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Television-Mediated Aggression and Its Effects on Children's Level of Aggressiveness

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TELEVISION-MEDIATED AGGRESSION AND ITS EFFECTS
ON CHILDREN'S LEVEL OF AGGRESSIVENESS



A Thesis
Presented to
the Graduate Faculty
Central Washington State College



In Partial Fulfillment
of the Requirements for the Degree
Master of Science



by
Thomas M. Ferguson
July, 1970

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CHAPTER I

STATEMENT OF THE PROBLEM

It has been reported by Lerner (1969) that 98.5% of all households have at least one television set. This incredible statistic gives an indication of the media's vast audience. Many researchers claim that television not only enjoys widespread popularity, but influences the behavior of the viewer. Therefore, the programming that this powerful media presents to the American public should be investigated.

Merriam (1964), in a report to the Federal Communications Commission, stated that between the ages of five and fourteen, the average American child witnesses the violent destruction of 13,000 human beings on television. If this figure seems exaggerated, consider Dodd's (1963) report that American children under 12, on the average, spend more time in front of the television than they do in either school or church. Merriam (1964) also reported the results of a Stanford University survey of one week's programming by four commercial channels in a major U.S. city: "The picture of the adult world presented on the children's hour is heavy in violence, light in intellectual interchange, and deeply concerned with crime (p. 41)."

Lange, Baker, and Ball (1969), in order to measure the extent of violence in television programming, analyzed for two weeks of all prime time television programs and found that:

Some violence occurred in eight out of every 10 programs. The average rate of violent episodes was 5 per program and 7 per program hour. Most violence was an integral part of

the play in which it occurred. The average rate of acts of violence was 11 per program or 15 per hour. The casualty count of injured and dead was at least 790 for the two weeks, and one in every 10 acts of violence resulted in a fatality. The two weeks of dramatic programming featured 455 leading characters. Of this number, 241 committed some violence, 54 killed their opponent, and 24 died violent deaths. The dramatic lead thus inflicted violence 50% of the time. One third of those killed were also killers, and one out of every 7 killers died a violent death. Surprisingly, nearly half of all killers suffered no consequences for their acts (p. 316).

Lange et al. (1969) also reported 43% of adult Americans (18 years and older) picked television as the mass medium they chose most of the time for entertainment. Books, chosen only 19% of the time, took a distant second. Young children employ television for entertainment to an even greater extent than adults. This may be due to the fact that most young people cannot read with sufficient competence to use newspapers, books or magazines for daily entertainment. Due to a multitude of reasons, availability or cost, etc., children do not use movies as a daily or weekly form of entertainment. Radio, due to the nature of its programming and its single stimulus property of audition, will not hold their attention for any great length of time. Television, then, is uniquely equipped by its audiovisual properties to sustain children's attention and has achieved widespread popularity among them by virtue of availability and because advanced reading skills are not required for its use.

It has been established that television has a heavy propensity for violence, and that children, during their most formative years, make up the majority of the audience. The question that arises, then, is whether or not the viewing of television violence produces a corresponding increase in the aggressive behavior of children.

Before proceeding into an examination of various psychologists'

answer to this question, it would be appropriate to define aggression. Most social scientists would agree with Berkowitz' definition of aggression as ". . . behavior whose goal response is the inflicting of injury on some object or person (1969, p. 3)." Goranson (1969) was more specific in his definition when he stated that there are two types of aggression: harm intent and response form. According to Goranson,

A harm intent definition is based on the measurement of the intentional inflicting of pain or injury on another person. The response form type is based on the physical characteristics of aggressive action: hitting, kicking, striking, etc. These responses have a form which is 'aggressive' even when the responses are directed toward non-human targets (Goranson, 1969, p. 396).

In this thesis, the term and measurement of aggression will refer to the response form definition, unless otherwise stated.

Background of Theory and Research

Television Violence and Aggressiveness

The proponents of current stimulus-response theory maintain that to acquire new response patterns, all one need do is reinforce behavior that successively approximates the desired goal behavior. However, this is not the only method for establishing new responses. Hilgard and Bower (1966) have pointed out that a large portion of human learning is observational and/or imitative. It is obvious that many skills, like driving a car, are learned more readily by modeling than they would be were the successive approximation method used exclusively.

Bandura (Berkowitz, 1965) defined an observational or vicarious learning event as one,

. . . in which new responses are acquired or the characteristics of existing response repertoires are modified as a function of observing the behavior of others and its reinforcing consequences, without the modeled response being

overtly performed by the viewer during the exposure period. In demonstrating vicarious learning phenomenon, it is therefore necessary to employ a non-response acquisition in which a subject simply observes a model's behavior, but otherwise performs no overt instrumental responses, nor is administered any reinforcing stimuli during the period of acquisition. Any learning that occurs under these limiting conditions is purely on an observational or covert basis. This mode of response acquisition is accordingly designated as no-trial learning, since the observer does not engage in any overt responding trials (p. 3).

Bandura, Ross and Ross (1961) produced strong evidence that

. . . observation of cues produced by the behavior of others is one effective means of eliciting certain forms of responses for which the original probability is very low or zero. Indeed, social imitation may hasten or short cut the acquisition of new behaviors without the necessity of reinforcing successive approximations as suggested by Skinner (p. 580).

Bandura et al. (1961) found that subjects who observed aggressive models later reproduced a good deal of physical and verbal aggression substantially identical with that of the model. In contrast, subjects who were exposed to nonaggressive models and those who had no previous exposure to any models only rarely performed such responses.

Rosenblith (1959) found that having a model was more effective than merely having additional trials. Using a maze learning task, she found that with kindergarten children a model has a significant effect on their amount of improvement.

Bandura, in numerous studies, has demonstrated the effects of observational or vicarious learning on children's behavior. Bandura, Ross and Ross (1963a) demonstrated that nursery school children exposed to film-mediated aggressive models will imitate the model's aggressive behavior to a significant degree and will display twice the number of aggressive responses as compared with a control group who saw no model. Bandura et al. concluded, "The results of the present study provide

strong evidence that exposure to filmed aggression heightens aggressive reactions in children. Filmed aggression not only facilitated the expression of aggression, but also effectively shaped the form of the subject's aggressive behavior (p. 9)."

Kuhn, Madsen and Becker (1967) used 20 nursery school children in four different treatment groups. All children were allowed to play with some toys. The first group was then frustrated, the second group was exposed to an aggressive film-mediated model, the third group observed an aggressive model and then were frustrated, and the fourth group was used as a control. All children were then returned to the playroom for a post test of aggressiveness. The authors concluded, "The strong effect of aggressive modeling found in the present study is in accordance with Bandura's work (p. 743)." They also found that frustration does not enhance aggression as predicted and explained this in the following manner, "With the addition of frustration, many children seemed to forget the movie during the post test, and much wandering about the room in a subdued, aimless manner was evident. Imitative and non-imitative behavior appeared much more spontaneous in the other groups (p. 743)."

Lóvaas (1961) tested the effect of exposure to symbolic aggression on the play behavior of children. The children were observed as they played with a bar pressing apparatus that initiated aggressive action between two dolls. He hypothesized that bar pressing behavior would increase after viewing an aggression packed film. A definite increase in response to the aggressive doll action after exposure to the aggressive film confirmed the hypothesis.

Mussen and Rutherford (1961) sought to test the hypothesis that exposure to aggressive fantasy in an animated cartoon may intensify children's

impulses to aggression. After viewing cartoons of an aggressive nature, the intensity of the child's aggressive impulses was inferred from his responses to questions concerning his desire to "play with" or "pop" a large yellow balloon. The hypothesis was confirmed - - the children did react aggressively after viewing the cartoon.

Conditions Affecting the Performance of Aggressive Behavior

Learned aggressive behavior, via modeling processes, may not be performed spontaneously. Bandura (1965) verified that there is a difference between the assimilation and the performance of aggressive responses. He found that performance of aggressive behavior, both imitative and non-imitative, is dependent upon observational and post-observational conditions.

One of the two important observational condition variables affecting the subject's performance is the observed reinforcement that the aggressive model receives. The following studies all demonstrate that a subject's performance of aggressive behavior is facilitated or inhibited by the response consequences for the aggressive model. Bandura (1965) had groups of children observe an aggressive film-mediated model under three different treatment conditions, model rewarded, punished, or left without consequences. He found in a postexposure test that response consequences to the model produced differential amounts of imitative behavior. The group that viewed the model-punished condition performed significantly fewer imitative responses than both of the other two groups. Bandura then offered the children in all three groups attractive rewards if they reproduce the model's aggressive responses. He found "The introduction of positive incentives completely wiped out the previously observed performance differences, revealing an equivalent amount of learning among

children in the model-rewarded, model-punished, and the no-consequence conditions (p. 594)."

Bandura, Ross and Ross (1963b) found " . . . children who witnessed an aggressive model rewarded, showed more imitative aggression and preferred to emulate the successful aggressor than children in the aggressive model punished group who both failed to reproduce his behavior and rejected him as a model of emulation (p. 601)."

Schein (1954) in an early modeling study, found that a significant number of subjects learned to imitate a model when such imitation was rewarded. The experimenter also found the imitative response generalized to a similar but new situation even though it was no longer rewarded.

Hicks (1965) in a study designed to test for retention of observational learning, gave positive incentives for imitative aggression following the delayed retest for spontaneous imitation. Hicks also found that, due to the introduction of incentives, a significant increase occurred in imitative aggressive behavior.

Another important observational condition affecting the subject's performance is the social setting in which the observational learning takes place.

Bandura and McDonald (1963) tested the relative efficacy of social reinforcement and modeling procedure in modifying moral judgmental responses. A sample of children was divided into three experimental groups. The first group observed adult models who expressed moral judgments opposed to the children's orientation, and were reinforced for imitating the model's evaluative responses. The second group observed the same adult models and corresponding moral judgments but were not reinforced for imitative responses. A third group observed no models

but were reinforced for expressing moral judgments that ran counter to their personal values. Following the treatment conditions, the subjects were tested for generalization effects. Bandura and McDonald demonstrated that children's moral orientations can be altered and even reversed by the manipulation of response-reinforcement contingencies and by the provision of appropriate social models.

Hicks (1968) investigated the effects on film-mediated aggression of a co-observer's positive, negative or non-sanctions and his subsequent presence or absence during performance opportunities. "Positive and negative sanctions produced corresponding disinhibition and inhibition effects only when the experimenter remained with the children during a post exposure test of imitative performance (p. 303)." Hicks concluded that children's expectancies for receiving various consequences determined the amount of aggressive imitation.

In a similar study by DeRath (1963) an adult co-observer emitted specific verbal condemnations against specific aggressive acts performed by a model in a film. These verbal prohibitions or condemnations served to inhibit the subjects imitation of the model's aggressive behavior.

The most relevant post-observational condition, for this study, is that of the similarity factor. Goranson (1969) explained the similarity factor,

When children observe aggressive models, in a modeling experiment or in the mass media, the aggression is always seen in a particular setting containing a variety of cues. In the research situation, the child is given an opportunity to imitate the aggression in a highly similar testing setting, one containing practically all of these cues. Following exposure to media aggression, the child may or may not encounter a situation similar to the original observational setting (p. 401).

For example, Bandura, for his observational condition, would film one of

his confederates aggressing against a bobo doll and other toys in a particular room. The subject, after seeing the film of Bandura's aggressive confederate, would be placed in the same room with the same toys that were used for the modeling and experimental condition. Because of this high similarity condition, the results of the film-mediated aggression studies have been severely criticized by Klapper (1968). He wrote,

Bandura and his colleagues extrapolated their findings to real life situations, ignoring the major ways in which the laboratory experiments differed from real life, for example: that the stimulus material for the experimental group consisted entirely, or very nearly entirely, of exhibitions of such attack by adults, outside of any context at all, and untempered by exhibitions of other activities, or by the presence of other adults in the exhibition; secondly, that the children were placed for the criterion behavior period in a physical situation identical in every respect with the situation of the adult in the film (p. 135).

Meyerson (1966) examined this one factor of similarity. Children in the study observed an aggressive model and then were placed in an experimental setting which was either high, medium or low in similarity to the observational setting. The results showed that the level of imitative aggression increased with increasing similarity between the film and post-film settings.

Greenwald and Albert (1967) found that the speed with which adults learned complex motor tasks was determined by the number of common elements that were present in both observational and experimental situations.

It has been demonstrated by Bandura et al. (1963a), Kuhn et al. (1967), Løvaas (1961), and Mussen and Rutherford (1961) that exposure to film-mediated aggression models generates a corresponding aggressive influence in children. Bandura (1963) reminds the reader that, "Television is but one of several important influences on children's attitudes and social behavior, and other factors undoubtedly heighten or suppress its

affects (p. 52)." However, Klapper's criticism of the high similarity factor appears valid and legitimate and has been collaborated in the research by Meyerson (1966) and Greenwald and Albert (1967). In response to the original question, then, of whether television violence produces corresponding behavior, one can only respond, "only under certain specified conditions." A general indictment of television violence on the basis of its facilitating of aggression can only be made once the similarity between observational and experimental settings is eliminated.

Resultant Emotional Effects of Viewing Television Violence

There are many scientists who cannot agree with the hypothesis that television violence stimulates children to aggression. However, they do not believe that the saturation of television programming with violence is harmless. Numerous studies have found that subjects observing violence increased their anxiety level and experienced physiological and emotional reactions.

In the study by Siegel (1956), and aggressive cartoon film did not increase aggressive behavior, but it was found that there was a highly significant increase in the level of rated anxiety.

Himmelweit, Oppenheim, and Vince (1958), in a very thorough study of the effects of television on children, found that what frightens and produces anxiety in the child depends on both the stimulus and the child. One of the principle findings was that children would become considerably upset if a character that they readily identified with was threatened or aggressed against.

Berger (1962) set up his experiment so that the subject observed a confederate ostensibly being shocked in a reaction-time study. The

confederate was not shocked, but acted out behavior as though he was being electrically stimulated. One of Berger's findings was that the subjects demonstrated physiologically that intense emotional reactions (as measured by galvanic skin response) are produced in an observer watching the extreme discomfort of another person.

It is a fairly common reaction to become upset by violence that we see perpetrated in real-life, on a television news program or that we read about in the newspaper. The aforementioned studies verify that this reaction does exist and that it is also common in all age groups, e.g., Himmelweit et al. (1958), "The impact of television does not lessen with time and veteran viewers are as frightened as recent ones (p. 210)." Given this finding, the question becomes - what happens to persons that habitually observe violence?

Berger (1962), in the study cited earlier, found that the strength of the observer's galvanic skin response decreased progressively upon continual presentations of shocks to the confederate. Lazarus, Spiesman, Mordkoff and Davison (1962) presented to their subjects a film demonstration a primitive tribal ritual that consisted of male genital mutilation. In each 17 minute film presentation, the subject witnessed six individual and separate genital incisions. Among other findings, Lazarus et al. discovered,

. . . there is a progressive drop in the amount of disturbance for the group as a whole during the entire film. That is, the peaks (of the galvanic skin response, high being increased emotional response) are not as high toward the end of the film as they were at the beginning (p. 30).

It could legitimately be hypothesized that the adaptation process is taking place and that the viewer is becoming use to the once anxiety-provoking stimulus.

Berger and Lazarus et al. have demonstrated via adaptation that anxiety toward a stimulus can be progressively reduced. Jones (1924) using social imitation eliminated children's fear of rabbits and rats. Bandura, Grusec, and Menlove (1967) have experimented successfully with the elimination of phobic anxieties via observation of models. In this particular study, children who had a fear of dogs, were involved in a festive party when a peer model appeared and interacted with a dog. There were eight 10-minute treatment sessions conducted on four successive days. A model, who was chosen for his complete lack of fear of dogs, performed prearranged sequences of interactions with the dog for approximately three minutes during each session. The fear provoking properties of the interaction were gradually increased with each treatment session. This was accomplished by eliminating the physical restraints on the dog, and increasing the model's physical proximity to the animal and the duration of boy-dog interaction. Bandura et al. concluded,

The findings of the present experiment provide considerable evidence that avoidance responses can be successfully extinguished on a vicarious basis. This is shown in the fact that children who experienced a gradual exposure to progressively more fearful modeled responses displayed extensive and stable reduction in avoidance behavior (p. 21).

Bandura and Menlove (1968), in an experiment designed to test for the effects of different modeling stimuli on the subject's vicarious extinction of avoidance behavior through symbolic modeling, replicated the results of their 1967 study.

Wolpe (1965) in many studies has pointed to adaptation effects in the elimination of phobic anxieties via desensitization. This desensitization process involves the presentation of anxiety provoking stimuli in a setting that is relaxed or inhibitory of anxiety. Wolpe stated,

Under these circumstances, what apparently happens is

that on each occasion the relaxation inhibits the anxiety, to some extent, and somewhat weakens the anxiety-evoking potential of the stimulus concerned. With repetition, this potential is brought down to zero (1965, p. 12).

Sears, Maccoby, and Levin (1957) formulated a hypothesis which stated that members of our culture ". . . do not tolerate aggression comfortably, neither their own or that displayed by others. It evokes too much anxiety . . .(p. 265)." Goranson draws a parallel between desensitization and the process in which the television viewer might be "cured" of his aggression anxiety, due to his constant visual diet of aggression. One might then question whether this blunting of the television viewer's emotional sensitivity is appropriate and desired.

Television Violence and the Catharsis Effect

An ancient view of drama is that action on stage provides the spectators with the opportunity to release their own strong emotions harmlessly, through identification with the people and events depicted in the play. Defenders of the violent content in television programming often cite this effect as being the beneficial aspect of viewing violence.

Feshbach (1961), in an experimental examination of film-mediated catharsis, divided a sample of college students into four treatment levels: (a) subjects insulted and exposed to aggressive film, (b) subjects not insulted and exposed to aggressive film, (c) subjects insulted and exposed to neutral film, and (d) subjects not insulted and exposed to neutral film. He then used the Word Association Measure to test for level of aggression. Feshbach hypothesized,

Participation in a vicarious aggressive drive results in a reduction in the subsequent aggressive behavior. If aggressive drive has been aroused at the time of such participation in a vicarious aggressive act, such participation results in an increase in subsequent aggressive behavior (p. 381).

Feshbach confirmed his hypothesis and found that the performance of subjects who were insulted and witnessed the aggressive film sequence (thus participating vicariously) resulted in a significant decrement in aggression, in contrast to the insulted subjects who saw the neutral film. Feshbach interpreted his results to be in support of the catharsis hypothesis.

Feshbach (1969) sought to discover the effect of aggressive television programming upon boys. The experimenter, in order to have strict control over television viewing time, used subjects who were members of military prep schools and homes for wayward boys. The population was divided into one group who watched aggressive television programs and a control group who viewed nonaggressive programs. A six week period of controlled viewing constituted the length of the trial period. In order to test for possible effects, subjects were administered a number of personality tests and attitude scales at the beginning and end of the experimental period. Feshbach found that,

. . . exposure to aggressive content in television over a six week period does not produce an increment in aggressive behavior. The results in fact strongly indicate that witnessing aggressive television programs serves to reduce or control the acting out of aggressive tendencies rather than to facilitate or stimulate aggression (p. 467).

Feshbach, however, qualified his results. Since the experiment employed commercial television programming, control of the structure, format and precise content of the experimental stimuli was sacrificed. Another procedural problem involved the control group. "We recognized from the very beginning of the study that boys preferred aggressive TV programs to non-aggressive ones, and were concerned about the possibility that boys might resent being assigned to the non-aggressive 'diet' (p. 469)."

Feshbach also acknowledged that the interpretation of the data are essentially ad hoc explanations. Though the results of the study found that television fails to stimulate the viewer to aggressive behavior but may control or reduce aggressive behavior, Feshbach concluded, ". . . we would not advocate, on the basis of the present findings, that boys should be encouraged to watch aggressive TV programs (p. 472)."

The findings of Berkowitz and Rawlings (1963) position them firmly against Feshbach and the catharsis hypothesis. Berkowitz attributes Feshbach's results of lower aggressive responses, in subjects who have just seen a violent film sequence, to inhibition of aggressive responses due to the effect of watching someone being hurt. Berkowitz stated that this produced a corresponding attitude that aggressive behavior was wrong. In his experiment, Berkowitz divided his population of college students into two groups. Both groups saw the prize fight sequence from the movie "Champion", but one group was told that the victim of the beating was a scoundrel and deserved the thrashing, and the second group was essentially told the beating was unjustified. Berkowitz hypothesized that if the subjects perceive the aggression as justified, the restraints against hostile responses will be weakened. This reduction in aggression inhibition will lead to an increase in the display of hostility towards the antagonist who had insulted him prior to the movie. This is contrary to the catharsis hypothesis that would predict a vicarious purgation of hostile or aggressive emotions. After the movie, the subject was allowed to shock the confederate who had insulted him.

(Again, the confederate was in another room and was not shocked.)

Berkowitz found that insulted subjects who had seen the violent film from the mental set of justification did administer significantly more shocks

to the confederate. Berkowitz concluded that, if in watching the filmed aggression, the subject saw the aggressor as justified in his use of violence, then the viewer may be primed to act aggressively towards any antagonist within his own immediate environment.

Berkowitz, Corwin, and Heironimus (1963), in a study that was designed to provide better control groups for the Berkowitz and Rawlings (1963) experiment, replicated the results of the earlier study.

Hartmann (1965) had 72 male adolescents, under court commitment to the California Youth Authority, participate in his study where they were assigned to one of three treatment groups. All three groups watched a film where two boys were playing basketball. One group saw a fight develop between the two players and it focused on the victim's verbal and gestural pain reactions as he was vigorously beaten by his opponent. The second group saw the two boys fighting with the film focusing the aggressor's responses. The third group saw the same two basketball players engage in a highly active but non-violent game. After exposure to the film, the subjects were allowed to administer shocks to a confederate who had insulted them prior to the film presentation. One of Hartmann's findings was, "Regardless of their level of arousal, subjects who witnessed either instrumental aggressive responses or displays of injury exhibited a greater degree of punitiveness as compared to subjects who had observed non-aggressive models (p. 4088)."

Walters and Thomas (1963) used male hospital attendants, high school boys, and young female adults as subjects to study the influence of film-mediated aggressive models. Each of the three groups of subjects were further subdivided so that half saw the knife sequence from the movie "Rebel Without a Cause" and the others, acting as a control, saw adoles-

cents engaged in constructive activities. After viewing the film, subjects administered shocks to a confederate for errors on a learning task. They found that the aggressive post-film subject's shock levels were significantly higher than the control group's levels. This result was consistently observed across all three groups of subjects.

Goranson (1969) appraised evidence, both favorable and unfavorable, to the catharsis hypothesis and concluded,

In light of the persistent belief in symbolic aggression catharsis, and the volume of research evidence against it, the time has perhaps come to recognize the extremely limited validity of the symbolic catharsis doctrine. This conclusion should not be too surprising. Bandura has pointed out that we would scarcely advocate that adolescents be shown libidinous films as a means of reducing sexual behavior, nor would we advise that a starving man observe the eating of a delicious meal in order to diminish his hunger pangs. Similarly, we should not expect that the outpouring of violence in the mass media will have the effect of reducing aggressive behavior (p. 459).

Statement of Purpose

As mentioned previously, Bandura et al. (1963a) were criticized for the high similarity between observational and experimental conditions. This criticism appears legitimate since children are rarely in an environment highly similar to that of the television model. Nor do they have the types of weapons or implements of destruction that are at the disposal of the video model. The purpose of this study is to answer this criticism by introducing an observational or modeling situation that is highly dissimilar to the experimental setting. Therefore, this study is attempting to answer the question, "Are learned aggressive behaviors performed in new or different situations than those in which they were learned?"

The primary hypothesis of this study is children viewing the

violent videotape will display a significantly higher level of aggressiveness than the subjects who witness a non-violent videotape and a control group, who will view no videotape.

Subjects will view a non-aggressive videotape in order to limit any significant differences to program content rather than the simple viewing of television.

CHAPTER II

METHOD

Subjects

The subjects were 18 boys and 18 girls ranging in age from 39-67 months, with a mean age of 55 months. The subjects were drawn from the Central Washington State College community. Eleven children were enrolled in the C.W.S.C. Home Economics Nursery school, 18 children were enrolled in the Hebeler Elementary Nursery School and seven subjects were children of Psychology faculty members at C.W.S.C. All subject's parents were faculty members or currently enrolled college students at C.W.S.C.

General Procedure

Subjects were divided into two experimental groups and one control group of 12 subjects each. One group of experimental subjects observed an aggressive television program; the second group viewed a non-aggressive television program. Following the exposure experience, subjects were tested for aggressive behaviors. The control group subjects had no exposure experience and were observed only in the test situation. In each of the three treatment conditions subjects were equally subdivided by sex.

Experimental Conditions

Subjects in the experimental groups were brought by a confederate to a viewing room where the subject was seated in front of a video tape monitor (similar in all respects to a typical black and white television). The confederate then turned on the monitor and took a seat next to the child.

The experimental group that viewed the aggressive models saw a video tape of the movie "Neighbors" by Norman McLaren (National Film Board of Canada). The film is nine minutes long and shows two next door neighbors physically fighting over a flower that has grown on their boundary line. The experimental group that viewed the non-aggressive models saw a nine minute video taped segment of the television program "Sesame Street" (originally broadcasted March 24, 1970).

At the conclusion of the film, the confederate stood up, turned off the monitor and said, "Well, I guess that's the end. Let's go play with some new toys." The confederate then escorted the subject to the test room.

Test For Performance of Learned Aggression

The test room contained a variety of toys, some of which tend to elicit either aggressive or non-aggressive behavior. The aggressive toys included a Bobo doll, (a 1.3 meter inflatable rubber toy, weighted at the bottom with sand) a plastic gun and forty (.025 meter) rubber combat soldiers. The non-aggressive toys included a tea set, a coloring book and crayons, a colorful yellow ball, two dolls, and two trucks.

In order to eliminate any variation in behavior due to mere placement of toys in the room, the play material was arranged in a fixed order for each of the sessions.

The subject was accompanied by the confederate in the test situation. The subject was told that he could play with any or all of the toys. The confederate then took a seat in a corner of the room and read the newspaper. The confederate initiated no interaction and attempted to maintain minimal interaction with the child during the test period.

The subject spent 15 minutes in the experimental room during

which time his behavior was rated, in terms of pre-determined response categories (Appendix A), by judges who observed the session through a one-way mirror from an adjoining observation room. The judges were unaware of the subject's treatment group membership. This was purposefully done in order to eliminate any experimenter bias in the rating of behavior. Bandura's (1963a) study lacked this control. The judge was aware of what treatment group the subject was in. The 15 minute session was divided into three minute intervals in order to test for behavior differences over time.

The experimenter scored the experimental session for all subjects. In order to provide an estimate of interjudge agreement, the performances of 50% of the subjects were scored independently by a second observer. The responses scored involved highly specific concrete classes of behavior, and yielded high interrater reliabilities, the Pearson product-moment coefficient equalling .98.

CHAPTER III

RESULTS

The mean aggression scores for subjects in the experimental and control groups are presented in Table 1.

Since the distribution of scores departed from normality and an F max test indicated the assumption of homogeneity of variance was violated, a log transformation of scores was made.

A split plot 2 x 3 x 5 repeated measure analysis of variance was done on the transformed scores to test for differences and variations over treatment groups, sex and time. The results of this analysis of variance reveal that the main effect of treatment conditions is non-significant at the .05 level (Table 2). The only significant result found was male subjects are more aggressive than female subjects. This finding is

TABLE 1

Mean Number of Aggressive Responses

	<u>Male</u>	<u>Female</u>
Aggressive Group	3.56	2.26
Non-Aggressive Group	3.29	2.41
Control Group	5.11	2.57

in agreement with male-female differences, in terms of aggressive responses, as found by Bandura et al. (1963a). A comparison among means was run on the male-female aggressive differences and it was found that male subjects are more aggressive than female subjects across all treatment levels. A Kruskal-Wallis One-Way Analysis of Variance by Ranks confirmed the results of the split-plot analysis of variance. A comparison among treatment levels and across time showed no significant differences. A comparison between sexes did show a significant difference, in terms of aggression, at the .05 level.

TABLE 2

Analysis of Variance

Source	SS	df	MS	F
Treatment (A)	1.47	2	.73	.96
Sex (C)	4.45	1	4.45	5.86*
AC	.9	2	.45	.59
Subjects w. groups	22.8	30	.76	
Time (B)	.54	4	.14	.78
AB	1.65	8	.21	1.17
BC	1.15	4	.29	1.61
ABC	1.33	8	.17	.94
B x subject w. groups	21.93	120	.18	

*= $p < .05$

CHAPTER IV

DISCUSSION

The results of this study do not allow the experimenter to accept the proposed experimental hypothesis. It was found that there is no significant difference in the level of aggressive play behavior of subjects who have viewed an aggressive video tape, a non-aggressive video tape or a control group which did not view a video tape.

The critical variable was the dissimilarity between the observational learning situation and the performance situation. According to the data, when such a dissimilarity exists there will be little or no performance of learning. This finding is in agreement with the results of Meyerson (1966) and Greenwald and Albert (1967). Both studies found the level of imitation increased with a corresponding increase in the similarity between observational and experimental settings. In order to precipitate the performance of certain learned behaviors, there must be a number of common elements between the observational and experimental conditions.

One possible explanation of the non-significant differences across treatment levels may be that aggressive behavior is more of a direct function of individual differences than of a stimulus in the immediate environment. If parents are permissive in their control of the child's aggression, the child may have already established an aggressive behavior repertoire. Therefore, even though he watches a non-violent television program, he will still react aggressively, as this is consistent with his past behavior.

This may also be true for the child whose parents actively discourage the expression of aggression. This child may have established a behavior pattern where aggressive behavior is virtually absent. Consequently, it appears to make little difference whether this child views a violent or non-violent television program, since he will react to both of them in his usual behavior pattern, non-aggressively. This is not to say that violence cannot be learned by imitation, only that it is limited by its generalizability.

Frustration of subjects was not employed in this study due to findings of Kuhn et al., (1967). The authors report frustration had a depressing effect on children's behavior. Also a telephone conversation with Dorethea Ross (co-author with Albert Bandura on many studies) revealed to the experimenter that frustration was an unnecessary complicating factor. Ross stated that if subjects in the aggressive television-mediated group reacted more aggressively than the subjects in the other two treatment groups, then one could assume that the findings would still be valid with the introduction of frustration. During the course of the experiment, the experimenter noticed that approximately one-third of the subjects drawn from the nursery school environments, asked the confederate if they could go back to the nursery school. (The nursery schools were large and very attractive rooms filled with a variety of toys and more than a dozen peer playmates. The testing room paled in comparison). The confederate replied that someone from the nursery school would come for them in a few minutes and at that time they could leave. This explanation seemed satisfactory to the subjects but afterwards they would typically be listless and would interact minimally with any of the toys. This depression of activity or play behavior may

then be in accordance with the findings of Kuhn et al., (1967) and therefore may explain the non-significance between treatment groups. It is hypothesized that being pulled out of such a highly attractive environment as the nursery school and being placed in an admittedly less attractive situation was a frustrating circumstance for the subjects and consequently depressed their play behavior.

The significant difference found between the sexes in terms of aggressive responses is consistent with American cultural standards. In this culture, it is permissible for boys to engage in aggressive type activities. However, girls are discouraged from acting in a similar manner, since to do so would be "un-feminine" or "un-ladylike."

After the viewing and rating of behavior the experimenter questions the validity of the criterion of an aggressive behavior. One female subject stood and tapped the Bobo doll for almost the entire experimental period. This behavior did not seem to be the least bit aggressive, yet her aggressive behavior score was four times as great as any other subject. To a lesser degree, this criticism can also be leveled at the rating of almost all other subjects.

CHAPTER V

SUMMARY

Thirty six nursery school children were tested under three different control conditions: 1) exposure to film-mediated aggressive models 2) exposure to film-mediated non-aggressive models and 3) control, no models. Following the exposure treatment, experimental subjects were taken to a room and allowed to play with a variety of toys. Control subjects were taken immediately to play room by passing exposure treatment. The critical variable introduced was a high dissimilarity between modeling and test situation. It was hypothesized that subjects viewing film-mediated aggressive models would perform more aggressive behaviors in the test situation, than either of the other two groups, despite the low similarity factor. Results failed to confirm this hypothesis. It was found that boys were more aggressive than girls across all treatment levels.

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APPENDIX A

CRITERION OF AGGRESSIVE BEHAVIOR*

- I. Bobo Doll
 - A. Aggressive Responses
 1. Child rolls a ball toward, or tosses it at Bobo.
 2. Child kicks or shoves Bobo with his foot.
 3. Child punches, taps, slaps, shoves or wrestles with Bobo.
 4. Child strikes, taps or shoves Bobo with any other toy, e.g., jabs Bobo with gun, doll, etc.

Note: Sometimes children combine two aggressive responses in a single act, e.g., child strikes Bobo and kicks it simultaneously. These acts will be doubled scored, that is, they will constitute two units of aggression and will be reported as such.
 - B. Non-aggressive Responses
 1. Child sits on Bobo, bounces up and down on it, lies or rolls on it.
 2. Child embraces Bobo, carries it around, dances with it, stands along side Bobo with his arm around it, etc.

- II. Gun
 - A. Aggressive responses
 1. Child aims the gun and shoots imaginary bullets.
 2. Child strikes any other toy with gun.
 - B. Non-aggressive Responses
 1. Child examines the gun, loads it, carries it in his hand.

- III. Verbal Aggression
 - A. Aggressive Responses
 1. Hostile, aggressive, derogatory remarks (e.g., stupid ball... I knock over people... I cut him...); statements of intent to inflict injury or damage (e.g., I'm going to shoot Bobo... I'm going to kill these army men...)
 - B. Non-aggressive Responses
 1. All other verbal remarks.

- IV. Other Responses
 - A. Aggressive
 1. This category includes physically aggressive acts directed toward the army men, the dolls or the cars, e.g., initiates fights between the army men or the dolls, crashes the cars, or runs them into the other toys, etc.
 - B. Non-aggressive
 1. This category includes all non-aggressive play with the dolls, the cars, the coloring book and the army men.

*Criterion developed by Albert Bandura, with slight modification for adaptation to this study.

APPENDIX B

TABLE 3

Aggressive Responses (Raw Scores)

		Time					
	Males	b ₁	b ₂	b ₃	b ₄	b ₅	
A	1.	2	0	0	0	0	
	2.	1	0	1	4	0	
	3.	56	50	2	1	6	
	4.	31	11	12	7	8	
	5.	50	25	2	0	0	
	6.	9	15	16	2	4	
		Females					
	7.	47	0	0	0	0	
	8.	0	0	0	0	0	
	9.	2	0	14	0	10	
	10.	0	29	22	4	8	
	11.	0	0	0	0	0	
12.	0	2	4	3	13		
NA		Males					
	13.	9	0	0	0	0	
	14.	2	9	24	33	23	
	15.	7	8	2	3	3	
	16.	1	0	2	10	6	
	17.	2	4	0	0	0	
	18.	30	30	0	18	2	
		Females					
	19.	112	132	161	58	0	
	20.	0	5	4	9	0	
	21.	7	0	0	0	0	
	22.	0	0	0	0	2	
23.	0	0	0	0	2		
24.	0	0	0	0	0		

AGGRESSIVE RESPONSES (RAW SCORES)

Males	b ₁	b ₂	b ₃	b ₄	b ₅
25.	16	16	8	1	7
26.	5	0	4	0	7
27.	3	24	16	24	7
28.	10	13	0	8	14
29.	9	19	45	13	20
30.	48	26	73	8	15
Females					
31.	0	0	2	5	0
32.	0	0	0	0	0
33.	0	2	6	4	7
34.	0	23	0	40	19
35.	0	1	1	3	12
36.	6	14	18	0	0

C

Note. - A=aggressive group, NA=non-aggressive group
C=control group.