

The 10 Most Controversial Psychology Studies Ever Published

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Controversy is essential to scientific progress. As [Richard Feynman](#) said, “science is the belief in the ignorance of experts.” Nothing is taken on faith, all assumptions are open to further scrutiny. It’s a healthy sign therefore that psychology studies continue to generate great controversy. Often the heat is created by arguments about the logic or ethics of the methods, other times it’s

because of disagreements about the implications of the findings to our understanding of human nature. Here we digest ten of the most controversial studies in psychology's history. Please use the comments to have your say on these controversies, or to highlight provocative studies that you think should have made it onto our list.

1. The Stanford Prison Experiment

Conducted in 1971, Philip Zimbardo's experiment had to be aborted when students allocated to the role of prison guards began abusing students who were acting as prisoners. Zimbardo interpreted the events as showing that certain situations inevitably turn good people bad, a theoretical stance he later applied to the acts of abuse that occurred at the Abu Ghraib prison camp in Iraq from 2003 to 2004. This situationist interpretation has been [challenged](#), most forcibly by the British psychologists Steve Reicher and Alex Haslam. The pair argue, on the basis of their own [BBC Prison study](#) and real-life instances of prisoner resistance, that people do not yield mindlessly to toxic environments. Rather, in any situation, power resides in the group that manages to establish a sense of shared identity. [Critics also point out](#) that Zimbardo led and inspired his abusive prison guards; that the Stanford Prison Experiment (SPE) may have attracted particular personality types; and that many guards did behave appropriately. The debate continues, as does the influence of the SPE on popular culture, so far inspiring at least two feature length [movies](#).



Zimbardo, P. G. (1972). [Comment: Pathology of imprisonment](#). *Society*, 9(6), 4-8. Google Scholar Citations: 324.

Haney, C., Banks, W. C., & Zimbardo, P. G. (1973). [Study of prisoners and guards in a simulated prison](#). *Naval Research Reviews*, 9(1-17). Google Scholar Citations: 216.

2. The Milgram “Shock Experiments”



Stanley Milgram’s studies conducted in the 1960s appeared to show that many people are incredibly obedient to authority. Given the instruction from a scientist, many participants [applied](#) what they thought were deadly levels of electricity to an innocent person. Not one study, but several, Milgram’s research has inspired many imitations, including in [virtual reality](#) and in the form of a [French TV show](#). The original studies have attracted [huge controversy](#), not only because of their ethically dubious nature, but also because of the way they have been interpreted and used to explain historical events such as the supposedly blind obedience to authority in the Nazi era. Haslam and Reicher have again been at the [forefront](#) of counter-arguments. Most recently, based on archived feedback from Milgram’s participants, the pair [argue](#) that the observed obedience was far from blind – in fact many participants were pleased to have taken part, so convinced were they that their efforts were making an important contribution to science. It’s also notable that many participants in fact disobeyed instructions, and in such cases, verbal prompts from the scientist were [largely ineffective](#).

Milgram, S. (1963). [Behavioral study of obedience](#). The Journal of Abnormal and Social Psychology, 67(4), 371. Google Scholar Citations: 3474

3. The “Elderly-related Words Provoke Slow Walking” Experiment (and other social priming research)

One of the experiments in a 1996 paper published by John Bargh and colleagues showed that when people were exposed to words that pertained to being old, they subsequently walked away from the lab more slowly. This finding is just one of many in



the field of “social priming” research, all of which suggest our minds are [far more open to influence than we realise](#). In 2012, a different lab [tried to replicate](#) the elderly words study and failed. Professor Bargh reacted [angrily](#). Ever since, the controversy over his study and other related findings has only intensified. Highlights of the furore include an [open letter](#) from Nobel Laureate Daniel Kahneman to researchers working in the area, and [a mass replication attempt](#) of several studies in social psychology, including social priming effects. [Much of the disagreement](#) centres around whether replication attempts in this area fail because the original effects don't exist, or because those attempting a replication lack the necessary research skills, make statistical errors, or fail to perfectly match the original research design.

Bargh, J. A., Chen, M., & Burrows, L. (1996). [Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action](#). *Journal of personality and social psychology*, 71(2), 230. Google Scholar Citations: 3276

4. The Conditioning of Little Albert



Back in 1920 John Watson and his future wife Rosalie Rayner deliberately induced fears in an 11-month-old baby. They did this by exposing him to a particular animal, such as a white rat, at the same time as banging a steel bar behind his head. The research is controversial not just because it seems so unethical, but also because the results have tended to be [reported in an inaccurate and overly simplified way](#). Many textbooks claim the study shows how fears are easily conditioned and generalised to similar stimuli; they say that after being conditioned to fear a white rat, Little Albert subsequently feared all things that were white and fluffy. In fact, the results were far

messier and more inconsistent than that, and the methodology was poorly controlled. Over the last few years, controversy has also developed around the identity of poor Little Albert. In 2009, a team led by Hall Beck [claimed](#) that the baby was in fact Douglas Merritte. They later [claimed](#) that Merritte was neurologically impaired, which if true would only add to the unethical nature of the original research. However, a new paper [published this year](#) by Ben Harris and colleagues argues that Little Albert was actually a child known as Albert Barger.

Watson, J. B., & Rayner, R. (1920). [Conditioned emotional reactions](#). *Journal of Experimental Psychology*, 3(1), 1. Google Scholar Citations: 2031

5. Loftus' "Lost in The Mall" Study

In 1995 and '96, [Elizabeth Loftus](#), James Coan and Jacqueline Pickrell documented how easy it was to implant in people a fictitious memory of having been lost in a shopping mall as a child. The false childhood event is simply described to a



participant alongside true events, and over a few interviews it soon becomes absorbed into the person's true memories, so that they think the experience really happened. The research and other [related findings](#) became hugely controversial because they showed how unreliable and suggestible memory can be. In particular, this cast doubt on so-called "recovered memories" of abuse that originated during sessions of psychotherapy. This is a highly sensitive area and experts continue to debate [the nature of false memories, repression and recovered memories](#). One challenge to the "lost in the mall" study was that participants may really have had the childhood experience of having been lost, in which case Loftus' methodology was recovering lost memories of the incident rather than implanting false memories. This criticism was refuted in a later study ([pdf](#)) in which Loftus and her colleagues implanted in people the memory of having met Bugs Bunny at Disneyland. Cartoon aficionados will understand why this memory was definitely false.

Loftus, E. F., & Pickrell, J. E. (1995). [The formation of false memories](#).

Psychiatric annals, 25(12), 720-725. Google Scholar Citations: 677

Loftus, E. F., Coan, J. A., & Pickrell, J. E. (1996). Manufacturing false memories using bits of reality. *Implicit memory and metacognition*, 195-220. Google Scholar Citations: 71

Loftus, E. F. (1993). [The reality of repressed memories](#). *American psychologist*, 48(5), 518. Google Scholar Citations: 1413



6. The Daryl Bem Pre-cognition Study

In 2010 social psychologist Daryl Bem attracted huge attention when he [claimed to have shown](#) that many established psychological phenomena work backwards in time. For instance, in one of his experiments, he found that people performed

better at a memory task for words they revised in the future. Bem interpreted this as evidence for pre-cognition, or psi – that is, effects that can't be explained by current scientific understanding. Superficially at least, Bem's methodology appeared robust, and he took the laudable step of making his procedures readily available to other researchers. However, many experts have since [criticised](#) Bem's methods and statistical analyses ([pdf](#)), and many replication attempts have [failed to support the original findings](#). Further controversy came from the fact that the journal that published Bem's results refused at first to publish any replication attempts. This prompted uproar in the research community and contributed to what's become known as the "[replication crisis](#)" or "[replication wars](#)" in psychology. Unabashed, Bem published a [meta-analysis](#) this year (an analysis that collated results from 90 attempts to replicate his 2010 findings) and he concluded that overall there was solid support for his earlier work. Where will this controversy head next? If Bem's right, you probably know the answer already.

Bem, D. J. (2011). [Feeling the future: experimental evidence for anomalous](#)

[retroactive influences on cognition and affect](#). Journal of personality and social psychology, 100(3), 407. Google Scholar Citations: 276

7. The Voodoo Correlations in Social Neuroscience study

This paper was released online before print, where it initially bore the provocative title “Voodoo correlations in social neuroscience”. Voodoo in this sense meant non-existent or spurious. Ed Vul and his colleagues had analysed over 50 studies that linked localised patterns of brain activity with specific aspects of behaviour or emotion, such as [one](#) that reported feelings of rejection were correlated highly with activity in the anterior cingulate cortex. Vul and his team said the high correlations reported in these papers were due to the use of inappropriate analyses – a form of “double-dipping” in which researchers took two or more steps: first identifying a region, or even a single voxel, linked with a certain behaviour, and then performing further analyses on just that area. The paper caused great offence to the many brain imaging researchers in social neuroscience whose work had been targeted. “Several of [Vul et al’s] conclusions are incorrect due to flawed reasoning, statistical errors, and sampling anomalies,” said the authors of one [rebuttal paper](#). However, concerns about the statistical analyses used in imaging neuroscience haven’t gone away. For example, in 2012 Joshua Carp wrote a [paper](#) claiming that most imaging papers fail to provide enough methodological detail to allow others to attempt replications.



Vul, E., Harris, C., Winkielman, P., & Pashler, H. (2009). [Puzzlingly high correlations in fMRI studies of emotion, personality, and social cognition](#). Perspectives on psychological science, 4(3), 274-290. Google Scholar Citations: 688.



8. The Kirsch Anti-Depressant Placebo Effect Study

In 2008 Irving Kirsch, a psychologist who was then based at the University of Hull in the UK, analysed all the trial data on anti-depressants, published and unpublished, submitted to the US Food and Drug Administration. He and his colleagues concluded that for most people with mild or moderate depression, the extra benefit of anti-depressants versus placebo is not clinically meaningful. The results led to headlines like “Depression drugs don’t work” and provided ammunition for people concerned with the overprescription of antidepressant medication. But there was also a backlash. [Other experts analysed Kirsch’s dataset using different methods and came to different conclusions](#). Another group made [similar findings](#) to Kirsch, but interpreted them very differently – as showing that drugs are more effective than placebo. Kirsch is standing his ground. Writing earlier this year, he [said](#): “Instead of curing depression, popular antidepressants may induce a biological vulnerability making people more likely to become depressed in the future.”

Kirsch, I., Deacon, B. J., Huedo-Medina, T. B., Scoboria, A., Moore, T. J., & Johnson, B. T. (2008). [Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration](#). *PLoS medicine*, 5(2), e45. Google Scholar Citations: 1450.

9. Judith Rich Harris and the “Nurture Assumption”

You could fill a library or two with all the books that have been published on how to be a better parent. The implicit assumption, of course, is that parents play a profound role in shaping their offspring. Judith Rich Harris challenged this idea with a provocative paper published in 1995 in which she proposed that children are shaped principally



by their peer groups and their experiences outside of the home. She followed this up with two best-selling books: *The Nurture Assumption* and *No Two Alike*. [Writing for the BPS Research Digest in 2007](#), Harris described some of the evidence that supports her claims: “identical twins reared by different parents are (on average) as similar in personality as those reared by the same parents ... adoptive siblings reared by the same parents are as dissimilar as those reared by different parents ... [and] ... children reared by immigrant parents have the personality characteristics of the country they were reared in, rather than those of their parents’ native land.” Harris has powerful supporters, Steven Pinker among them, but her ideas also unleashed a storm of controversy and criticism. “[I am embarrassed for psychology](#),” Jerome Kagan told Newsweek after the publication of Harris’ *Nurture Assumption*.

Harris, J. R. (1995). [Where is the child’s environment? A group socialization theory of development](#). *Psychological review*, 102(3), 458. Google Scholar Citations: 1535



10. Libet’s Challenge to Free Will

Your decisions feel like your own, but Benjamin Libet’s study using electroencephalography (EEG) appeared to show that preparatory brain activity precedes your conscious decisions of when to move. One controversial interpretation is that this challenges the notion that you have free will. The decision of when to move is made non-consciously, so the argument goes, and then your subjective sense of having willed that act is tagged on afterwards. Libet’s study and others like it have inspired deep philosophical debate. Some philosophers like Daniel Dennett [believe](#) that neuroscientists have overstated the implications of these kinds of findings for people’s conception of free will. [Other researchers](#) have pointed out flaws in Libet’s research, such as people’s inaccuracy in judging the instant of their own will. However, the principle of non-conscious neural

activity preceding conscious will has been [replicated using fMRI](#), and influential neuroscientists like Sam Harris [continue to argue](#) that Libet's work undermines the idea of free will.

Libet, B., Gleason, C. A., Wright, E. W., & Pearl, D. K. (1983). [Time of conscious intention to act in relation to onset of cerebral activity \(readiness-potential\) the unconscious initiation of a freely voluntary act](#). *Brain*, 106(3), 623-642. Google Scholar Citations: 1483

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