Is One of the Most Popular Psychology Experiments Worthless?

A trolley is careening toward an unsuspecting group of workers. You have the power to derail the trolley onto a track with just one worker. Do you do it? It might not matter.

Olga Khazan July 24, 2014

Noel Pennington/Flickr

Harvard University justice professor Michael J. Sandel stood before a lecture hall filled with students recently and presented them with an age-old moral quandary:

"Suppose you're the driver of a trolley car, and your trolley car is hurtling down the track at 60 miles an hour. You notice five workers working on the track. You try to stop, but you can't, because your brakes don't work. You know that if you crash into these five workers, they will all die. You

feel helpless until you notice that off to the side, there's a side track. And there's one worker on the side track."

The question: Do you send the trolley onto the side track, thus killing the one worker but sparing the five, or do you let events unfold as they will and allow the deaths of all five? (Most people, for what it's worth, say they would turn.)

Then Sandel asked about a popular variation on the same problem. The same trolley is careening toward unsuspecting innocents, but this time, you're an onlooker on a footbridge, and, "you notice that standing next to you, leaning over the bridge, is a very fat man."

A ripple of laughter rises from the packed auditorium.

"You could give him a shove," he continues. "He would fall over onto the track, right in the way of the trolley car. He would die, but he would spare the five. How many would push the fat man over the bridge?"

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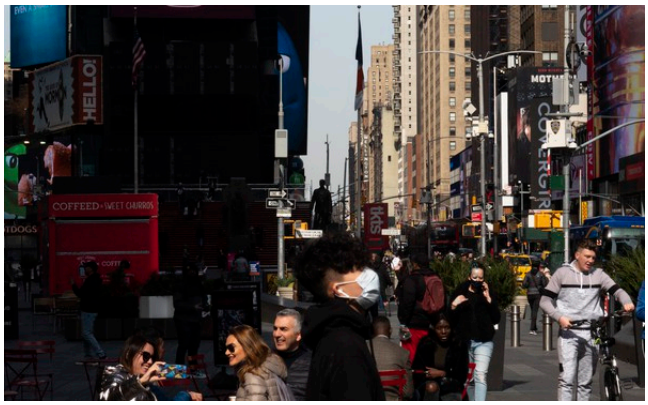
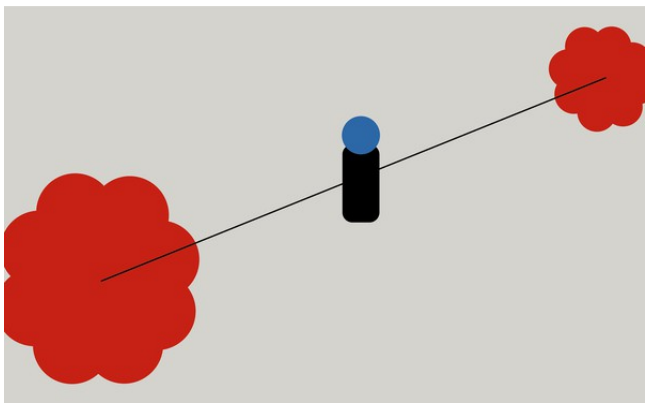
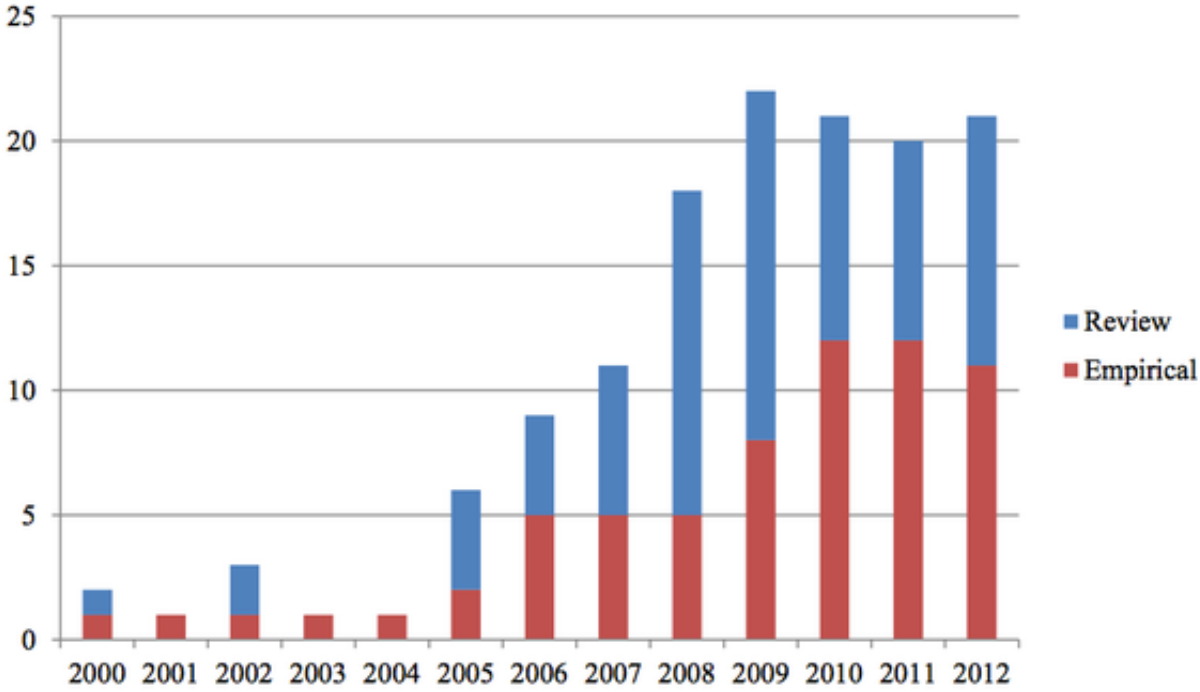




A few hands go up, but most of the students just erupt in giggles.

And that's exactly why, some scientists argue, this well-known "trolley dilemma," shouldn't be used for psychology experiments as much as it is.

Number of Studies Discussing the Trolley Problem



Published psychology papers that discuss the "trolley dilemma," by year. (Bauman, McGraw, et al.)

Over the past few decades, the trolley dilemma has been at the center of dozens of experiments designed to gauge subjects' moral compasses. Some people think it can help answer Big Questions about everything from the use of drones to self-driving cars.

One recent paper by Harvard's Joshua Greene and others, which involved MRI scans of people contemplating the trolley, has been cited more than 2,000 times. In 2007, the psychologists Fiery Cushman and Liane Young and the biologist Marc Hauser administered the test to thousands of web users and found that while 89 percent would flip the track switch, only about 11 percent would push the fat man.

That contradiction—that people find giving the man a fatal prod just too disturbing, even though the end result would be the same—is supposed to show how emotions can sometimes color our ethical judgments.

But one group of researchers thinks it might be time to retire the trolley. In an upcoming paper that will be published in *Social and Personality Psychology Compass*, Christopher Bauman of the University of California, Irvine, Peter McGraw of the University of Colorado, Boulder, and others argue that the dilemma is too silly and unrealistic to be applicable to real-life moral problems. Therefore, they contend, it doesn't tell us as much about the human condition as we might hope.

In a survey of undergraduates, Bauman and McGraw found that 63 percent laughed "at least a little bit" in the fat-man scenario and 33 percent did so in the track-switching scenario. And that's an issue, because "humor may alter the decision-making processes people normally use to evaluate moral situations," they note. "A large body of research shows how positivity is less motivating than negativity."

"If you study moral judgement and people are laughing about the experimental materials you're giving them, that might be a problem," McGraw, who also studies humor, told me in an interview.

McGraw also says the trolley problem isn't a realistic representation of actual crises of conscience. (When's the last time you even rode in a trolley?)

The dilemma was originally devised not by psychologists, after all, but by philosophers. In the 1960s, Philippa Foot and Judith Jarvis Thomson used it as a thought experiment; a way of laying bare the difference between peoples' convictions and their justifications.

In another survey, McGraw and his co-authors found that people "rated the trolley problems to be much less realistic than short scenarios about contemporary social issues."

Most real-life moral dilemmas, McGraw points out, are not of the sacrificial variety. We don't go through life shoving people in front of locomotives in order to rescue other people. More likely, you'd face something like, "should I lay off this department, or this other one?"

"In that case, use a scenario where you're laying people off, not pushing a fat man off a bridge," McGraw said.

To be fair, there's something to be said for what's become the "fruit fly" of a traditionally less-precise science. It can be helpful for different experiments to have the same starting point. The trolley problem may not be perfect, but it's the best lowest common denominator we have.

Charles Millar, a PhD candidate at Ontario's University of Waterloo, agrees that the footbridge variant, in particular, is far-fetched. "There is no way there is someone who is so large that they can be pushed in front of a train and stop it," he said. "And if there was, you wouldn't be able to push them."

But he says that there are ways to modify the story to be less over-the-top. One version, for example, stars a spilled container of bleach headed for a collection of precious tapestries. Would you throw one tapestry over the bleach, thereby soaking it up but destroying the one rug, or would you try to stem the flow of the bleach through some other, indirect means?

Others argue that the trolley problem isn't supposed to be representative of a real-world problem in the first place. Even if it doesn't accurately capture the nature of human sacrifice, it tells us interesting things about the brain. Joshua Greene, the Harvard researcher, told me that the trolley dilemma has been used to answer questions like, "Can visual imagery actually influence a moral judgment? Can a neurotransmitter have a directional influence on moral judgment? Could the language in which you read about a moral question influence your answer?" across dozens of published papers.

The trolley problems don't tell us what we'd do if we actually faced an out-of-control streetcar, he argues, they just highlight subtle quirks of our internal moral GPS systems.

"It's not 'Let's study trolley problems because they're representative of

problems we face in everyday life,'" Greene told me. "It's 'Here's an interesting puzzle. If we follow it, we might learn something important.'"

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