

**The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies**, by Scott E. Page. Princeton, NJ, and Oxford: Princeton University Press, 2007, 448 pp., \$27.95 hardbound, \$19.95 paperback.

### Unworldly Diversity

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Published online: 21 January 2009  
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“In the long-running debate on affirmative action Scott E. Page...is a fresh voice.” So began Claudia Dreifus in her January 8, 2008, *New York Times* article introducing Page—a professor of economics and “complex systems” at the University of Michigan—and his recently published book, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. The “fresh voice” the *Times* alludes to centers around the mathematical modeling techniques and other innovative methods that are developed in the book to defend the claim that under many circum-

stances organizational diversity—including racial and ethnic diversity—is a source of organizational strength. Though filled with three-dimensional graphs, computer simulations, and other quantitative exercises that some will find intimidating, the book has the great advantage of being accessible to the nontechnical reader, at least one willing to invest considerable time and effort in following its clear but often complex reasoning. Where *The Difference* clearly succeeds is in bridging the gap between the more arcane technical literature found in the professional economics journals and writing intended for a general audience.

The main conclusion of *The Difference* can be easily summarized: problem-solving talents and perspectives come in many different varieties, so if one wants to assemble an effective problem-solving team it is usually a good idea to combine people of diverse talents and perspectives rather than those displaying a single type problem-solving ability, even if that ability in each team member is at the very highest level. Whether the venue is a university research center, a graduate seminar, a corporate marketing task force, or any other organizational

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setting, it is usually better, says Page, to assemble a team consisting of people of diverse cognitive strengths rather than one more narrowly focused in its staff's endowments. When the problems to be solved are complex and difficult, diversity can often, in Page's phrase, "trump ability." Here he means that a team composed of several people, each of whom has the best individual problem-solving ability, might not be collectively as good as a more diverse team consisting of people with individually lesser problem-solving abilities but with divergent and complimentary talents that synergistically enhance the group's creativity.

Although his "diversity trumps ability" claim—frequently repeated—can be confusing and misleading (should mediocre talent really be chosen over superior talent?), the point Page wants to make is commonsensical and in many cases, at least, undoubtedly correct. To give a simple example: an all-star team composed of the top ten crossword puzzle solvers in the United States would almost certainly be less good at solving the most demanding crossword puzzles than a team of ten individuals who are only good at crossword puzzles and not top-ranked, but who each possess a special cognitive strength compli-

menting the strengths of the others. A team consisting of one member with a specialist's knowledge in science and technology terms, another who is an authority on entertainment and popular culture, a third with expert knowledge of American history and geography, etc., would almost certainly outperform a team comprised of the best individual crossword puzzle solvers in the land. As long as the members of the more cognitively diverse team get along well with each other, share the same objectives, and communicate well, the more diverse team would almost certainly beat out the more narrowly focused team of "the best and the brightest." (Instead of speaking of "diversity trumping ability," it would have been less confusing had Page simply said that divergent yet complimentary talents often produce better and more creative outcomes than convergent and more overlapping ones, regardless of how superlative the latter might be.)

Page is particularly concerned with dethroning the idea that cognitive and problem-solving strengths can be easily measured by scores on a one-dimensional (or even multi-dimensional) measuring stick like an IQ test or such standardized exams as the SAT or GRE. "Our cognitive abilities," he says, "cannot be summarized

in a single number or vector of numbers.” Even in university research teams, engineering firms, and university science departments, where one would expect something like high IQ and standardized test scores to be at a premium, progress, Page believes, “depends as much on our collective differences as it does on our individual IQ scores.” A “team of people with high test scores all trained at the same school in the same techniques” will probably not do as well, he explains, “as a group that contains diversely trained people with diverse experiences and slightly lower average SAT, GRE, or IQ scores.” If we want to innovate and reach new understandings, says Page, “we should invite physicists into chemistry departments, psychologists into economic departments, and political scientists into business schools. We should include engineers in marketing meetings and marketers in engineering meetings.”

Page’s defense of cognitive and perspectival diversity is built largely on his agent-based computer models, though he also draws upon historical and case-study material to illustrate some of his major points. One of his most salient examples, introduced at the very beginning of the book and referred to several times subsequently, is the British code-cracking team assembled during World War II at

Bletchley Park outside of London. The British team, which also included Americans, Poles, Aussies, and members of other groups, successfully cracked the super-secret Nazi Enigma code, Page explains, by relying on the cooperative effort of a huge team of mathematicians, engineers, linguists, historians, crossword puzzle experts, classical scholars, and specialized cryptographers. It was their very cognitive differences, Page believes, that contributed to the success of the Bletchley Park group. Quoting the management guru Peter Drucker, Page concludes that “effective work is actually done in and by teams of people of diverse knowledge and skills.” “Think different,” Page counsels, repeating the Apple Corporation slogan. “In difference lies the potential to contribute.”

The bulk of *The Difference* is dedicated to showing the benefits of diverse perspectives, interpretations, cognitive skills, and predictive models in addressing some of the more complex problems in academic research and industrial management. Approximately two-thirds is devoted to this task, and if Page had stopped here his theory would hardly have raised eyebrows or been considered in any way controversial. It certainly would not be touted by liberal journalists as a “fresh voice”

in the affirmative action debate. But as Page explains in the prologue, for many years his research stayed clear of issues of racial, ethnic, and gender diversity, apparently believing that these “identity diversities” (Page’s term) were not nearly as important in generating cognitive and problem-solving benefits as other diversity forms. After giving numerous talks to university and industrial groups, however, Page was told by many in his audience, especially those in the corporate world, that a close relationship existed between beneficial forms of problem-solving diversity and a racially, ethnically, and gender diverse staff. As a result Page began to pay more attention to these issues and much of the last third of *The Difference* is devoted to exploring them.

Page seems to believe that because so many in the corporate world with whom he spoke and so many university spokesmen in brochures and official pronouncements extol the benefits of identity diversity, they must know what they are talking about, since they are closest to the problems at hand. It never seems to have occurred to him, and is never mentioned in his four hundred-page book, that what the universities and corporations say about identity diversity may be

motivated more by public relations issues, ideological considerations and strictures of political correctness, pressure from the federal contract compliance agencies, or fear of protests from feminist, black, and Hispanic interest groups than by their stated concern with generating greater creativity or efficiency. It is here, in addressing issues of racial, ethnic, and gender diversity—and the preferences needed to sustain such diversity—that Page seems most like the genial-but-unworldly computer geek (“a card-carrying mathematical social scientist” in his own words)—someone more at home in the world of mathematical algorithms and a priori formal model-building than in the passion and prejudice tainted universe of flesh-and-blood human beings.

Identity diversity, says Page, can often be at least indirectly related to cognitive and perspectival diversity, and as such should be looked upon favorably as a source of innovative strength in assembling problem-solving teams in universities, corporations, research centers, and elsewhere. In trying to extend his “diversity enhances problem-solving ability” model to issues of identity diversity, however, Page encounters difficulties that anyone knowledgeable of the relevant management literature is aware. To his

credit, Page is an honest and conscientious scholar who has done his homework and is familiar with some of the extensive empirical literature that calls into question many of the more optimistic claims of identity diversity's proponents. "If we look at the evidence on whether identity-diverse collections of people perform better than more homogeneous collections," he writes, "we see mixed results at every level." The research shows that for identity-diverse groups to have a positive effect on problem-solving ability and productivity, not only must identity diversity correlate positively with relevant cognitive diversity, but the members of an effective identity-diverse team must have common goals, communicate well with one another, and work together harmoniously. But these criteria, the research shows, are often not met.

In one of the most comprehensive surveys of the organizational literature on diversity, "Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups," by Frances Milliken and Luis Martins (*Academy of Management Review*, April 1996), the authors conclude:

The results of research on heterogeneity in groups suggest that diversity offers both a great opportunity for organizations

as well as an enormous challenge. On the one hand, some research suggests that more diverse groups have the potential to consider a greater range of perspectives and to generate more high-quality solutions than less diverse groups. On the other hand, the greater the amount of diversity in a group or an organizational subunit, the less integrated the group is likely to be and the higher the level of dissatisfaction and turnover.... Findings suggest that individuals who are different from their work units in racial or ethnic background tend to be less psychologically committed to their organizations, less inclined to stay with the organization, and more likely to be absent.... Diversity thus appears to be a double-edged sword, increasing the opportunity for creativity as well as the likelihood that group members will be dissatisfied and fail to identify with the group.

What the empirical literature reveals is that identity-diverse groups are more likely than less heterogeneous groups to encounter communication problems, problems in agreeing upon fundamental objectives, and problems in simply getting along with one another. Page is aware of all this. In identity-diverse

groups, Page writes, “group dynamics can create no end of problems. People prefer to hang with people like themselves and tend to stereotype others.” “Lots of strange things can happen in a diverse group that would not be likely to happen among homogeneous people—including physical and verbal violence.” “The more different we are,” Page concludes, summarizing much of the empirical literature, “the less we agree on what we would like to do.”

“Death by a thousand qualifications” is perhaps the best way to characterize what is left of Page’s defense of identity diversity after all his caveats are listed. *If* problem-solving team members get along with one another, he says, *if* their differing identities correlate with relevant cognitive talents important to the task at hand, *if* there is no fundamental conflict with their basic preferences and ends, and *if* the task at hand is a complex one requiring the effort of a multi-talented group, then—and only then—is identity diversity a good thing and well worth achieving through affirmative action-type policies. But just how often can one expect such criteria to be met? By Page’s own reading of the literature, not so often.

And a major complicating factor not taken up by Page is the resentment and sense of grievance that

inevitably follow when racial, ethnic, and gender criteria are used to assemble a research or problem-solving team among members of those identity groups who have not been favored. Appointing someone to a university science department or NASA research team because that person is black or Hispanic or female in the belief that such criteria are good proxies for relevant cognitive strengths (Page’s basic defense of affirmative action), is not likely to sit well with members chosen for the group on the basis of their actual, unmediated talents. Surely this must affect the sensitive group dynamics that Page recognizes to be so important in producing cooperative teamwork and positive group outcomes.

Alas, as a “fresh voice” in the affirmative action debate *The Difference* comes up short and will hardly withstand the criticism of skeptics. An anonymous blogger on [www.crookedtimber.org](http://www.crookedtimber.org) with obvious experience of the real world not captured in Page’s models may have the last word here:

[Page’s argument] strikes me as a pragmatic reason for selecting a group that is heterogeneous with respect to cognitive style, skills, innate abilities, personality type, philosophies, even politics, but it doesn’t strike me as a defense of

actual diversity practices [today in America] which ignore all of the above and focus only on skin color (and sex)...Given that there are ways to actually assess all of those kinds of things that actually matter for better group decision making...[there is] no reason to use skin color or sex as poor proxy measures. (<http://crooked>

[timber.org/2007/06/27/review-scott-e-page-the-difference/](http://timber.org/2007/06/27/review-scott-e-page-the-difference/))

Knowledgeable, fair-minded, and worldly people can only say, “Amen.”

*Editor’s Note:* A version of this review, amplified with page references and informative footnotes, is available on [www.nas.org](http://www.nas.org).