

The Threat of Stereotype

Joshua Aronson

Joshua Aronson is Associate Professor of Psychology and Education at New York University (NYU), 239 Greene St., New York, NY 10003; joshua.aronson@nyu.edu. He is also Co-director of the National Task Force on the Achievement Gap at NYU.

To close the achievement gap, it helps to understand how negative stereotypes can interfere with achievement.

Not long ago, I was asked to explain why Jews were so rich. I had just accepted an offer to be assistant professor at a large university, and my wife and I, hunting for our new home, were in a restaurant having lunch with the realtor. “I mean it,” the realtor said. “Do you people have some *genetic* thing that makes you good at making money?” She explained that in her experience, her Jewish clients had the biggest houses and the nicest cars, and wore the fanciest clothes. I bristled. “What do you mean? That stereotype seems so worn-out...and clearly, my wife and I are far from rich, and *we’re Jewish...*” From there, I proceeded to give her a brief anti-stereotyping primer, to which she responded with interest. I was reassured.

A few moments later, however, I faced a strange predicament. The bill for lunch arrived and, unfamiliar with realtor-client etiquette, I considered picking up the tab. Then it hit me: If I offer to pay, won’t this support the stereotype that I just tried to debunk—that we Jews are loaded? But then, al-

most immediately, another thought: If I *don’t* make the offer, maybe she’ll consider that other, more negative stereotype about Jews—that we’re all *stingy*. I was stuck.

In the months following the September 11 attacks, it was common for Muslim cabdrivers in New York City to display U.S. flags in their cabs; some even posted signs declaring, *I am not a terrorist!* or *Proud to be an American!* I asked my driver one day why he had put up his sign. “Since the World Trade Center,” he said, “vibrations very bad; tips very bad. Everything better with sign.”

The cabdriver’s uneasiness following September 11 and my awkwardness with the realtor are common phenomena that arise when humans interact across cultural or racial divides. Nobody likes to be reduced to a stereotype, particularly a negative one. If we care how we are viewed by others, we adjust our behavior to avoid being pegged, seen and treated as though the stereotype were true. In many cases, the stakes of confirming a stereotype are low, as with my realtor’s impression of Jews. But for the cabdriver, both his psychological well-being and his livelihood seemed to be on the line, with people looking at him and thinking *Arab terrorist*.

During the last decade, I have studied how people cope with such situations, focusing on those stereotypes that allege intellectual inferiority and on the students who face their allegations of inferiority. Fellow researcher Claude Steele and I named this predicament *stereotype threat*. We have found that stereotype threat and the responses it prompts can play a powerful role in the relatively poor achievement of certain students—African Americans, Latinos, and girls in math-oriented domains. We have also found that understanding stereotype threat can help educators nurture their students’ intelligence.

It was data on college performance that initially drew us to the topic. The data were clear and consistent from study to study—and they frustrated nearly all the arguments about genetics or early-developed skills being the sole determinants of differences in performance between black and white students. The data showed that even when students arrived at college with similar skills and preparation (as measured by grades and SAT scores), black students fared worse than white students did. As many studies have since shown, even when students start out matched—in terms of parental income and education and the quality of schools the students attended—a significant achievement gap remains between black and white students (Jencks & Phillips, 1998; Massey, Charles, Lundy, & Fischer, 2003). Something else was suppressing the achievement of these college students—something beyond their intelligence and skills. Our hunch was that this “something else” was rooted in the cultural stereotypes of intellectual inferiority that these students so frequently complained about.

UNNERVING EXPECTATIONS

By age six, virtually everyone is aware of a variety of cultural stereotypes. Mere familiarity with their content is enough to bias people’s perceptions and treatment of individuals from stereotyped groups (Devine, 1989). National opinion polls, moreover, suggest that the stereotypes are widely believed. About half of white Americans endorse common stereotypes about blacks and Latinos, which, among other images, portray them as unintelligent (Smith, 1990). It has long been known that stereotypes—the pictures in the head that simplify our thinking about other people—produce expectations about what people are like and how they will behave. We also know that such expectations on the part of a teacher can influence the performance of his or her students (Rosenthal, 2002; Weinstein, 2002) and that the black-white achievement gap may in part result from the differential treatment that black students receive in school (Ferguson, 1998).

Our focus, however, was to look at the situation through the eyes of the students on the receiving end of these negative expectations. Research indicates that African Americans are well aware of their group’s negative reputation. Indeed, some research suggests a tendency for African Americans to be hyperaware of the negative expectations about their group and to considerably overestimate the extent to which the mainstream sees them as less intelligent and more likely to commit crime and live off welfare (Sigelman & Tuch, 1997). Thus, when black students are in an evaluative situation—being called on in class, for example, or taking a test—they are apt to experience an additional degree of risk not experienced by most white students. The very real possibility

looms that they will do something to confirm the stereotype’s unflattering allegations of inferiority, in the eyes of others and in their own eyes as well.

From the hundreds of interviews that I’ve conducted with black college students, it’s clear that many believe that the stereotype places them in situations freighted with unnerving expectations. Some report feeling a sense of unfairness, that there will be less patience for their mistakes than for white students’ mistakes, and that their difficulties will be seen as evidence of an unalterable limitation rather than as the result of a bad day or the inherent difficulty of the material. Others report worrying that the stereotype might indeed be true of them, or that their poor performance will reflect badly on other members of their group. Such feelings can make black students more apprehensive than white students about being evaluated and about the prospect of failure. They will often begin to question whether they truly belong in an arena that prizes academic talent.

This is bad news given what we know about the ubiquity of social stereotypes and the fact that they are notoriously resistant to change. But there is also good news: stereotype threat is partly situational; it varies in intensity as a function of social climate, and of students’ perceptions about their own goals and abilities, and the way schools and colleges are organized. As teachers, we therefore have a good deal of influence over how much stereotype threat our students will experience.

TEST STRESS

Our research began with the simple hypothesis that stereotype threat makes students anxious, which in turn can depress their performance on such challenging tasks as standardized tests. We decided that if we could reduce students’ apprehension about confirming the stereotype, then we could reduce their anxiety and boost their performance.

We tested this reasoning with a number of simple experiments (Steele & Aronson, 1995). In our first experiment, we had African American and white college students take a challenging standardized verbal test. In the control condition of the experiment, we presented the test in the standard way—as a measure of intellectual ability and preparation. In the experimental condition, we sought to reduce stereotype threat by removing the relevance of the stereotype. We told our test takers that we were not interested in using the test to measure their ability; we only wanted to use it to examine the psychology of verbal problem solving. This was the only difference between the two conditions of the experiment. The test was the same, the students were equally talented, and students were allotted the same amount of time to complete the test. When we looked at student performance, the results were surprising, even to us.

On the test that we presented in a nonevaluative manner, the black students solved, on average, twice as many items as on the test that we presented in the standard way. The way we presented the test had no effect whatsoever on the white students. In another set of studies, we found that merely asking students to indicate their race on a demographic questionnaire prior to starting the test had a similarly debilitating effect on black students. When they thought we were interested in their race, their test scores plunged.

From these and other studies, I've come to recognize that human intellectual performance is far more fragile than we customarily think; it can rise and fall depending on rather subtle features of the social context. As a growing body of research is showing, when social conditions threaten basic motives—our sense of competence, our feelings of belonging, our feelings of control—this can dramatically influence our intellectual capacities, our motivation, and our abilities to self-regulate. Stereotype threat appears to threaten all of these motives at once (Aronson & Steele, 2005).

Since the publication of our initial report a decade ago, over 100 studies on stereotype threat have been conducted, both by us and by researchers around the world, showing that stereotype threat is a significant factor in the achievement gap (Massey et al., 2003). These studies shed considerable light on how stereotypes suppress the performance, motivation, and learning of students who have to contend with them, and they suggest what educators can do to help (Aronson & Steele, 2005).

EVERYONE IS VULNERABLE

One thing is clear from the studies on test performance: stereotype threat does not prompt test takers to give up or try less. If anything, stereotype threat makes people try harder on tests. This increased level of effort and anxiety suggests an “I’ll show you” response aimed at invalidating the stereotype. Such a reflex can be advantageous in situations requiring brute effort. Indeed, stereotype threat can actually boost performance on easy or well-learned tasks in which additional effort pays off (O’Brien & Crandall, 2003).

But on difficult standardized tests—as with, say, free-throw shooting, brain surgery or chess—a relaxed concentration is optimal; anything that compounds performance pressure is likely to be a handicap.

The data from our studies strongly suggest that this extra motivation on the part of test takers reflects the desire to disprove the negative stereotype or, at least, to deflect it from being self-characteristic, as in the cabdriver’s *I am not a terrorist* sign. Thus, poor test performance does not nec-

essarily reflect a lack of effort or caring, but rather the fragility of intellectual performance in psychologically loaded situations. Indeed, the research shows that students who are most vulnerable to stereotype threat are those who care the most and who are most deeply invested in high performance (Aronson et al., 1999), a fact that contributes to the poor predictive value of standardized tests. Ideally, a test of aptitude should add points for academic dedication, not subtract them.

Everyone can be vulnerable to stereotype threat. Studies show similar effects for women on math tests, Latinos on verbal tests, and elderly individuals (who face the stereotype about declining mental powers) on tests of short-term memory. But even groups who carry no historical stigma of inferiority can be impaired if one arranges the situation to their disadvantage. My colleagues and I found, for example, that white male engineering students (with astronomical SAT math scores) performed significantly worse on a difficult math test when we told them that their performance would help us understand Asians’ mathematical superiority (Aronson et al., 1999). The rather unusual situation that we imposed on these students—a direct comparison with an allegedly superior group—is not unusual for blacks and Latinos. They contend daily with this sort of implied comparison in most integrated academic settings. The fact that undeniably smart and accomplished students as those in our experiment underperformed on a test when faced with a stereotype should make us think twice about casually assuming that the low performance of blacks and Latinos reflects a lack of ability. Instead, we need to appreciate the power of the circumstances that these students face.

Students become vulnerable to stereotypes at around sixth grade, an age when children get increasingly concerned with others’ evaluations, and when they begin to comprehend that the world at large has negative expectations for certain groups. Children who are exposed to more prejudice or who are more advanced in their thinking about stereotypes and intellectual abilities will become vulnerable earlier.

Early adolescence is also a crucial period for students, partly because students are deciding who they are, what they are good at, and what they want to be. For the first time, they get to make choices that will determine their long-range education trajectories. To the extent that students avoid challenge when given the opportunity—by selecting easier courses, for example—they rob themselves of opportunities to expand their skills and intelligence. The studies reveal a significant tendency among minority students to avoid challenge when they are being evaluated. When given a choice of problems ranging in difficulty, they often select easy, success-ensuring tasks (Aronson & Good, 2002). One of the most pernicious effects of stereotype threat, then, is that it creates a goal structure in which

looking smart becomes more important than *getting* smart. But again, wise teaching can turn this around.

HOW EDUCATORS CAN HELP

Educators can minimize stereotype threat. When we do this, we see student scores, motivation, and enjoyment of the education process rise, often dramatically. For example, cooperative classroom structures in which students work interdependently typically produce immediate and dramatic gains in minority students' grades, test scores, and engagement because such environments reduce competition, distrust, and stereotyping among students, while promoting a sense of community (Aronson & Patnoe, 1997). So, too, do smaller classrooms where students and teachers get to know one another, and thereby can more easily see beyond the superficial category labels of race and ethnicity. In an important recent study, the economist Thomas Dee found that students assigned to large classes tended to do better if they had a teacher of the same race. Black kids did better with black teachers and white students with white teachers, suggesting that some kind of race bias was operating. But students assigned to smaller classes escaped these biases—the race of their teacher didn't matter at all.

Studies also indicate the benefits of teaching students to conceptualize their intellectual abilities as expandable rather than fixed. Stereotypes impose on students the notion that their difficulties reflect an unalterable limitation, a *bell curve* view of abilities that says that some people are born smart and others dumb. When we teach students to reconsider the nature of intelligence, to think of their minds as muscles that get strengthened and expanded—*smarter*—with hard work, we find that their negative responses to stereotype threat diminish. They stop trying so hard to not look dumb, they engage more, take on more challenges, and are braver about asking for help. They can relax and embrace the curriculum.

In one laboratory study with college students, teaching a malleable view of intelligence dramatically boosted the students' test scores on a difficult standardized test (Aronson, 2004). In another study, it significantly boosted students' enjoyment of school and their resulting year-end grade point averages (Aronson, Fried, & Good, 2002). In a third study that tested this approach, poor minority students in a middle school showed dramatic improvement on their statewide standardized test scores (Good, Aronson, & Inzlicht, 2003). Stereotype threat can be substantially overcome with the proper mindset about the nature of ability, and this mindset can be taught (Dweck, 1999).

Studies also show the value of simply teaching students about stereotype threat. Learning that their test anxiety re-

sults from a common response to stereotyping helps students interpret their struggles in a less pejorative and anxiety-producing way and this results in higher test scores (Aronson & Williams, 2004; Johns & Schmader, 2004). Similarly, exposing minority students to role models who have triumphed over similar academic struggles with hard work and persistence markedly improve the students' study habits, grades, and test scores.

No Child Left Behind, as currently implemented in many schools, maximizes some elements of stereotype threat. The single-minded emphasis on *the big test*, the end-of-year evaluation used to judge the quality of students, teachers, schools, and districts—all of whom will be duly rewarded or punished for the outcome—adds pressure for students already disadvantaged by tests. Worse, it threatens an already tenuous sense of belonging by creating a belief that the school views certain students as weak links in the chain and might prefer it if they weren't around to lower the school's test score average. Such stigmatization and threats to belonging can have devastating effects on achievement (Aronson & Steele, 2005; Wong, Eccles, & Sameroff, 2003). Thus, for many minority students, No Child Left Behind is programmed to backfire. Not surprisingly, many states have witnessed a rise in dropout rates among disadvantaged minorities since the law went into effect. Research makes it clear that if we are serious about narrowing the minority-white achievement gap or the gap between men and women in the upper levels of math and science, we'll need to pay much greater attention to the social and psychological implications of our policies.

THE BIG PICTURE

A caveat: H. L. Mencken once said that “for every complex problem, there is a solution that is simple, neat—and wrong.” Attending only to stereotype threat—or to any single factor by itself—we will never close the achievement gap. Sadly, much of public discourse surrounding the achievement gap tends toward the H.L. Mencken variety: too simple to be right or helpful.

For example, various recent commentators have looked at the four-year reading gap between African American high school students and their white counterparts (National Center for Education Statistics, 2000). In their view the problem is the family—poor, broken, uneducated black families, they argue, are the primary culprits in black students' lagging test scores and grades (Farkas, 2004; Wax, 2004). Parents pass on their own shortcomings to their children by failing to provide the kind of intellectual stimulation needed to succeed in school. Black parents

don't talk enough to their kids, don't use complex enough vocabulary, don't read them enough books, the logic goes, and this intellectually impoverished environment creates a skill deficit that starts black children behind and keeps them behind throughout their school years.

This analysis isn't flat-out wrong as far as it goes, but its simplicity makes it misleading. True enough, early skill differences contribute greatly to the achievement gap (and universal quality daycare would probably narrow the gap more than any currently proposed solution such as No Child Left Behind). But the differences kids bring with them to kindergarten do not cause the entire achievement gap. We know this because the gap actually widens—nearly doubles, in fact—as kids move through school (Jencks & Phillips, 1998). This widening is often a reflection of the fact that if you are poor and black in America, you are likely to be taught by under qualified teachers in overstressed, under-resourced schools, in districts where parents lack the clout—or *cultural capital*, as Pedro Noguera (2003) calls it—to meaningfully advocate for their children. So when we yell at parents in such situations, I think we erroneously overestimate their influence. At the same time, we absolve policymakers of their responsibility to give educators the support they need to eliminate whatever skill deficits children bring with them to school. When schools have the resources and the wisdom about how to use them, achievement gaps narrow.

No one who has looked, for example, at Mary Catherine Swanson's AVID program could ever doubt the power of wise schooling and caring teachers to lift minority student achievement. In her program, which emphasizes community, inquiry, and dedication—in addition to academic rigor—many thousands of poor minority high school kids who would have failed or dropped out have gone on to college with the skills to thrive there. And, a good number of the AVID kids succeed in spite of extremely dire conditions in the home because AVID attends to the basic social psychological requirements children need for genuine learning—among them, not to feel devalued or rejected by teachers and peers. If academic achievement depends primarily on home life, this kind of success simply could not happen as often as it does.

If we are serious about closing achievement gaps, then, we will have to move beyond the simplistic rhetoric of “It's the parents,” or “It's the schools,” or “It's poverty.” Or, for that matter, “it's the soft bigotry of low expectations.” Serious analyses make it clear that all of these factors matter. It's always hard to devise and implement complex solutions to problems, and harder still to get others to follow suit. But unless we can learn think beyond the single cause and the simple solution then surely we will continue to fail *our* big test, which is to find a way for all children to thrive in school.

REFERENCES

- Aronson, J. (2004). *The effects of conceiving ability as fixed or improvable on responses to stereotype threat*. Unpublished manuscript, New York University.
- Aronson, J., Fried, C., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, 38, 113–125.
- Aronson, J., & Good, C. (2002). The development and consequences of stereotype vulnerability in adolescents. In F. Pajares & T. Urdan (Eds.), *Adolescence and education, Vol. 2: Academic motivation of adolescents*. Greenwich, CT: Information Age Publishing.
- Aronson, J., Lustina, M. J., Good, C., Keough, K., Steele, C. M., & Brown, J. (1999). When white men can't do math. *Journal of Experimental Social Psychology*, 35, 29–46.
- Aronson, E., & Patnoe, S. (1997). *The jigsaw classroom*. New York: Longman.
- Aronson, J., & Steele, C. M. (2005). Stereotypes and the fragility of human competence, motivation, and self-concept. In C. Dweck & E. Elliot (Eds.), *Handbook of competence and motivation*. New York: Guilford.
- Aronson, J., & Williams, J. (2004). *Stereotype threat: Forewarned is forearmed*. New York: New York University.
- Devine, P. (1989). Stereotypes and prejudice. *Journal of Personality and Social Psychology*, 56, 5–18.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Taylor & Francis.
- Farkas, G. (2004). The black-white test score gap. *Contexts*, 3(2), 12–21.
- Ferguson, R. F. (1998). Teacher's perceptions and expectations and the black-white test score gap. In C. Jencks & M. Phillips (Eds.), *The black-white test score gap*. Washington, DC: Brookings Institution Press.
- Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance. *Journal of Applied Developmental Psychology*, 24, 645–662.
- Jencks, C., & Phillips, M. (Eds.). (1998). *The black-white test score gap*. Washington, DC: Brookings Institution Press.
- Johns, M., & Schmader, T. (2004). *Knowing is half the battle*. Paper presented at the annual meeting of the Society for Personality and Social Psychology, Austin, Texas.
- Massey, D. S., Charles, C. Z., Lundy, G. F., & Fischer, M. J. (2003). *The source of the river: The social origins of freshmen at America's selective colleges and universities*. Princeton, NJ: Princeton University Press.
- National Center for Education Statistics. (2000). *National Assessment of Educational Progress: The nation's report card*. Washington, DC: U.S. Department of Education.

- Noguera, P. (2003). *City schools and the American dream: Reclaiming the promise of public education*. New York: Teachers College Press.
- O'Brien, L., & Crandall, C. (2003). Stereotype threat and arousal: Effects on women's math performance. *Personality and Social Psychology Bulletin*, 29, 782–789.
- Rosenthal, R. (2002). The Pygmalion effect and its mediating mechanisms. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education*. San Diego, CA: Academic Press.
- Sigelman & Tuch. (1997). Meta-stereotypes: Blacks' perceptions of whites' stereotypes of blacks. *Public Opinion Quarterly*, 61, 87–101.
- Smith, T. W. (1990). *Ethnic images*. GSS Topical Report No. 19. National Opinion Research Center.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797–811.
- Wax, A. (2004, April 18). The threat in the air. *The Wall Street Journal*. Available: www.opinionjournal.com/extra/?id=110004973
- Weinstein, R. S. (2002). *Reaching higher: The power of expectations in schooling*. Cambridge, MA: Harvard University Press.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality*, 71(6), 1197–1232.