

An Original Way of Looking into Obedience and Disobedience: Different Genders Facing Different Kinds of Authorities

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Abstract. Various experiments about obedience and disobedience to authority have been taken place in the past decades. However, it is a brand new task for academics where genders and types of authorities are on cross analysis. Are female more likely to obey to educated professionals or severe dominators? Will genders affect people's attitudes to the governors? In this work, an experiment is designed based on Milgram's original experiment of obedience, in order to answer the answers previously mentioned. Different reactions from different genders will be tested when they are facing prestige or dominance authorities separately. The method of testing level of obedience is altered from the original electric shock experiment taken by Milgram to a new method of using hot sauce to measure participants' obedience to authorities. The hypothesis in existence suggested that females will show a higher level of obedience to dominance authorities rather than prestige authorities, and their obedience to dominant authorities will be relatively high comparing to males, while males will show a higher level of obedience to prestige authorities than dominant authorities, and showing relatively high obedience to prestigious authorities. This work aims to show a new way to understand gender difference in behaviors, and wish to open a gate of behaviour study and gender cognition study.

1. Introduction

In the year of 1965, Stanley Milgram first established his experiment about the obedience to authority [1]. In addition to the shock resulted from the experiment itself, people are starting to concern about enlightenment and caution beyond electrical shocks.

Beyond all doubts, we are surrounded by authorities in our daily life. From our professors to our governors, or even some professionals on the televisions who would give advises about healthy diets, authorities are deciding a majority of decisions we made and actions we taken. It is astonishing to discover how obedient we are to the authorities, furthermore, how much we could do beyond morality under the orders of authorities.

These questions have already been asked and discussed by both the researchers and the public. Nevertheless, which had barely been taken into consideration was the types of authorities. In their monograph, Cheng et al divided authorities into two groups, which are prestige and dominance [2]. While prestige refers to authorities who use professionalism to affect their audience, dominance is related to tough measures and occasional violence. There is a common belief that females are easier to obey politics in power than males in specific historical periods. Other discussions criticize that females are credulous to experts, which belongs to prestigious authority. To discover the truths of these criticisms could not only contribute to social scientific fields, and also help us better understand gender differences.

Another reason of this research is to manage to make certain improvements on Milgram's experiment nearly six decades ago. Criticism of its morality has never ceased. People blame the psychological pressure the experimenter put upon participants' heads [3]. We are seeking a way for which a milder method could achieve the same effect on participants. These measures will be applied in our experiments about different genders facing different authorities.

2. Literature Review

After over fifty years, Milgram's experiment is still the model of the study of obedience and disobedience. Before proceeding, I would like to outline this epochal experiment. In the cover story, participants are recruited because of an experiment testing if punishments will affect scores. They are demanded to give electric shocks to the students when they choose wrong answers, and as the experiment proceeded, the electric shock kept increasing. By testing whether or not the participants would choose to disobey to the authority if they are threatening people's lives and when they would disobey, the experimenter could measure participants' obedience level. Although professionals believed that few people would mortally hurt others even if they are under the orders of authorities. The result showed that over sixty percent of participants determine to administer the experiment's final massive 450 volts electric shock [1]. After the establishment of obedience study, methodological and conceptual replications have been conducted in 11 different regions and locations outside U.

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S. A. [3]. Similar results have come up in these replications.

The participants of the first Milgram's experiment were American males in the age range of 20 to 50 [4]. Because of this arrangement, the possible differences in outcomes due to gender differences cause a debate. After 1965, there are 12 experiments in total taken to measure gender differences in obedience. The majority of experiments found no differences between males and females, while other experiments found female obedience lower than males [3]. These experiments show that under the same kind of authority, it is hard to tell a difference between obedience of the two genders. But in the conditions of different authorities, the result is still unknown to us.

3. Method

3.1. Procedure

Participants of this experiment are Chinese men and women, age ranging from 18 to 40. The numbers of people of each gender are the same, which is 50 people each. The participants will be recruited with a cover story: One laboratory is looking for volunteers to help researchers complete an experiment about how the spicy level of food will affect people's reaction activity. This cover story is totally fake in order to conceal the real intention of this experiment. Milgram's original cover story is no longer available as some of our participants could have heard the initial obedience experiment. After recruitment, half of participants will be tested with prestigious authority, and the rest of them will be tested with dominance, they will be guided to different laboratory. The prestige group will take the experiment in a laboratory with a title of college, while the dominance group will not.

Before the experiment, every participant will be given a questionnaire about their presently living city, native place, family structure, wealth condition and other factors that we speculated to be possibly related to obedience level. The data from the questionnaire will help us to control variables and better understand of the role gender plays in the differences of obedience level.

Arranging in group of five, participants will meet with the authority representatives. For the prestige group, they will meet a professional researcher who will introduce his/her professions and research field, in order to establish trust and respect from participants. The cover story and experiment flow path will be explained in details. For the dominance group, the authority representative have no necessity to preform their professional literacy, instead of introducing their professions, participants will *overhear* the arguments between researchers, which presents their tough behaviour.

The experiment itself is designed based on Milgram's obedience experiment. Participants play the role of a teacher of the tester, who would deliver harms to the testers and would be given psychological pressure. However, in order to lessen the pressure put upon participants' head, electric shock is taken place by hot sauce. This design is inspired by the aggression experiment of Lieberman, who

use the measures of hot sauce to examine people's aggression and anger [5]. Spicy food can physically harm other people as the pungency is identifies as a kind of ache. However, compared with electric shock, people tend to believe spicy food would bring less harm. Participants play the role of a teacher, who is responsible to hand in spicy food to the testers. The testers are played by researchers, they would be arranged to sit in a room next to the participants, a transparent window between makes sure the participants could see the testers' reactions. The tester will first use five simple logical questions to test their initial reaction activity, then the first portion of hot sauce mixed with water would be sent to the testers when the participant presses a button on a desk in his/her room (The participants can choose to taste the hot sauce). Five different logical questions would be answered and the reaction activity would be measured for the second time. These afore-said steps will be repeated for over five times, and each time the concentration of hot sauce in the liquid would be doubled.

In fact, no hot sauce would be served. What the testers drink is drinking water mixed with pigment. The testers need to pretend to be suffering. During the whole experiment, participants have the right to put a halt at any time. The authority representative will refuse to stop at first, but if the participant asks for three times or they stopped the experiment for over five minutes, then the whole experiment will be quit.

By measuring how much times the participants will demand for quitting, and whether they would stop the experiment in the end, we could find the obedience level of these participants by finding the percentage of people choose to obey. Because we use a different method with Milgram's experiment, we will not compare our data with Milgram, but make internal comparisons instead.

3.2. Controlling Variables

The independent variables of this experiment are both the genders and the types of authorities. I have mentioned that the number of both genders facing each authorities are the same. This ensured that the data will not be influenced by participants number. For the types of authorities, I manage to polarize the two kinds of authorities. What need to be noticed is that, in reality, it is hard to find such polarization. Most authorities will mix up these two kinds of authorities together. In the diagram below, I would show what details should each representative of authorities follow to control the independent variables.

The dependent variable of this experiment is the degree of obedience. The dependent result would be closely related to the changes in independent variables. Initial hypothetical results will be shown in the next section of the article.

There are various controlled variables in this experiment that we focused on. Firstly, the nationality and aging range. We have already mentioned in the previous sections. This factor is controlled because we need to minimize the effects of different culture that could influence the obedience level. Secondly, the performance of each kind of authorities. As shown in Table 1, details that each

representative of authorities should follow to control the performances of authorities are listed.

Table 1. Scale of performances of different authorities

Type of authority	Before the experiment	Appearance	Meet with participants	During experiment	Required stopping
Prestige	No performance	Work clothes	Introduction of profession and experiment	Far from the participants	Persuasion. "Please continue, we need you to complete the experiment."
Dominance	Argue with researchers	Suits	No performance	Stand next to participants	Orders. "Just continue."

Thirdly, the performances of testers should be controlled. Participants' obedience could be highly vacillated by testers' performances, and finally influenced our results. The performances need to be similar to each other,

which required some skills. Table 2 outlines the rough schedule of testers' performances.

Table 2. testers' performances under different concentration of hot sauce

Concentration of hot sauce/%	Performances of testers
2.5	Frowns, take a deep breath
5	Coughs for several times, uncomfortable facial expression
10	Says that "I can't have such spicy food", harder coughs
20	Cries out "I can't drink this, I hate hot taste"
40	Almost cries, refuse to drink, ask to stop the experiment

4. Hypothesis

4.1. Considering Types of Authorities

For females, we hypothesized that they will obey more to dominance authorities rather than prestige authorities. When comparing dominance and prestige, females often choose to obey people that are likely to cause dangers [6,7]. For males, we hypothesize that they will obey more prestige authorities than dominant authorities. A lower rate of fear is presented in males when facing angry and fearful conditions, while males tend to trust and obey people that shared group membership and show professionals [8].

4.2. Considering Genders

For prestige authorities, males will show a higher rate of obedience. Maddux indicated that males show a higher level of trust toward prestige authorities, which leads to a higher rate of obedience [8]. Rationality is also a factor that may effect the results. Males show a higher concentration on rationality and reliability of an object or statement than females, so a prestige that shows little characteristics of personality would gain more respect in males than females [8]. For dominant authorities, females will show a higher rate of obedience to authority. Females are more likely to be influenced by emotions and movements, so authorities that show strong personalities will affect females rather than males [7].

5. Limitations

One thing that should be admitted is that there are problems in this experiment that are unsolved at the moment. We admitted the existence of limitations and hope that in the future, this obedience experiment can be further refined.

Firstly, psychological pressure is still existing in this experiment. Although this experiment has been improved on the level of psychology, and less pressure will be brought on participants' heads, participants will still feel guilty and anxiety when they are facing moral pressure. Although Milgram claimed that even when the participants are aware of the truth of this experiment, they are still willing to participate in it, we know that a more gentle way is necessary [1].

Secondly, Information consent problem seems unsolvable. Milgram's obedience experiment was criticized because of the absence of information consent. The participants are unaware of what kind of experiment they are participating in from the beginning, and they are ignorant about the real purpose of this experiment. This problem can hardly be solved. Once the participants are aware of the existence of psychological hint given by the authorities, this experiment will not work anymore. After all, this experiment aims to test people's obedience under unconscious situations.

Thirdly, the results we get are limited in a little range of people, which cannot represent the whole humankind. Only Chinese adults are examined, which means the results are only available for Chinese adults aging from 18 to 40. For foreigners and teenagers, another experiment is demanded. Another reason that affects the availability of

these data is the sample size. Even though our participation is higher than Milgram's initial experiment, more participants are still required.

6. Conclusion

In this article, I raise a question about the blank in research of obedience that jointed differences in genders and differences in authorities. The answer of this question will help us better understand gender differences in social scientific field. Also, I proposed to make improvements on Milgram's experiments to lessen psychological pressure. An experiment is designed to answer the previously mentioned question, which is based on Milgram's obedience experiment, but the electric shocks are replaced by hot sauce. I discussed how to control the variables, and how to use a cover story to make the participants believe that they are participating in an experiment measuring the effects of spicy food on mind activity. Before getting the results, I made some hypothesis bases on scientific facts and personal deduction. In the final section of the article, I gave the limitations of this experiment, including the lack of information consent, limitation of sample source and sample size, and the psychological pressure that still exists. I hope that when the experiment is practiced, we could open a new gate of obedience study and gender cognition study.

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