HOW PEOPLE INTERPRET MILGRAM'S EXPERIMENTS

by

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ABSTRACT

HOW PEOPLE INTERPRET MILGRAM'S EXPERIMENTS

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Subjects were exposed to varying types of information about Milgram's (1974) obedience experiments to test Safer's conclusions that exposure to Milgram's film of his obedience experiment causes subjects to believe that people are evil and aggressive. Other hypotheses tested were that the subjects who viewed the film Obedience would perceive people as possessing less strength of will and rationality, altruism, and independence, and be less authoritarian. Also, subjects exposed to the Obedience film condition were expected to see others as more obedient, value promoting effective independent thinking, and to view personality instead of the situation as determining behavior to a greater extent. The only hypothesis supported in any way was that naive subjects exposed to the Obedience film-aggression description condition perceived people as possessing less strength of will and rationality when compared to those subjects who only read a description of the obedience experiment. An unexpected finding was that males, in comparison to females, indicated that people are more aggressive. Nisbett and Wilson's (1977) position suggesting that Safer's subjects committed the fundamental attribution

error was an explanation offered to account for Safer's results and the results of this experiment. The fact that subjects were tested in groups may have suppressed the effect of the filmed obedience experiment. A suggestion for future research was presented.

INTRODUCTION

Obedience is a special type of influence in which one person tries to induce another to do something. This experiment attempted to assess the degree to which individuals who varies in knowledge about the Milgram (1974) obedience experiments were affected in how they perceived others, how they made attributions, and what they valued.

The Milgram (1974) experiments have shown that subjects will obey an experimenter to the extent of inflicting pain on another individual who is not a threat to him in any way. Certainly the fact that 100 percent of the subjects delivered what they believed was 300 volts of shock to the victim and 65 percent delivered what they thought was the maximum voltage in Milgram's most basic study indicates the power of the situation. Milgram explains his results by pointing out that the subject becomes an agent for the experimenter, thus relegating all responsibility to the experimenter. Binding forces keep the person subservient to the person in the position of authority in the experiment. The binding forces stem from experiences in the family, school, and work that have reinforced obedience. The experimenter is thus obeyed because of the position he occupies. Milgram, therefore, accounts for his results by pointing to the past experiences of the subjects.

One of the experiments Milgram performed was a control experiment to test whether subjects were releasing aggressive impulses instead of acting obediently. He found that subjects were significantly less likely to administer the maximum shock level when they made autonomous choices of shock level in that experiment versus when they were told by the experimenter in the obedience study to continue administering progressively higher shock levels. (Herein this autonomous choice experiment will be referred to as the "aggression" experiment.) The results of this experiment led Milgram to conclude that subjects were obeying the experimenter instead of releasing aggressive impulses.

Whereas Milgram was interested in why people obey, Safer (1980) was interested in how people react to those who obey. Safer examined student reactions to the film Obedience (Milgram, 1965). The film depicts the Milgram obedience experiment in which a confederate learner acted as though he had a heart condition. The students in the Safer experiment were asked after they had seen the film how much shock subjects would give if they were allowed to choose the level administered for every wrong answer (as in Milgram's "aggression" experiment) instead of being told to go one level higher by the experimenter. He found that they overestimated the shock level the subjects had actually given in the Milgram aggression experiment.

Safer suggested that the students concluded after viewing the film that people release aggressive instincts in the obedience experiment; he reasoned that people in general were seen as "evil" and aggressive. Safer tested his idea by contrasting shock level predictions given by students who had seen the film Obedience ("sophisticated" subjects) with students who had not seen the film ("naive" subjects). Significant differences between them were found for the average shock level and the last shock level predicted for the "teacher" in the Milgram experiment who was free to choose shock levels. The sophisticated subjects, when compared with the naive subjects, predicted that higher shock levels were delivered. Of the "naive" students, about half claimed not to know anything about the Milgram experiments. These "truly naive" subjects were contrasted with the naive subjects' ratings. Significant differences were found for the predicted last shock level and the predicted percentage of Milgram's subjects setting the highest shock level. The naive subjects predicted that higher last shock levels were delivered and a higher percentage of subjects delivered the highest shock level in the Milgram experiment. Finally, the truly naive subjects were contrasted with the sophisticated subjects. Here, the truly naive subjects were significantly different in predicting that fewer subjects would go to the maximum shock level, a lower average shock level, and a lower last shock level.

Safer reasoned that the student subjects had failed to see the degree to which situational factors rather than an individual's character determines his behavior. In other words, the subjects were not weighing the situational context enough and were assigning too much importance to personality factors. This is consistent with Ross's (1977) finding that people believe that character instead of situational influences are likely to determine behavior. Ross has called this tendency "the fundamental attribution error."

Whereas Milgram explained his results by saying that people's tendency to behave obediently is because of their previous experiences, Safer is proposing that people have a problem in making attributions about others because they assume that behaviors emanate from personality factors, thus diminishing the importance of the immediate environment. Milgram certainly did not commit the fundamental attribution error in concluding that subjects in his experiment were obedient. This is because Milgram was sensitive to the different situational factors which were independent variables in his obedience experiments.

The present experiment attempted to assess more directly if, after subjects are exposed to the Milgram experiments, they view people as being more evil and aggressive as Safer hypothesized; in addition, several other dimensions were assessed.

The basic design problem in Safer's experiment acknowledged by Safer himself was that the subjects (i.e., Introductory Psychology students) were not randomly assigned to groups. Subjects were assigned randomly to conditions in this experiment.

Another prominent methodological problem was that Safer omitted telling a "naive" control group the programmed responses that the "learner" could give in response to the shocks at different levels because Safer thought this would lead them to conclude that some "teachers" actually administered the high levels of shock. This was a mistake which was easily corrected in this experiment by describing the possible programmed responses the learner would give in the Milgram experiment if the subjects gave the corresponding levels of shock. Safer's procedure was a mistake because it could have actually suppressed the significant differences that Safer did find: the programmed verbal responses theoretically would have only deterred the teachers in Milgram's experiments from delivering a higher shock level. The subjects in the naive conditions in Safer's experiment may thereby predict in the absence of the learner's responses, that higher levels of shock would be administered. They may have then chosen predicted scores that are closer to the sophisticated subjects' predicted scores.

The present experiment attempted to test Safer's conclusions about his experiment. Safer inferred that after

viewing the film Obedience the subjects saw people as being more evil and aggressive. His inferences were based on the fact that they predicted people to deliver higher levels of shock in the aggression experiment. Because Safer said that the subjects saw people in general as being more evil and aggressive after viewing the film, his explanation would theoretically generalize to measures not asking about the aggression experiment. This hypothesized attribution made by Safer was directly assessed in the present experiment by questions not asking about the Milgram aggression experiment but rather about how the subjects perceive others.

The present experiment also assessed people's reactions along other dimensions. The remaining dimensions that this experiment assessed were deductions and speculations based on assuming Safer's inferences (i.e., subjects saw people as being evil and aggressive) and the reasoning he advanced (i.e., about the fundamental attribution error) were correct in the context of an obedience situation.

It was thought that if Safer's inference is found to be correct in this experiment, an alternative explanation for Safer's findings that Safer himself advanced as a possibility would be indirectly disconfirmed. The alternative explanation cited by Safer (1980) was based on Nisbett and Wilson's (1977) finding. They have found that people see a "fittingness of cause and effect": small manipulations in experiments will not be seen as leading to large changes in

behavior. Therefore, according to this reasoning, "sophisticated" subjects in Safer's experiment overestimated the level of shock people would give in the aggression experiment because they believed the subjects were experiencing similar conditions to those displayed on the film. However, since the questionnaire which contains the dependent variable questions in this experiment were not asking subjects to estimate how people would response when a change in the independent variable (i.e., from obedience situation to aggression situation) is introduced, the Nisbett and Wilson alternative explanation would not be applicable to differences in the present study. In addition, because subjects' reactions to the two Milgram experiments including the results were assessed, the alternative explanation to Safer's findings was indirectly tested.

The specific dependent variable dimensions that were explored other than those directly assessing Safer's conclusions (evil and aggression) were subjects' attributions about other person's "strength of will and rationality," "altruism," "independence" (Wrightsman, 1974), and "obedience." Subjects' own perceptions about "authoritarianism" (Adorno, Frenkel-Brunswick, Levinson, and Sanford, 1950) "promoting effective independent thinking" and "personality versus situation influence" were also assessed.

The general hypothesis was that subjects exposed to the filmed Milgram obedience experiment would respond

differently on most measures than those who were not exposed. The subjects exposed to the filmed obedience condition were hypothesized to see people as possessing less strength of will and rationality, altruism, and independence because subjects in the film appear to possess less of these qualities. Subjects exposed to the filmed obedience condition are also hypothesized to less authoritarian because it is believed that they will react to the consequences of obedience as displayed on the film and will not see the value of obedience and respecting those in positions of authority. Finally, subjects exposed to the obedience condition are hypothesized to see others as being more obedient because those subjects on the obedience film behave obediently; to value independent thinking because they will see the value of making independent decisions after seeing the consequences of blind obedience; and to view personality instead of the situation as determining behavior to a greater extent in accordance with Safer's conclusion that individuals in the obedience condition were seen committing the fundamental attribution error.

In addition to the no exposure and obedience film conditions about which the major hypotheses were advanced, there were four other conditions. The aggression description condition was expected to produce results similar to the no exposure condition because it did not portray subjects as obedient and harmful. The obedience film, then

aggression description condition was incorporated into this experiment to see whether exposure to the aggression description condition would temper the hypothesized effect of the exposure to the obedience film. Another condition was exposure to the aggression description first followed by the obedience film to see if the sequence of information had an effect. Finally, a verbal description of the basic obedience experiment was also including to see if there was a medium difference between verbal presentation and exposure to a film.

METHOD

Subjects

One hundred and sixty-nine subjects in various sections of Introductory Psychology classes at the University of Dayton were used in the study for which they received experimental participation credit. Subjects were randomly assigned to one of the six independent variable conditions.

Materials

Materials used were the film, Obedience (1965), which shows a segment of the actual Milgram obedience experiments; a written description of one of the obedience experiments in which the confederate acted as though he had a heart condition (see Appendix A); a written description of the aggression experiment in which subjects were free to choose the level of shock administered (see Appendix B); and a questionnaire (see Appendix C).

Procedure

The independent variable consisted of six levels of exposure to obedience information:

(1) No exposure condition. Subjects in the no exposure condition did not receive any information before completing the dependent measures.

(2) Verbal description of the aggression experiment. Subjects in the verbal description of the aggression experiment condition read a description of Milgram's (1974) control condition in which subjects were free to choose the level of shock administered (see Appendix A). It was underscored that the experimenter did not influence the subjects in any way to give progressively higher shocks. The aggression condition was described similarly to the way Safer did to all groups in his experiment; subjects were shown a photocopy of the shock generator (Milgram, 1974), p. 28) and the "learner's" programmed verbal responses to the various shock levels (Milgram, 1974, p. 56). However, it was pointed out that the responses were given only if the "shock" was delivered. The results of the experiment were also presented, whereas Safer's dependent variable had subjects predict the results of the aggression experiment.

(3) Verbal description of the obedience experiment. Subjects in the verbal description of the obedience experiment condition read a paraphrased description of the Milgram (1974) obedience experiment in which the confederate acted as though he had a heart condition (see Appendix B). It was described similarly to the aggression condition except that the basic differences were included: the instructions to go one level higher on the shock generator if a mistake was made, the experimenter's systematic prods to deliver

progressively higher shocks, and the dramatically different results.

(4) Film condition. The film condition subjects saw the film Obedience (Milgram, 1965). This film shows segments of the actual Milgram obedience experiment in which the confederate learner acted as though he had a heart condition.

(5) Film-aggression description condition. The film-aggression condition subjects saw the film Obedience and were then given a verbal description of the aggression condition and the results. Before the second condition was given, the experimenter announced the following: "Please be aware that the experiment you will now learn about is different from the one you have just learned about." This was given so subjects would pay attention to the differences and not assume that they were presented a replication of what they had just learned about in another form.

(6) Aggression description-film condition. The aggression-film condition was exactly the same as the film-aggression condition except that the order was reversed.

Dependent Measures

The subjects in all of the conditions were then given a twenty-five item questionnaire to assess the degree to which the independent variable manipulations affected the

subjects' attributions of others and perceptions of others. The questions assessed the following dimensions: (1) "strength of will and rationality," (2) "altruism," and (3) "independence" (Wrightsman, 1974); (4) "authoritarianism" (Adorno et. al., 1950); (5) "evil," (6) "aggression," (7) "promoting effective independent thinking," (8) "obedience" and (9) "personality versus situation influence." The questions were picked because of their face validity. Higher scores indicate possessing more of each construct. Several items had to be reversed in scoring.

The "Strength of Will and Rationality" dimension questions were taken from Wrightsman's (1974) Philosophies of Human Nature Scale. It consisted of the following four questions:

> Our success in life is pretty much determined by forces outside our own control.
> The average person is largely the master of his own fate.
> Most people have little influence over the things that happen to them.
> Most people have a lot of control over what happens to them in life.

Since each item was rated on a scale from one to seven, the range of the total varies from four to twenty-eight. However, in the analysis, the item averages were used.

The "Altruism" dimension questions were taken from Wrightman's (1974) Philosophies of Human Nature Scale. On the first question, "try to" was omitted to make the state-

ment relevant to actual behaviors instead of intentions. It originally read: "Most people try to apply..." This scale consisted of the following six questions:

Most people apply the Golden Rule, even in today's complex society.
Most people do not hesitate to go out of their way to help someone in trouble.
Most people will act as "Good Samaritans" if given the opportunity.
"Do unto others as you would have them do unto you" you" is a motto that most people follow.
The typical person is sincerely concerned about the problems of others.
People pretend to care more about one another than they really do.

The "Independence dimension questions were taken from Wrightsman's (1974) Philosophies of Human Nature Scale. It consisted of the following five questions:

Most people have the courage of their convictions.
Most people can make their own decisions, uninfluenced by public opinion.
The average person will stick to his opinion if he thinks he's right, even if others disagree.
It's a rare person who will go against the crowd.
Most people have to rely upon someone else to make their important decisions for them.

The "Evil" dimension question was made up by this author. It consisted of the following question:

Most people are evil.

The "Aggression" dimension was made up by this author. It consisted of the following two questions:

> Many people would harm a stranger if given the opportunity because of their aggressiveness. If it were not for the restrictions of religion and society, people would act in a very selfish and aggressive manner toward one another.

The "Authoritarianism" dimension was taken from the Authoritarianism Scale (Adorno, et. al., 1950). It consisted of the following question:

> Obedience and respect for authority are the most important virtues children should learn.

The "Obedience" dimension was made up by this author. It consisted of the following question:

> If a soldier was commanded by officers of higher rank to kill unarmed civilian men, women, and children during a combat operation, he probably would ultimately follow orders.

The "Promoting Effective Independent Thinking" dimension was made up by this author. It consisted of the following question:

> The central concern of education should be to promote independent thinking that could lead to individuals being able to evaluate things for themselves better.

The "Personality versus Situation Influence" dimension was both taken from Wrightsman's (1974) Philosophies of Human Nature Scale (the second question below) and made up

by this author. It consisted of the following four questions:

Most people's behavior is determined more by their personality than anything else.
Most people are consistent from situation to situation in the way they react to things.
A person's reaction to things differs from one situation to another.
Most people's behavior is affected more by the situations they behave in than anything else.

Each item was rated on a scale from one to seven. Higher scores mean that subjects believe personality influences behavior to a greater extent than the situation.

The instructions and answer key for the questionnaire were taken from the Balanced F Scale (Byrne, 1974, see Appendix C).

After completing the dependent variable questionnaire the subjects answered a question to assess whether they had prior knowledge of Milgram's experiments (see Appendix C). The subjects were than asked to indicate their gender and, if they would not mind, their name on the reverse side. Finally, the subjects were debriefed.

RESULTS

2 (Sex) x 6 (Experimental Conditions) ANOVA's were conducted on each of the nine dimensions. There were no significant main effects for experimental conditions or sex x condition interactions on any of the nine analyses. There was a significant main effect for sex on the aggression subscale, F (1,157) = 5.69, $p < .02$. Men perceived people to be more aggressive than women did. The mean scores for each experimental condition on all dimensions are presented in Table 1. ANOVA tables are in the Appendix.

An additional analysis of variance in which non-naive subjects concerning Milgram's work were discarded from the subject sample was conducted on each of the dimensions. This was done because Safer found additional significant results when he examined only ("truly") naive subjects' data. The means of the analysis of naive subjects are presented in Table 2. In one instance the analysis of naive subjects led to different results than the analysis using the complete sample. The strength of will and rationality dimension, showed a significant main effect for experimental conditions, F (5,116) = 2.62, $p < .03$. The description of the aggression experiment condition and the description of the obedience experiment condition were significantly different than the film-description of the aggression experiment condition. The Tukey HSD test indicated that

the subjects in the two description only conditions rated people as possessing more strength of will and rationality. All other patterns were similar to the complete sample analysis.

Table 1

Mean and Standard Deviation on All Dimensions
as a Function of Experimental Conditions

	CONDITIONS					
	No Exposure	Description of Aggression Experiment	Description of Obedience Experiment	Film + Description of Aggression Experiment	Description of Aggression Experiment + Film	Film
	n=31	n=29	n=30	n=27	n=27	n=25
Strength of Will and Rationality						
Mean	4.85	4.90	5.13	4.31	4.63	4.64
Standard Deviation	1.23	1.22	.92	.97	1.05	1.10
Altruism						
Mean	3.95	4.07	3.92	3.96	4.07	3.89
Standard Deviation	.81	1.01	1.14	1.07	.93	.72
Promoting Independence						
Mean	5.65	6.28	6.03	6.22	6.30	5.88
Standard Deviation	1.11	.65	1.33	.75	.78	1.17
Obedience						
Mean	4.42	3.93	4.07	4.44	4.70	4.68
Standard Deviation	1.86	2.02	1.93	1.91	1.94	1.77

Note: Higher numbers represent greater values on the particular dimension.

Table 1 cont.

	CONDITIONS					
	No Exposure	Description of Aggression Experiment	Description of Obedience Experiment	Film + Description of Aggression Experiment	Description of Aggression Experiment + Film	Film
Authoritarianism						
Mean	4.32	4.28	4.27	3.78	3.70	3.72
Standard Deviation	1.56	1.89	1.88	1.72	1.88	1.93
Evil						
Mean	1.74	1.93	1.67	2.11	1.52	1.44
Standard Deviation	1.21	1.22	.96	1.85	.85	.77
Independence						
Mean	3.56	3.76	3.63	3.48	3.29	3.14
Standard Deviation	.91	1.07	1.06	1.04	.95	.76
Personality vs. Situation Influence						
Mean	3.53	3.58	3.47	3.59	3.31	3.36
Standard Deviation	.83	.83	.86	.88	.57	.98
Aggression						
Mean	2.32	2.60	2.77	2.87	2.44	2.52
Standard Deviation	.94	1.23	.96	1.28	1.24	1.28

Note: Higher numbers represent greater values on the particular dimension.

Table 2

Mean and Standard Deviation on All Dimensions as a Function of Experimental Conditions for Naive Subjects

	CONDITIONS					
	No Exposure	Description of Aggression Experiment	Description of Obedience Experiment	Film + Description of Aggression Experiment	Description of Aggression Experiment + Film	Film
	n=30	n=17	n=20	n=17	n=18	n=20
Strength of Will and Rationality						
Mean	4.84	5.18^{X}	5.18^{X}	4.09^{Y}	4.90	4.76
Standard Deviation	1.25	1.09	1.04	.64	.83	1.03
Altruism						
Mean	4.00	3.01	4.03	4.16	4.18	3.79
Standard Deviation	.75	.05	1.14	.84	1.02	.76
Independence						
Mean	3.56	3.69	3.81	3.62	3.34	3.18
Standard Deviation	.93	1.24	1.22	.96	1.05	.75
Personality vs. Situation Influence						
Mean	3.55	3.51	3.55	3.69	3.38	3.46
Standard Deviation	.84	.91	.98	.82	.52	1.03
Aggression						
Mean	2.32	2.65	2.58	3.06	2.61	2.53
Standard Deviation	.96	.98	.89	1.40	1.36	1.39

Table 2 cont.

	CONDITIONS					
	No Exposure	Description of Aggression Experiment	Description of Obedience Experiment	Film + Description of Aggression Experiment	Description of Aggression Experiment + Film	Film
Promoting Independent Thinking						
Mean	5.73	6.41	5.95	6.24	6.33	5.85
Standard Deviation	1.01	.71	1.39	.83	.77	1.27
Obedience						
Mean	4.37	3.71	4.10	4.29	3.94	4.60
Standard Deviation	1.52	1.80	1.96	1.69	1.91	2.00
Authoritarianism						
Mean	4.40	4.65	4.40	3.88	4.11	3.70
Standard Deviation	1.52	1.80	1.96	1.69	1.91	2.00
Evil						
Mean	1.77	2.24	1.80	2.06	1.50	1.55
Standard Deviation	1.22	1.48	1.11	1.85	.79	.83

Notes: Higher numbers represent greater values on the particular dimension. Superscript means without a common superscript are significantly different from each other according to Tukey HSD. Subjects refers to subjects who indicated they were not familiar with Milgram's obedience experiments before this experiment.

DISCUSSION

The hypotheses of this experiment were that people exposed to Milgram's Obedience film would perceive people as being less willful and rational and less altruistic, and independent; more evil and aggressive; and themselves be less authoritarian. Also, subjects exposed to the Obedience film condition were expected to see others as more obedient, to value promoting effective independent thinking, and to view personality instead of the situation as determining behavior to a greater extent. Only the hypothesis about the strength of will and rationality dimension was supported in any way. Safer's contention that viewers of the Milgram film would come to believe people are aggressive and evil was not supported.

There was significant sex difference on the aggression subscale in that men compared to women tended to believe that people are more aggressive. This finding could be due to males being more aggressive (Maccoby & Jacklin, 1974) and, therefore, seeing others as more aggressive. Another possible explanation could derive from the fact that females experience more anxiety associated with aggression (e.g., Rothaus and Worchel, 1964; Sears, 1961). They may thus be unwilling to see in others what for them leads to tension.

Naive Subjects Data

The analyses on each of the dimensions in which non-naive subjects concerning Milgram's experiments were discarded generated results on one dimension. On the strength of will and rationality dimension, naive subjects in description of the aggression experiment, and the description of the obedience experiment condition indicated that people have more strength of will and rationality than subjects in the film-verbal description of the aggression experiment condition did. Apparently the Obedience film showed the lack of strength of will and rationality Milgram's subjects displayed. The description of the aggression experiment condition when preceded by the Obedience film may have served to underscore the events of the film seen previously and thus served to strengthen any conclusions drawn from the graphic display of obedience on the film. Of course, the assumption being made is that either the subjects did not pay attention to, or were not influenced by, the results of the aggression experiment. This assumption is being made because of the fact that instead of tempering aggressive notions about others, the aggression experiment when preceded by the Obedience film actually appears to have increased these notions. These Obedience, than aggression description subjects may have believed they were merely seeing a replication of what they had just previously seen

on film in spite of the experimenter cautioning them that the experiment was different.

General Discussion

In light of the present results, the Nisbett and Wilson explanation (1977) accounts for Safer's results better than Safer's "evil and aggressive people" interpretation does. It states that small changes in experimental manipulations will not be seen as leading to large changes in behavior. It thus is a plausible explanation for why subjects first exposed to the Obedience film in Safer's experiment had then estimated subjects would deliver higher shock levels in the free choice aggression experiment than subjects not given any information. Safer's subjects may have been strongly influenced by the film and the "small change" of free choice in the aggression experiment led them to underestimate the large differences in behavior between the two experiments. However, in this experiment, the potential problem was eradicated by the methodology employed. Subjects were asked to respond to direct questions after they were exposed to an independent variable condition. In this way, insensitivity to important differences between Milgram's obedience and aggression experiments could not contribute to getting differences between the film only and no exposure conditions as it probably did in the Safer study. No differences

between film and no exposure conditions were found in the present study.

It appears that insensitivity to important differences between the Obedience film and aggression experiment may have lead to the one pattern of significant results in this experiment. This pattern seems to support the Nisbett and Wilson (1977) explanation for Safer's findings. The significant result found in this experiment showed that when the description of aggression experiment followed the film it seemed to both reinforce and exaggerate the hypothesized effects of the film on subjects. Therefore, subjects seemed to be insensitive to important differences between the two experiments because one would expect that the aggression experiment would only change subjects' perceptions in the opposite direction by tempering the effects of the film if it had any effect.

The fact that subjects in this experiment were tested in groups may have affected the results. Group administration produces less impact and control than individual administration does (Carlsmith, Ellsworth, & Aronson, 1976). The subjects may not have approached the task seriously and could have been distracted. For example, a few subjects in the description of aggression experiment, then Obedience film condition laughed on several occasions while the film was being shown. In Safer's study, group administration may have contributed to subjects' insensitivity to details and

confirming his hypothesis incorrectly. In the present study, reduced impact from group administration may have led to failure to find effects that really exist. Therefore, it may be wise to replicate this experiment and administer it to people one at a time.

The results of this experiment produced no significant differences among the six experimental conditions using data from all subjects in the basic NOVA's. Therefore, confidence in the results and the explanations given for the results are undermined. The findings are not robust and may not be replicable.

Conclusions

The Nisbett and Wilson (1977) explanation underscores the possibility that subjects may not be paying attention to the experimental conditions. Group testing, which has been shown to lessen the impact of experimental conditions (Carlsmith, et. al., 1976) may also account for the failure to obtain hypothesized effects in this experiment. Supporting both of these possible explanations is that what appeared to be the increased impact of the obedience film when it was followed by the aggression experiment condition; the results of the aggression experiment did not appear to affect subjects. Apparently subjects believed they were reading a repetition of what happened in the film despite being told by the experimenter they were not. The results

in the present study cast doubt on Safer's assertion that seeing the Milgram obedience film makes subjects believe that people are evil and aggressive.

APPENDICES

APPENDIX A

Verbal Description of Obedience Experiment

When Stanley Milgram, a Ph.D. social psychologist, was a professor at Yale University, he conducted an experiment in which subjects were told the purpose was to see how punishment affected learning. It was conducted in "modest quarters" in the basement of a building at Yale University. Milgram (1974) described it as being"... functional but somewhat plain with bare steampipes running along the ceiling, and a concrete floor..."

The subjects came from several occupations such as postal clerks, high school teachers, salesmen, engineers and laborers. Forty percent of the subjects were skilled and unskilled workers; forty percent were in white collar jobs, sales and business; and twenty percent were professionals. Educationally, the subjects ranged from those who had not finished high school to those who held doctoral degrees. Twenty percent of the subjects were in their twenties, forty percent of the subjects were in their thirties, and forty percent of the subjects were in their forties. The subjects were recruited from New Haven Connecticut.

When subjects showed up, the experimenter said the following:

"Psychologists have developed several theories to explain how people learn various types of material.

Some of the better-known theories are treated in this book. (The subject was shown a book on the teaching-learning process.)

One theory is that people learn things correctly whenever they get punished for making a mistake.

A common application of this theory would be when parents spank a child if he does something wrong.

The expectation is that spanking, a form of punishment, will teach the child to remember better, will teach him to learn more effectively.

But actually, we know very little about the effect of punishment on learning, because almost no truly scientific studies have been made of it in human beings.

For instance, we don't know how much punishment is best for learning--and we don't know how much difference it makes as to who is giving the punishment, whether an adult learns best from a younger or an older person than himself--or many things of that sort.

So in this study we are bringing together a number of adults of different occupations and ages. And we're asking some of them to be teachers and some of them to be learners.

We want to find out just what effect different people have on each other as teachers and learners, and also what effect punishment will have on learning in this situation.

Therefore, I'm going to ask one of you to be the teacher here tonight and the other one to be the learner.

Does either of you have a preference?

[Subject and accomplice are allowed to express preference.]

Well, I guess the fairest way of doing this is for me to write the word Teacher on one slip of paper and Learner on the other and let you both draw.

[The subject draws first, then the accomplice.]

Well, which of you is which?

All right. Now the first thing we'll have to do is to set the Learner up so that he can get some type of punishment.

If you'll both come with me into this next room."

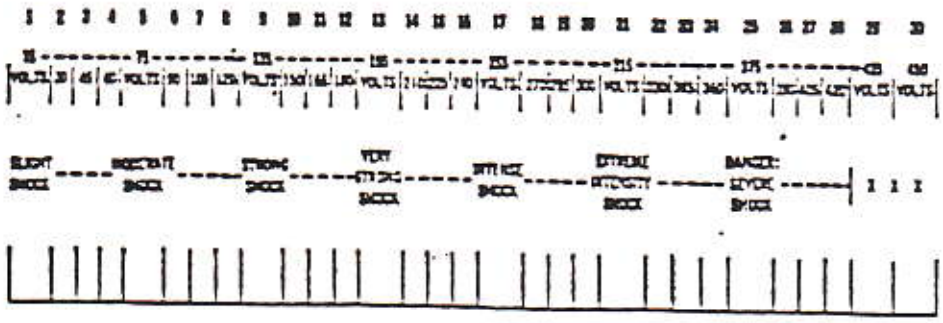
The drawing was rigged so that the subject was always the teacher. The learner was next strapped into a chair and the experimenter explained that it was to keep the subject from moving too much when he got shocked. An electrode was attached to the learner's wrists along with electrode paste to keep him from getting "blisters and burns." The experimenter than asked, "Are there any questions?" The learner said, "When I was at the Westhaven V.A. Hospital a few years ago, they detected a slight heart condition. Nothing serious, but are these shocks dangerous?" The experimenter then answered that they can be painful, but they cannot cause permanent tissue damage.

The learning task consisted of the subject first reading a series of paired words to the learner. Then he would choose one of the word pairs and read only the first word followed by four other words. The learner's task was to point out which of the four words had been paired previously with the first word.

Each subject was given a sample shock of 45 volts by "pressing the third switch of the generator." It was given on the subject's wrist and was said to help make the subject see the shock generator as being real.

THE SUBJECT WAS TOLD TO ADMINISTER A SHOCK TO THE LEARNER EACH TIME A WRONG RESPONSE WAS GIVEN. IN ADDITION, HE WAS INSTRUCTED TO GO UP 15 VOLTS ON THE SHOCK GENERATOR EACH TIME THE LEARNER GAVE A WRONG ANSWER.

The shock generator control panel is depicted below:



Standard answers or "prods" were given by the experimenter in response to questions by the subjects as to whether or not he should continue. They were made in sequence:

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
Prod 4: You have no other choice, you must go on

If the subject refused to obey the experimenter after Prod 4, the experiment was then over.

In response to questions about hurting the subject permanently, the experimenter answered: "Although the shocks may be painful, there is no permanent tissue damage, so please go on." If the subject indicated that the learner did not want to on, the experimenter said, "Whether the learner likes it or not, you must go on until he has learned all the word pairs correctly.

TWENTY-SIX OUT OF THE FORTY SUBJECTS OR 65% OF THEM CONTINUED TO ADMINISTER SHOCKS TO THE HIGHEST (450 VOLT) LEVEL. ONLY ONE PERSON OR 2.5% OF THE SAMPLE STOPPED BEFORE 150 VOLTS. THE RESULTS OF THE EXPERIMENT AS WELL AS THE LEARNER'S STANDARD PROTESTS TO THE SHOCK IF THE CORRESPONDING SHOCK LEVEL WAS DELIVERED ARE GIVEN BELOW:

Results

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests (Note that these would be given only if the corresponding shock voltage is given; so these protests are only possible)
Slight Shock		
15		
30		
45		
60		
Moderate Shock		
75		-Ugh!
90	1	-Ugh!
105		-Ugh! (louder)
120		-Ugh! Hey, this really hurts.
Strong Shock		
135		
150	6	Ugh!!! Experimenter! That's all. Get me out of here. I told you I had heart trouble. My heart's starting to bother me now. Get me out of here, please. My heart's starting to bother me. I refuse to go on. Let me out.
165		-Ugh! Let me out! (shouting).
180	1	Ugh! I can't stand the pain. Let out of here (shouting).
Very Strong Shock		
195		-Ugh! Let me out of here. Let me out of here. My heart's bothering me. Let me out of here. You have no right to

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests
		keep me here! Let me out! Let me out of here! Let me out! Let me out of here! Let me out! Let me out of here! My heart's bothering me. Let me out! Let me out!
210		-Ugh! Experimenter! Get me out of here. I've had enough. I won't be in the experiment any more.
225		-Ugh!
240		-Ugh!
Intense Shock		
255		-Ugh! Get me out here.
270	2	-(Agonized scream). Let me out of here. Let me out of here. Let me out of here. Let me out. Do you hear? Let me out of here.
285		-(Agonized scream.)
300	1	-(Agonized scream.) I absolutely refuse to answer any more. Get me out of here. You can't hold me here. Get me out. Get me out of here.
Extreme Intensity Shock		
315	1	-(Intensely agonized scream.) I told you I refuse to answer. I'm no longer part of this experiment.

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests
330	1	-(Intense and prolonged agonized scream.) Let me out of here. Let me out of here. My heart's bothering me. Let me out, I tell you. (Hysterically) let me out of here. Let me out of here. You have no right to hold me here. Let me out! Let me out! Let me out! let me out of here! Let me out! Let me out!
345		
360		
Danger: Severe Shock		
375	1	
390		
405		
420		
XXX		
435		
450	26	
Average maximum shock voltage	368.25	
PERCENTAGE OF SUBJECTS THAT DELIVERED THE MAXIMUM SHOCK VOLTAGE.	65.0%	

APPENDIX B

Verbal Description of Aggression Experiment

When Stanley Milgram, a Ph.D. social psychologist, was a professor at Yale University, he conducted an experiment in which subjects were told the purpose was to see how punishment affected learning. It was conducted in "modest quarters" in the basement of a building at Yale University. Milgram (1974) described it as being"... functional but somewhat plain with bare steampipes running along the ceiling, and a concrete floor..."

The subjects came from several occupations such as postal clerks, high school teachers, salesmen, engineers and laborers. Forty percent of the subjects were skilled and unskilled workers; forty percent were in white collar jobs, sales and business; and twenty percent were professionals. Educationally, the subjects ranged from those who had not finished high school to those who held doctoral degrees. Twenty percent of the subjects were in their twenties, forty percent of the subjects were in their thirties, and forty percent of the subjects were in their forties. The subjects were recruited from New Haven Connecticut.

When subjects showed up, the experimenter said the following:

"Psychologists have developed several theories to explain how people learn various types of material.

Some of the better-known theories are treated in this book. (The subject was shown a book on the teaching-learning process.)

One theory is that people learn things correctly whenever they get punished for making a mistake.

A common application of this theory would be when parents spank a child if he does something wrong.

The expectation is that spanking, a form of punishment, will teach the child to remember better, will teach him to learn more effectively.

But actually, we know very little about the effect of punishment on learning, because almost no truly scientific studies have been made of it in human beings.

For instance, we don't know how much punishment is best for learning--and we don't know how much difference it makes as to who is giving the punishment, whether an adult learns best from a younger or an older person than himself--or many things of that sort.

So in this study we are bringing together a number of adults of different occupations and ages. And we're asking some of them to be teachers and some of them to be learners.

We want to find out just what effect different people have on each other as teachers and learners, and also what effect punishment will have on learning in this situation.

Therefore, I'm going to ask one of you to be the teacher here tonight and the other one to be the learner.

Does either of you have a preference?

[Subject and accomplice are allowed to express preference.]

Well, I guess the fairest way of doing this is for me to write the word Teacher on one slip of paper and Learner on the other and let you both draw.

[The subject draws first, then the accomplice.]

Well, which of you is which?

All right. Now the first thing we'll have to do is to set the Learner up so that he can get some type of punishment.

If you'll both come with me into this next room."

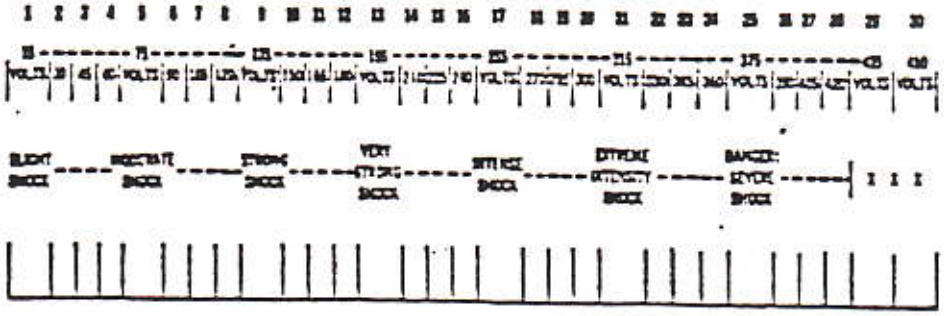
The drawing was rigged so that the subject was always the teacher. The learner was next strapped into a chair and the experimenter explained that it was to keep the subject from moving too much when he got shocked. An electrode was attached to the learner's wrists along with electrode paste to keep him from getting "blisters and burns." The experimenter than asked, "Are there any questions?" The learner said, "When I was at the Westhaven V.A. Hospital a few years ago, they detected a slight heart condition. Nothing serious, but are these shocks dangerous?" The experimenter then answered that they can be painful, but they cannot cause permanent tissue damage.

The learning task consisted of the subject first reading a series of paired words to the learner. Then he would choose one of the word pairs and read only the first word followed by four other words. The learner's task was to point out which of the four words had been paired previously with the first word.

Each subject was given a sample shock of 45 volts by "pressing the third switch of the generator." It was given on the subject's wrist and was said to help make the subject see the shock generator as being real.

<u>THE EXPERIMENTER STRESSED THAT THE SUBJECT COULD ADMINISTRATOR THE HIGHEST, LOWEST, OR ANY VOLTAGE LEVEL IN BETWEEN, OR ANY COMBINATION OF VOLTAGES. THE EXPERIMENTER DID NOT COMMAND THE SUBJECT TO ADMINISTER HIGHER SHOCKS EACH TIME.</u>

The shock generator control panel is depicted below:



In response to questions about hurting the subject permanently, the experimenter answered: "Although the shocks may be painful, there is no permanent tissue damage, so please go on." If the subject indicated that the learner did not want to go on, the experimenter said, "Whether the learner likes it or not, you must go on until he has learned all the word pairs correctly."

IN GENERAL, MOST SUBJECTS ADMINISTERED ONLY THE LOWEST LEVELS OF SHOCK. THIRTY-EIGHTY OUT OF THE FORTY SUBJECTS OR 95% OF THEM DID NOT GO BEYOND 150 VOLT LEVEL. THE RESULTS OF THE EXPERIMENT AS WELL AS THE LEARNER'S STANDARD PROTESTS TO THE SHOCK IF THE CORRESPONDING SHOCK LEVEL WAS DELIVERED ARE GIVEN BELOW.

Results

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests (Note that these would be given only if the corresponding shock voltage is given; so these protests are only possible)
Slight Shock		
15	3	
30	6	
45	7	
60	7	

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests
Moderate Shock		
75	5	-Ugh!
90	5	-Ugh!
105	1	-Ugh! (louder)
120	1	-Ugh! Hey, this really hurts.
Strong Shock		
135	3	
150	1	Ugh!!! Experimenter! That's all. Get me out of here. I told you I had heart trouble. My heart's starting to bother me now. Get me out of here, please. My heart's starting to bother me. I refuse to go on. Let me out.
165		-Ugh! Let me out! (shouting).
180		Ugh! I can't stand the pain. Let out of here (shouting).
Very Strong Shock		
195		-Ugh! Let me out of here. Let me out of here. My heart's bothering me. Let me out of here. You have no right to keep me here! Let me out! Let me out of here! Let me out! Let me out of here! Let me out! Let out of here! My heart's bothering me. Let me out! Let me out!

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests
210		-Ugh! Experimenter! Get me out of here. I've had enough. I won't be in the experiment any more.
225		-Ugh!
240		-Ugh!
Intense Shock		
255		-Ugh! Get me out here.
270		-(Agonized scream). Let me out of here. Let me out of here. Let me out of here. Let me out. Do you hear? Let me out of here.
285		-(Agonized scream.)
300		-(Agonized scream.) I absolutely refuse to answer any more. Get me out of here. You can't hold me here. Get me out. Get me out of here.
Extreme Intensity Shock		
315		-(Intensely agonized scream.) I told you I refuse to answer. I'm no longer part of this experiment.
330		-(Intense and prolonged agonized scream.) Let me out of here. Let me out of here. My heart's bothering me. Let me out, I tell you. (Hysterically) let me out of here. Let me out of here. You have no right to

Verbal designation and voltage level	Number of subjects out of forty stopping at this level	Standard, predetermined learner protests
		hold me here. Let me out! Let me out! Let me out! let me out of here! Let me out! Let me out!
345		
360		
Danger: Severe Shock		
375	1	
390		
405		
420		
XXX		
435		
450	1	
Average maximum shock voltage	82.5	
PERCENTAGE OF SUBJECTS THAT DELIVERED THE MAXIMUM SHOCK VOLTAGE.	2.5%	

APPENDIX C

Questionnaire

Instructions to Subjects:

PUBLIC OPINION SCALE

The following sets of items are an attempt to assess the opinions of college students about a number of important personal, academic, and social issues. The best answer to each statement is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same way you do.

Mark your opinion about each statement on the answer sheet (following the statements) according to how much you agree or disagree with it. Please mark every one.

1. The central concern of education should be to promote independent thinking that would lead to individuals being able to evaluate things for themselves better.

2. If a soldier was commanded by officers of higher rank to kill unarmed civilian men, women, and children during a combat operation, he probably would ultimately follow orders.

3. Most people's behavior is determined more by their personality than anything else.

4. Most people would harm a stranger if given the opportunity because of their aggressiveness.

5. Obedience and respect for authority are the most important virtues children should learn.

6. Most people are consistent from situation to situation in the way they react to things.

7. Most persons have a lot of control over what happens to them in life.

8. Our success in life is pretty much determined by forces outside our own control.

9. Most people have little influence over the things that happen to them.

10. Most people apply the Golden Rule, even in today's complex society.

11. Most people do not hesitate to go out of their way to help someone in trouble.

12. Most people will act as "Good Samaritans" if given the opportunity.

13. "Do unto others as you would have them do unto you" is a motto that most people follow.

14. The typical person is sincerely concerned about the problems of others.

15. People pretend to care more about one another than they really do.

16. Most people have the courage of their convictions.

17. Most people can make their own decisions, uninfluenced by public opinion.

18. The average person will stick to his opinion if he thinks he's right, even if others disagree.

19. It's a rare person who will go against the crowd.

20. Most people have to rely on someone else to make their important decisions for them.

21. A person's reaction to things differs from one situation to another.

22. The average person is largely the master of his own fate.

23. Most people are evil.

24. If it were not for the restrictions of religion and society, people would act in a very selfish and aggressive manner toward one another.

25. Most people's behavior is affected more by the situations they behave in than anything else.

ANSWER KEY

1 = Strongly Agree
2 = Moderately Agree
3 = Slightly Agree
4 = Neither Agree nor Disagree
5 = Slightly Disagree
6 = Moderately Disagree
7 = Strongly Disagree

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____

Were you familiar with any of the obedience experiments done by Stanley Milgram before you came for this experiment? (If you have any questions, please ask the experimenter.)

Yes No

APPENDIX D

Sex x Experimental Condition ANOVA's

Table D-1

Strength of Will and Rationality
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	2.428	5	2.030	.077
Sex	2.166	1	1.811	.180
E X S	.759	5	.635	.673
Within Subjects	1.196	157		

Table D-2

Altruism
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	.153	5	.165	.975
Sex	1.610	1	1.745	.188
E X S	.799	5	.866	.505
Within Subjects	.923	157		

Table D-3

Independence
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	1.399	5	1.440	.213
Sex	.077	1	.079	.779
E X S	.439	5	.452	.811
Within Subjects	.972	157		

Table D-4

Authoritarianism
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	2.790	5	.878	.497
Sex	8.012	1	2.521	.114
E X S	4.962	5	1.561	.174
Within Subjects	3.178	157		

Table D-5

Evil
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	1.816	5	1.267	.281
Sex	1.001	1	.698	.405
E X S	1.587	5	1.107	.359
Within Subjects	1.434	157		

Table D-6

Aggression
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	1.332	5	1.035	.399
Sex	7.324	1	5.691	.018
E X S	1.832	5	1.423	.219
Within Subjects	1.287	157		

Table D-7

Promoting Independent Thinking
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	1.837	5	1.824	.111
Sex	2.207	1	2.191	.141
E X S	.491	5	.487	.785
Within Subjects	1.007	157		

Table D-8

Obedience
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	2.848	5	.779	.566
Sex	3.959	1	1.083	.300
E X S	2.969	5	.812	.543
Within Subjects	3.657	157		

Table D-9

Personality Versus Situation Influence
as a Function of Experimental Conditions and Sex

Source	MS	df	F	P
Experimental Conditions	.410	5	.591	.706
Sex	1.284	1	1.853	.175
E X S	.669	5	.965	.441
Within Subjects	.693	157		

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