

PSYCHOLOGY

A WEIRD View of Human Nature Skews Psychologists' Studies

Relying on undergraduates from developed nations as research subjects creates a false picture of human behavior, some psychologists argue

Suppose you're a psychologist at a research university, trying to figure out what drives human behavior. You have devised simple, clever experiments in which people play economic games or perceive visual illusions, and you would like large sample sizes. How will you find subjects? For generations of psychologists, the answer has been straightforward: Use the pool of thousands of undergraduates at your university.

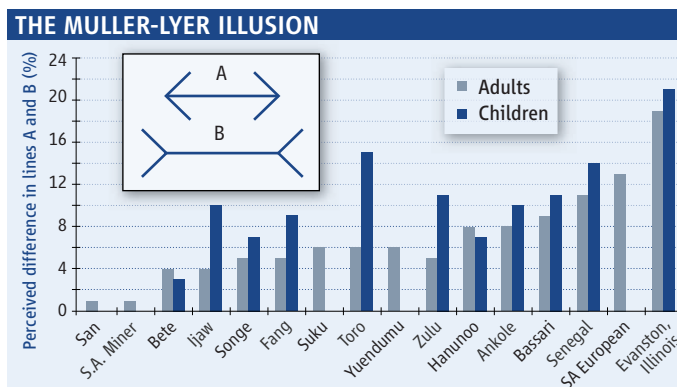
But although undergrads from wealthy nations are numerous and willing subjects, psychologists are beginning to realize that they have a drawback: They are WEIRDs. That is, they are people from Western, educated, industrialized, rich, and democratic cultures. In a provocative review paper published online in *Behavioral and Brain Sciences (BBS)* last week, anthropologist Joseph Henrich and psychologists Steven Heine and Ara Norenzayan of the University of British Columbia in Canada argue that WEIRDs aren't representative of humans as a whole and that psychologists routinely use them to make broad, and quite likely false, claims about what drives human behavior.

"A lot of psychologists assume that one group of humans is as good as the next for their experiments, and that results from these studies apply more broadly. We show that this assumption is wrong," says Heine. "WEIRD subjects are some of the most psychologically unusual people on the planet."

There's little doubt that psychologists have relied on WEIRDs. In a 2008 paper in *American Psychologist*, Jeffrey Arnett of Clark University in Worcester, Massachusetts, analyzed all empirical papers published in six top-tier psychology journals between 2003 and 2007 and found that the United States alone provided 68% of study subjects, with a further 27% coming from the United Kingdom, Canada, Australia, New Zealand, or Europe. Psychology undergraduates were the sole subjects in 67% of U.S. studies and 80% of studies in other countries. Overall,

96% of subjects were WEIRDs.

This would be fine if WEIRDs were representative of people from other cultures, but they are not, Henrich, Heine, and Norenzayan argue in the *BBS* paper. Although cultural variation is sometimes assumed to be superficial, Heine says that cultures differ in fundamental aspects such as reasoning styles, conceptions of the self, the importance of choice, notions of fairness, and even visual perception. For example, in the Muller-Lyer illusion (see figure), most people in industrialized societies think line



In the eye of the beholder. People in industrialized societies often think line A is shorter than line B, but that illusion is weaker or absent in some small-scale societies, whose members perceive the lines as equally long.

A is shorter than line B, though the lines are equally long. But in small-scale traditional societies, the illusion is much less powerful or even absent.

The reliance on WEIRD data has led to a biased picture of human psychology, says Heine. Social psychologists, for example, talk of the "fundamental attribution error," or the tendency to explain people's behavior in terms of internal personality traits rather than external, situational factors (attributing an instance of angry behavior to an angry temperament, for example). Yet outside WEIRD societies, this error looks a lot less fundamental, says Henrich, as people pay more attention to the context in which behavior occurs, so someone's anger might be construed as simply reflecting an irritating day.

Textbooks also frequently describe people as valuing a wide range of options when

making choices, being analytical in their reasoning, being motivated to maintain a highly positive self-image, and having a tendency to rate their capabilities as above average. Again, the review article contends, this picture breaks down for people from non-WEIRD societies: These groups tend to place less importance on choice, be more holistic in their reasoning, and be less concerned with seeing themselves as above average. And although WEIRDs stand apart from the rest of the world in these and other respects, Americans stand even further away, with U.S. undergraduates further away still—"an outlier in an outlier population," as the *BBS* authors put it. "We will never figure out human nature by studying American undergrads," says Henrich.

Other researchers welcome this central message but caution that the differences observed in crosscultural studies may themselves be problematic. "Not only do psychologists use WEIRD people, they also use weird, highly artificial experiments," says Nicolas Baumard, an anthropologist at the University of Oxford in the United Kingdom. So the cultural variation those experiments detect may simply reflect the way experiments are construed by various groups rather than deep differences. Heine counters that many crosscultural findings have been replicated with a range of methods, suggesting that the differences are robust.

Henrich, Heine, and Norenzayan recommend that psychologists explicitly discuss whether their findings can be generalized and make data on subjects available so population effects can be more easily detected. Researchers should also try to build links to diverse subject pools, perhaps drawing on contacts made by economists and public-health researchers in non-WEIRD societies. The Internet also provides another way of reaching out, though potentially biasing research away from WEIRD people toward wired people.

The accumulated data on WEIRDs may still prove to have enduring value, argues cultural psychologist Paul Rozin of the University of Pennsylvania, as the world becomes more globalized. "The U.S. is in the vanguard of the global world and may provide a glimpse into the future," he says. For now, however, psychologists should remember that WEIRDs remain weird.

—DAN JONES

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