



## MILGRAM'S SHOCK EXPERIMENT IS A FALLACY

WHEN IS SOCIAL SCIENCE GOING TO BURY A FALLACIOUS DARLING  
INSTEAD OF KEEPING IT ARTIFICIALLY ALIVE?  
PERHAPS AFTER READING THIS.

--- Hugo Meijers ---

**W**ay back in 1961, Milgram devised an experiment to test how far people would obey an authority figure to administer increasing electrical shocks to an innocent learner for making mistakes. Right up to the point where these shocks were deemed to be lethal. The disquieting outcome of the original study was that a shocking 65% of the participants went all the way to the alleged lethal maximum of 450 Volt. A disconcerting finding that has been reproduced a number of times in multiples settings over the last half-century.

Milgram concluded that the majority of the volunteers were capable of abhorrent deeds when pressured to do so by an authority. His conclusion has received a lot of criticism on how to interpret the outcome. [Don Mixon](#) argued that trust in the experimenter is key. Furthermore, he [postulated](#) that expecting experimental safeguards would lead the volunteers to assume that they did not harm



the learner. [Stephen Reicher and colleagues](#) reinterpreted the outcome as a display of the power of social identity-based leadership to induce active and committed followership. And recently, Jacob Appel reframed the result in his post [Rethinking the Infamous Milgram Experiment in Authoritarian Times](#). He changed obedience to authority into displaying disobedience even under strong social pressures. In other words, he puts the shoe on the other foot.

The ongoing debate on what the right conclusion should be gets fueled by the replication of this study. These replications have sparked the belief Milgram is onto something. Consequently, many have accepted the experimental design and take the findings seriously. But what if the design is flawed and the findings fraud? That would mean scientists are resuscitating a fallacy, and rethinking the results is pure folly. If this is true, continuing to keep this study alive could be a serious threat to the credibility of social science.

Well, I believe this study is fallacious, and that it is high time to bury it for good and move on. For starters, the use of volts. It is common knowledge that volts are not harmful. Amps are. The ins and outs of electricity are elementary school physics. There you learn that a few milliamps are safe; a few hundred milliamps are lethal. That is why police tasers peak between 30,000 to 50,000 Volt at low amperage, immobilizing an offender without causing injury. To stop trespassers, electric fences vary between 2,000 Volt up to the maximum internationally allowed 10,000 Volt. Static shocks, those nasty sparks that go flying because your body is charged, start at around 500 volts and can go up to a staggering 25,000 volts. And lifesaving defibrillators, even the implantable ones, operate between 200 and 1,000 volts.

Still, these high voltages pale by comparison with the largest non-lethal electrical shock. According to the Guinness Book of Records, a massive 340,000 Volt was given to Harry McGrew when he touched a transmission line. Therefore, zapping someone with 450 volts is peanuts. Suggesting that this could be lethal is absurd. Little wonder that [Jerry Burger](#) found similar obedience rates using lower voltages. Stating volts is a massive design flaw, obliterating the validity of this experiment. For there is no way of telling how many participants in this study acted deliberately or subconsciously on knowing the volts are insignificant.

Not only are the volts meaningless. Many volunteers in Milgram's experiment believed the electrocution was fake. [Matthew Hollander and Jason Turowetz](#) examined 91 archived recordings of the debriefing interview held minutes after the experiment and found that 72% of the participants made references to believing the shocks were fake. Milgram did not report this fact, making his experiment eligible for research misconduct.

Hollander and Turowetz were not the only ones to highlight disbelief. Gina Perry concluded in her book *Behind the Shock Machine: the untold story of the notorious Milgram psychology experiments* that half the volunteers believed the shocks were not real. She also concluded that 66% of the participants that believed the learner was electrocuted disobeyed the orders. This suggests that for conscience to kick in, someone must be convinced enough that the shocks are real.

The logic behind believing the shocks were fake is flawless. After all, Stanley Milgram was not Josef Mengele. Hence, a science study set up to intentionally bring fatal harm to someone does not stand to reason. Science is supposed to be rational and sane, making it irrational and insane to believe the administered shocks were real, in line with [Don Mixon's](#) interpretation. Without a doubt, every



participant had serious doubts. It would explain why many volunteers became increasingly distraught, fighting the conflict within of what and who to believe.

Next, all volunteers received in total \$ 4.50 to follow the instructions. In essence, they applied for a cushy job to make a quick buck. Now, it is unfathomable to assume that paying someone to partake in a scientific study does not influence a volunteers' behavior. It undeniably does. Not for nothing are medical studies nowadays double-blind. Even a researcher in the know subconsciously affects test subjects.

More important, part and parcel of the decision to partake in a scientific study is to switch off critical thinking. The male volunteers that showed up had already decided to do as asked, making their obedience implicit. Many could well have blindly acted on autopilot. An explanation that [Jerry Burgers' replication](#) corroborates. He found that as soon as orders to proceed were given, participants started disobeying. The orders made the volunteers start to question what on earth they were doing.

Furthermore, what is the impact of paying participants to perform? Although in those days it was a common practice to lure volunteers, even so, paying them has ramifications. Billions display this every working day when they hand in their critical conscious brain at the factory gate or corporate front door. Simply because they get paid, employees voluntarily obey the orders given by their superiors. No matter how fruitless, dumb, or silly these orders might be. A case of bought complacent compliance, even against better judgment.

Of course, managers and bosses like to believe employees see them as authority figures. However, many subordinates will beg to differ. They relinquish responsibility for wages. Undeniably, the employer-employee power-relationship in organizations ensures superiors carry the weight of responsibility. The buck stops at the top. Relinquishing responsibility for payment sheds a completely different light on Milgram's agentic state theory. He believed that we readily give up our sense of responsibility when following instructions from an authority figure. He did not take a bought soul into account.

Then the orders used during the study, which Milgram called prods. Remarkably, they were not recorded. Nowhere did Milgram in his 1963 publication *Behavioral study of obedience* mention which prod was given and at what voltage. His focus was on the administered voltage, thereby altering the purpose of the experiment. While it is a common belief that Milgram's study was about obedience, the recorded findings are on someone's willingness to inflict harm. In effect, he measured the level of sadism.

Such being the case, no one knows which of the four prods were issued. All we know is that 14 out of the original 40 volunteers heard all four 'commands' to proceed, simply because the experiment was terminated short of the maximum 450 Volt. Just suppose those other 26 needed little encouragement to go all the way? What would that suggest?

Not focusing on the prods is an essential flaw, certainly in light of the wording. The prods Milgram used have received massive critique, and rightfully so. The first three prods—Prod 1: Please continue, or Please go on. Prod 2: The experiment requires that you continue. Prod 3: It is absolutely essential that you continue—are encouragements and manipulations. There is a consensus among criticasters



that these prods are not orders. Consequently, voicing such instructions has little bearing on obedience. The first three prods are more on a volunteers' susceptibility to suggestion.

Now, what about the fourth? Prod 4 states: you have no other choice, you must go on. This prod is also not an order. Trust me, I am a war veteran and know what an order is. Prod 4 is a double bind. A double bind is a contradiction that causes conflict. In this case, the first part is not true. Every volunteer had the option to stop at any moment. Because the first part is false, it negates the second part. That creates confusion of following a false order or not, to which each recipient responds ad hoc. Using a double bind makes the experiment unreliable.

So there you have it. The proof of fallacy is in unrealistic electrocution, suggesting harmless volts are lethal, paying participants to perform, volunteers knowing it was a scientific study, using prods that do not order, and not recording the prods. All this makes the design invalid, and the findings unreliable. Additionally, Milgram did not report that many volunteers disbelieved the administered shocks were real. Not reporting qualifies his experiment for science fraud.

In my opinion, this null and void experiment should not have been published. Let alone constantly be reanimated by replications, like recently Polish researchers lead by [Dariusz Doliński](#) did. Replication demonstrates that an invalid and unreliable experimental design can reproduce similar findings, giving credence to a fallacy. More important, trying to re-interpret a fallacy is sheer folly. Revisiting flawed findings is not bad science; it is non-science. And continuing to do so is more than a senseless waste of time. Ignoring the facts of fallacy is downright detrimental to faith in science. Therefore, it is high time to put this study to rest.