the students to put themselves in the shoes of the people involved in this drama. Discussion was vigorous. Ted noted that the black students started saying "we." He knew they weren't including him. Then the term "white people" emerged. "White people try to avoid this part of history." "White people don't want to take responsibility for these transgressions." He felt uncomfortable. He told me weeks later, in an interview we had as part of this research in a campus bookstore café, that he often worried about proving himself academically at this university. But in this class, he knew he had to prove himself in another way—as a good person, as an ally of the cause, as a nonracist white person.

In class, he felt he was multitasking. He was involved in the lectures and

discussions, but he also worried that perhaps his statements, even his thoughts, would confirm the suspicion over his head. He kept his comments at the "tip of the iceberg" level, trying to be inoffensive—for example, saying out loud in class that he really liked the civil rights leader Bayard Rustin, while keeping to himself his ignorance about exactly what Rustin's role in the civil rights movement was. He was too reticent to pursue answers to his questions. He noticed the same thing in the other white student in class. Mostly, neither of them talked. Toward the end of that first day, as the professor went around the room asking the students to say their names and college major, he could hardly find his voice. His name came out more like "head" than "Ted." He sank in his seat.

Things hadn't gotten much better by the time our interview took place halfway through the quarter. I asked whether his tension interfered with his learning. He said he thought so. He described reading a section of St. Clair Drake and Horace Cayton's classic *Black Metropolis* in his dorm room. The section analyzed how a growing black population affected Chicago city politics in the mid-twentieth century. Ted said he hadn't been confident that he correctly understood the material. Maybe he was biased. Maybe his thinking was unknowingly contaminated by prejudice, stereotypes, or just naïveté. Even alone in his dorm room, his thinking was bottled up, insecure.

Yet he saw the class as positive for black students. "It gives them a chance to show how smart they are," he said. In most classes at his school, blacks are the minority, often a tiny minority. In those classes, they could feel the way he felt in this class. This is part of why he stayed in the class. Turnabout is fair play, but, most important, it was showing him something. He could see how the setting affected his "smartness." The pressure he felt confined his thought to the safe, the inoffensive, the superficial "tip of the iceberg." He hardly had one moment of unself-conscious engagement in the course's material. Yet he could see that the black students, whose experience and numbers enabled them to dominate the class, were unself-conscious, vigorously involved, and apt to say impressive things.

Our interview went on for a while. He had never expected the class to have so much of an effect on him. I explained the ideas my students and I were working on, about how the meaning of social identities like whiteness and blackness were rooted in situational contingencies. I said that was probably why he felt his "whiteness" so strongly in this class: it made him a minority there. Also, the topic of the class made negative stereotypes about whites—as racist or racially insensitive—constantly prominent. This put him under pressure, I explained.

I explained this pressure as a contingency of his identity in the class, his cross to bear. He listened. Encouraged, I became even more didactic, telling him he was probably learning something valuable. He was seeing into the experience of other groups, and that would give him the breadth he was after, make him more cosmopolitan. He listened. He said that would be nice. But as the interview closed, he said what impressed him most about the class was how it made him feel, how much it affected "smartness," his own and that of his black classmates.

Ted's experience in this class—his lack of participation, his self-consciousness, his hesitancy in thinking about the material, his lower-than-usual performance—would seem to reflect a threat similar to that experienced by women taking a difficult math test, or by blacks taking a difficult academic test of any sort. These threats differ as to form. The group identity involved is different. Ted is a white male, not a woman or a black. The aspect of his behavior affected by this threat was different; Ted was concerned about his lack of participation and self-consciousness in class more than about his performance per se. And the stereotype he worried about confirming was different: he was concerned about being seen as racially insensitive, not as unintelligent. He also knew that he was safe from this pressure in other classes where he was not a minority—unlike the blacks in this class, for whom this class was one of the few places they enjoyed such safety in numbers. Nonetheless, he experienced a stereotype threat in this class that affected him powerfully.

Ted's story makes a straightforward point: identity threat of the sort that has been shown to affect the intellectual performance of women and blacks is likely a general phenomenon that, in some form or another, in some situation or another, can affect anyone. There exists no group on earth that is not negatively stereotyped in some way—the old, the young, northerners, southerners, WASPs, computer whiz kids, Californians, and so forth. And when people with these identities are doing something, or are in a situation for which a negative stereotype about their group is relevant, they can feel stereotype threat; they can feel under pressure not to confirm the stereotype for fear that they will be judged or treated in terms of it. Identity threats like this—contingencies of identity—are part of everyone's life.

Yet early in our research we had no evidence that this was so, that identity threats are part of everyone's life. We'd shown its effect among strong women math students and among strong African American students. This was some generality: it happened in two groups, not just one. But a skeptic might argue that these two groups, women and blacks, had perhaps internalized the negative stereotype about their group's ability, and perhaps that internalization gave them a susceptibility to stereotype threat, a susceptibility necessary to get the effects

we'd gotten in our experiments. Remember the Gordon Allport quote from chapter 3, "One's reputation, false or true, can't be hammered, hammered, hammered into one's head without doing something to one's character." Would someone show these effects if he hadn't grown up with this "hammering," and the self-doubt that Allport believes follows it?

As one often says in the science business, this is an "empirical question," a question that can be answered by research and therefore should be answered by research, not by speculation. Answering this question, we came to see, would take two steps. The first was to determine whether stereotype threat effects indeed required some prior susceptibility to the stereotype. The second was to see whether stereotype threat effects could actually be found in other groups—in reaction to different stereotypes and involving different behaviors.

We began with the first question, stewing about it in our lab group and with colleagues. At the time my colleague Lee Ross's office was across the hall from mine. Capable of seeing a problem from many sides, Lee is often referred to as a social psychologist's social psychologist. A former student of his once introduced him as the Charlie Parker of social psychology. He blows lots of notes with intricate themes, like the jazz saxophonist. You could do a lot worse than take an idea by his office to see what he thought. We talked.

An approach to our problem emerged. We'd have to do what seemed like the impossible: impose stereotype threat on a group in an area of performance where they weren't negatively stereotyped, and thus couldn't have an internalized stereotype susceptibility. If they then underperformed, we'd know that no prior susceptibility to the stereotype was necessary for them to experience this threat. We'd know that stereotype threat in the immediate situation was enough. If they didn't underperform, we would know that a prior susceptibility *was* necessary for them to experience this threat. But how to do this? How could we get a group to experience stereotype threat in an area where they weren't negatively stereotyped?

Joshua Aronson, Michael Lustina, Kelli Keough, Joseph Brown, Catherine Good, and I put our heads together and eventually came up with a strategy. We would put high-performing, highly confident white male math students under the stereotype threat of another group's—Asian Americans'—positive stereotype in math. We would tell them, just as they began a difficult math test that this was a study exploring Asians' strength in math and that the test they were taking was "one on which Asians tend to do better than whites." This would put them in a situation comparable to the one that women and blacks faced in the stereotype threat groups of our earlier experiments. They would be at risk of confirming their own group's math inferiority—this time not directly, but in relation to

another group's stereotyped superiority. Their normal frustration on the test, then, could mean that, as whites, they had limited math ability relative to Asians. For white students who care about math, this perception, and the possibility of being judged or treated in terms of it, could be upsetting enough to distract them and undermine their test performance.

Yet white males have not lived with a stereotype about their group's math inferiority being "hammered into their heads" and should not, therefore, have the internalized self-doubts that such an experience could produce—and that could be a necessary component of the stereotype threat effects we'd observed with women and blacks. So if they underperformed after exposure to the Asian stereotype, we'd know that it was due to the situational impact of stereotype threat and not self-doubts acquired over a long socialization process.

That was our reasoning. Still, we knew it could be argued that white male math students, while not having their group's math inferiority directly "hammered into their heads," might still know the Asian-math stereotype and might have developed some sense of math inferiority relative to Asians. Several considerations told us not to worry too much about this. Knowing that another group is positively stereotyped in an activity doesn't imply that you are inferior because you're not a member of the group. Also, unless you've been close to a sizable population of strong Asian math students, you might not know about, or strongly believe, this stereotype.

Still, as a further precaution, we used only very strong white male math students in this study—Stanford students whose average score on the math SAT was 712 (on the 800-point scale for this test) and whose average self-rating of their math skills was very strong. It didn't seem likely that members of this group would have stereotype-based doubts about their math ability. So if they underperformed after exposure to the positive Asian stereotype, we could say with considerable confidence that it was due to the situational pressure of this indirect form of stereotype threat.

And this is just what happened. The results were dramatic. White males taking the difficult eighteen-item test, represented as one on which "Asians tend to do better than whites" performed, on average, a full three items worse than white male participants who were told nothing about the test.

The stereotype threat created by this comment impaired the math performance of *exceptionally strong white male* math students. No special self-doubting susceptibility seemed necessary.

At about this time, a different research team, all the way across the country at Harvard University, produced further evidence of the situational nature of stereotype threat—dramatic evidence at that. Margaret Shih, Todd L. Pittinsky,

and Nalini Ambady asked the interesting question of how stereotype threat would work for a group of people who had two social identities relevant to a given performance domain, especially if one identity was positively stereotyped in the domain and the other identity was negatively stereotyped in the domain. They had in mind the case of Asian women performing math. Members of this group have two math-relevant identities: their gender identity, which is negatively stereotyped in math, and their ethnic identity, which is positively stereotyped in math.

If stereotype threat is largely a situational pressure, then it might be possible to change the math performance of Asian women, depending on which one of their performance-relevant identities they are reminded of in the situation—their ethnicity or their gender.

Shih and her colleagues asked undergraduate Asian women from Boston area colleges to participate in a study that had only two parts. They first filled out a brief background questionnaire and then took a difficult twenty-minute math test made up of twelve items from the Canadian Math Competition, a prestigious high school competition in Canada. The questions on the background questionnaire were used to remind the women of one or another of their math-relevant identities just before they took the test. What the researchers found was clear. Women whose background questionnaire reminded them of their gender identity—with questions about whether their dorm was coed and why they would prefer coed living—got 43 percent of the math test questions they attempted correct, whereas women whose background questionnaire asked questions that did not remind them of their gender identity—with questions about their telephone service—got 49 percent of the questions they attempted correct. This comparison essentially replicated the detrimental effect of stereotype threat, among the gender-reminded women, on performance. Importantly, though, when the background questionnaire reminded them of their ethnic identity—with questions about what languages they spoke at home and how many generations of their family had lived in America—this underperformance was eliminated entirely. They got 54 percent of the items they attempted correct. Simply varying which of their identities they were reminded of before taking the twelve-item math test produced an average difference of two points in their score—an effect size that if played out over a typical, much longer test would depress overall performance dramatically.

These findings do not mean that math skills or even internalized math vulnerabilities—as internal traits of these women—had no effect on their performance. These internal characteristics may well have affected the general level of participants' performance. What they do show is that their math

performance was further affected by which one of their identities was prominent in the test situation—the identity that exposes them to stereotype threat or the one that doesn't. This makes the important point that whatever the skills or vulnerabilities a group may have, situational differences in stereotype threat alone—a contingency of social identity—are fully sufficient to affect intellectual performance substantially.

And these findings suggest a possible remedy for stereotype threat effects: remind test takers of identities that counter the relevant stereotype. Some years earlier, a then graduate student Kirsten Stoutemeyer and I had inadvertently found evidence of this. Just before women math students took a difficult math test, we reminded them that they were Stanford students. This reminder greatly reduced stereotype threat's effect on their performance. We later found that R. B. McIntyre, R. M. Paulson, and Charles Lord had independently found the same thing. They dramatically reduced stereotype threat's impairment of women's math performance by reminding them, just before the test, of positive women role models.

Science, like life, is rarely definitive. But in light of the emerging results, we had confidence in a straightforward conclusion: stereotype threat isn't confined to particular groups, and if people have to have a susceptibility to experience it, that susceptibility doesn't have to be more than a simple familiarity with the relevant stereotype—and a commitment to doing well in that area of performance. As I described earlier, we also knew that stereotype threat affected the strongest students in the stereotyped group the most—another reason to doubt that self-doubt was a necessary component of one's susceptibility to stereotype threat. The picture was clearing up. Stereotype threat seemed to be a situational pressure that didn't require internal susceptibility to interfere with intellectual performance.

In order to know that this was so, we needed evidence of the breadth of stereotype threat effects. If no internal susceptibility was at the root of these effects, then it should be possible to observe them in a broad variety of groups and in relation to a broad variety of stereotypes. This was the task to which our lab and other social psychologists next turned.

2.

Jean-Claude Croizet is a French social psychologist with postdoctoral training in the United States. He is a man of medium height and, reflecting his penchant for marathon running, a thin build. He is curious and thoughtful, a careful thinker

and careful researcher. He comes from the French working class in a society in which social class is as central a social division as race is in the United States. Perhaps this background led him to notice that something was undermining the intellectual and linguistic achievement of lower-class students at the French university where he taught, even the best prepared among them. As he considered how to study what he was seeing, he read the research that Josh Aronson and I had done, showing the effect of stereotype threat on African Americans' test performance.

His question to himself was essentially the generality question: Could the same thing that happened to strong African American students in our experiments be what was happening to lower-class French students in his classes? Could "stereotype threat"—the specific form it took for lower-class French students in French universities—be a cause of their language and performance troubles in college? Was stereotype threat a general part of the human experience?

Jean-Claude and his collaborator, Theresa Claire, gave this possibility its first test. They did an experiment at the University of Clermont-Ferrand, in southeastern France, with upper-and lower-class French college students that followed the experiment we had done at Stanford University with white and black Americans. They gave both groups, one at a time, a very difficult language test (again using GRE-type items). They told half of the participants that the test was diagnostic of language ability—an instruction that causes stereotype threat for the lower-class students by framing frustration on the test as confirmation of the French stereotype that lower-class people lack language ability. They told the other half of the participants that the test was nondiagnostic of ability, thus making the stereotype about social class and language ability irrelevant to their experience on the test.

The results mirrored those of my experiments with Josh exactly. When the twenty-one-item language test was said to be nondiagnostic of language ability, the lower-class French students performed slightly better than the upper-class French students, averaging 11.4 correct compared with an average of 10.3 correct for the upper-class French. But when the test was said to be diagnostic of language ability—thus making the stereotype about lower-class French students' ability relevant to their performance on this test—the lower-class French performed almost three items worse than the upper-class French. Stereotype threat—here stemming from stereotypes about language ability and social class rather than cognitive ability and race, or about math ability and sex—generalizes to a different group, in a different situation, in a different country and culture.

Back Stateside, Thomas Hess and his colleagues at North Carolina State

University tested a generalization of stereotype threat that struck closer to home—that is, for a man of mellowing years like myself. There is, of course, a stereotype about aging and memory. Could the threat of confirming that stereotype actually affect memory among older people? To find out, one study asked older people (average age 70.8 years) and younger people (average age 19.3 years) to study some materials that included a memory test, a list of thirty words that participants studied for two minutes before trying to write down as many words on the list as they could remember. To make the stereotype about aging and memory vivid for some participants—thereby putting the older people in the group under the threat of confirming the stereotype—they had them first read a newspaper article claiming that age did, in fact, impair memory. Compared with participants who read no such article or who read an article claiming that age had little effect on memory, participants who read the stereotype-evoking article performed worse on the brief memory test, recalling 44 percent of the studied words compared with 58 percent by participants not under stereotype threat. In fact, in the group experiencing stereotype threat, the more aware the participants were of the aging stereotype, the worse they performed. And, as in so many stereotype threat experiments, the proportion of words recalled was worse for the older participants who cared most about having good memories.

As a last illustration of the emerging generality of stereotype threat effects, I remind you of the intriguing research by Jeff Stone and his colleagues at the University of Arizona, described in chapter 1, showing stereotype threat's effect on the golfing performance of athletically inclined Princeton students.

In the nearly fifteen years since its first demonstration was published, research on stereotype threat effects has blossomed throughout the world. The effect has been observed in women, African Americans, white males, Latino Americans, third-grade American schoolgirls, Asian American students, European males aspiring to be clinical psychologists (under the threat of negative stereotypes about men's ability to understand feelings), French college students, German grade school girls, U.S. soldiers on army bases in Italy, women business school students, white and black athletes, older Americans, and so on. It has been shown to affect many performances: math, verbal, analytic, and IQ test performance, golf putting, reaction time performance, language usage, aggressiveness in negotiations, memory performance, the height of athletic jumping, and so on. No special susceptibility is required to experience this pressure. Research has found but one prerequisite: the person must care about the performance in question. That's what makes the prospect of confirming the negative stereotype upsetting enough to interfere with that performance.

After I make this point in my talks, people often have several questions at once: What exactly does this threat do to a person that causes the interfering effects it has? What can be done to reduce the unwanted effects of stereotype threat in society and in their lives? And perhaps reflecting a certain frustration, they ask, Dear Professor, why can't a person just buckle down and overcome the damn stereotype? I can hear my parents' admonitions to this effect ringing in my ears as I write this. Future sections of the book will deal extensively with the first two questions. But now, sensing that frustration, I will address my parents' view, one shared by many—*I hear you, son, stereotype threat can be pretty bad, but you should use it to motivate you; get out there and prove the stereotype, and those who hold it, wrong.*