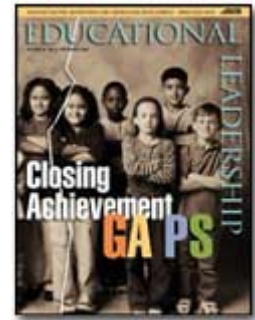


Educational Leadership

November 2004 | Volume 62 | Number 3
Closing Achievement Gaps Pages 14-19



November 2004

The Threat of Stereotype

Joshua Aronson

To close the achievement gap, we must address negative stereotypes that suppress student 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. I bristled. "What do you mean? That's a worn-out stereotype. My wife and I are not rich, and *we're* Jewish . . ." 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 predicament. The bill for lunch arrived and, unfamiliar with realtor-client etiquette, I considered picking up the tab. Then it hit me: If I do, it will support the stereotype that I just tried to debunk. But then, almost immediately, I had another thought: If I *don't* offer to pick up the tab, 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 are awful; tips are very bad. Things are better with the sign."

The cabdriver's uneasiness following September 11 and my predicament with the realtor are common phenomena that arise when humans interact across cultural or racial divides. Few people enjoy being reduced to a stereotype, especially when the stereotype has negative associations, so we often change our behavior to avoid being viewed and treated as though the stereotype were true. In many cases, the stakes of confirming a stereotype are low, as with my realtor. But for the cabdriver, both his psychological well-being and his livelihood were threatened by people looking at him and thinking *Arab terrorist*.

During the last decade, I have studied how people cope with unflattering stereotypes about their groups, focusing on those stereotypes that allege

intellectual inferiority and on the students who have to deal with those stereotypes. Fellow researcher Claude Steele and I named this predicament *stereotype threat*. We have found that stereotype threat and the responses it elicits can play a powerful role in the relatively poor achievement of certain students—African Americans, Latinos, and girls in math-oriented domains. We have found that understanding stereotype threat has the potential to help educators narrow persistent achievement gaps.

Data on college performance 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 not related to 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 the age of 6, virtually everyone in our culture 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). Moreover, opinion polls 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 crimes 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 experience an additional degree of risk not experienced by nonstereotyped students. The very real possibility looms that they will confirm the stereotype's unflattering allegations of inferiority, in the eyes of others and perhaps in their own eyes as well.

From 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 failure will be seen as evidence of an unalterable limitation rather than as the result of a bad day. Others report worrying that the stereotype might be true 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 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.

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 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 surprised even 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 manner in which 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.

I've come to believe that human intellectual performance is far more fragile than we customarily think; it can rise and fall depending on the social context. As research is showing, conditions that threaten basic motives—such as our sense of competence, our feelings of belonging, and our trust in people around us—can dramatically influence our intellectual capacities and motivation. And stereotype threat appears to threaten all these things at once (Aronson & Steele, 2005).

Since the publication of our initial report a decade ago, nearly 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 reflects 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 brain surgery or chess—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 necessarily reflect a lack of effort, but rather the fragility of intellectual performance. 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. In theory, these tests should add points for dedication, not subtract them.

Everyone is 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 poor memory) 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 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 a supposedly 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 such 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 are vulnerable to stereotypes as early as 6th grade, an age when children become concerned with others' evaluations, comprehend that the world at large has negative expectations for certain groups, and form their notions about intellectual ability. 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 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 generally select easy, success-ensuring tasks (Aronson & Good, 2002). One of the most pernicious effects of stereotype threat is that it creates an atmosphere in which *looking* smart is more important than *getting* smart.

How Educators Can Help

Educators can minimize stereotype threat. When we do this, we see student scores, motivation, and enjoyment of the education process soar. 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 (Aronson & Patnoe, 1997).

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.

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 overcome with the proper mind-set about the nature of ability, and this mind-set can be taught (Dweck, 1999).

Studies also show the value of simply teaching students about stereotype threat. Learning that their test anxiety results from a common response to stereotyping helps students interpret their struggles in a less pejorative and anxiety-producing way and 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, 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 wisely pointed out that “for every problem, there is a solution that is simple, neat—and wrong.” Attending only to stereotype threat—or to any single factor—will never close the achievement gap. Much public discourse surrounding the achievement gap tends toward the variety identified by Mencken: too simple to be right or broadly helpful.

For example, various researchers and 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). They see poor, troubled, uneducated black families as the sole culprits in black students' lagging test scores and grades (Farkas, 2004; Wax, 2004). According to them, the problem

begins and ends in the home where, owing to their lack of education, parents fail to provide the kind of intellectual stimulation needed to put their children on an equal footing with their white, better-off peers. Black parents don't talk enough to their kids, don't use enough complex vocabulary, or don't read enough books, these commentators' 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; it's just incomplete. Early skill differences *do* contribute greatly to the achievement gap, but they do not account for all of it (Jencks & Phillips, 1998). Focusing solely on the preschool years ignores the transformative power of schools, teachers, and peers in either magnifying or remedying these early deficits. Such an emphasis disregards the fact that given ample funding, expertise, and freedom, schools *can* eliminate the gap. And by blaming parents, we absolve policymakers of their responsibility to give schools the support they need to provide students with the schooling they deserve.

If we are serious about closing achievement gaps, we will have to move beyond the simplistic rhetoric of "It's the family," or "It's the schools," or "It's poverty"—or "It's stereotyping," for that matter. Serious analyses make it clear that all of these factors matter. Unless we learn to think complexly about the problem, 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.
- 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.

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 Codirector of the National Task Force on the Achievement Gap at NYU.
