R E P O R T R E S U M E S

ED 010 511 24

TEACHER BEHAVIORS AND EFFECTIVENESS OF REINFORCEMENT.

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REPORT NUMBER BR-5-0216-TR-9 PUB DATE 66
CONTRACT OEC-5-10-154
EDRS PRICE MF-$0.09 HC-$1.24 31P.

DESCRIPTORS- *TEACHER CHARACTERISTICS, TEACHER EVALUATION, *POSITIVE REINFORCEMENT, TEACHING TECHNIQUES, REWARDS, *MOTIVATION, *STIMULUS BEHAVIOR, RESEARCH AND DEVELOPMENT CENTERS, SECONDARY SCHOOL TEACHERS, *BEHAVIOR PATTERNS, INTERVIEWS, MADISON, WISCONSIN

VARIATIONS IN THE PROPERTIES OF INSTRUCTIONAL REINFORCEMENT WERE STUDIED UNDER TWO ASPECTS OF TEACHER BEHAVIOR, PUNITIVENESS AND EXPERTISE, TO IDENTIFY TECHNIQUES FOR AFFECTING OPERANT RESPONSE RATE IN A VERBAL CONDITIONING SITUATION. PUNITIVENESS AND EXPERTISE WERE MANIPULATED BY USING PREARRANGED TAPE RECORDINGS OF A SIMULATED SOCIAL STUDIES CLASS. THESE RECORDINGS WERE PRESENTED TO 160 HIGH SCHOOL STUDENTS IN GROUPS OF FIVE. TWO STUDENTS FROM EACH GROUP (MALE) THEN PARTICIPATED IN INDIVIDUAL INTERVIEWS WITH THE TEACHER WHOSE CLASS THEY HAD HEARD. SOCIAL REINFORCEMENT WAS VARIED DURING THE INTERVIEWS. POSITIVE REINFORCEMENT WAS USED IN 75 PERCENT OF THE INTERVIEWS WHERE THE TEACHER SMILED AND NODDED HIS HEAD WHEN STUDENTS MADE CERTAIN RESPONSES. IN THE REMAINING INTERVIEWS, THE TEACHER REMAINED NEUTRAL TO ALL STUDENT RESPONSES. QUESTIONNAIRES WERE ADMINISTERED AFTER BOTH THE SIMULATED CLASSROOM SESSIONS AND INTERVIEWS TO ELICIT SPECIFIED STUDENT REACTIONS. THE MAJOR FINDINGS INDICATED THAT NONPUNITIVE TEACHERS ELICITED A HIGHER OPERANT RATE UNDER THE REINFORCEMENT CONDITION AND THAT PUNITIVE TEACHERS ELICITED A HIGHER OPERANT RATE UNDER THE NEUTRAL CONDITION. EXPERTISE PRODUCED NO SIGNIFICANT EFFECTS ON THE OPERANT RATE. THE OPERANT RESPONSE RATE WAS SIMPLY THE NUMBER OF FIRST PERSON PRONOUNS EMITTED BY THE INDIVIDUAL STUDENTS DURING THEIR INTERVIEWS. (JH)

5-0216
TR-9

TEACHER BEHAVIORS AND EFFECTIVENESS OF REINFORCEMENT

RESEARCH AND DEVELOPMENT
CENTER FOR LEARNING
AND RE-EDUCATION

Technical Report No. 9

TEACHER BEHAVIORS AND EFFECTIVENESS OF REINFORCEMENT

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Research and Development Center

for Learning and Re-Education

The University of Wisconsin

Madison, Wisconsin

1966

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education, and Welfare, under the provisions of the Cooperative Research Program.
Center No. C-03 / Contract OE 5-10-154

ACKNOWLEDGMENTS

The authors gratefully acknowledge the assistance of the students and staffs of Monroe and Wisconsin Heights High Schools, the graduate students, J. Kent Davis and Ray T. Sterner, who enacted the teacher roles, and the many students who assisted in preparing materials and collecting data.

PREFACE

The R & D Center for Learning and Re-Education has as its primary goal the improvement of cognitive learning in children and adults, commensurate with good personality development. Through synthesizing present knowledge and conducting research to generate new knowledge, we are extending the understanding of human learning and the variables associated with efficiency of school learning. Knowledge is being focused upon the three main problem areas of the Center: developing exemplary instructional systems, refining the science of human behavior and learning on the one hand and the technology of instruction on the other, and inventing new models for school experimentation, development activities, etc.

This technical report is based on the master's thesis of Thelma Baldwin. Members of the thesis committee were Thomas J. Johnson, Chairman; Edward A. Nelson; and Arthur W. Staats.

Teacher behavior is known to be a powerful variable associated with efficiency of school learning; however, few dimensions of teacher behavior have been clearly defined. For her investigation of the effects of teacher behavior on the shaping of responses, Miss Baldwin developed a methodology that proved to be quite successful. This methodology might effectively be used to assess the varied effects of a number of teacher behaviors.

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ABSTRACT

One hundred sixty high school students in groups of five heard tape recordings of simulated classrooms in which two aspects of teacher behavior, punitiveness and expertise, were varied. Forty-eight of the subjects then participated in an interview with the teacher whose class they had heard. During three-fourths of the interviews the teacher attempted to condition a verbal operant response with positive social reinforcement. One-fourth were conducted as a control, non-positive reinforcement condition. The major findings indicated that non-punitive teachers elicited a higher operant rate than punitive teachers under the reinforcement condition and that punitive teachers elicited a higher operant rate than non-punitive teachers under the non-positive reinforcement condition. Expertise produced no significant effects on the operant rate.

I

INTRODUCTION

Although other social scientists have made extensive use of the power concept in analyzing social behavior, educational psychologists have seldom applied it to their investigation of classroom behavior. The concept does seem particularly applicable to the classroom situation, however. For example, sources of teacher power can be found in the involuntary nature of the classroom group, the legitimate position of leadership given to the teacher, and in various forms of personal incentives and coercive techniques the teacher is able to apply. The effects of the teacher's power, his ability to influence student behavior, could be assessed with a large number of possible techniques, e.g., the student's tendency to imitate the teacher's behavior, his compliance to requests, etc.

The assessment technique used in this study is a measure of the reward value of the teacher's encouraging remarks. This technique was selected because of its direct relationship to current conceptions of the learning process. A verbal conditioning situation was chosen as the means of assessing the value or efficacy of the teacher's social reinforcement. Hopefully this technique will provide a direct means of assessing the impact of specific teacher characteristics and behaviors on classroom learning outcomes.

In general studies concerned with the stimulus properties of the reinforcement used in verbal conditioning have been sparse. Krasner (1958) and Salzinger (1959) have reviewed several studies, however, which indicate that this conditioning phenomenon is sensitive to variations in the attributes of the reinforcement used.

A few experimenters have looked specifically at variations in the attributes of the person administering the reinforcement (Binder, McConnell, & Sjohelm, 1957; Kanfer & Karas, 1959; Blaufarb, 1961; Sarason & Minard, 1963; Prince, 1962). The results of these studies are not easily combined and applied to the central question of this investigation. Different operations were used to vary attributes of the reinforcers and the relationship of these operations to social power is questionable. Moreover the effectiveness of these operations was assessed in widely varying conditioning situations. The results of this past research do suggest, however, that the phenomenon of verbal conditioning is sensitive to variations in the behaviors and/or characteristics of the social reinforcer. The central focus of this study then is to determine how variations in the properties of the reinforcer, based on more conventional operational definitions of power, will affect the operant response rate in a verbal conditioning situation.

II

CONCEPTS AND OPERATIONS

According to Thibaut and Kelley's (1961) theory of social behavior, the power of one person over another is based on his ability to manipulate another's rewards and costs. Assuming that any social approval emitted by this person can function as a secondary reinforcement primarily based on this ability to mediate rewards and punishments, it is hypothesized that the efficacy of reinforcement via an approving gesture or remark will vary directly with amount of social power.

SOCIAL POWER

In this study the amount of the teacher's social power was varied by manipulating two aspects of his behavior, his punitiveness and expertise. Thibaut and Kelley's theory would suggest that a punitive teacher's power is based on his ability to make the consequences of a student's behavior costly and unpleasant.

Experimental evidence confirms the effectiveness of punitive behavior as a source of power (Dittes & Kelley, 1956; Chasdi & Lawrence, 1955; Raven & French, 1958). However, other studies have demonstrated that it may have a detrimental effect on power and lead to non-compliance (Day & Hamblin, 1964; Kipnis, 1958; Zipf, 1960; French, Morrison, & Levinger, 1960). These diverse effects of punishment on control have been noted by Thibaut and Kelley. They suggest that compliance is only one of the means that a person can use to reduce the costs of punishment. Noncompliant alternatives such as leaving the situation, covert activity, etc. are also effective possibilities. They suggest that active monitoring is a necessary condition for control when reduction of outcomes for noncompliance is the source of power.

The relationship of expertise to social power has been demonstrated experimentally on numerous occasions (Festinger, Gerard, Hymovitch, Kelley, & Raven, 1952; Moore, 1921; Gilchrist, 1952; Haiman, 1948; Evan & Zelditch, 1961; Hollander, 1960; see also a recent review by Campbell, 1961). In these studies expertise has been operationalized in varying ways ranging from reported status and status symbols to observed success on laboratory tasks. Influence has been measured most often as attitude change but other measures such as changes in production rate, number of accepted suggestions, and questionnaire testimonials have been used also. In all cases expertness was directly related to amount of influence.

The relationship of expertise to power is explained by Thibaut and Kelley as based on cost reduction. The expert's knowledge enables others to perform rewarding activities with less effort, time, or cost. Thus, his expertise enables him to manipulate the outcomes of others (Thibaut & Kelley, 1961, p. 109).

Collins and Guetzkow (1964) offer essentially the same explanation based on enhanced rewards and reduced punishments. They also add a phenomenon, "reputational halo," to their explanation, suggesting that compliance is not necessarily restricted to the expert's demonstrated area of expertness. Through some sort of generalization process, the expert's other behavior, outside the realm of his particular competence, becomes rewarding and his power is enhanced. This non-relevant influence has been demonstrated empirically (Haiman, 1948; Gilchrist, 1952).

SOCIAL REINFORCEMENT

Following Verplanck's (1955) early lead, many researchers have demonstrated that classes of verbal respondents could be effectively conditioned in a conversational setting. Although this procedure has been criticized for not having sufficient control over the responses elicited by the subject (Azrin, Holz, Ulrich, & Goldiamond, 1961), Salzinger and Pisoni (1958) and Centers (1963) have demon-

strated that interview and laboratory adaptations of the procedure are successful.

The effectiveness of reinforcement has generally been measured by increase in the frequency (or probability) of a conditioned operant. When the effectiveness of one reinforcer is compared to another the frequency (or increase in frequency) of the conditioned operant during the reinforced trials is compared either across groups (Crespi, 1944; Zeaman, 1949) or, in the same subject, across responses which have received the different reinforcers (Reynolds, 1963; Prince, 1962).

In order to insure relevance to social influence situations and to avoid, if possible, the complications of awareness in the conditioning situation, a conversational procedure for conditioning verbal operants was selected for use in evaluating the efficacy of the social reinforcers. The specific setting used is similar to that used successfully by Salzinger and Pisoni (1958). While interviewing the subject, E emits a social reinforcement (smile, head nod, or "mm-hmm") whenever the subject makes a statement using "I," "me," or "us." The efficacy of the social reinforcement is assessed by comparing the frequency of first person pronouns emitted by the subjects.

The explanation of the relationship of punitiveness to power suggests that the punitive teacher's power is based on his ability to reduce the outcomes of students. In an operant conditioning situation where positive reinforcement is to be used to influence behavior, augmentation of outcomes (by increased reward) will be the likely basis for control. Therefore, it is expected that an approving gesture emitted by a punitive teacher, who has previously mediated negative-affect and costs, would be a small positive outcome, and he would thus have less efficacy as a positive reinforcer than a non-punitive teacher.

The explanation of expert power, on the other hand, suggests that the expert teacher's power is based on his ability to augment the outcomes of students by reducing costs. Therefore it is expected that approving gestures emitted by an expert teacher who previously has mediated reduction of costs and augmented outcomes would be more of a positive outcome, and he would thus have more efficacy as a positive reinforcer than a non-expert teacher.

III

METHODOLOGY

SUBJECTS

Subjects were 160 junior and senior high school students selected from two high schools in the Madison area. Due to administrative differences the 80 subjects from one school were selected randomly from the population of students whereas the 80 from the other school were volunteers from timely study halls.[1]

The subjects participated in the experiment in groups of five. At least two members of each group were male. These groups were randomly assigned to experimental treatments. After the first phase of the experiment was concluded two males from each group were selected to be used in Phase II of the study. This selection was random when the group contained more than two males.

EXPERIMENTAL SETTING

The study was conducted in two classrooms and two conference rooms in each of the high schools. A tape recorder surrounded by five chairs was set up in each classroom. A tape recorder was also used in each conference room in order to record the interviews that were to take place there. No attempt was made to conceal the microphones.

Six graduate student experimenters were involved in this study. Two males posing as high school teachers were stationed in the conference rooms, two females were stationed in the classrooms to operate the tape recorders, and two other females were used to lead students from the classrooms to the conference rooms.

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[1] No significant difference between high schools was observed on any dependent variable; consequently, this difference in sampling method can be considered irrelevant for the purposes of this study.

Two replications of the experiment were conducted simultaneously. Each required one classroom, one conference room, one "teacher," and two experimenters. The combination of teacher and experimenters who worked together was changed midway through the experiment so that each teacher worked equally with both pairs of experimenters during the course of the study.

STIMULUS MATERIALS

Both punitiveness and expertise were manipulated by using prearranged recordings of a simulated social studies class. A standard script involving a lecture on propaganda was recorded by each of the two male graduate student "teachers" with the assistance of four high school students. Variations in punitiveness and expertise were accomplished by splicing additional, separately recorded segments of the teacher's behavior into copies of the standard script. (Scripts with variations are included in Appendix A.)

Punitiveness

In the standard script there were two instances of disruptive student behavior which interrupted the lecture on propaganda: 1) a girl asks an irrelevant question, "Is propaganda bad?" and 2) a male voice is heard mumbling in the background. In the punitive condition the teacher responded in a rude manner to the students: 1) "How many times do I have to tell you not to interrupt me!" and 2) "Jack, shut up! If I hear one more sound out of you or anybody else this whole class will have to stay after school and write an essay on propaganda." In the non-punitive condition the teacher responded in a pleasing manner: 1) "Joan, I'd like you to bring that up later after I've finished telling the class about these propaganda devices," and 2) "Jack, I think this is important for you to hear. Would you mind paying attention?"

Expertise

Expertise was manipulated in the question and answer period that followed the lecture. The expert teacher gave longer answers, handled all questions directly, and documented his answers with relevant facts. The inexpert teacher gave shorter answers, spoke hesitantly, used many sentence fragments, and evaded questions.

Both teachers recorded the punitive, non-punitive, expert, and inexpert segments as well as the standard script. Thus, after splicing and copying there were four recordings of each teacher. These varied in all possible combinations of the punitiveness and expertise manipulations but were identical in every other way.

PROCEDURE

As soon as the five subjects had come into the experimental classrooms they were seated around a tape recorder and cautioned not to talk to one another. The experimenter explained that they were participating in a study of teacher evaluation conducted by the University of Wisconsin. The students were to listen to a recording of a teacher conducting a high school social studies class.

Phase I

Subjects heard the teacher giving a lecture on propaganda during the course of which the punitive or non-punitive interactions occurred. The experimenter then sped the tape ahead explaining that she would play a small portion of the question and answer period so that they could see how well the teacher handled questions. During this last portion of the tape subjects heard the expert or inexpert handling of the question and answer session. The tape recording lasted approximately fifteen minutes. Following this all five subjects completed the first questionnaire. Then three of the subjects were dismissed with cautions not to discuss the experiment with other students.

Phase II

The two remaining subjects, male, were told that the teacher they had just heard was there in person and, as a further aspect of the evaluation procedure, they would be asked to talk with him as they might talk with an advisor. Another experimenter entered the room at this time and took the two subjects, one at a time, to the interview room where the graduate student "teacher" was waiting.

After the experimenter had introduced the student to the "teacher" and left, the teacher began the interview which consisted of six open-ended questions concerning the student's opinion on matters relating to high school, sports, and teen-age activities. Additional prompts were given as needed to insure the student's talking approximately ten minutes. (The interview questions are included in Appendix B.)

While the first student was being interviewed, the second was seated by himself in the hall outside the conference room. The experimenter stayed on hand to be certain that he talked with no one. The effect of immediate or delayed interviews was included as a variable in the design.

Social Reinforcement

Social reinforcement was varied during the teacher-student interviews in the following manner: In the positive reinforcement condition, the teacher smiled and nodded his head whenever the student used a first-person pronoun. In the neutral condition the teacher made no attempt to smile or nod at specified responses. The same six questions, in random order, were used in every interview. The teachers were not aware of the experimental conditions that preceded the interviews, and both teachers enacted the positive and neutral conditions. The experimental designs for Phases I and II are presented in Tables 1 and 2.

After the interview each subject completed a post-experimental questionnaire and was then dismissed. Before dismissal all subjects were asked not to talk with anyone about the study until later that afternoon when testing at their high school would be completed.

None of the subjects indicated that they were aware of the "simulated" aspect of the situation. When invited to make comments on the post-experimental questionnaire all made further evaluative remarks about the teacher. One subject, exposed to the punitive treatment, even walked back into the conference room after completing his last questionnaire and gave the teacher some advice about "not acting so tough in the classroom." There was also no evidence of awareness of the positive reinforcement contingency. Only one subject made a related comment. He felt that the teacher was "too agreeable."

Table 1

Design Used to Analyze Data from Phase I

		Punitive		Non-Punitive	
		High School 1	High School 2	High School 1	High School 2
Expert	Teacher 1	10	10	10	10
	Teacher 2	10	10	10	10
Non-Expert	Teacher 1	10	10	10	10
	Teacher 2	10	10	10	10

Table 2

Design used to Analyze Data from Phase II[1]

			Non-Punitive		Punitive	
			Non-Expert	Expert	Non-Expert	Expert
Non-Reinforcement	Delay	Teacher 1	1	1	1	1
		Teacher 2	1	1	1	1
	Immediate	Teacher 1	1	1	1	1
		Teacher 2	1	1	1	1
Reinforcement	Delay	Teacher 1	3	3	3	3
		Teacher 2	3	3	3	3
	Immediate	Teacher 1	3	3	3	3
		Teacher 2	3	3	3	3

[1]This was analyzed as a 2^4 design blocked on teacher differences.

QUESTIONNAIRE INSTRUMENTS

Both questionnaires are in the Appendix to the thesis on which this report is based (Baldwin, 1966).

The first questionnaire was administered to the subjects after they had heard the recording of the simulated social studies class. The instrument consisted of a series of items in a six or seven point scale format.

Two items: 1) Rate the qualifications of this person to teach social studies, and 2) How knowledgeable do you think this person is in his field, provided a measure of perceived expertise. Perceived punitiveness was assessed by using two items: (1) To what extent would this person punish a "cut-up"? (2) How harshly would this person react to your arriving late to his class? These measures were used to assess the effectiveness of the experimental manipulations. To measure "expected consideration" a four item subscale was used which asked the subject to rate (1) the probability that he would ask the teacher to clarify a point that most of the class understood, (2) how this person would react if he did ask the above question, (3) the probability that this person would accept his explanations of what incorrectly appeared to be cheating behavior, and (4) how this person would react if he stopped

after class to ask for help. Three items, forming a "compliance" subscale, asked the subject to rate the cooperation this teacher could expect if (1) he asked for volunteers to help set up a classroom display after school, (2) a member of the administration was observing his class, and (3) he recommended a movie to the class.

Ten items from the semantic differential were also included: four evaluative pairs—good-bad, clean-dirty, cruel-kind, wise-foolish; four potency pairs—strong-weak, hard-soft, severe-lenient, small-large; and two activity pairs—passive-active, hot-cold.

A two-part second questionnaire was administered to each subject immediately following his interview with the teacher. The written instructions for the first part of this instrument assured the subject that he could be frank because the teacher would not see his evaluation. It then asked the subject to rate the teacher on eight items, a five-item social desirability subscale: (1) Would you discuss a personal problem with this person? (2) Would this person be well liked by the students? (3) Would this person get cooperation if he approached the class to assist with a clean-up task? (4) How would you rate this person as a lecturer? (5) To what extent does this person take pride in doing a good job? and three filler items: (1) Would this person be likely to give you extra help with some aspect of his subject if you were having trouble understanding? (2) Is this person interested in having his students understand his subject? (3) Would this person be interested in the progress of his students after graduation?

The second part of the questionnaire included the same five-item social desirability subscale but the instructions cautioned the subject to be certain that his name was written on the sheet since it would be shown to the teacher and he (the teacher) might want to talk with him about his evaluation. The discrepancy between the two social desirability scores was used as a measure of social inhibition resulting from teacher surveillance.

An optional, unstructured item was also included which invited the subject to make any further comments about the teacher. This item was intended to assess the subject's awareness of the experimental manipulations. It was assumed that if the subject questioned the authenticity of the "teacher" he would either ignore the option or write about his suspicions.

IV

RESULTS AND DISCUSSION

PHASE I: EXPERIMENTAL MANIPULATIONS

In order to assess the success of the experimental manipulations, the responses of all 160 subjects to the first questionnaire were utilized. Scores for each of the various subscales were obtained by combining all relevant items; and a series of 2^4 analyses of variance were performed testing the effects and interactions of the two manipulated variables, punitiveness and expertise, and also of two additional variables, teacher (interviewer) differences and school differences. Results of the analyses of variance are included in Appendix C, and additional data is presented in the Appendix to the thesis on which this report is based (Baldwin, 1966).

Punitiveness

Five subscales were designed to validate the relationship of punitive behaviors enacted in this study to the conception of "punitiveness" found in previous research and theoretical formulations. The first was a "perceived punitiveness" subscale to ascertain the subjects' awareness of the manipulations of the teacher's "punitive" actions and characteristics. The second subscale contained items from the potency dimension of the semantic differential (Osgood, Tannenbaum, & Suci, 1957). It was assumed that the strength of punitive coercive power, as demonstrated in the studies of Raven and French (1958), Chasdi and Lawrence (1955), for example, would be reflected in the ratings on this dimension which had been constructed originally to be independent of evaluating and "liking" components. The resistant force or detrimental aspects of punishment observed by Day and Hamblin (1964), Raven and French (1958) and others would be expected to result in a loss of "liking" for the teacher (Collins and Guetzkow, 1964) or feelings of aggression directed toward him (Day and Hamblin, 1964). Consequently a low rating on the four evaluation items of the semantic differential was expected. It was also anticipated that these feelings would result in the teacher being perceived as less considerate of the students, and, as a parallel to the resulting low productivity observed in industrial experiments, it was expected that the students would be less likely to comply voluntarily to the requests of the teacher. Subscales were included to assess perceived consideration and voluntary compliance.

Table 3 presents the mean scores on each of the five validating subscales for the punitive and non-punitive manipulation and the results of the analysis of variance. The data in the table show that under the punitive condition subjects tended to perceive the teacher as significantly more punitive ($p < .001$) than under the non-punitive condition, indicating that the experimental manipulation was successful. The table also reveals that, as expected, the mean ratings of the punitive teacher are significantly higher on the potency dimension of the semantic differential ($p < .001$) and significantly lower on the evaluative dimension ($p < .001$) than are the ratings of the non-punitive teacher. The table also confirms the expectation that punitive teachers would tend to be perceived as significantly less considerate than non-punitive teachers ($p < .001$), and that subjects felt they would be less compliant under the punitive condition ($p < .001$).

Expertise

In an attempt to evaluate the success of the expertise manipulations, a perceived-expertise subscale was included in the questionnaire to assess the subject's perception of the expertness of the teacher. It was also assumed that expertness should generalize to a "halo" of competence and positive associations (Collins and Guetzkow, 1964) and thus the expert manipulations should result in higher evaluation and potency ratings on the semantic differential than the non-expert manipula-

Table 3

Mean Scores on Validating Subscales Under Two Levels of Punitiveness

Subscale (Max. Score)		Mean Scores		F^a
		Lo Pun	Hi Pun	
Perceived Punitiveness	(12)	7.16	9.82	72.00
Potency	(28)	14.91	19.62	40.72
Evaluation	(28)	19.98	15.76	35.50
Perceived Consideration	(24)	14.96	11.16	40.22
Voluntary Compliance	(18)	10.70	8.74	18.52

[a] df = 1, 144

Table 4

Mean Scores on Validating Subscales under Two Levels of Expertise

Subscale (Max. Score)		Mean Scores		F^a
		Lo Expert	Hi Expert	
Perceived Expertise	(12)	4.99	8.61	153.16
Potency	(28)	15.40	19.12	25.58
Evaluation	(28)	15.34	20.40	51.05
Perceived Consideration	(24)	10.68	15.44	62.00
Voluntary Compliance	(18)	8.64	11.00	33.34

[a] df = 1, 144

tions. In addition it was expected that students would tend to perceive this "good" (expert) teacher as more considerate and be more willing to comply voluntarily to his demands.

The mean scores and the results of the analyses on each of the five validating subscales for the expert and non-expert manipulations are presented in Table 4. The data reveal that subjects under the expert condition tended to perceive the teacher as significantly more expert than subjects under the non-expert condition ($p < .001$), indicating that this experimental manipulation was also successful. The table shows that the mean ratings on the potency dimension and also on the evaluation dimension of the semantic differential were significantly higher for the expert teacher than the ratings of the non-expert teacher ($p < .001$) as predicted. The results also support the expectations that expert teachers would tend to be perceived as more considerate ($p < .001$) and would be more likely to elicit voluntary compliance ($p < .001$).

These findings also serve to relate the manipulations of punitiveness and expertise to the conception of social power and social reinforcement which underlies this study. Based on Thibaut and Kelley's (1961) model, it had been assumed that the punitive teacher's power would be based on his ability to mediate threatened reduction of outcomes; hence he would be associated with negative affect and have negative reinforcing properties. It was also assumed that the expert teacher's power would be based on the teacher's ability to mediate the augmentation of outcomes; hence he would be associated with positive affect and have positive reinforcing properties. The effects of punitive and expert behaviors on the evaluative (affective) dimension of the semantic differential are consistent with this assumption. The fact that the punitive teacher received lower scores on these scales than the non-punitive teacher supports the argument that the punitive teacher would mediate negative affect and reduction of outcomes. The fact that the expert teacher received higher scores than the non-expert supports the argument that the expert teacher would mediate positive affect and augmentation of outcomes.

Other evidence which suggests that these affective associations were created can be

derived from the perceived consideration and voluntary compliance subscales. Thibaut and Kelley have suggested a distinction between power which is based on augmentation and positive affect and power which is based on reduction and negative affect. This distinction concerns the conditions under which the give and take (consideration and compliance) of dyadic relationships occur.

Thibaut and Kelley suggest that when a student is controlled by augmentation and positive outcomes, his expectations of reward will maintain his compliance even when the teacher cannot monitor the student's behavior. In contrast, when the student is controlled by punishment and reduction of outcomes, the give and take (compliance in exchange for escape from punishment) will only occur when the student is under the surveillance of the teacher.

The perceived consideration subscale concerns the students' expectation of favors (rewards and cost reduction) extended by the teacher. The voluntary compliance scale concerns the favors students are willing to extend to the teacher. This reciprocal exchange of consideration and compliance is typical of behavior control, and, since the compliance scale concerns voluntary behavior outside the surveillance of the teacher, it is typical of the behavior control which operates without surveillance. In other words, it is the sort of control which distinguishes power based on reduction of outcomes from power based on augmentation. Hence it is expected that punitive teachers would elicit lower scores of perceived consideration and voluntary compliance than non-punitive, and that expert teachers would elicit higher scores on these scales than non-expert teachers. The data in Tables 3 and 4 confirm these expectations.

In summary, it appears that the students were aware of the teachers' punitive and expert behaviors and from these behaviors they inferred power-related characteristics similar to those which previous studies have shown to be related to the punitive and expert constructs. Also there is evidence which suggests that the punitive teachers were associated with more negative affect and reduction of outcomes than the non-punitive and that the expert teachers were associated with more positive affect and augmentation of outcomes than the non-expert.

Based on this evidence it was expected that the punitive teacher would have more negative reinforcing properties and thus would have less efficacy as a positive reinforcer than a non-punitive teacher. It was also expected that the expert teacher would have more positive reinforcing properties and hence would have more efficacy as a social reinforcer than a non-expert.

PHASE II: SOCIAL REINFORCEMENT

Data used to assess the efficacy of the social reinforcer was obtained from typescripts of the tape recordings obtained during the interview sessions. First a frequency count was made of the number of separate times the interviewer spoke during the course of the interview and this became the interviewer instigation rate. Then a frequency count was also made of the number of first person pronouns emitted by the student during the interview and this became the operant response rate. The dependent variable was simply the mean operant response rate for each interviewer instigation. One advantage of a measure derived in this fashion is that the cue-response-reinforcement contingencies of the standard operant conditioning paradigm are all represented operationally.

Because time is likely to be an important factor affecting the speech of two strangers, it was decided that the usually established base operant rate would not be an adequate control. Therefore a control group of subjects under a non-reinforcement condition was included in the design for purposes of comparison.

The main effects and interactions of four variables, punitiveness, expertise, reinforcement, and immediate-delayed interview,[2] were tested in a 2^4 weighted means analysis of variance (See Table 2). It was expected that the effects of punitiveness and expertise on reinforcer efficacy would produce significant interactions between punitiveness and reinforcement and between expertise and reinforcement. No differential predictions concerning the immediate-delayed interviews were made.

The analysis revealed only the predicted interaction between punitiveness and reinforcement ($F = 6.40$, $df = 1, 48$, $p < .025$). The mean operant rates for subjects interviewed by the punitive and non-punitive teachers under the conditions of reinforcement and non-reinforcement are shown in Table 5.

[2] Since a separate analysis failed to reveal any significant differences between the two "teacher-interviewers" on either of the variables employed in Phase II, "teacher" was not included as a variable in this design.

Table 5

Mean Operant Rate Per Instigation by High and Low Punitive Teachers Under Reinforcement and Non-Reinforcement Conditions

Teacher	Interview Condition	
	Reinforcement	Non-Reinforcement (Control)
Lo Pun	2.44	1.48
Hi Pun	1.70	2.58

Inspection of the table shows that the non-punitive teacher tended to elicit a higher operant rate than the punitive teacher in the verbal conditioning situation. However, it is unexpectedly apparent that the operant rate was also affected by punitiveness under the non-reinforcement condition in the control group. Figure 1 illustrates the relationships.

The results, although somewhat unexpected, can be explained within the general framework of the study. In order to insure the occurrence of the operant response, the questions used in the interviews were designed to elicit first person pronouns (e.g., What do you think about. . . ? How do you feel about. . . ? cf. Appendix B). The teacher was asking the student to talk about himself and his opinions. "Compliance" to this request would normally result in the operant, first person pronouns.

In the non-positive reinforcement situation the students under the punitive condition entered the interview with expectations of negative outcomes. The "teacher" had previously been overheard speaking in a rude manner to students. These expectations, according to an affective arousal model (cf. Young, 1943; McClelland, 1951), would probably result in avoidant behavior if the student were free to leave the situation. Since compliance also reduces the threat of punishment it can be argued that compliance in our situation is analogous to avoidant behavior. Thus it follows that in the normal non-positive reinforcement interview, the punitive teacher-interviewer, arousing anticipation of negative outcomes, would elicit more compliance and hence more first person pronouns than the non-punitive teacher.

In the positive reinforcement situation the students under the punitive condition also enter the interview with expectations of negative outcomes. However, as the interview progresses and the subject samples the teacher's

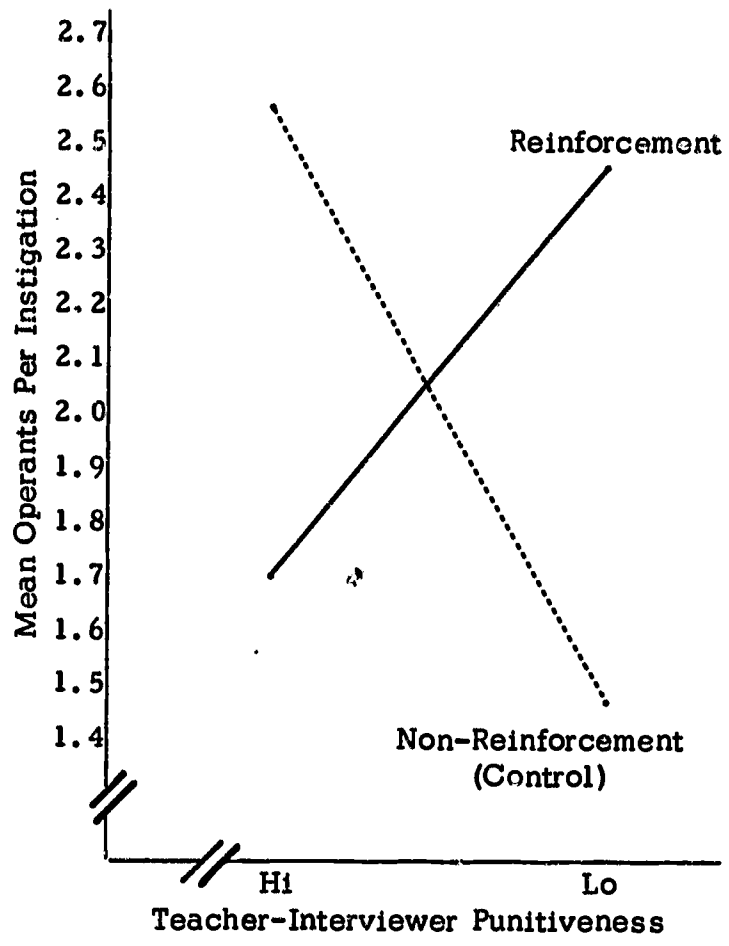

Figure 1

Mean operants per interviewer instigation under reinforcement and non-reinforcement conditions as a function of teacher-interviewer punitiveness.

behavior, he experiences the smiles and nods of the positive reinforcement condition. This positive reinforcement should serve to reduce the subject's anticipation of punitive remarks and negative outcomes. Consequently it should also reduce the compliant behavior which produced the high operant rate in the non-positive reinforcement condition.

On the other hand the students under the non-punitive condition probably enter the interview situation with little anticipation of positive or negative outcomes. There is little need for compliance and hence there is a relatively low operant rate in the non-positive reinforcement interviews. As the students under the positive reinforcement condition begin answering the teacher-interviewer's questions, however, they begin to experience positive outcomes and the social reinforcement should become more effective. The general explanation for these results, then, is that the "power" cues associated with the teacher-interviewer redintegrated an anticipation of the outcomes that were likely to follow in the

interview and this tended to elicit behaviors appropriate to those outcomes.

The same rationale used to explain the effects of punitiveness should also predict effects for expertise; i.e., the expert who is associated with positive outcomes should be a more effective positive social reinforcer than the non-expert. However, the results indicate that expertise had no effect on the efficacy of the reinforcer ($F = .04$, $df = 1, 48$).

Since there is strong evidence that the experimental manipulations were successful and since the measure of reinforcer efficacy was sensitive to the punitive manipulations, the lack of results is probably better explained by examining the conceptual relationship of expertise to the efficacy of a social reinforcer.

Expertise was selected as a variable because of its wide use in social psychological experiments where power is manipulated. Based on these studies it was assumed that the specific expert behaviors would generalize to a "reputational halo" of competence, positive evaluation, and augmentation-based power. Another look at the instances of this "halo" influence of expertise suggests a possible explanation for the results found in this study. The behavior changes that these "experts" have usually effected are responses to attitudinal questionnaires (cf. Haiman, 1948; Gilchrist, 1952; Campbell, 1961). In this study we also found strong effects for the "expertise" variations in questionnaire data. However, in the non-cognitive situation, this variable did not produce the same effects.

Common sense tells us that we might expect the expertness cues to function (i.e., mediate outcomes) if the interview were an oral examination or if the operation of reinforcement involved taking notes on the content of the subject's speech, but this "aura" of competence would tend to be a weaker influence in informal, personal conversations.

Thus, as in animal operant conditioning, the effectiveness of a social reinforcer is dependent in part upon the "need-state" of the organism as well as the stimulus properties of the reinforcement.

ADDITIONAL FINDINGS

In addition to the predicted main effects of punitiveness and expertise, a few unexpected results were revealed in the analyses of the subscales in the first questionnaire. Table 6 presents the mean perceived punitiveness scores of the subjects under the four treatment combinations of punitiveness and expertise. The data show that the perceptions of punitiveness tend to be somewhat more extreme for the non-expert teachers than for the expert teachers and an analysis of variance indicates that this apparent interaction is significant ($F = 7.05$, $df = 1, 144$, $p < .05$). This finding could be interpreted as further evidence of the "reputational halo" emanating from expertness. Given that some coercion is necessary to control the sort of deviant behavior described in the perceived punitiveness subscale (i.e., handling "cut-ups" and "late-comers"), there is evidence which suggests that a moderate amount of coercion is the most effective means of exerting this control (Festinger, 1957; Raven and French, 1958). Thus competent teachers might be expected to use moderate amounts of coercion and an incompetent teacher might be characterized by not attempting to handle the deviance or using too much coercion. Students who considered this "proper" use of coercion a part of the competent teacher's role would use both characteristics of "competence" and punitiveness to predict how the teacher would handle classroom situations that required coercion. Thus the "competent" teachers would tend to be perceived as moderate in their use of punishment and the "incompetent" teachers extreme.

Table 6
Mean Perceived Punitiveness Scores Under Two Levels of Punitiveness and Expertise

Punitiveness	Expertise	
	Lo	Hi
Lo	6.49	7.84
Hi	9.98	9.66

Another somewhat related finding is the presence of a significant interaction between expertise and teachers on the voluntary compliance scale ($F = 7.35$, $df = 1, 144$, $p < .01$). These data are presented in Table 7. The table shows that Teacher A tended to elicit more extreme compliance responses under the two conditions of expertise than did Teacher B. Although it appears as if Teacher A were a better actor (more obviously expert and inexpert), this explanation is doubtful since the interaction did not approach significance in the analysis of the perceived expertise subscale. It is more likely that some uncontrolled attribute (e.g., pronunciation, inflection, etc.) of the teachers' speech combined with the

expertise manipulations to affect the subjects' responses to the voluntary compliance subscale.

Table 7

Mean Voluntary Compliance Scores Under Different Teacher and Expertise Conditions

Expertise	Teacher	
	A	B
Low	8.18	9.11
High	11.64	10.36

An interesting and unexpected source of variation appears to have affected both the perceived consideration and evaluation data. The analyses of variance showed that the school × teacher interaction was significant ($p < .05$) for both of these variables. Since any school by teacher effects are confounded with experimenter effects (the two experimenters changed teachers at the different schools), and since school and teacher differences have been weak sources of variance throughout the study, it seems more likely that the effect of experimenter accounts for the findings. Relabeling the source of variance as the main effect of experimenter rather than the interaction of school × teacher suggests the relationship presented in Table 8.

Table 8

Mean Scores on Perceived Consideration and Evaluation Ratings Occurring Under Two Experimenters

Subscales	Experimenter	
	A	B
Perceived Consideration	13.78	12.35
Evaluation	18.70	17.04

Although standard scripts were used to control experimenter differences, it seems plausible that this control was insufficient. The two experimenters who initially greeted the subjects, introduced them to the experiment and played the tape recording differed markedly in appearance, manner and involvement in the study. The curt, distant manner of one of the experimenters offers a possible explanation for the reduced evaluation and consideration scores of the teachers she introduced. This interpretation supports the findings of others (e.g., Orne, 1962) which suggest the importance of the demand characteristics of the experimental setting used in social psychological experiments.

POST-EXPERIMENTAL QUESTIONNAIRE

The post-experimental questionnaire was examined to determine awareness of the manipulated social reinforcement. Subjects were classified as "unaware" if their responses to an optional, open-ended question asking for further comments were evaluative comments about the teacher. All subjects met this criterion.

The social inhibition measure included in this questionnaire was designed to measure differences between subjects' behavior under teacher surveillance. The same set of items was rated twice, once confidentially for the experimenter and once for presentation to the teacher. The inhibition score was the sum of the discrepancies. It was assumed that anticipation of positive or negative outcomes would also be reflected in this measure (i.e., subjects expecting greater negative outcomes would report negative evaluations privately to the experimenter but inhibit these responses when reporting to the teacher).

Extreme within-treatment variance in the subjects' scores was observed, however. The 2^4 weighted means analysis of variance (See design, Table 2), performed on a logarithmic transformation of the data, showed no significant effects. The high unexplained variance indicates that the instrument was not sensitive to the variables included in the design. Since many of the discrepancy scores were in the negative direction ("better" evaluations were reported to the experimenter than to the teacher), it is possible that variables concerned with the threats of "administration surveillance" of the teacher were affecting results rather than the effects of teacher surveillance of the students as intended.

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APPENDIX A

SCRIPTS FOR SIMULATED SOCIAL STUDIES CLASS

LECTURE WITH PUNITIVE MANIPULATIONS

Mr. Jenkins:

We've been talking about the natural weaknesses of the human mind—the tendency to observe inaccurately, to show favoritism, and to think wishfully and in stereotypes. We've seen that these tendencies are sufficient in themselves to hinder sound thinking about social problems.

Today we're going to consider how propagandists use these weaknesses to prevent objective consideration of social problems.

We generally think of the propagandist as someone who is trying to "put something across." He uses the methods of the salesman and the advertiser. His purpose is to persuade us to accept an opinion or adopt a course of action. Often he tries to keep us from examining both sides of the question. He does this by arousing our emotions and sometimes by deliberately deceiving us.

Propaganda hinders men from getting at the facts needed for making decisions and choices in a rational manner.

There are many sorts of propaganda—racial, political, economic, patriotic, and religious. It may be used to support to a charity campaign or to a political belief such as communism.

Since we can more easily recognize propaganda when we see it if we are familiar with the common devices used by the propagandists, I thought we should examine the list of devices that the Institute for Propaganda Analysis has set down.

The first is name calling or the use of smear words. The propagandist appeals to our hate and fear by giving bad names to individuals, groups, nations, races, policies, practices, beliefs, and ideals which he would have us condemn. Some of the bad names or smear words that you hear today are: Communist, trouble-maker, rabble-rouser, crack-pot, reactionary, dictator, demagogue, Nigger, and so forth. I'm certain that you can think of others.

One example of the effect of name calling could be like this: Congressman X's enemies might say that Congressman X is a Communist. Then it is quite likely that the public will stop considering his ideas on their merits and simply condemn them because a "Communist" said them. Another example could be a prominent citizen saying that "The President's proposal will lead straight toward dictatorship." The public shudders and opposes the proposal. The word dictatorship is a stereotype that arouses fear; so is the word communism. We are so frightened by the label that we turn away without discovering whether the label has been justly applied. Name calling is perhaps the most common of all the propaganda devices.

NON-PUNITIVE INSERT

Joan:

Mr. Jenkins, doesn't the word "propaganda" mean something bad?

Mr. Jenkins:

(pleasantly) That's an interesting question, Joan, and I'd like you to bring it up later. Right now I'd like to finish telling the class about the Institute's list of propaganda devices.

PUNITIVE INSERT

Joan:

Mr. Jenkins, doesn't the word . . .

Mr. Jenkins:

(gruffly) Joan! How many times do I have to tell you not to interrupt me!

The second device that the Institute lists is glittering generalities, or "glory words." By this device the propagandist identifies his program with virtue by using such words as truth, freedom, liberty, social justice, public

service, the American way, the right to work. By describing some program as "the American way," for instance, the propagandist seeks to win our approval without giving us very much evidence.

Another device is transfer. The propogandist seeks to associate our feelings of respect for church, the flag, home, school, motherhood, and the like with some kind of special pleading. A cartoonist might depict Uncle Sam disapproving a budget for public housing, and thus make us feel that the whole United States disapproves it. By drawing an Uncle Sam who approves the same budget, the cartoonist would have us feel that the American people approve it.

The fourth on their list is testimonial. All of us are familiar with the use of testimonials in advertising. A cosmetic company, for instance, pays $5000 to a society girl for the use of her photograph with a few words from her in praise of the company's cold cream. Testimonials and counter-testimonials are also used in campaigns for and against a political or social proposal. Thus the National Association of Manufacturers, the Federal Council of Churches, or any other group having prestige, is often quoted as favoring or not favoring some way of dealing with a national problem.

The fifth is a "plain folk" appearance. This is a device often used by politicians, labor leaders, b u s i n e s s m e n, and even by ministers and teachers, to win our confidence by appearing to be people like ourselves. Candidates for office try to show their devotion to the common, homey things of life. They go to picnics, attend a country church, put on overalls and do farm chores—first making sure that a newspaper photographer is at hand. They win votes by showing that they are "just plain folks" like the rest of us.

NON-PUNITIVE INSERT

Jack:

(Begin whispering or talking softly.) Did you see----------on television last night? Wasn't it . . .(Go on until caught.)

Mr. Jenkins:

(in a soft, considerate tone) Jack, I think this is important for you to hear. Would you mind paying attention?

PUNITIVE INSERT

Jack:

(Begin whispering or talking softly.) Did you see----------on television last night? Wasn't it . . . .(Go on until caught.)

Mr. Jenkins:

Jack, shut up! If I hear one more sound out of you or anybody else this whole class will have to stay after school and write an essay on propaganda.

Another device is the band wagon. The propagandist appeals to the desire to follow the crowd. He assures us that "everybody's doing it." Often he directs his appeal to groups held together by common ties of nationality, race, religion, occupation, or the like, in an attempt to push the whole group on to the band wagon. Thus he may try to win Catholics or Protestants or Jews by harnessing their particular fears, biases, convictions, or ideals, and assuring them that the other members of their group favor his proposal.

The last on the list is cardstacking. This depends on the use of deception. The propagandist stacks the cards against the truth. He distorts or suppresses some of the facts. He makes misleading statements or lets half-truth pass for truth. He may attempt to divert attention from the real issue by raising some other issue or staging some happening that will put his opponents in the wrong. You may have seen this operating during labor disputes. Big corporations have at times hired ruffians to commit acts of violence or even destroy property belonging to the corporation in order to turn the public against the strikers. And likewise workmen looking for an excuse to strike have been known to pick a quarrel with a foreman; and when discharged, the offenders have used the incident to show that a strike was justified.

All of these devices are ways that the propagandist tries to manipulate the feelings and thereby the actions of others. The best defense against the propagandist is to learn to recognize him. It seems that once you identify something as propaganda it ceases to have an emotional effect.

One of the best places to study propaganda is in the advertising pages of a popular magazine. Here you find little information, and what you see may be carefully selected to build up the notion that the advertiser's product is indispensible for health or happiness. In place of facts there is a skillful attempt to excite emotion. The universal longings to be admired, to be recognized as beautiful, desirable, or superior, to be loved, and to be secure, these are fed with promises. Less worthy motives may also be played upon, such as the snobbish desire to have something that the mass of people cannot afford. Advertisers

commonly use all the propaganda devices listed above except that of name calling. I'd like you to look through a magazine or newspaper tonight and find three examples of propaganda.

QUESTION AND ANSWER SESSION: EXPERT

Jack:

What's the difference between the devices of glittering generalities and transfer?

Mr. Jenkins:

That's a good point, Jack. Transferring a feeling from one object to another does seem to mean the same as generalization. Your criticism of the labels is a valid one. I think the Institute for Propaganda Analysis actually did have in mind a distinction between the two devices, though.

By glittering generalities or glory words, I think they mean words which are very abstract and imply goodness—such as liberty, happiness, freedom. Using these words attaches a general sense of worth to the idea or whatever that is being promoted.

The device of transfer, however, attaches a more concete meaning. Feelings which are attached to concrete objects—such as the home, the church, the country, and so forth—are transferred onto the idea that's being "pushed."

In short—one device attaches a general aura of meaning; the other attaches specific feelings or associations. Sandy, did you have a question?

Sandy:

Yes, I do. What is the Institute for Propaganda Analysis?

Mr. Jenkins:

It was a group of professors that worked together in the late 1930's to study propaganda. I'm not certain who all of the people were or where it was held, but two of the participants, ah. . . Alfred and Elizabeth Lee, wrote a book The Fine Art of Propaganda, and these devices are listed there. Joan?

Joan:

I always thought that propaganda was bad—that it was something used by the Communists to fool people.

Mr. Jenkins:

No, Joan, it means more than that. Propaganda is a communication of some sort which causes a person to emotionally accept or reject an idea without considering it rationally. It can be used to support any idea or object—good or bad. A charity campaign may use propaganda to get more people to contribute to their cause. Likewise, as you mentioned, it can be used to persuade people to accept a political ideology such as communism. It can be used for either good causes or bad ones.

Joan:

Is it okay to use it for a good cause?

Mr. Jenkins:

Well, Joan, that's a point that's good for a lot of discussion. Some people would argue that anything that interferes with rational consideration of a decision or choice is harmful. Others contend that any device is justified to accomplish a good cause. I'd like all of you to think about that and we can discuss it in class tomorrow. All right, Ralph, what's your question?

Ralph:

Is the way our government controls the information that the public gets an example of propaganda?

Mr. Jenkins:

Yes, Ralph, I think that's probably a good example of what the institute calls "card stacking." Information is withheld that is considered to be detrimental to the welfare of the nation. Often this includes "military secrets" and such but it can also include information that would cause the American public to become extremely dissatisfied with the government and perhaps disrupt the whole system and established order. This is definitely cardstacking to keep the public accepting the present system of government. This brings us right back to the issue Joan raised about whether or not we can justify using propaganda for what we think is a good cause.

QUESTION AND ANSWER SESSION: NON-EXPERT

Jack:

What's the difference between the devices of glittering generalities and transfer?

Mr. Jenkins:

Heh... Heh ... They do seem alike, don't

they? (Fumble through notes). Let's see... ah... glittering generalities... An example would be describing some program as the American way. And... an example of transfer would be a cartoon showing Uncle Sam approving of a legislative proposal... Sandy, do you have a question?

Sandy:
What is the Institute for Propaganda Analysis?

Mr. Jenkins:
I'm not really sure. It was probably a group of scholars that work with sociology and psychology who got together at one university for a short while to study and talk about propaganda. I found the list I gave you in one of my textbooks. Yes, Joan?

Joan:
I always thought that propaganda was bad—that it was something used by the Communists to fool people.

Mr. Jenkins:
Oh no, Joan. You must have misunderstood what I said. Propaganda can, ah... it can be used to support anything. It doesn't matter whether the thing is good or bad. For instance, it's often used to get people to contribute to a charity.

Joan:
Is it okay to use it for a good cause?

Mr. Jenkins:
Ah, well... that's hard to say. It... ah... it's up to each of us to decide if we think it's right to fool people into doing a good thing. You should all think about that tonight and we can discuss it tomorrow. Ralph?

Ralph:
Is the way our government controls the information that the public gets an example of propaganda?

Mr. Jenkins:
Ah... Well, I don't think we should think of that exactly as... uhm, propaganda. Well ... ah... it's a rather, oh, complicated issue. Uh... are there any more questions?

APPENDIX B

INTERVIEW QUESTIONS *

1. What do you plan to do after finishing high school ?
2. What do you think about the Braves leaving Milwaukee ?
3. What do you like most about high school ? What do you dislike about it ?
4. How would you react if the school would put all the time and money currently invested in inter-scholastic sports into an intramural program ?
5. Often adults criticize teenagers for becoming infatuated with fads like the Beatles or skateboards. Can you explain this ?
6. I'm a social studies teacher and I'm interested in what teenagers think about the drinking age. Do you think it should be raised from 18 to 21 or do you think it should be left at 18 ?

---

*Presented in random order.

APPENDIX C

STATISTICAL ANALYSES

Table 1

Analysis of Variance of Perceived Punitiveness Scores

Source	df	MS	F
(E) Expertise	1	10.76	2.74
(P) Punitiveness	1	282.23	72.00**
(S) School	1	.35	
(T) Teacher	1	2.14	
E × P	1	27.64	7.05*
E × S	1	8.33	2.12
E × T	1	8.33	2.12
P × S	1	4.39	
P × T	1	.98	
S × T	1	2.63	
E × P × S	1	2.38	
E × P × T	1	.001	
E × S × T	1	4.39	
P × S × T	1	8.79	2.24
E × P × S × T	1	1.14	
error	144	3.92	

**p < .01
*p < .05

Table 2

Analysis of Variance of Perceived Expertise Scores

Source	df	MS	F
(E) Expertise	1	523.81	153.16*
(P) Punitiveness	1	12.38	3.62
(S) School	1	7.44	
(T) Teacher	1	.04	
E × P	1	.01	
E × S	1	.35	
E × T	1	3.75	
P × S	1	.35	
P × T	1	.001	
S × T	1	4.73	
E × P × S	1	1.50	
E × P × T	1	11.29	3.30
E × S × T	1	2.70	
P × S × T	1	1.70	
E × P × S × T	1	7.88	
error	144	3.42	

*p < .01

Table 3

Analysis of Variance of Potency Ratings on the Semantic Differential

Source	df	MS	F
(E) Expertise	1	555.02	25.58*
(P) Punitiveness	1	883.60	40.72*
(S) School	1	18.22	
(T) Teacher	1	36.10	
E × P		44.10	2.03
E × S	1	34.22	
E × T	1	57.60	2.65
P × S	1	.90	
P × T	1	27.22	
S × T	1	10.00	
E × P × S	1	.40	
E × P × T	1	13.22	
E × S × T	1	8.10	
P × S × T	1	15.62	
E × P × S × T	1	2.02	
error	144	21.70	

*p < .01

Table 4

Analysis of Variance of Evaluative Ratings on the Semantic Differential

Source	df	MS	F
(E) Expertise	1	1025.16	51.05**
(P) Punitiveness	1	709.81	35.35**
(S) School	1	6.01	
(T) Teacher	1	8.56	
E × P	1	.76	
E × S	1	15.01	
E × T	1	.76	
P × S	1	1.41	
P × T	1	51.76	2.58
S × T	1	110.56	5.51*
E × P × S	1	5.26	
E × P × T	1	1.41	
E × S × T	1	54.06	2.69
P × S × T	1	24.81	
E × P × S × T	1	.06	
error	144	20.08	

**p < .01
*p < .05

Table 5

Analysis of Variance of Perceived Consideration Scores

Source	df	MS	F
(E) Expertise	1	902.5	62.85**
(P) Punitiveness	1	577.6	40.22**
(S) School	1	30.62	2.13
(T) Teacher	1	50.62	3.52
E × F	1	4.9	
E × S	1	3.60	
E × T	1	32.40	2.26
P × S	1	30.62	2.13
P × T	1	.02	
S × T	1	81.22	5.66*
E × P × S	1	15.62	1.09
E × P × T	1	24.02	1.67
E × S × T	1	1.60	
P × S × T	1	.10	
E × P × S × T	1	16.90	1.18
error	144	14.36	

**p < .01
*p < .05

Table 6

Analysis of Variance of Voluntary Compliance Scores

Source	df	MS	F
(E) Expertise	1	222.07	33.34**
(P) Punitiveness	1	123.37	18.52**
(S) School	1	2.14	
(T) Teacher	1	1.14	
E × P	1	12.94	1.94
E × S	1	7.88	
E × T	1	48.95	7.35*
P × S	1	2.16	
P × T	1	2.89	
S × T	1	22.88	3.44
E × P × S	1	8.32	
E × P × T	1	.02	
E × S × T	1	5.07	
P × S × T	1	1.70	
E × P × S × T	1	.07	
error	144	6.66	

**p < .01
*p < .05

Table 7

Weighted Means Analysis of Variance of Number of First Person Pronouns per Interviewer Instigation

Source	df	MS	F
(P) Punitiveness	1	.13	
(E) Expertise	1	.06	
(I) Immediate-Delay Interivew	1	.22	
(R) Reinforcement	1	.01	
P × E	1	.14	
P × I	1	.18	
P × R	1	3.39	6.40*
E × I	1	.65	
E × R	1	.02	
I × R	1	.21	
P × E × I	1	.47	
P × E × R	1	.18	
P × I × R	1	.28	
E × I × R	1	.21	
P × E × I × R	1	.20	
error	48	.53	

*p < .05