


# The Stereotype Trap

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Sharon Begley

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The students had no idea of the real purpose of the study they had volunteered for--it is, after all, standard operating procedure in psychology to keep subjects in the dark on that little point. (If volunteers know they're being studied for, say, whether they will help a blind child cross a busy street, it tends to skew their behavior.) So when 40 black and 40 white Princeton undergraduates volunteered to play mini-golf, the psychologists dissembled a bit. This is a test of "natural ability," Jeff Stone and his colleagues informed some of the kids. This is a test of "the ability to think strategically," they told others. Then the students--nongolfers all--played the course, one at a time. Among those told the test measured natural ability, black students scored, on average, more than four strokes better than whites. In the group told the test gauged strategic savvy, the white kids scored four strokes better, the researchers reported last year. "When people are reminded of a negative stereotype about themselves--'white men can't jump' or 'black men can't think'--it can adversely affect performance," says Stone, now at the University of Arizona.

Another group of students, 46 Asian-American female undergrads at Harvard, thought they were taking a tough, 12-question math test. Before one group attacked the advanced algebra, they answered written questions emphasizing ethnicity ("How many generations of your family have lived in America?"). Another group's questionnaire subtly reminded them of their gender ("Do you live on a co-ed or single-sex dorm floor?"). Women who took the math test after being reminded of their Asian heritage--and thus, it seems, the stereotype that Asians excel at math--scored highest, getting 54 percent right. The women whose questionnaire implicitly reminded them of the stereotype that, for girls, "math is hard," as Barbie infamously said, scored lowest, answering 43 percent correctly.

The power of stereotypes, scientists had long figured, lay in their ability to change the behavior of the person holding the stereotype. If you think women are ninnyes ruled by hormonal swings, you don't name them CEO; if you think gays are pedophiles, you don't tap them to lead your Boy Scout troop. But five years ago Stanford University psychologist Claude Steele showed something else: it is the *targets* of a stereotype whose behavior is most powerfully affected by it. A stereotype that pervades the culture the way "ditzy blondes" and "forgetful seniors" do makes people painfully aware of how society views them--so painfully aware, in fact, that knowledge of the stereotype can affect how well they do on intellectual and other tasks. Now, with half a decade of additional research under their belts, psychologists are discovering the power of stereotypes not only over blacks, but over women, members of ethnic minorities and the elderly, too. And the research is shedding light on such enduring mysteries as why black kids, even those from middle-class families and good schools, often score lower than white kids on standardized tests.

In their seminal 1995 study, Steele and Joshua Aronson, now at New York University, focused on how the threat posed by stereotypes affects African-Americans. They reasoned that whenever black students take on an intellectual task, like an SAT, they face the prospect of confirming widely held suspicions about their brainpower. This threat, the psychologists suspected, might interfere with performance. To test this hunch, Steele and Aronson gave 44 Stanford undergrads questions from the verbal part of the tough Graduate Record Exam. One group was asked, right before the test, to indicate their year in school, age, major and other information. The other group answered all that, as well as one final question: what is your race? The results were sobering. "Just listing their race undermined the black students' performance," says Steele, making them score significantly worse than blacks who did not note their race, and significantly worse than all whites. But the performance of black Stanfordites who were not explicitly reminded of their race equaled that of whites, found the scientists.

You do not even have to believe a negative stereotype to be hurt by it, psychologists find. As long as you care about the ability you're being tested on, such as golfing or math, and are familiar with the stereotype ("girls can't do higher math"), it can sink you. What seems to happen is that as soon as you reach a tough par 3 or a difficult trig problem, the possibility of confirming, and being personally reduced to, a painful stereotype causes enough distress to impair performance. "If you are a white male and you find yourself having difficulty, you may begin to worry about failing the test," says psychologist Paul Davies of Stanford in an upcoming paper. But "if you are a black male... you begin to worry... about failing your race by confirming a negative stereotype." It's a sort of "oh God, they really are right about people like me" reaction.

You don't outgrow it, either. Becca Levy of Yale showed over-60 volunteers subliminal messages (through words flashed quickly on a monitor) and then tested them on memory. Seniors who saw words like "Alzheimer's," "senile" and "old" always scored worse than seniors who saw words like "wise" and "sage"--in some tests, 64 percent better. Does it matter? In a follow-up, Levy used the same subliminal priming. But this time she asked the volunteers whether they would accept life-prolonging medical intervention. Those seniors primed with positive stereotypes usually said yes; those reminded of senility and frailty said no. "What's so frightening," says Levy, "is that the stereotype, at least in the short run, overwhelms long-held beliefs."

Stereotypes seem to most affect the best and the brightest. Only if you're black and care about academics, or female and care about math, will you also care if society thinks you're bad at those things. A girl whose sense of self-worth is tied up in her poetry, for instance, is less likely to freeze up when her facility with calculus is belittled. To test the effect of the "bimbo" stereotype, scientists at the University of Waterloo in Ontario showed men and women undergrads TV commercials with and without gender stereotypes. (In one, a student says her primary goal in college is to meet "cute guys.") Then the students, who all said they were good at math and that it mattered to them, took a standardized test. Women who saw the commercials with female stereotypes not only did worse on the math problems than did

women who saw gender-neutral commercials, as well as worse than men: they actively avoided math problems in favor of verbal ones. But the effect of stereotypes didn't end there. Women who saw stereotyped ads expressed less interest in math-based careers like financial analysis and physics afterward, and more interest in math-free fields like writing. "Exposure to stereotypic commercials persuades women to withdraw" from fields like math and science where they are the targets of stereotypes, Davies says. Of course, if the stereotype is positive, it can induce you to persist in something you're supposed to be good at even if you're not. Steele admits sheepishly that he keeps playing sports (even though he's no Tiger Woods) because, as a black man, he's told by society that he's a natural.

The power of stereotypes may explain the persistent gap between black and white kids on standardized tests even when the black kids come from middle and upper socioeconomic classes. Tellingly, that gap widens with age. Little kids have comparable scores on standardized tests, but by sixth grade, black kids lag by two full grade levels in many districts. It is around sixth grade, Steele points out, that "race becomes a big factor in the social organization of school"--and hence a more powerful reminder of which group you belong to.

Can the pernicious effects of stereotypes be vanquished? If no one reminds you of a negative stereotype, your performance doesn't suffer. It can actually improve if instead you think of a positive stereotype--Steele recommends bellowing something like "You are Stanford students!" but clearly that has limited applicability. Deception helps, too: if women are told that a difficult math test reveals no gender differences, finds Stephen Spencer of Waterloo, they perform as well as men. Otherwise, women score much lower. While such manipulations may weaken the brutal power of stereotypes, at the end of the day they remain manipulations. But until stereotypes fade away, that may be the best we can hope for.