SCIENTIFIC AMERICAN™

Permanent Address: http://www.scientificamerican.com/article/3-myths-plus-a-few-best-practices-for-achieving-diversity/
The Sciences » Scientific American Volume 311, Issue 4 » Features

This article is from the In-Depth Report State of the World's Science 2014

3 Myths Plus a Few Best Practices for Achieving Diversity

There is no formula for bringing diversity to the workplace or classroom, but new research that deepens our understanding of how diversity operates suggests some modestly successful strategies

By Victoria Plaut | Sep 16, 2014 | 0

Every time I speak with an audience about diversity, I get the same question: How do we do it? All of my audiences—schools, academic departments, businesses, health care organizations and law firms—seem mystified. They want the secret recipe or a foolproof checklist. They hope I will say, "Follow these simple steps, and you will have diversity and inclusion." So let me begin with this disclaimer: a simple, foolproof method for ensuring that a group is well represented across racial, ethnic, socioeconomic or gender lines does not exist.

A few common misperceptions, in my experience, interfere with many people's and organizations' sincere desire to create a more inclusive environment in the office or classroom. First, many of us assume that we do not need to think about what makes us different to promote diversity. Second, we think that everyone experiences school or work settings in basically the same way. And third, if problems arise, we assume that we personally cannot do much about them, because they are too systemic or, alternatively, are mostly caused by a few biased people (who could be changed through specialized training).

Research shows that these assumptions, though widely held, are mistaken. Their continued persistence fuels the misguided impression that all it takes to pursue a career in STEM (science, technology, engineering and mathematics) is to be competent and motivated, with access to the right tools. These falsehoods in turn lead to a false conclusion: if people are not signing up for or staying in science, it must be because they cannot or do not want to.

Edel Rodriguez

Fortunately, those who are open to trying can change their assumptions. And a growing body of evidence from experimental social psychology and organizational sociology suggests some approaches to producing more inclusive environments are more likely to prove successful than others. New understanding and growing confidence in the latest research findings are producing more inclusive environments at a number of organizations.

Forget Color Blindness
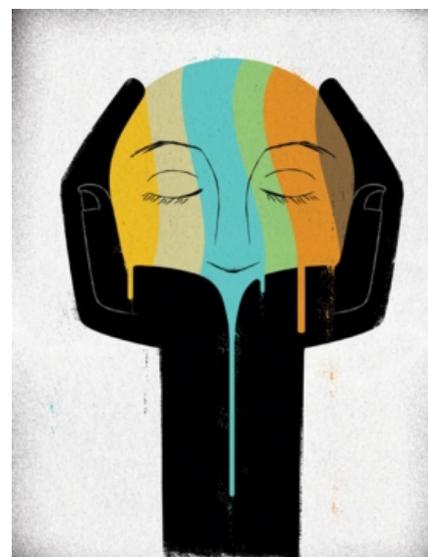
Perhaps an ideal world exists in which race or gender is beside the point in the office or classroom. In our world, however, most people find it easier to thrive in an actively supportive environment in which it is safe to be different.

Several years ago my colleagues and I conducted a study in a health care organization consisting of scientists, doctors, nurses and other health care workers. We asked people whether they thought racial and ethnic differences should be actively ignored or positively acknowledged as part of the organization's efforts to promote diversity. We then examined how employees of color felt about their work and the organization. In departments in which white employees believed that differences should be ignored, we found that the sense of engagement felt by nonwhite workers was lower than in departments in which white workers publicly espoused support for diversity—regardless of how many persons of color actually worked in the department. Moreover, in the "color-blind" departments, individuals from underrepresented groups perceived more bias. In the acknowledging departments, they perceived less.

Several studies indicate that unconscious bias, subject to suggestion, may be at play here. For example, in 2004 Jennifer A. Richeson, then at Dartmouth College, and her colleagues measured the reaction times on certain psychological tests of about 50 white college students after half of them had been given material that argued for color-blind policies to achieve interracial harmony and the other half received material favoring the deliberate promotion of racial diversity. Richeson then measured how quickly participants linked certain pairs of words with ethnically suggestive names (for example, "Jamal" and "good" or "Josh" and "good" versus "Jamal" and "bad" or "Josh" and "bad"). Participants who were perfectly unbiased should have been able to pick the equivalent word pairs equally quickly, regardless of racial overtones. Faster reactions times whenever the white-pleasant and black-unpleasant associations were called for indicated an implicit bias in favor of whites.

Whereas both groups completed their tests more quickly when pairing "white" and "pleasant" words, study participants who had been exposed to the multicultural approach showed less of a difference than those who had been given the color-blind material. Richeson, who is now at Northwestern University, thus concluded that color-blind policies might backfire, generating more racial tension by stoking rather than lessening implicit bias. More recent studies have found that the prescription to ignore racial differences tends to increase prejudicial behavior in both verbal and nonverbal ways by white students and, perhaps because of this, to cognitively exhaust students of color.

Similarly, other studies show that our biases leak out in subtle ways. In 2002 researchers measured a group of white students' explicit and implicit racial attitudes, using a questionnaire and a reaction time task. They then arranged for the students to have a conversation with a black student on a topic not ostensibly about race (dating). Afterward, other students listened to an audiotape of the participants and rated their verbal friendliness. They also watched silent videos that showed only the white participants and rated their nonverbal mannerisms for signs of friendliness. The result: students whose speech was rated as less friendly also scored worse on the explicit bias test, whereas those who appeared to be less friendly on the video did worse on the reaction time test, providing evidence that even supposedly hidden bias is often clearly noticeable.

Such cues are not lost on those individuals from underrepresented groups, who may become discouraged and decide to leave a particular field or firm. Indeed, surveys on college campuses suggest that perceptions of the diversity climate and experiences with prejudice and discrimination play a role in underrepresented students' decisions to avoid or leave STEM majors. Likewise, in the working world, perceptions about an organization's acceptance of diversity predict how likely individuals from underrepresented groups are to leave. Adopting a color-blind approach, therefore, leaves organizations blind to the processes that help to shape people's desire to engage productively or to seek greener pastures.

Groups that abandon color-blind policies are not necessarily home-free. But embracing difference in a way that does not stereotype or pigeonhole people appears to hold promise for achieving diversity. In a recent intervention at Northwestern by Nicole M. Stephens and her colleagues, some first-year students attended a panel in which other students discussed their experiences by *drawing attention to* difference (the experimental group)—in this case, their status as first-generation college students. Others (the control group) attended a panel that ignored difference. Both panels provided advice, but those in the "difference" group did so by explicitly connecting social class to their discussion of obstacles and strategies. More important, the latter panel emphasized difference in a constructive and supportive way—not in a way that signaled a deficiency. The result of this one-hour intervention: a 63 percent reduction in the academic gap between first-generation and continuing-generation students at the end of the first semester.

Bolster Belonging

It is easy to think that science is science and that so long as people have the necessary preparation and motivation, they can join the club, but the truth is more complicated. Research in social psychology suggests that for underrepresented students, a sense of belonging is a key driver of participation and performance.

SEE ALSO:
Health: **Researchers Seek Cancer Clues from Pet Dogs** | Mind: **Animals Have More Social Smarts Than You May Think** | Sustainability: **How Modern Agriculture Can Save the Gorillas of Virunga** | Tech: **Are We on the Cusp of War—in Space?**

Gregory M. Walton and Geoffrey L. Cohen, both at Stanford University, recently decided to test this observation with a group of nearly 100 college freshmen at an "elite college" (they did not say which one in their 2011 report). Half the students (the experimental group) read testimonials from more senior students about how they, too, had experienced social difficulties in their first year and had worried that these experiences meant that they did not belong at the school but had eventually grown confident that they belonged. The other half (the control group) were given unrelated information about changing social and political attitudes. Three years after the intervention occurred, the researchers checked the students' progress. Being in either group made little difference to the white students. Black students in the experimental group, in contrast, did significantly better academically than their peers in the control group—cutting in half the average achievement gap between racial groups seen at the start of the study. Of course, as Walton and Cohen point out, such an intervention may not work in an openly hostile environment.

The critical importance of developing a sense of belonging may explain why historically black colleges and universities are traditionally much stronger producers of black STEM graduates. Predominantly white schools—and workplaces—face significant challenges in creating inclusive and welcoming environments, but various methods are available to do so.

In the domain of computer science, for example, nonprofits have sprung up across the U.S. to teach coding to underrepresented youth. These organizations include Code2040, the Hidden Genius Project, Black Girls Code, CodeNow and Girls Who Code. Notably, what ties these types of programs together is not only that they teach valuable skills and promote educational and career opportunities but also that they reinforce belonging, encourage collaboration and emphasize applications that relate to students' lives and communities.

Such efforts extend even to the choice of decor. In 2009 my colleagues and I determined that the act of changing the types of objects found in a computer science classroom from the stereotypically geeky (*Star Trek* posters, junk food and soda cans) to more neutral objects (nature posters, coffee mugs and water bottles) was enough to raise female students' level of interest in the subject matter to that of the males. Similarly, a separate study showed that emphasizing the ways in which the pursuit of science is a collaborative effort instead of a solitary one boosted women's inclination to pursue a scientific career.

Take Action
So is that it, then? Just acknowledge people's differences and make them feel included, and they will participate and stay in science? Research in organizational sociology suggests a third vital component: the ways we structure diversity efforts within organizations.

Frank Dobbin of Harvard University, Alexandra Kalev, now at Tel Aviv University, and their colleagues have analyzed diversity initiatives in hundreds of U.S. companies over three decades. They have found that organizations that put someone in charge of diversity have stronger records of employing managers from underrepresented groups. A full-time diversity staffer results in, on average, a 15 percent increase in the proportions of black women and men in management in about five to seven years. Similarly, companies that establish a diversity task force of employees who are held accountable for increasing diversity experience significant increases in black, Latino, and Asian-American men and women and white women in management.

Research shows that hiring diversity managers and launching diversity task forces also increase the effectiveness of other programs, such as employee network groups that help people from underrepresented groups to feel less isolated and diversity councils that address specific issues, such as the retention and development of employees from underrepresented groups. In addition, multiple studies, including Dobbin and Kalev's, show that active, targeted recruitment programs also boost workforce diversity.

Lest anyone think, however, that only systemic initiatives make a difference—a common belief related to the final blind spot I would like to address—Dobbin, Kalev and others have shown that mentoring programs are the most effective in increasing the numbers of white and black women and Latino and Asian women and men in management. Gains in proportions of managers for some of these groups

reached almost 40 percent after such programs were launched.

Similarly, the importance of good mentoring cannot be understated in science education, where opportunities to get involved in a laboratory and learn about postcollege possibilities often come through mentors, who may also help bolster the belonging processes described here. In his book *Whistling Vivaldi*, social psychologist and University of California, Berkeley, provost Claude Steele, who is black, recounts how, as a Ph.D. student at Ohio State University, his white adviser treated him in a way that made him feel like he belonged there—as a scientist—in the midst of an environment that otherwise felt pretty alienating: "He had faith in me as a worthy partner. Somehow his assumptions about what he was doing as a scientist included me as, at least potentially, a capable colleague. My race and class identities didn't get in his way."

Notably, research shows that diversity leadership, targeted recruitment and mentoring appear to be more effective than common initiatives such as diversity training and diversity performance evaluations. Dobbin, Kalev and their colleagues suggest the following reason: the less common techniques engage managers in the task of identifying problems and solutions related to diversity rather than placing blame on them.

These programs alone will not create sweeping change, but they improve the chances for increasing diversity, provided they are not reduced to merely symbolic initiatives. Employees must be given the responsibility and institutional authority for "getting" diversity. A good example of a comprehensive intervention program that recruits and trains underrepresented undergraduate students in STEM is the Meyerhoff Scholars Program at the University of Maryland, Baltimore County. It combines *14* different components and has been particularly successful at increasing the number of African-American science degree holders. Another is the recently formed California Alliance for Graduate Education and the Professoriate (a partnership between U.C. Berkeley, U.C.L.A., Stanford and the California Institute of Technology), which targets underrepresentation in academia. What is more, it was built on principles from social science research and plans to analyze the effectiveness of different initiatives. (Such "real world" data are in short supply. Nor is there a central repository of research or a system for different groups—particularly from industry and academia—to communicate and partner with one another about what works best.)

For scientific and nonscientific organizations alike to get results, a deeper understanding of how diversity operates is required. No matter how sincere the goal setting, merely caring about diversity is not enough. Although there is no simple or perfect recipe to translate these sentiments into action and results, organizations are more likely to attract and retain diverse talent when they are smart and persistent in their outreach, nourish a sense of belonging, and put in place people who are accountable for—and monitor—diversity.

ABOUT THE AUTHOR(S)
Victoria Plaut is a social psychologist and a professor of law and social science at University of California, Berkeley, School of Law.

MORE TO EXPLORE: DIVERSITY
Diversity Management in Corporate America. Frank Dobbin, Alexandra Kalev and Erin Kelly in *Contexts*, Vol. 6, No. 4, pages 21–27; November 2007.

Does Female Representation in Top Management Improve Firm Performance? A Panel Data Investigation. Cristian L. Dezsö and David Gaddis Ross in *Strategic Management Journal*, Vol. 33, No. 9, pages 1072–1089; September 2012.

Clash! 8 Cultural Conflicts That Make Us Who We Are. Hazel Rose Markus and Alana Conner. Hudson Street Press, 2013.

Diversity Science and Institutional Design. Victoria C. Plaut in *Policy Insights from the Behavioral and Brain Sciences* (in press).

FROM OUR ARCHIVES

The Implicit Prejudice. Sally Lehrman; June 2006.

Scientific American Online Discover more resources about diversity and innovation at ScientificAmerican.com/oct2014/diversity

This article was originally published with the title "Inviting Everyone In."