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ABSTRACT

Using a modified television set that required them to depress a foot pedal in order to view the material, 77 subjects watched a nonviolent segment of the film, The Chase, and either a violent sequence with consequences to the victim or violence without consequences. Subjects were randomly assigned to each treatment on the basis of Buss-Durkee Aggression scores. Allowed to choose to respond or not to respond to the material, 58 percent of subjects chose not to attend at the rate necessary to continually view the program. No relationships were found between the subject's Buss-Durkee score and the subject's behavior elicited by the stimulus materials. (SK)

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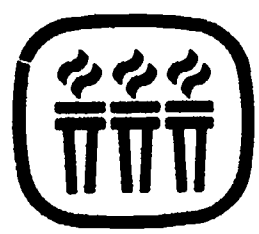

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MEDIATED VIOLENCE AND VICTIM CONSEQUENCES: A BEHAVIORAL MEASURE OF ATTENTION AND INTEREST

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ABSTRACT

MEDIATED VIOLENCE AND VICTIM CONSEQUENCES: A BEHAVIORAL MEASURE OF ATTENTION AND INTEREST

This study utilized a modified television set that required the subject to depress a foot pedal in order to view the stimulus material. Cumulative response curves were collected from seventy-seven subjects who saw a non-violent segment of the film The Chase and either a violent sequence with consequences to the victim or violence without consequences. Subjects were randomly assigned to each treatment on the basis of their Buss-Durkee Aggression scores.

The subjects were allowed to choose to respond or not respond to the stimulus material. Attention was defined as responding at the minimum efficient rate to continually view the program and interest as any increase over the attention rate baseline.

The findings revealed no relationships between a subject's Buss-Durkee score and the behavior elicited by the stimulus material. When given a choice to attend to non-violent or violent stimulus material, fifty-eight percent of the subjects chose not to attend at an efficient rate. Implications of this finding in light of the traditional forced exposure to aggressive mass media stimuli paradigm of previous studies are also discussed.

Operant Methodology

Operant methodology seeks to design studies that directly and empirically collect data from the interaction of a subject and stimulus with some type of reinforcer. The data is the rate of subjects' responding to a stimulus which is recorded by an apparatus that counts the number of responses per unit of time. Some psychologists in this research traditional eschew all forms of cognitive explanation, e.g., the use of attitude as an intervening explanatory variable by Sidman (1960). Since we are in the initial stages of this type of research, we have not foreclosed the possibility of cognitive variables having some explanatory power.

Contiguous reinforcement is defined as the response of a subject operating a device to maintain the continued presence of some stimulus (Lindsley, 1962). In this study, the stimulus material is the presence or absence of television program with particular content characteristics. For continuous viewing of the television program, the subject must press a large floor pedal. The reward for pressing the pedal is three seconds of television programming. The subject thus can choose to view or not to view a given television stimulus. The Florida State University Conjugate Reinforcement Audio-Visual Equipment (CRAVE) has been designed to allow numerous such reinforcement contingencies. Williams (1970) has employed a prototype of CRAVE and demonstrated its viability as an experimental device. Winters and Wallace (1970) demonstrated the

validity of a similar apparatus. LeRoy, Uram and Williams (1972) have shown that operant methodology can be heuristically linked to traditional social psychological theories of media effects. More important, the development of the FSU CRAVE allows for systematic investigation of stimulus-subject interaction with rigor sought by Weiss in his recent review of the literature (Weiss, 1968; 1971).

Rationale

Only four studies have dealt with the effects of exposure to depictions of victim consequences (Brammel, Taub & Blum, 1968; Tannenbaum & Goranson,[1] 1969; Gordon, 1971; Wotring & Greenberg, 1972). The latter two of these experiments dealing directly with television violence with victim consequences shown have resulted in ambiguous findings. Given the theoretic implications of this important and relatively unstudied content variable, it is valuable to clarify these findings.

One very probable confounding variable is the amount of interest and attention subjects paid to the television scenes. In both studies the subjects could not choose whether or not to view the scenes and no measure of interest or attention was taken. Since attention and interest are necessary for effects to occur, though not sufficient, then the less the interest the less likely any effects will occur.

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[1] Unpublished study discussed in Goranson (1969).

In this study, the amount of interest and attention produced by (1) televised violence without consequences to the victim shown, (2) televised violence with consequences to the victim shown, and (3) televised non-violence are compared. Three segments of a movie have been edited, each depicting one of the above content manipulations (the same scenes used by Gordon and Wotring & Greenberg). Levels of trait aggressiveness is expected to affect interest and attention.

We hypothesized that (1) the higher the trait aggressiveness, the more the interest across television treatments; (2) television violence with consequences will be more interesting than television violence without consequences, which will be followed by televised non-violence; finally, (3) there will be an interaction between TV treatments and trait aggressiveness such that the higher the level of trait aggressiveness, the greater the differences in interest between the TV treatments.

Method

Subjects

Seventy-seven subjects were selected from an advanced mass communication course at Florida State University on the basis of scores obtained on the Buss-Durkee Aggression-Hostility Inventory.

Stimulus Material

An edited videotape was constructed from the movie The Chase. Three separate segments corresponded to the three treat-

ment conditions. The violence with consequences (VC) segment was comprised of the town sheriff (Marlon Brando) being beaten by three men resulting in blood and physical deformities. An edited version of the same sequence served as the violence without consequences treatment (V). The blood was removed via a red filter and most other consequences were electronically edited from the segment. Hence, the no consequences treatment differed only with respect to the results of the violence. The no violence treatment (NV) involved the same characters, but in nonviolent sequences. Context was controlled by including similar scenes in all three treatments. All three segments were approximately 4:30 minutes.

Apparatus

The CRAVE apparatus was operated by the S registering interest for the stimulus material by pressing a footpedal. When S depressed the pedal, the video and audio was presented for three seconds by completing both circuits. After the prescribed time interval, the circuit was opened causing the audio and video elements to disappear. If S did not release the pedal, another circuit was activated to also open the circuits. Consequently, S had to continually press the pedal every three seconds to continually monitor the stimulus material. Each response was recorded on a Harvard Cumulative Graph Recorder.

Procedures

The Buss-Durkee Aggression-Hostility Inventory, without the guilt factor, was administered to a pool of 150 subjects. The resulting scores were computed by counting the number of times a subject positively responded to the items which comprised the factors. The total scores were ranked ordered for both males and females. The top and bottom scores for both sexes were identified. These S's were labelled as high and low aggressives, respectively, and were selected for the study. A list of potential subjects were distributed to the pool, which was told that specific students were randomly selected to participate in a television viewing experiment. Subjects then volunteered by signing up for individual appointments in order to receive extra class credit.

As each subject arrived for the appointment, they were individually seated in a sound-proof room before a television and the CRAVE footpedal, which was explained as necessary to depress if the subject wishes to view a program. The experimenter left the viewing room, entered the experimental room, started the videotape equipment, and then gave the subject the first three seconds of the first segment free to signify the beginning of the experiment. After completion of the first segment, the videotape recorder was turned off and the subject was allowed to extinguish the button pushing behavior. Extinguished behavior was defined as no responses for fifteen seconds. The second segment was then started and three free seconds were again presented. The subject viewed the non-

violent segment and either the violence with consequences or the violence without consequences. The subjects were randomly assigned to groups and the order of presentation was systematically varied. Consequently, the high and low aggressive males and females were placed in one of four groups: V/NV, NV/V, VC/NC, or NV/VC.

Findings

The findings reported in this section follow the traditional statistical analysis employed in laboratory experimentation. It should be clear that a psychologist within the operant methodology tradition would not employ most of these techniques. Given the exploratory nature of this project we proceeded to utilize the traditional statistical methodology and what follows is a brief overview of these findings. Analysis of the cumulative graph recordings will be reported in a following section.

Figure 1 displays a typical response curve for a subject viewing the non-violence and violence with consequence sequence. To analyze this "line" a number of summary measures were developed. Since the number of pedal depressions are directly measured over time, it was necessary to develop a measure of the slope of the response line that accurately described the length of the film segment and the number of pedal depressions. Optimal criterion behavior (OCB) is defined as the most efficient number of depressions needed to maintain a constant signal. Since each depression delivered three seconds of audio-visual stimuli, the most efficient measure is 20 depressions per minute.

Given a number of scenes of varying length, the time involved for the three scenes was converted into seconds, and the seconds in turn divided into the total number of subject responses for film scene. The ratio score is a sensitive measure of the slope of the line of a subject's response pattern. Upon reflection it can be seen the most efficient coefficient for optimal criterion behavior (OCB) is equal to .3333 (the subject has to respond once every three seconds, thus the rate is .3333 per second). This is of course an idealized slope since most people will perform above such a hypothetical perfect definition of operant behavior. Comparing the OCB ratio to the subjects' ratio scores reveals who in fact saw the program and who did not, since a ratio score of less that .3333 indicates that the subject did not work enough to deliver a constant signal.

Dividing subjects, regardless of their sex or Buss Durkee Aggressive score, into those who saw the violence or violence with consequences program -- that is worked at or above criterion from those who worked less than .3333 demonstrates that less than half of the subjects (42%) paid enough attention to watch the whole segment. A Z test for proportions reveals that the two groups differed significatly from each other in terms of the direction of their interest. A significantly ($p < .001$) higher proportion of people above criterion watched violence more than non-violence as compared to below criterion. Given a mixed pattern of responses, however, it was soon apparent that there was indeed an order effect to these preferences. Those subjects who worked above criterion and who saw violence (with and without

consequences) second differed from those individuals who saw aggression first and non-violence second, i.e., a greater proportion were more interested in violence than non-violence ($p < .002$). The same finding held for those who worked below criterion, i.e., saw less than the whole program ($p < .05$). In other words, seeing violence second after viewing non-violence resulted in a greater interest in violence than when it was viewed first. It should be stressed that the coefficient employed, number of depressions divided by the stimulus length in seconds, reflects both the level and the amount of work the subject performed.

Other analyses were performed with no success. For example, those subjects who saw violence with consequences did not differ significantly in interest from those who saw the same segment of violence without consequences. This finding held for subjects who worked both above and below criterion. Further, introducing controls for the subject's sex and agressive score on the Buss Durkee Scale (high and low quartile respondents) revealed no significant differences. Thus, if a subject's gender and aggression score were known, one would not be able to predict whether that subject would view more or less of the stimulus. More important, regardless of gender or aggressive score, there was no correlation between a subject's ratio score in either violence treatment or his Buss-Durkee Score. Thus, a person with a high aggressiveness score cannot be assumed to work harder to see agression. Females are not likely to work more or less than men. An extensive number of comparisons between treatments, sex, and

aggression scores revealed no significant differences. For example, highly aggressive males viewing violence with consequences did not differ significantly from low aggressive females viewing non-violence.

Males and females did not significantly differ in the amount of work they performed, regardless of their aggression scores. However, it should be stressed that those subjects working at or above criterion who viewed the violence sequence second, had a significantly greater number of responses to the violence treatment as measured by the ratio score, compared to their non-violence viewing behavior (correlated t, p .01). The converse was not true, those subjects working above criterion who saw violence first and non-violence second did not have significantly more responses for the violence segment.

A number of other procedures were also attempted. The ratio of the subject's score for viewing his aggressive segment was divided by his score for seeing non-violence, in an attempt to see if viewing aggression elicited any overall increase in behavior from a baseline. Assuming that the non-violence score functions as a crude measure for intrasubject control, the lack of any significant findings suggest that at least for this sample, violence in and of itself is no more interesting (with or without consequences to the victim) than non-violent action scenes with the same characters and context. However, in two instances a shift in behavior was found. Viewing violence second does seem to elicit an increased amount of depressions, and if a subject shows interest at or above criterion

he demonstrates more interest in violence than non-violence.

Discussion

The analysis of this study is alien to the operant methodology tradition. Utilizing the traditional statistics of the experimental social scientist, a few relationships were found between the hypotheses and the willingness of subjects to view non-violent and aggressive film clips.

Subjects for this experiment came from a motion picture appreciation class and could, in some instances, be characterized as "film addicts". While these individuals can be located in the data, it should be recalled that this group of subjects should maximize viewing. Second, subjects were allowed to choose between viewing and non-viewing. In fact, a number of subjects read and watched when they felt like it. This kind of research differs from other studies in which the subject is "required" to view the aggressive stimuli by being placed in front of a motion picture or television screen. This study has demonstrated that when given the choice of viewing or not viewing, a large number of subjects, in fact 58%, viewed less than the complete film segment as presented on a television set. Assuming replication, this finding in itself supports some critics of the Berkowitz experiments; that is, it is one thing to require a subject to view aggressive stimuli and then deliver at least one shock to the confederate, and quite another to give him a

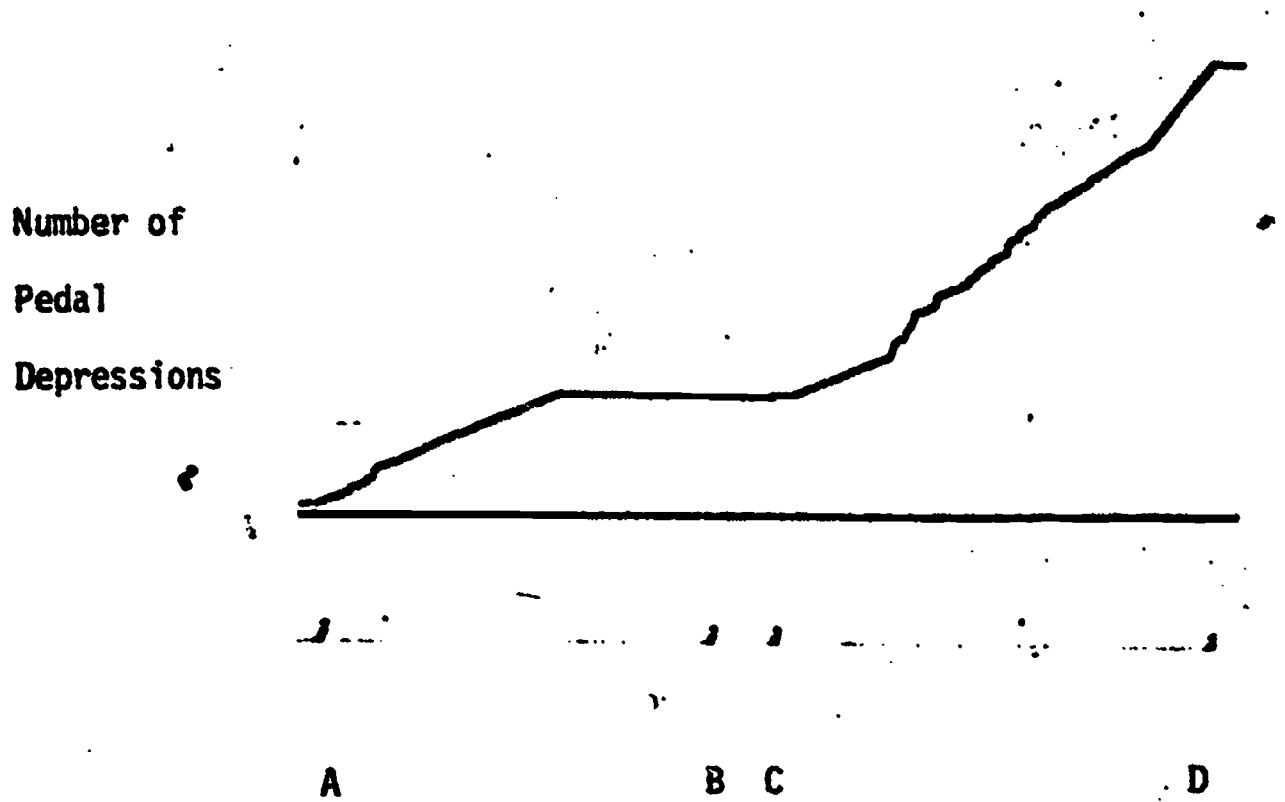
choice in viewing and shocking. Given this freedom to choose to view or not view, a majority of our subjects randomly viewed the stimulus. It should be emphasized that the subjects were not required to commit some form of laboratory aggression after viewing. This will be a topic for future research.

However, proponents of the view that television aggression under certain conditions leads to subsequent aggressive behavior can be reinforced by the one significant finding. When a subject decided to watch the violence by operating above criterion, there was no relationship with the corresponding Buss Durkee score. However, more males chose to view violence with consequences than females, while the converse held with violence without consequences.

Future research employing operant techniques should utilize analysis techniques discussed by Sidman (1960) and a more precise method of defining responses slopes. These procedures may more completely explain research similar to the one reported above.

FIGURE 1

OPERANT BEHAVIOR GRAPH



KEY

AB - Number of depressions for non-violence sequence
BC - End of program: Extinction interval
CD - Number of depressions for violence stimulus

REFERENCES

Bramme!, D., Taub, B. & Blum, B. An observer's reactions to the suffereing of his enemy. Journal of Personality and Social Psychology, 1968, 8, 384-392.

Goranson, R. A review of recent literature on psychological effects of media protrayals of violence. In R. K. Baker and S. J. Ball (Eds.), Mass media and violence, Staff report to the National Commission on the Causes and Prevention of Violence. Washington D.C.: Government Printing Office, November, 1969.

Gordon, T. The effect of viewing physical consequences of violence on perceptions and aggressiveness. Unpublished doctoral dissertation, Michigan State University, 1971.

LeRoy, D., Uram, E., & Williams, W. Operant methodology and mass media effects: An exploratory analysis. Journalism Quarterly, accepted.

Lindsley, O. A behavioral measure of television viewing. Journal of Advertising Research, 1962, 2, 2-12.

Sidman, M. Techniques of scientific research. New York: Basic Books, 1960.

Williams, W. A preliminary description of selected individual responses to the viewing of a videotaped newscast. Unpublished master's thesis, Florida State University, 1970.

Winters, C. & Wallace, W. On operant condition techniques. Journal of Advertising Research, 1970, 10, 39-45.

Wotring, C. & Greenberg, B. Experiments in televised violence and verbal aggression: two exploratory studies. Journal of Communication, submission