

EXPERIMENTAL PSYCHOLOGY SEMINAR: THOUGHT EXPERIMENTS AND REAL EXPERIMENTS

Thought experiments have played an important role in philosophy, and have also played a major role in the development of psychology.

Check out these links on YouTube:

<https://www.youtube.com/watch?v=dYAoiLhOuao&list=PLbKQ3ul46tJ3yuJm9C2hO8S7xZggzrAVY> Link to Ship of Theseus explanation by Jennifer Wang

<https://www.youtube.com/watch?v=bOpf6KcWYyw> Link to the Trolley Problem

<https://www.youtube.com/watch?v=W147ybOdgpE> Link to the Milgram study

Prisoner's Dilemma

The Prisoner's Dilemma problem is a classic problem in game theory that attempts to explain agreement and dissension among two parties. Here is a description of the game taken from Wikipedia:

Two men are arrested, but the police do not possess enough information for a conviction. Following the separation of the two men, the police offer both a similar deal- if one testifies against his partner (defects / betrays), and the other remains silent (cooperates / assists), the betrayer goes free and the co-operator receives the full one-year sentence. If both remain silent, both are sentenced to only one month in jail for a minor charge. If each 'rats out' the other, each receives a three-month sentence. Each prisoner must choose to either betray or remain silent; the decision of each is kept quiet. What should they do?

If the two convicts are cooperating, then the clear choice is to both remain silent. That way, each serves only the minimum one month sentence instead of one person receiving a full year or both receiving three months. However, if both convicts distrust the other, then it turns out that the optimal decision to be made by both is to rat the other convict out. To see this, let's examine the *payoff matrix* that describes the time each prisoner gets based on the decisions they make.

	A is silent	A rats out B
B is silent	A and B get 1 month	A goes free; B gets 1 year
B rats out A	A gets 1 year; B goes free	A and B get 3 months

From this we can see that, for example, if prisoner A decides to be silent, then he will either 1 month or 1 year of team. On the other hand, if prisoner A rats out B, then he'll get either serve no time or 3 months. Clearly if A does not trust B, then ratting him out is the best idea.

The traditional prisoner's dilemma consists of only a single opportunity for the prisoners to be silent or rat out their partner. Academics have also considered the *iterated* prisoner's dilemma in which the prisoners make several such decisions in a row, potentially changing their strategies based on previous rounds.

Of course, this is slightly unrealistic, so instead we phrase the iterated prisoner's dilemma game in terms of another game called A Peace War Game

Peace War Games

The peace and war game is similar to the prisoner's dilemma except that instead of prisoners we have neighbouring countries. And instead of either staying silent or ratting, declare peace or war against the opposing country, scoring a number of points based on who declares peace or war. The game continues for a number of years and the winner is the country with the most points.

The pay-off matrix for the peace and war game is as follows:

	A declares peace	A declares war
B declares peace	A and B get 3 points	A gets 5 points; B gets no points
B declares war	A gets no points; B gets 5 points	A and B get 1 point

TASK: Using the matrix provided to you, you need to negotiate with each other person in the seminar group on whether you are going to declare peace or war with them... of course, what you actually decide to do is up to you! You can tell someone you are going to be declaring peace but actually declare war – if they declare peace with you then you will get all of the points and they will get none. However, if they declare war as well you will only get one point apiece.

The winner (because you go to war with the intention to win) will be the person who accumulates the most points from the decisions made with all other participants.

Peace War Game Grid

You are country _____

A	B	C	D	E	F	G	H	I	J	K	L	M

Put a cross through the box above of whatever your country letter is (no need to negotiate with yourself!).

You must negotiate with all other countries verbally about whether you are going to declare war or peace with them – your strategy may depend upon what they say to you as well – this is a negotiation.

However... privately you should enter into the box what you intend to do – just because you have told someone you are going to declare peace on them does not mean that you have to behave in that way – this is about winning! Your goal is to score the most points that you can, and so sometimes it may be more beneficial to declare war, at other times peace, depending upon what others are going to do to you (or what you think they might do to you!). Use the matrix to understand how to maximise the number of points that you get. Make sure other people can't see your grid and enter W for war or P for peace into each box after your negotiations.

For example, if you are country A and you are negotiating with country C you might tell each other that you are both going to declare peace. If you both do declare peace then you get three points each... not bad. But if you declare war and they declare peace... they might glare at you but you will get five points and they will get none – and remember, this isn't about being nice, it is ultimately about winning! However, be warned – if you both lie to each other and say you will declare peace and then both actually declare war – just one point each – better than the zero points for declaring peace when your opponent goes war, but nowhere near as good as the three points you would get for both declaring peace.

Authors: Shelley E. Taylor, Letitia Anne Peplau, and David O. Sears

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In the 1960s, Stanley Milgram (1963, 1974) designed a series of laboratory experiments to understand the issues involved in obedience to authority. Because Milgram's work has become an enduring classic in social psychology (Blass, 2000), we describe it in some detail. Milgram began his research by placing newspaper ads asking for men to participate in a psychology study. The volunteers were scheduled in pairs and were told that the purpose of the study was to investigate the effects of punishment on learning. One of them was selected by chance as the “learner” and the other as the “teacher”. The teacher's job was to read aloud pairs of words that the learner was supposed to memorise. Each time the learner made a mistake, the teacher was to administer punishment.

The teacher sat in front of a large, impressive “shock machine” containing a long series of levers, each labelled with the amount of shock it would deliver. The range was from 15 to 450 volts. Above the numbers representing voltage were labels describing the severity of the shocks such as “slight,” “extremely intensity shock,” and “danger: severe shock.”

The learner was put in a chair in another room. His arm was strapped down to the chair and electrodes were taped to his arm. He could not be seen by the teacher or anyone else; they communicated entirely by intercom. Before the testing began, the learner mentioned that he had a slightly weak heart. He was assured by the experimenter that the shocks were not dangerous. Then the experimenter gave the teacher a sample shock, to give him some idea of what the shock he would be delivering felt like. It was actually fairly severe and hurt considerably, but the teacher was told it was a mild shock.

During the testing, the learner made a number of errors. Each time, the teacher told him he was wrong and delivered a shock. Whenever a shock was given, the learner grunted. As the level of shock increased, the learner's reactions became increasingly dramatic. He yelled, begged the teacher to stop shocking him, banged the table, and hit the wall. Toward the end, he simply stopped answering and made no response at all. Through all this, the experimenter urged the teacher to continue: "Please continue," "The experiment must go on," "It is necessary for you to continue." The subject was assured that the responsibility was the experimenter's, and not his.

In these circumstances, a large number of subjects dutifully delivered supposedly severe electric shocks. All 40 subjects delivered 300 volts shock, and 65% continue to the final 450 volts level. They did this even though the person they were shocking scream for mercy, had a heart condition, and was apparently experiencing great pain. In reality, of course, the "learner", a confederate of the experimenter, did not receive any shocks. All responses, including errors, grunts, and groans, were carefully rehearsed and then tape-recorded to make them identical for all subjects. The "teacher," however, had no way of knowing that the situation was staged.

In a series of 18 studies, Milgram (1965, 1974) identified conditions that increase or decrease obedience. Situations that make individuals feel more responsible for their own actions or that emphasised the suffering of the victim reduced the amount of obedience. For example, bringing the victim closer to the subject substantially reduced obedience. Obedience is greatest when the victim was in another room and could not be heard or could be heard only through an intercom. Obedience decreased when the victim was in the same room, and it dropped still more when the subject had to touch the victim to administer the shock. Reminding subjects of their own personal responsibility for their actions also reduced the number of shocks they administered (Tilker, 1970).

Milgram found the physical presence of the experimenter also made a difference. Obedience is greatest when the experimenter was in the same room with the subject and decreased if the experimenter communicated by phone from another room or simply left tape-recorded instructions. It was harder to disobey the authority figure if he was closely monitoring the subjects behaviour. Finally, in another variation of the experiment, subjects

administered shocks as part of a group of teachers. (In reality, only one of the teachers was a naive subject.) When the real subject merely watched as he is administered shocks, 93% of subjects obeyed the experimenter fully. In contrast, when two defiant peers (actually confederates) stopped administering shocks early in the experiment, 90% of subjects also stopped. The behaviour of peers proved a powerful force could support -or defy - the authority of the experimenter.

Participants in the Milgram studies often experienced considerable stress. Some began to sweat; others broke out in nervous laughter or stuttered. They often pleaded with the experimenter to end the study. Participants were not callous about the situation; rather, they experienced great conflict. They felt enormous pressure from the situation and from experimenter to continue. But they were also concerned about the welfare of the victim and about their personal responsibility for inflicting pain. As long as subjects could shift responsibility to the experimenter and minimise in their own minds the pain the victim was enduring, obedience was high. To the extent they felt personally responsible and were aware of the victim's pain, they were less obedience.

No one anticipated the levels of obedience of Milgram observed. To demonstrate this point, Milgram (1974) described his procedures in detail to psychiatrists, college students, and middle-class adults. Virtually everyone predicted the subjects would quickly stopped giving shocks once the learner protested. The psychiatrists predicted that most subjects would not go beyond 150 volts when the first victim demanded to be let go, and that only one person in 1000 would administer the highest level of shock on the board. One contribution of this research was to show that even experts could not accurately predict what subjects would actually do in the powerful situation created in Milgram's laboratory.

Milgram interpreted his findings as showing that "normal" people can be led to perform destructive acts when exposed to strong situational pressure from a legitimate authority: "Men who are in everyday life responsible and decent were seduced by the trappings of authority ... and by the uncritical acceptance of the experimenter's definition of the situation into performing harsh acts" (Milgram, 1965, p. 74). Miller (1986) called this the "normality thesis" - the idea that evil acts are not necessarily performed by abnormal or "crazy" people. Rather, average individuals who see themselves as mere agents of an

organisation, carrying out the orders of those in command, and behaving in destructive ways. The Milgram studies are a compelling reminder of the power of social situations to influence human behaviour (Cialdini & Goldstein, 2004).

Although the pressures to obey legitimate authority are strong, individuals do not inevitably obey. In Chapter 12, we describe the actions of Christians who risked their lives to shelter Jews from Nazi persecution. What enabled these individuals to resist Nazi policies, and more generally, how can we account for principled resistance to authority? Several factors seem to make a difference. First, obedience is reduced when the suffering of the victims is highly salient. Second, obedience is reduced when an individual is made to feel personally responsible for his or her actions. Third, people are more likely to resist authority when others in the situation disobey. Fourth, encouraging individuals to question the motives, expertise, or judgement of authorities can also reduce obedience.

The ethics of obedience research

Milgram's research sparked an unprecedented debate about the ethics of psychological research. Diana Baumrind (1964) severely criticised Milgram for exposing participants to psychological distress, embarrassment, and loss of dignity. She suggested that Milgram did not take seriously enough how subjects reacted to his study, and she questioned whether the debriefing following the experiment was able to restore the subject's psychological well-being. She worried that in the long run, those who participated in Milgram's research may have suffered a loss of self-esteem and the deception used in the study may have reduced participants trust in authorities.

Milgram (1964) offered a strong defence of his research. He emphasised the study was not ultimately harmful to the subjects. He explained the details and thoughtful nature of the explanations given to participants at the end of the experimental session. He also noted that a one-year follow-up of participants found no evidence of long-term psychological harm. Indeed, most subjects expressed positive feelings about the research. Milgram also emphasised the value of his research. Neither he nor his colleagues have expected the high

levels of obedience they found, and so important information about human behaviour was provided.

Psychological science has weathered the storm created by the Milgram controversy and has learned a good deal in the process (Miller, 1986). Today, psychologists are much more aware of the potential risks of psychological research. In addition, the US government has established strict guidelines for the protection of human research participants. An important part of current procedures is that a research project must be evaluated in advance by a panel of experts, so the individual researcher can no longer decide whether the study is ethically sound. It is doubtful that the Milgram studies would gain approval today. Baumrind (1964), among others, would see this as a victory. Other psychologists would argue that the important information gained from the Milgram studies made them ethically justifiable. Do you think the risks to Milgram's subjects were outweighed by the benefits gained from the research?