Stop bullying the 'soft' sciences: The social sciences are just that -- sciences. July 12, 2012 By Timothy Wilson. LA Times

Once, during a meeting at my university, a biologist mentioned that he was the only faculty member present from a science department. When I corrected him, noting that I was from the Department of Psychology, he waved his hand dismissively, as if I were a Little Leaguer telling a member of the New York Yankees that I too played baseball.

There has long been snobbery in the sciences, with the "hard" ones (physics, chemistry, biology) considering themselves to be more legitimate than the "soft" ones (psychology, sociology). It is thus no surprise that many members of the general public feel the same way. But of late, skepticism about the rigors of social science has reached absurd heights.

The U.S. House of Representativesrecently voted to eliminate funding for political science research through the National Science Foundation. In the wake of that action, an opinion writer for the Washington Post suggested that the House didn't go far enough. The NSF should not fund any research in the social sciences, wrote Charles Lane, because "unlike hypotheses in the hard sciences, hypotheses about society usually can't be proven or disproven by experimentation."

Lane's comments echoed ones by Gary Gutting in the Opinionator blog of the New York Times. "While the physical sciences produce many detailed and precise predictions," wrote Gutting, "the social sciences do not. The reason is that such predictions almost always require randomized controlled experiments, which are seldom possible when people are involved."

This is news to me and the many other social scientists who have spent their careers doing carefully controlled experiments on human behavior, inside and outside the laboratory. What makes the criticism so galling is that those who voice it, or members of their families, have undoubtedly benefited from research in the disciplines they dismiss.

Most of us know someone who has suffered from depression and sought psychotherapy. He or she probably benefited from therapies such as cognitive behavioral therapy that have been shown to work in randomized clinical trials.

Problems such as child abuse and teenage pregnancy take a huge toll on society. Interventions developed by research psychologists, tested with the experimental method, have been found to lower the incidence of child abuse and reduce the rate of teenage pregnancies.

Ever hear of stereotype threat? It is the double jeopardy that people face when they are at risk of confirming a negative stereotype of their group. When African American students take a difficult test, for example, they are concerned not only about how well they will do but also about the possibility that performing poorly will reflect badly on their entire group. This added worry has been shown time and again, in carefully controlled experiments, to lower academic performance. But fortunately, experiments have also showed promising ways to reduce this threat. One intervention, for example, conducted in a middle school, reduced the achievement gap by 40%.

If you know someone who was unlucky enough to be arrested for a crime he didn't commit, he may have benefited from social psychological experiments that have resulted in fairer lineups and interrogations, making it less likely that innocent people are convicted.

An often-overlooked advantage of the experimental method is that it can demonstrate what doesn't work. Consider three popular programs that research psychologists have debunked: Critical Incident Stress Debriefing, used to prevent post-traumatic stress disorders in first responders and others who have witnessed horrific events; the D.A.R.E. anti-drug program, used in many schools throughout America; and Scared Straight programs designed to prevent at-risk teens from engaging in criminal behavior.

All three of these programs have been shown, with well-designed experimental studies, to be ineffective or, in some cases, to make matters worse. And as a result, the programs have become less popular or have changed their methods. By discovering what doesn't work, social scientists have saved the public billions of dollars.

To be fair to the critics, social scientists have not always taken advantage of the experimental method as much as they could. Too often, for example, educational programs have been implemented widely without being adequately tested. But increasingly, educational researchers are employing better methodologies. For example, in a recent study, researchers randomly assigned teachers to a program called My Teaching Partner, which is designed to improve teaching skills, or to a control group. Students taught by the teachers who participated in the program did significantly better on achievement tests than did students taught by teachers in the control group.

Are the social sciences perfect? Of course not. Human behavior is complex, and it is not possible to conduct experiments to test all aspects of what people do or why. There are entire disciplines devoted to the experimental study of human behavior, however, in tightly controlled, ethically acceptable ways. Many people benefit from the results, including those who, in their ignorance, believe that science is limited to the study of molecules.

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Why psychology isn't science ,July 13, 2012 By Alex B. Berezow. LA Times

Psychologist Timothy D. Wilson, a professor at the University of Virginia, expressed resentment in his Times Op-Ed article on Thursday over the fact that most scientists don't consider his field a real science. He casts scientists as condescending bullies:

"Once, during a meeting at my university, a biologist mentioned that he was the only faculty member present from a science department. When I corrected him, noting that I was from the Department of Psychology, he waved his hand dismissively, as if I were a Little Leaguer telling a member of the New York Yankees that I too played baseball.

"There has long been snobbery in the sciences, with the 'hard' ones (physics, chemistry, biology) considering themselves to be more legitimate than the 'soft' ones (psychology, sociology)."

The dismissive attitude scientists have toward psychologists isn't rooted in snobbery; it's rooted in intellectual frustration. It's rooted in the failure of psychologists to acknowledge that they don't have the same claim on secular truth that the hard sciences do. It's rooted in the tired exasperation that scientists feel when non-scientists try to pretend they are scientists.

That's right. Psychology isn't science.

Why can we definitively say that? Because psychology often does not meet the five basic requirements for a field to be considered scientifically rigorous: clearly defined terminology, quantifiability, highly controlled experimental conditions, reproducibility and, finally, predictability and testability.

Happiness research is a great example of why psychology isn't science. How exactly should "happiness" be defined? The meaning of that word differs from person to person and especially between cultures. What makes Americans happy doesn't necessarily make Chinese people happy. How does one measure happiness? Psychologists can't use a ruler or a microscope, so they invent an arbitrary scale. Today, personally, I'm feeling about a 3.7 out of 5. How about you?

The failure to meet the first two requirements of scientific rigor (clear terminology and quantifiability) makes it almost impossible for happiness research to meet the other three. How can an experiment be consistently reproducible or provide any useful predictions if the basic terms are vague and unquantifiable? And when exactly has there ever been a reliable prediction made about human behavior? Making useful predictions is a vital part of the scientific process, but psychology has a dismal record in this regard. Just ask a foreign policy or intelligence analyst.

To be fair, not all psychology research is equally wishy-washy. Some research is far more scientifically rigorous. And the field often yields interesting and important insights.

But to claim it is "science" is inaccurate. Actually, it's worse than that. It's an attempt to redefine science. Science, redefined, is no longer the empirical analysis of the natural world; instead, it is any topic that sprinkles a few numbers around. This is dangerous because, under such a loose definition, anything can qualify as science. And when anything qualifies as science, science can no longer claim to have a unique grasp on secular truth.

That's why scientists dismiss psychologists. They're rightfully defending their intellectual turf.
Alex B. Berezow is the editor of RealClearScience.com, where this piece originally appeared. He has a doctorate in microbiology.

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