

College Guild

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What's On Your Mind?

Unit 2 of 6

~ Research Methods ~

Soft science



By many outside the field, psychology is considered to be a “soft” science. This term is used to describe a field of study in which the data cannot be measured strictly and *objectively* (using facts, not opinions). The use of human subjects in psychology contributes to the field being considered less objective than other sciences. For example, if you drop a Mento mint into a bottle of Diet Coke, the soda will bubble over and explode out the top of the bottle! You could try this experiment over and over again and arrive at the same result because we know that the ingredients in every Mento are the same and the ingredients in every bottle of Diet Coke are the same. Therefore, since the composition of these never change, you can predict the same result every time.

However, studying *people* rather than *objects* makes it much more complicated. Unlike the Mentos and Diet Coke, there is no “ingredient” list for individual minds.

1. How might the study of psychology be different if we were able to read minds?

When creating experiments using human subjects, we need to take great care to minimize outside factors that could affect our results.

Consider this example: A high school psychology teacher at a private high school in the U.S. wants to know how many students work after-school jobs during the school year. He finds that less than 10% of the students in his class work part-time during the year, and concludes that American students are lazy.

This teacher has failed to consider several influencing factors. His sample was made up of a small number of private school children with wealthy parents who don't need to work and are not representative of all students in the country. In this experiment, the wealthy parents can be considered the common “ingredient” among these students, an ingredient that not all students have. Experiments like these assume that all

humans have common “ingredients,” just like the Mento and the Diet Coke, and that results in human experiments could be the same every time.

2. How might you change the teacher’s experiment to make his statement about high school students in America more accurate?

3. How might you get a sample that is representative of an entire population?

Something else to consider when studying humans is the wellbeing of the participants, and how they are being affected by the study.

4. What are some risks you can think of for someone participating in a psychology study?

Ethics

In order to ensure that they are treating our subjects fairly and not harming them, psychologists must follow the American Psychological Association’s ethics guidelines. There are five principles that these guidelines outline:

Principle	Subject	Meaning
A	Beneficence* and nonmaleficence*	Researchers must protect the rights of the subjects with whom they work, and take care not to express any prejudices or biases.
B	Fidelity* and responsibility	Researchers must take responsibility for following ethical codes and are expected to review the work of fellow researchers for ethical issues.
C	Integrity	This principle is present to ensure the quality of the researcher’s work, stating that it should be absent of fraud, false results, or misconduct.
D	Justice	All who produce psychological research must provide access to the work and share the benefits of their research with the public.
E	Respect for people’s rights and dignity	Researchers must obtain consent from and provide confidentiality for all participants.

*See definitions in glossary.

5. Which of these principles do you think is the most important? Why?

6. If you could add a sixth principle of ethics, what would it be?

7. Which of these principles do you think is the most difficult to follow? Why?

Examples of unethical experiments

The Monster Study was a study about stuttering children that took place in Iowa in 1939 under researchers Wendell Johnson and Mary Tudor. Tudor wanted to see if telling stutterers that their speech was fine would produce a change in their speech quality. The experiment involved dividing children into two groups. The first group was given positive speech therapy and was encouraged and complimented for their speech. The second group received negative speech therapy and was ridiculed for any speech imperfection. The second group of children, some of whom spoke normally at the beginning of the experiment, ultimately reported developing speech and psychological issues after completion of the study.

8. What ethical problems do you see with this study?

9. What would you change to make the study more ethical?

The Stanford Prison experiment, despite being a failed effort, is one of the most famous psychology studies to date. In 1971, Philip Zimbardo designed and carried out the Stanford Prison experiment in order to learn more about the psychological effects of being a prisoner or prison guard. He ultimately recruited 24 male college student participants and randomly assigned them to groups: half were assigned to be prisoners and half were guards. It is important to remember that the subjects were neither prisoners nor prison officers, nor were they assigned to these groups for any specific reason; they were simply supposed to be playing a part.



Zimbardo and his team created a fake prison in the basement of a Stanford building and intended to observe the “prisoners” and “guards” interacting for two weeks. After only six days, the behavior of the fake guards had gotten out of control and the experiment was stopped. The researchers, who had bugged the “prison,” had watched for nearly a week as the fake guards took their responsibility too seriously and began inflicting significant psychological and physical damage onto the fake prisoners.

10. Was this experiment doomed from the start? Why or why not?

11. What do you think could have been changed to make this experiment more ethical?

12. Write a short dialogue between a reporter and Zimbardo after his experiment failed.

Ethical experiments on animals and humans

In many cases, psychologists will study the psyches (minds) of animals, such as rats or moles, because the ethical guidelines for working with rodents are much less strict than those involving humans. In the 1930s, rats were considered extremely valuable to the study of psychology.

13. What might be another benefit to working with animals versus humans?

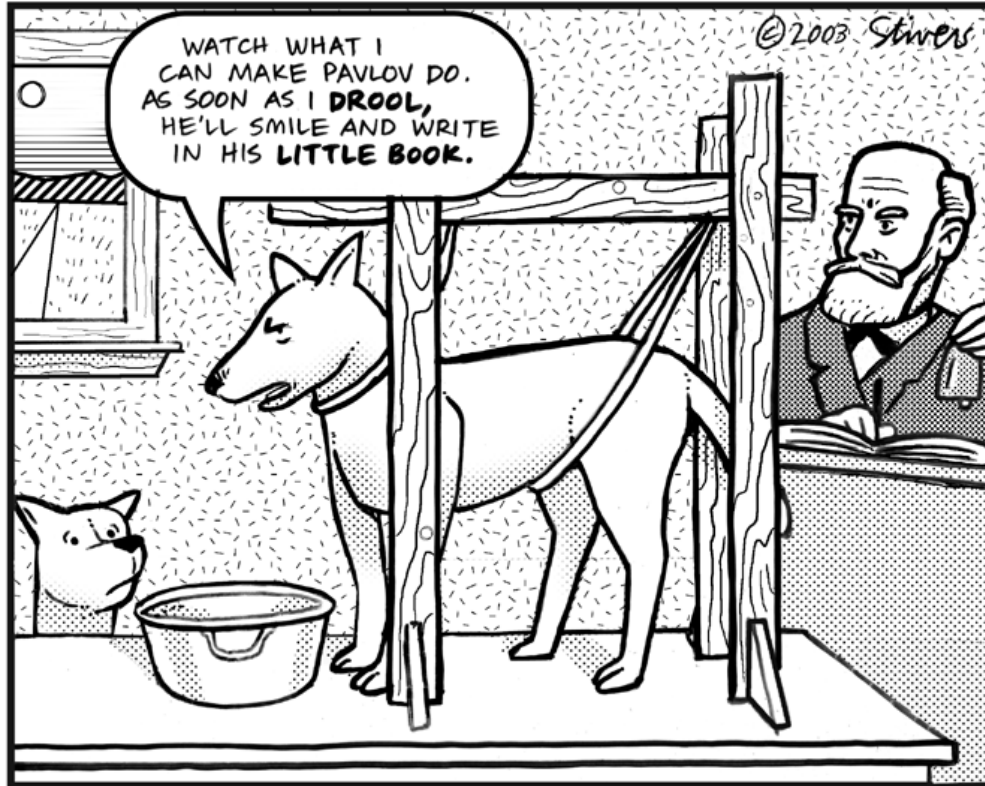
Famous psychologist John Watson suggested that you could figure out everything you needed to know about human psychology by putting a rat into a maze. Here is a quote from John Watson:

“I would rather see the behavior of one white rat observed carefully from the moment of birth until death than to see a large volume of accurate statistical data on how 2,000 rats learned to open a puzzle box.”

14. How would you interpret this? Do you agree?

Rats aren't the only animals that have been used in psychology studies. One famous example of an ethical animal study is the conditioning experiment discussed in Unit 1, done by Ivan Pavlov. By using his dog to test conditioning, he was able to avoid physically or psychologically harming a human.

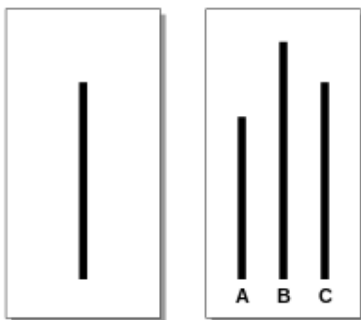




Some psychologists believe using animals is a great way to avoid the complications that can arise when studying human subjects who have complex emotions that can cause the results of a study to vary. However, when it comes to studying actual human emotion, it is necessary to use human subjects, ever so carefully.

14. Pretend you are a rat or mole in a psychology experiment. Write a letter to the psychologist studying you.

The Asch Line Experiment



The Asch Line Experiment set out to determine how much people are affected by group pressure to make decisions. In the study, researchers had about five actors in a room and one real participant who was unaware that the other people in the room were actors. The researcher showed them all a figure like the one seen to the left. After allowing the subjects time to study the figure, the researcher went down the line of participants (one real, the rest actors) and asked them which of the three lines on the right was the same length as the line on the left (correct answer: line C).

Starting with the actors and ending with the one real participant, the researcher asked them to state their answers aloud. The actors were instructed to intentionally give the wrong answer. For example, all of the actors would say that line “A” was the same length as the line on the left (an obviously wrong answer). The researchers expected that, when they got to the actual participant, they would also give the wrong answer, knowing that it was wrong, due to peer pressure. There were, however, a handful of participants that said line C, knowing that they had the right answer.

15. Imagine you are one of 12 people on a jury. The eleven other jury members disagree with your verdict, but you feel very strongly about it. How would you feel having to argue for your opinion on your own?

16. Now imagine the same scenario, but instead of eleven jury members disagreeing with you, there are only 10 that disagree and one that agrees with you and also feels very strongly. How might that change your feelings about asserting your opinion?

When designing his study, Asch took into account the fact that peer pressure situations can often be distressing for participants. The lack of seriousness of the decision the participants made — choosing between lines — removed a great deal of the anxiety and stress that often accompanies peer pressure situations. In this way, he was able to make people slightly uncomfortable without causing any lasting damage.

17. How do you think a study on peer pressure might have been constructed unethically?

18. A year later, how do you think the participants in Asch’s study felt about the experiment?

The Asch Line experiment is a great study to demonstrate the effects of social peer pressure. Keep in mind these effects when completing the next unit, which will be looking at different theories and experiments concerning social psychology.

Glossary:

Beneficence: The act of doing good or benefitting someone or something

Nonmaleficence: The act of doing something that is not harmful

Fidelity: Faithfulness to a person, cause, or belief

References:

https://todayinsci.com/W/Watson_John/WatsonJohn-

[Quotations.htm](#); https://www.realclearscience.com/blog/2014/02/the_rat_experiment_you_dont_know_about_but_should.html; <https://www.prisonexp.org/guards>; <https://blog.efpsa.org/2013/08/15/apas-five-general-principles-of-ethics/>; <https://www.onlinepsychologydegree.info/unethical-experiments-psychology/>; <https://www.simplypsychology.org/asch-conformity.html>

Remember: First names only & please let us know if your address changes