In Professor's Model, Diversity = Productivity

By CLAUDIA DREIFUS

In the long-running debate on affirmative action, Scott E. Page, a professor of complex systems, political science and economics at the University of Michigan, is a fresh voice.


Rather than ponder moral questions like, “Why can’t we all get along?” Dr. Page asks practical ones like, “How can we all be more productive together?” The answer, he suggests, is in messy, creative organizations and environments with individuals from vastly different backgrounds and life experiences.

"New York City is the perfect example of diversity functioning well," he said in an interview. "It’s an exciting place that produces lots of innovation and creativity. It’s not a coincidence that New York has so much energy and also so much diversity."

Q. In your book you posit that organizations made up of different types of people are more productive than homogenous ones. Why do you say that?

A. Because diverse groups of people bring to organizations more and different ways of seeing a problem and, thus, faster/better ways of solving it.

People from different backgrounds have varying ways of looking at problems, what I call “tools.” The sum of these tools is far more powerful in organizations with diversity than in ones where everyone has gone to the same schools, been trained in the same mold and thinks in almost identical ways.

The problems we face in the world are very complicated. Any one of us can get stuck. If we’re in an organization where everyone thinks in the same way, everyone will get stuck in the same place.

But if we have people with diverse tools, they’ll get stuck in different places. One person can do their best, and then someone else can come in and improve on it. There’s a lot of empirical data to show that diverse cities are more productive, diverse boards of directors make better decisions, the most innovative companies are diverse.

Breakthroughs in science increasingly come from teams of bright, diverse people. That’s why interdisciplinary work is the biggest trend in scientific research.

Q. The term “diversity” has become a code word for inclusion of racial, ethnic and sexual minorities. Is that what you’re talking about?

A. I mean differences in how people think. Two people can look quite different and think similarly. Having said that, there’s certainly a lot of evidence that people’s identity groups — ethnic, racial, sexual, age — matter when it comes to diversity in thinking.
Here’s the bottom line: I myself am an affirmative action child. I got into the University of Michigan in the 1980s on a program. I’m from a rural part of Michigan. No calculus in high school. So I was given bonus points toward undergraduate admissions.

If the policy had been to consider mainly grades and SATs and not to make room for some geographic diversity, maybe I wouldn’t have gotten in.

Q. Give us an example of where diversity has improved an organization or profession?

A. I’ve seen it in my own field, economics. Before women got really involved in the 1970s, a lot of the actual labor of women wasn’t included in calculations of the gross domestic product. It was as if you had Ma Ingalls sitting around the Little House on the Prairie, eating bonbons, and only Pa Ingalls’s labor was counted in.

After you got women into the profession, they started saying: “What if Ma Ingalls opened up a business and charged for the cleaning, pie making, tending of the animals. Wouldn’t there be a lot of G.D.P. in there?”

When you only had men thinking about the economy, they were ignoring the productivity of half the population. By including the perspectives of females, the estimates got more accurate. This was important for looking at the American past and for understanding contemporary societies like those in Africa, where women are usually the farmers.

Q. In your book, you advocate affirmative action, an unpopular social policy these days. What’s your argument?

A. That it's a flat-out good because, as I said earlier, it makes everything we do more powerful.

For a while, I chaired admissions in the graduate political science department at the University of Michigan. We didn’t just look at high test scores. We looked at things like whether an applicant had worked with Teach for America. We wanted to bring in people who had experiences and modes of thinking that would improve everyone else.

At a university, people learn from each other as well as their professors. Another suburban kid who was raised to score high on tests doesn’t add all that much to the mix.

Q. What’s your critique of standardized testing?

A. After a certain threshold, it doesn't give you enough information. Anyone who scores above 600 on a Graduate Record Exam will probably do well in graduate school. But we were looking for future social science researchers. The ability to do innovative research requires creativity and originality, something the G.R.E. won’t predict.

Q. How do you know you’re right about diversity?

A. One of the things social scientists do is create math models to prove our theories. With Lu Hong — she’s an economist at Chicago’s Loyola University — I constructed a formal model that showed mathematically that diversity can trump ability, and also when it does.

Our models were similar to what people are doing to predict the financial markets and voting patterns, and our paper was published in The Proceedings of the National Academy of Sciences.

What the model showed was that diverse groups of problem solvers outperformed the groups of the best individuals at solving problems. The reason: the diverse groups got stuck less often than the smart individuals, who tended to think similarly.

The other thing we did was to show in mathematical terms how when making predictions, a group’s errors depend in equal parts on the ability of its members to predict and their diversity. This second theorem can be expressed as an equation: collective accuracy = average accuracy + diversity.