

AROUSAL AND EMOTIONALITY OF WORDING IN PRINTED
ACCOUNTS OF VIOLENCE AS FACTORS
IN SUBSEQUENT AGGRESSION

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CHAPTER I

INTRODUCTION

One need not be acquainted with American society for very long before it becomes evident that the typical style of life has become a very violent one. One is constantly bombarded in television, radio, and movie film with scenes of both real and staged violence. The pages of the newspapers faithfully report all the gory details, accompanied by pictures from several different angles, of every mishap or criminal act which has the potential to arouse the insatiable American appetite for viewing violence. People have become so used to seeing and hearing violent accounts in the media that it now appears that mere wars, riots, murders, or other violent actions must have some ironic "public interest" aspect to them to be noticed at all. Gerbner (1971) has reported that violent episodes occur on television at the rate of over eight per hour. Saturday morning viewing, which remains as the prime viewing time for children, is perhaps the most violent of all. Fully 94 percent of the cartoon programs most avidly watched were found to focus on at least one violent episode.

An increasing amount of concern on the part of some individuals has been shown regarding the possible effects which this continuous bombardment with violence via the media is having on our society. Some authorities (Klapper, 1960) feel that the effects are generally exaggerated and that there is actually little cause for alarm. Others

(Wertham, 1968) contend that the continuous exposure of children to hostile material is having a much more extensive effect than is generally recognized, and have gone so far as to declare that much of television is merely a school for violence. The presentation of so much violence carries with it tacit approval of the idea that most of life's frustrations can be solved or overcome by finding the appropriate aggressive and violent action. With the recent increase in bombings, skyjackings, assassinations, and kidnappings it has been suggested that the mass media are unknowingly helping to undermine the bonds of our society.

There are also those who feel that violence and hostility are a natural part of everyone's life, and in attempting to repress it we are only making it worse. The mass media, in devoting time and space toward publicizing violence, are actually serving a necessary social function. As each individual views the violence he identifies it with his own violent tendencies, and so the portrayed violence serves as a vicarious outlet for the expression of his own hostile impulses.

In 1972 the Surgeon General of the United States commissioned a Scientific Advisory Committee on Television and Social Behavior to investigate the impact of televised violence on subsequent aggression. In its report to the Surgeon General the committee concluded that viewing violence can indeed increase aggressive behavior. However, there still are many aspects to the more global question of aggression and violence which need to be investigated.

The intent of the present study is to study the effect which exposure to violence in literature has on aggression, with a particular

interest in whether the emotionality of the words used in the account has any effect on the intensity of the induced aggression.

CHAPTER II

REVIEW OF LITERATURE

The Catharsis Hypothesis

There are at present two major opposing theories regarding the effects of exposure to hostile or aggressive behavior on subsequent behavior. The catharsis hypothesis maintains that participation in an aggressive act, whether physically or vicariously through exposure via some medium, will serve to decrease the tendency toward further aggression by reducing the hostile or aggressive impulses within the individual. This view, which is an extension of the psycho-analytic concept of catharsis, is seen by many as having socially beneficial effects in reducing the amount of aggression in society. The presentation of hostility and aggression by the mass media is an effective way to provide socially-acceptable outlets for the release of aggressive impulses by allowing the individual to vicariously participate in the aggressive act, and thereby decrease his own motivation to aggress.

The most noted proponent of this theory is Feshbach. In his well known study done in 1955, Feshbach found support for the theory using projective fantasy as an outlet for the hostility. He angered two groups of college students and then gave half of them the opportunity to respond to the anger by writing projective fantasy stories in response to TAT cards. Feshbach found that writing aggressive TAT stories

resulted in a reduction in subsequent aggressive tendencies, as measured by a questionnaire dealing with aggressive feelings. He concluded that the group which had a chance to express their anger through fantasy had themselves vicariously aggressed, and the task had thus been cathartic. Lewin, Lippitt, and White (1939) produced further support for the catharsis position. They found that children's aggressive tendencies decreased after they were given the opportunity to scapegoat their feelings onto a neutral object. In extending the support for his position, Feshbach (1961) exposed his subjects to either a violent ten-minute fight scene or a film about how rumors spread in a factory. Half of the subjects viewing each film had been insulted and were anger-aroused, the other half were not. He found that exposure to the fight film had the hypothesized cathartic effect, but only if the observer was in a state of anger-arousal at the time of viewing the film. Thus the cathartic effect seems to be dependent on the previous state of arousal of the individual. Feshbach and Singer (1971) have provided another study of the catharsis hypothesis. They controlled the television diet of several adolescent boys in an institutional setting for several weeks. Daily ratings of each boy's aggressive behavior were also kept. They found that several of the boys who viewed the non-violent television programs exhibited more aggressive behavior than those boys who were exposed to the violent programs.

In other attempts to validate the cathartic position contradictory evidence has been found. Siegel (1956) exposed children between the ages of three and five to either an aggressive or non-aggressive film. Following the film, children from each of the groups were placed together in a playroom and their levels of aggression measured and

recorded. One week later the same children were exposed to the film which they had not seen previously, and again their aggressive behaviors were recorded. Siegel found a tendency toward increased aggression following exposure to an aggressive film rather than a decrease, as would be predicted by the catharsis hypothesis. Mallick and McCandless (1966) gave third-grade children a difficult task, and then frustrated half of the subjects with interruptions and prevented them from completing it. All the children were then allowed to play aggressively by shooting guns at targets. Following the play period they were allowed to "get even" with their frustrator by interfering with his work. No reduction in the instigation to aggression was found in either the frustrated or non-frustrated group as a result of the opportunity to engage in aggressive play. Mallick and McCandless concluded that the aggressive play had no cathartic value. However, the results did indicate that when the children were provided with a reasonable positive interpretation for the frustrator's action a reduction effect was found. The expression of aggression in itself was not sufficient to result in a reduction of the amount of hostility manifested.

The Social-Learning or "Contagion" Hypothesis

In light of the contradictory results in replications of Feshbach's work, a large body of literature has appeared which questions the validity of the catharsis hypothesis. Berkowitz (1962), in a review of the experimental findings on the effects of violence via the mass media, states "there is no need for theoretical twisting and turning on this point; there simply is no adequate evidence that hostility catharsis occurs through vicarious aggression" (p. 240), and proposes a second

explanation for the effects of exposure to violence. He argues that participation, whether actual or vicarious, in aggression will increase the individual's tendency to aggress by lowering his inhibitions against aggression. Support for this view suggests that extensive coverage of violence by the mass media, instead of having a beneficial effect as the catharsis hypothesis maintains, may actually have a detrimental effect on society by increasing the tendency toward aggression.

Bandura, Ross, and Ross (1963) conducted what has become a classic study on the effects of violence on nursery school children. The children were shown either a live model engaged in aggressive actions toward a Bobo doll, a film of the same model aggressing toward the doll, or a cartoon character aggressing toward a doll. The children were then frustrated and left to play in a room with a number of toys including a Bobo doll. In all three of the conditions the results were an increase in the amount of aggressive behaviors by the child toward the doll.

In a similar study Lovaas (1961) showed groups of nursery school children either an aggressive or non-aggressive cartoon. Later the children were allowed to play with one of two games. In one game, pressing the lever caused one doll to strike the other doll. In the other, the result of pressing the lever was merely to bounce a ball. Lovaas found that the children who had been exposed to the aggressive cartoon were more interested in the "aggressive" toy, and played with it significantly more than the non-aggressive group.

Still further evidence was provided by Mussen and Rutherford (1961) who found that children exposed to aggression will show a predisposition toward further aggression. They divided their first grade children into six groups. Three groups were given a number copying task and then

frustrated with constant criticism by their teachers. Immediately afterward one group viewed an aggressive cartoon, the second a non-aggressive cartoon, and the third was shown no cartoon at all. The remaining three groups were treated similarly, except that they were not frustrated while performing the task. Mussen and Rutherford measured each child's verbal expression of his desire to pop and destroy a balloon and found that the children who were exposed to the aggressive cartoon were significantly more intense in their desire to destroy the balloon than either of the other two groups. Whether the children had been frustrated or not was found not to be significant.

Results similar to those for children have been found using adolescents and adults as subjects. Walters, Thomas, and Acker (1962) presented adolescents and adults with a paired-associate learning task in which the subject responded to the "errors" by administering electric shock. The subjects were then exposed to either a film of a realistic knife-fight scene or a non-violent film about cooperative behaviors. In the "learning task" which followed, the subjects who saw the violent film expressed more verbal aggression and administered more severe electric shock to another individual than those who saw the movie with a non-violent theme. In another study, male college students were shown an aggressive prize-fight scene, or a non-aggressive track race film (Geen and Berkowitz, 1967). Again subjects who observed the aggressive film gave higher shocks than those who observed the non-aggressive film. Wheeler and Caggiula (1966) conducted a similar study using enlisted men in the Navy and found greater amounts of verbal aggression among the group exposed to aggression. Even viewing an extremely aggressive sport such as football can enhance hostile feelings (Goldstein and Arms,

1971).

The import of the studies conducted thus far seems to lead to the conclusion that exposure to violence does not seem to serve as a catharsis for hostile and aggressive tendencies, and substantiates Berkowitz' (1970) contention that "aggression is all too likely to lead to still more aggression" (p. 6).

Factors Involved in the Effects of Observed Violence

It is apparent that observing violence leads to a reduction in the inhibition against violence and instigates an increase in subsequent aggressive behavior. There are several factors which have been shown to be involved in influencing the magnitude of the aggressive response to situations where aggression has somehow been experienced.

One of these factors seems to be the attitude taken by the observer as to whether the violence he is witnessing is justified or not. Berkowitz (1970) contends that in our society aggression is socially acceptable when directed toward persons who deserve it. The viewing of "legitimate" aggression seems to make a person's own aggression appear more "morally proper," and thus reduce the viewer's inhibitions to aggress. Berkowitz, Corwin, and Hieronimus (1963) exposed college students to a prize-fight scene or a neutral film clip about canal boats. Prior to viewing the film, half the subjects in each group were insulted, while the other half were not. As an introduction to the prize-fight sequence, half the subjects viewing the film were given a justified explanation for the violence in the film while the others were given a summary which provided a non-justified explanation. The results showed that there is a greater increase in the likelihood of aggression

if the violence is seen as justified than if the violence is not seen as justified. A replication by Berkowitz and Rawlings (1963) confirmed the above results, that aggression which is seen as socially justified reduces the restraints against hostility and increases aggressive behavior. Meyers (1972) also found that college students who viewed justified real film violence subsequently gave more shocks and more intense shocks than students who viewed non-justified real film violence. The viewing of justified violence seems to create in the viewer the feeling that it is acceptable to attack a person whom he feels deserves to be punished. Berkowitz, Corwin, and Hieronimus (1963) postulate that because "justified" violence has been socially sanctioned the viewer might also believe that it is permissible for him to attack the "villains" or frustrators in his own life.

The stimulus properties of the potential target of the aggression is another factor which influences the effects of observed violence. Berkowitz (1965) contends that when an individual has been aroused to respond aggressively, his hostility may be held "in check" unless the appropriate aggression evoking cues are present in the environment. Only when these cues are present do the individual's hostile impulses get translated into aggressive behavior. "Thus, a person who sees a brutal fight may not himself display any detectable aggression immediately afterwards, even if his inhibitions are relatively weak, unless he encounters stimuli having some association with the fight" (Berkowitz, 1965, p. 360).

In his initial research on this topic, Berkowitz (1965) used college students who were initially either insulted or not insulted by a confederate who was posing as another student. The confederate was

introduced to the subject as either a college boxer or a speech major. The subjects were then shown a film clip of a violent boxing match or a neutral control film. When given the opportunity to shock the confederate, subjects who were angered by a confederate introduced as a boxer and then shown the violent fight film gave the greatest number of shocks. It seems the association between the target and the characters in the observed film may have precipitated the aggressive responses from the angered subjects.

Berkowitz and Geen (1966) followed this study with an attempt to establish the association on the basis of the target's name. In this study the control film depicted an exciting, though non-violent, road-race film. Half of the subjects viewing the violent boxing film were introduced to a confederate having the same name as one of the boxers. The subjects subsequently gave greater shocks when they had been angered by a confederate with the same name as the character in the aggressive film. Again, the confederate's association with aggression-related stimuli produced more aggressive attacks from the persons viewing the film.

An extension of this series of studies was conducted to investigate a possible difference in subsequent shock when the confederate was associated with the victim in the film, instead of the victor. Geen and Berkowitz (1967) insulted their male college subjects before having them view a film. To half of the subjects the insulter was introduced as "Bob", and to the other half he was introduced as "Kirk". All the subjects then saw a film clip in which the actor, Kirk Douglas, was given a severe beating. The subjects were then given an opportunity to aggress against their insulter. It was found that subjects gave

significantly stronger shocks to the insulter whose name had been associated with the name of the victim in the fight scene than to the insulter whose name was not associated with the film.

An additional study (Berkowitz and Geen, 1967) found similar results even when the association between the name of the confederate and the film character's name was formed after the film had been viewed.

Closely related to the presence of aggressive cues in the environment of the target of aggression is the similarity between the situation where the exposure to violence took place and the behavioral settings which the subject may encounter later. In both the experimental situation and in the mass media, the subject is always exposed to the aggressive model in a particular setting with a variety of specific cues. In the case of the experiment, the subsequent test for aggression is generally made in a situation which is very similar to the initial exposure and contains many of the same cues as before. However, following the exposure to the aggression via the mass media the subject may not later encounter a situation which is similar to the media setting or which contains many of the same cues as the original exposure situation.

Lovaas (1961) and Siegel (1956) used cartoon segments which depicted a large number of different highly aggressive behaviors. After each of the subjects had viewed the film he was placed in a situation which was very different from that in the cartoon and which contained virtually none of the same cues present in the cartoon. Out of four separate replications, in only one was there a tendency for increased aggression as a result of viewing the film. It seems that similarity between the exposure situation and the setting in which the subsequent aggression is measured is essential in order for the instigation to

aggression to occur.

Meyerson (1966) tested this hypothesis by exposing children to the performance of an aggressive model on film. The children were then observed in a test situation having either a high, medium, or low degree of similarity to the exposure situation. Meyerson found that the level of imitative aggression increased as the level of similarity between the exposure and test situations increased.

It appears that the level of subsequent aggression is determined in part by the level of cue similarity between the exposure situations and real-life situations which the individual encounters later. The reproduction of observed violence is "cue-specific", and thus realistic aggression portrayed in everyday settings is much more likely to be imitated.

An important, though still somewhat equivocal, body of literature has appeared which deals with a revision of the catharsis hypothesis originally proposed by Feshbach. The revised theory contends that it is not the observation of aggressive attacks which results in catharsis, but rather the observation of the tragic results of aggression that produces the catharsis. According to this hypothesis, the subsequent aggression of angered subjects should be reduced when they witness the horrific stimuli associated with the aftermath of violence--injury, pain, blood, and suffering.

Bramel, Taub, and Blum (1968) studied "an observers reaction to the suffering of his enemy." Half of the subjects were insulted by the first experimenter, and a second experimenter then played a tape recording of the first experimenter's experience as a subject in a drug experiment. In the three versions of the tape the experimenter

experienced a euphoric reaction to the drug, a neutral reaction, or a very miserable reaction. Though the results seem to be somewhat ambiguous, the aroused subjects' subsequent aggression toward the first experimenter seemed to be unaffected by exposure to the neutral or euphoric tapes, but a substantial reduction in aggression was found for subjects who had listened to the experimenter suffer in the misery version. The conclusion was that the subject's desire to punish the experimenter was reduced by the perception of him undergoing extreme suffering.

In a similar study Hartmann (1969) showed subjects three versions of a basketball game. The neutral version merely depicted a vigorous but non-violent game. In the other two versions the game was interrupted by a fist fight between two of the players. The second version focused on the attacker's responses of punching fists, kicks, angry facial expressions, and aggressive verbalizations. The third version concentrated on the plight of the victim, including close-ups of his face as he was knocked down, groans, cries, and other signs of distress. For the half of the subjects who had been angered it was found that both of the aggressive films increased the intensity of the shocks delivered ostensibly as part of a "learning task" following the film. Using intensity of shock as a measure of aggression, the same was true for the non-angered subjects, with no difference between attacker and victim films in either case. However, the results were changed somewhat when the interaction of the intensity and the duration of shock was used as a criterion. In this case the subjects exposed to the attacker film exhibited more subsequent aggression than the controls, with no difference between the aroused and non-aroused subjects in either condition.

The aroused subjects who viewed the victim film were significantly more aggressive in terms of the intensity x duration interaction than any other group of subjects, and the non-angered subjects who viewed the victim film actually reduced their subsequent aggression. When considered in this way the results seem to lend support to the revised catharsis hypothesis, but the author chose to attribute the results to a more active degree of inhibition against aggression as the result of their being sensitized to the possible serious consequences of their own aggressive reactions. The results obtained using shock intensity, and the intensity x duration interaction as a criterion of aggression are both presented here because of the low correlations which have been found (Henry, 1973; Neiberding, 1974) between measures of intensity and duration of shock, which suggests that results based on a combination of these measures must be interpreted with caution.

In an unpublished study cited by Goranson (1970), Tannenbaum and Goranson angered all of their subjects and then exposed them to a highly aggressive boxing match with either a positive ending in which the winner is unscathed and goes on to live happily ever after, a negative outcome in which the loser is severely injured, suffers a cerebral hemorrhage, and dies, or a control outcome which just reviewed events of the fight. In seeming contradiction of Hartmann's results the subjects who were angered and exposed to the negative outcome (similar to Hartmann's "victim" film) reduced the intensity of shock which they were willing to administer. In a follow-up study Goranson (1969) found the same results, even when the long term effects in the outcomes were not directly attributable to the fight. Again, the author does not consider his results to substantiate the revised catharsis hypothesis. He

instead agrees that the perception of the horrible effects of violence sensitizes the subjects to the potential harm which they might themselves inflict.

The validity of the conclusions offered by the authors of this research is still subject to question. Seemingly contradictory evidence has been found by Scharff and Schlottmann (in press), Wilkins, Scharff, and Schlottmann (in press), and Henry (1973), all of whom reported an increase in subsequent aggressive behavior following exposure to verbal reports of the results of violence. Using intensity of shock as a criterion of aggression, Hartmann (1969) also found that subjects increased their aggression after being exposed to an aggressive film which depicted the tragic results of aggression against a victim. The lack of any definitive evidence at this time makes it impossible to determine which of these results are in fact correct.

CHAPTER III

STATEMENT OF PROBLEM

The majority of the research investigating the effects of the observation of violence on aggressive behavior has employed live models or filmed and videotaped models as the medium for the observation of the aggression. However, the increase in aggressive behavior following exposure to violence does not seem to be limited to situations involving visual stimulation. Scharff and Schlottmann (1973) have found that subjects who were first angered and then exposed to a violent radio news broadcast responded with more aggression than subjects who listened to a broadcast of neutral material. Schuck, Schuck, Hallam, Mancini, and Wells (1971) found similar results using actual radio broadcasts. Wilkins, Scharff, and Schlottmann (in press) found that persons with different personality types responded somewhat differently to the observed aggression; her results for all groups were consistent with the previous findings that violence need not be witnessed visually in order to affect subsequent aggression. More recently the concern has focused on televised violence (Singer, 1971; Surgeon General's Scientific Advisory Committee on Television and Social Behavior, 1972).

A large portion of the violence presented on television is found in news broadcasts which report the events which occurred throughout the world on any particular day. Many of the events which the news agencies deem important, and to which they devote extensive coverage, focus on

acts of violence and aggression. In so doing the news agencies expose their viewing public to a substantial amount of violence. The news agencies have also long recognized that a substantial part of the impact on the public of any news event which they report is governed by the nature of the words which are used in the broadcast. A very emotionally worded news item which vividly portrays the occurrence of a violent event may be said to also include more "aggressive" words than a factual account of the same event which is not so emotionally loaded. The importance of "emotional loading" in printed accounts of violence was the subject of some studies by Tannenbaum (Surgeon General's Scientific Advisory Committee on Television and Social Behavior, 1972). Tannenbaum exposed his subjects to erotic, humorous, aggressive, or neutral videotape of film material. Aggression was measured by the subject's willingness to administer electric shock or to give negative ratings which could jeopardize another's career. The results of his studies showed that the neutral film material precipitated less aggression than either the erotic or humorous material, and that the greatest amount of aggression resulted from exposure to the erotic material. Tannenbaum concludes that the arousal capability of the material is equally as important as its content.

Schlottmann, Shore, and Palazzo (in press) attempted to extend Tannenbaum's findings in their investigation of the effects of exposure to violent and non-violent printed selections on subsequent aggressive behavior. The results of that study were inconsistent with previous findings in that subjects who had been "insulted" responded with less subsequent aggressive behavior than the non-insulted subjects. The authors report that it was discovered in the debriefing sessions that

the subjects tended to believe that the confederate's insult toward them was justified, and the large amount of criticism directed toward an ability in which they had neither experience nor ego involvement (their "ESP" ability) resulted in their being intimidated and discouraged, rather than aroused. Thus the "insulted" subjects were not really insulted at all, and their intimidation produced a decrease in their post-test shock levels. Schlottmann, et al.'s results appear to be similar to those found by Bramel, Taub, and Blum (1968), Hartmann (1969) and Goranson (1969, 1970). However, even when interpreted in light of these findings, the results are still somewhat puzzling. Assuming that the sensitization hypothesis is true, one would expect a greater reduction in subsequent aggression from emotionally aroused subjects who are more highly sensitized, than in lesser aroused subjects. However, the opposite was found to be true. The emotional-violent group showed significantly less reduction in aggression than the factual-violent group which was not substantially different from the control group. Thus the results do not seem to be consistent with any of the previous findings, and are very difficult to logically explain.

There are some additional methodological problems in the study which further complicate the interpretation of the results. The factual-violent and emotional-violent selections which the subjects were given differed not only in the emotionality of the words, but also in the content and information communicated. Thus the accounts were not really comparable. Both of the violent selections were also titled "The Boston Strangler," which allows for contamination of the emotional-factual variable by not taking into account the possible differential exposure and experience of the subjects to either the book or the movie

on the same topic. The title of the selection may have prompted the subject to recall scenes from his previous exposure to the event and thus invalidate control over the emotionality of the selections.

The present study investigated the effects of printed accounts of violence on aggressive behavior. The design was similar to that of Schlottmann, et al., but incorporated several crucial methodological changes. The insult-arousal procedure was insulting instead of intimidating. The insults were delivered by the confederate in a very personal, face-to-face manner, and were directed toward the subject's performance on a supposed intelligence test. By directing the insult at something in which the subject has a definite stake, the amount of ego involvement in the insult on the part of the subject was increased and thus enhanced the effectiveness of the insult and resulting arousal.

The printed accounts were also made more comparable, so that the only continuum on which they differed was the degree of emotionality and arousal potential in the wording of the account. The information transmitted was the same for both selections. The titles were also removed so that the subject had no referent with which to tie the selection which he read to any material with which he had had previous experience.

An additional measure of aggression was also used. Both the intensity of the delivered shock and its duration were recorded. These criteria are not necessarily comparable in all aspects, and it remains to be determined which is the most reliable indicator of the magnitude of an aggressive response.

Based on the results of previous research in this area, it was hypothesized that both the experimental groups (emotional-violent and

factual-violent) would respond with more aggressive behavior than the non-violent group, with the emotional-violent group being more aggressive than the factual-violent group. It was also expected that the insulted subjects would produce higher mean shock levels than the non-insulted subjects.

CHAPTER IV

METHOD

Subjects

Sixty male students who were enrolled in introductory psychology courses at Oklahoma State University served as Ss. The students were all of freshman or sophomore standing. Ten subjects were randomly assigned to each of the six conditions.

Apparatus

A "shock" apparatus similar to the one used by Buss (1961) was used. It consists of a black, 12.5" x 24.5" x 12.5" box-shaped structure with ten levers on the front panel. The levers were numbered 1-10 from left to right, with the first lever labeled "mild" and the tenth lever "strong". Located below these levers in the center of the panel was a separate lever labeled "ready". A small panel in the adjoining room with lights corresponding to the levers was connected to the "shock" box. A Hunter Model 120A Klockcounter was also used to measure the duration of each shock.

Procedure

Each subject was informed that the experiment was trying to determine the effect on extrasensory perception performance when the threat

of shock is present. He was asked about his previous experience with extrasensory perception and his belief concerning its existence. Unless he was totally unwilling to admit to any possibility that there was such a phenomenon the experiment will proceed. He was also given the opportunity to stop if he objected to the use of shock.

A pre-test measure of the subject's level of aggression (as measured by the intensity and duration of the shock which he administers) was obtained from all Ss. Each S was tested with a confederate who posed as a student from another section of the class. The S and the confederate were then introduced to the shock apparatus, and instructed that the levers were connected to electrodes in the adjoining room, and that shocks of increasing intensity would be delivered to the person wired to the electrodes as the levers from one to ten were pressed. They were told that the shock level would increase and become more painful as they moved from lever number 1 to lever number 10. The subject was also informed that the confederate would receive shock as long as the lever was pressed, but the shock would not be intense enough at any level to actually cause physical harm. Throughout the experiment no shock was administered at any time. The confederate was asked to draw one of two slips of paper from a container to determine if he would be the administrator or the recipient of the shock. The draw was rigged so that the confederate was always the recipient.

The confederate then adjourned to the adjoining room where he was to be wired to the apparatus. He actually recorded the S's responses from the lights on the panel before him. The subject was then presented with a list of twelve colors and asked to concentrate fully on each one of them in order. When he was concentrating on a color he was to flip

the "ready" lever to signal the receiver. The receiver would then respond by way of a microphone. The confederate would respond according to a predetermined order so that two of his responses would be correct, and ten incorrect. The S was told he could respond to incorrect responses of the confederate with any level of shock which he desired. After two practice trials, the experimenter left the room to allow the S to freely administer the shock.

The subject and confederate were then returned to the original room and proceeded with the second task. It was explained that intelligence may be a factor in assessing extrasensory perception ability, and each was asked to take a short "IQ" test. The test was simply sixteen questions involving arithmetic, vocabulary, and general information. It took approximately 10-15 minutes to complete. Half of the subjects were allowed to finish the test without incident and proceeded to the next task. The other half were insulted by the confederate. As the subject brought his test to be graded, the confederate made disparaging remarks that the subject's form was easier than his, that he could have done better and finished in half the time if he had had the easier form, and that the subject would have had to really concentrate in order to finish the confederate's form.

It next was explained to the subject and confederate that simultaneous concentration on certain types of material could enhance ESP ability. The subject and confederate were asked to read the selection given to them and concentrate on it at the same time. To assure concentration they were told that they would be tested on the material which they had read. The subject was then asked to read one of three literary selections: (1) a short selection of non-violent material;

(2) a short selection which describes a violent event in a very factual manner; or (3) a short selection describing the same violent event in inflammatory language with heavy emotional overtones. Each of the three groups contained ten subjects who had previously been insulted, and ten subjects who had not been insulted. After the subject and confederate had both read the selection, they were given five multiple choice questions to assure that they were attending to the material. The questions were not difficult, and subjects who were unable to answer them correctly were excluded from the data analysis.

The subject was then told that in order to determine whether the concentration tasks and "thinking together" in the other tasks had enhanced their extrasensory perception ability, they would repeat the first task. All sixty Ss were again asked to administer shock for incorrect answers. The confederate again gave two correct, and ten incorrect responses.

After the experiment was over all subjects were debriefed as to the actual nature of the experiment and cautioned not to talk to anyone else about it. In this period of casual questioning, any subject who did not believe that the confederate was actually being shocked, or who had a concept of the actual purpose of the study was eliminated.

Design

The means of the ten pre-test and post-test shock intensity levels were obtained for each subject and were analyzed in a 2 x 3 analysis of variance. The factors were arousal (insult versus no-insult) and emotionality in each of the three types of printed accounts (non-violent, factual violent, emotional violent). A similar analysis was performed

with duration of shock as the dependent variable. Pearson product-moment correlations were computed between the intensity and duration scores for each group.

CHAPTER V

RESULTS

Shock Intensity Measure

The means and the mean difference scores from the pre- and post-test intensity measure for each of the groups are shown in Table I, and the results of the analysis of variance appear in Table II. The insulted subjects increased their shock levels significantly more than did the non-insulted subjects ($F=69.83$, $df=1, 54$, $p<.001$). Significant differences were also found among the scores for the emotionality variable ($F=40.92$, $df=2, 54$, $p<.001$). However, both of the main effects must be interpreted cautiously in light of the interaction between arousal and emotionality, which was also significant ($F=15.13$, $df=2, 54$, $p<.001$).

In order to determine which of the conditions were responsible for the observed differences, additional tests were carried out. The results of an analysis of simple main effects are presented in Table III. The aroused Ss showed a significantly greater increase in the intensity of their shocks than the non-aroused subjects in the emotional-violent, factual-violent, and non-violent treatment conditions ($F=65.79$, $df=1, 54$, $p<.001$; $F=10.13$, $df=1, 54$, $p<.01$; $F=4.14$, $df=1, 54$, $p<.05$, respectively), although the magnitude of the difference was most pronounced for the emotional- and factual-violent groups. A series of orthogonal

TABLE I
 MEANS AND MEAN DIFFERENCE SCORES FOR PRE-
 AND POST-TEST INTENSITY OF SHOCK

| | <u>Pre-Test</u> | | <u>Post-Test</u> | | <u>Difference</u> |
|----------------------|-----------------|------|------------------|------|-------------------|
| | \bar{X} | SD | \bar{X} | SD | |
| Anger-Aroused | | | | | |
| Emotional-Violent | 4.43 | 0.95 | 6.10 | 0.96 | 1.67 |
| Factual-Violent | 4.72 | 1.67 | 5.63 | 1.73 | 0.91 |
| Non-Violent | 3.68 | 1.32 | 4.22 | 1.42 | 0.54 |
| Non-Aroused | | | | | |
| Emotional-Violent | 4.69 | 1.63 | 5.31 | 1.52 | 0.62 |
| Factual-Violent | 4.14 | 1.06 | 4.69 | 1.22 | 0.55 |
| Non-Violent | 4.54 | 1.38 | 4.85 | 1.48 | 0.31 |

TABLE II
ANALYSIS OF VARIANCE FOR
SHOCK INTENSITY

| Source | df | MS | F | |
|--|----|-------|--------|---|
| Arousal (Insult or No Insult) | 1 | 4.469 | 68.829 | * |
| Emotionality (Emotional-Violent, Factual-Violent, or Non-Violent) | 2 | 2.619 | 40.922 | * |
| Arousal X Emotionality | 2 | 0.968 | 15.125 | * |
| Error (Within Cells) | 54 | 0.064 | | |

* $p < .001$

TABLE III
SIMPLE MAIN EFFECTS ANALYSIS OF
VARIANCE FOR SHOCK INTENSITY

| Source | df | MS | F | |
|---|----|-------|--------|-----|
| Arousal | 1 | 4.469 | 69.829 | *** |
| Arousal at Emotional-Violent | 1 | 5.491 | 85.797 | *** |
| Arousal at Factual-Violent | 1 | 0.648 | 10.125 | ** |
| Arousal at Non-Violent | 1 | 0.265 | 4.141 | * |
| Emotionality | 2 | 2.619 | 40.922 | *** |
| Emotionality for Insulted Subjects | 2 | 3.319 | 51.860 | *** |
| Emotionality for Non-Insulted Subjects | 2 | 0.267 | 4.172 | * |
| Error Within Cells | 54 | 0.064 | | |

* $p < .05$
 ** $p < .01$
 *** $p < .001$

comparisons among the means were also conducted to test the veracity of the a priori hypothesized relationships. For the insulted Ss, it was found that the difference scores of the emotional- and factual-violent groups were significantly greater than those of the non-violent group ($t=10.56$, $df=54$, $p<.01$). The insulted subjects in the emotional-violent group were also significantly more aggressive than the insulted subjects in the factual-violent group ($t=9.05$, $df=54$, $p<.01$). Similarly, the difference scores in the emotional- and factual-violent conditions were greater than those in the non-violent condition for non-insulted subjects ($t=3.87$, $df=54$, $p<.01$). However, there were no significant differences between the non-insulted subjects in the emotional-violent condition and the non-insulted subjects in the factual-violent condition ($t=0.83$, $df=54$, $p>.10$).

Shock Duration Measure

The means and mean difference scores for the pre- and post-test duration measure for each of the groups are shown in Table IV. The results of the analysis of variance for the duration measure appear in Table V.

No significant differences were found between the duration measures for the insulted and non-insulted subjects. The main effect for emotionality was significant ($F=3.52$, $df=2, 54$, $p<.05$), showing that exposure to different reading selections did have an effect on the duration of the shock administered by the subjects. Inspection of Table IV reveals that subjects in the factual-violent group gave shocks of longer duration than subjects in the emotional- and non-violent conditions.

The a priori hypotheses were tested using orthogonal comparisons.

TABLE IV
 MEANS AND MEAN DIFFERENCE SCORES FOR PRE-
 AND POST-TEST DURATION OF SHOCK

| | <u>Pre-Test</u> | | <u>Post-Test</u> | | <u>Difference</u> |
|----------------------|-----------------|------|------------------|------|-------------------|
| | \bar{X} | SD | \bar{X} | SD | |
| Anger-Aroused | | | | | |
| Emotional-Violent | 1.515 | 0.70 | 1.551 | 0.82 | 0.036 |
| Factual-Violent | 1.600 | 0.68 | 2.020 | 1.17 | 0.419 |
| Non-Violent | 1.155 | 0.38 | 1.127 | 0.42 | -0.027 |
| Non-Aroused | | | | | |
| Emotional-Violent | 1.100 | 0.72 | 1.142 | 0.61 | 0.042 |
| Factual-Violent | 1.053 | 0.51 | 1.108 | 0.52 | 0.055 |
| Non-Violent | 0.977 | 0.25 | 0.902 | 0.23 | -0.074 |

TABLE V
ANALYSIS OF VARIANCE FOR
SHOCK DURATION

| Source | df | MS | F | |
|--|----|-------|-------|---|
| Arousal (Insult or No Insult) | 1 | 0.274 | 2.228 | |
| Emotionality (Emotional-Violent, Factual-Violent, or Non-Violent) | 2 | 0.433 | 3.521 | * |
| Arousal X Emotionality | 2 | 0.200 | 1.626 | |
| Error (Within Cells) | 54 | 0.123 | | |

* $p < .05$

A significant difference was found between the emotional- and factual-violent groups and the non-violent group of insulted subjects ($t=3.58$, $df=54$, $p<.01$), with the scores of the two groups which were exposed to violent reading selections being greater than those who read the non-violent selection. The emotional-violent and factual-violent groups of insulted subjects were also found to have a significant difference between their mean difference scores ($t=4.56$, $df=54$, $p<.01$). The effect is in the opposite direction of the data for shock intensity, however. In this case the factual-violent group of subjects who had been insulted demonstrated a greater increase in their scores than did the emotional-violent subjects. Both comparisons for the non-insulted subjects were found not to be significant ($t=1.72$, $df=54$, $p>.10$ and $t=0.16$, $df=54$, $p>.10$, respectively).

Correlations

Pearson product-moment correlations were computed between the mean difference scores for intensity and duration for each of the groups. The results appear in Table VI. None of the correlations is significantly different from zero, and no consistent pattern emerges upon viewing the data.

TABLE VI
PEARSON PRODUCT - MOMENT CORRELATIONS OF
SHOCK INTENSITY WITH SHOCK DURATION

| | <u>Emotional- Violent</u> | <u>Factual- Violent</u> | <u>Non- Violent</u> |
|-------------------|-------------------------------|-----------------------------|-------------------------|
| Anger- Aroused | -.17 | -.48 | -.53 |
| Non- Aroused | .17 | .39 | -.09 |

CHAPTER VI

DISCUSSION AND CONCLUSIONS

The hypothesis that greater amounts of aggression would result from subjects who had been anger-aroused by insult was confirmed for all three of the emotionality conditions. This finding is consistent with previous research using several different experimental paradigms (Berkowitz et al., 1963; Berkowitz, 1965; Berkowitz and Geen, 1966; Hartmann, 1969; Henry, 1973), and it seems to be quite consistent. The insult and arousal provides a large amount of energy for which the subject seeks a release. The data indicates that the release does not occur through a catharsis resulting from the observation and vicarious participation in violence, but rather through engaging in aggressive actions when given the opportunity to do so.

It was also hypothesized that exposure to violent reading selections would lead to a greater amount of subsequent aggression. This hypothesis was confirmed for both the anger-aroused and non-aroused subjects. These results are consistent with similar research using live models (Bandura, 1963), video-taped films (Walters, Thomas, and Acker, 1962; Geen and Berkowitz, 1967), radio broadcasts (Scharff and Schlottmann, 1973; Schuck et al., 1971), and printed material (Schlottmann, Shore, and Palazzo, 1974) as the medium through which the violent model was presented. This finding is contradictory to the interpretation given their results by Hartmann (1969) and Goranson

(1969, 1970) who reported a reduction in aggression for both angered and non-angered subjects who were exposed to a violent film sequence. Thus, while the results of this study tend to cast doubt on the validity of the "catharsis hypothesis" (Feshbach, 1955), and the "revised catharsis hypothesis" or "sensitization hypothesis" (Hartmann, 1969), they substantiate the contentions of Berkowitz (1962, 1965, 1970) and Bandura et al. (1963) that exposure to violent material precipitates in the observer a lowering of inhibitions against violence and an increase in subsequent aggression.

The third hypothesis was that the emotionality of the wording in the printed selections would play a part in determining the impact of the violence on the subject, and that the selection with a highly emotional description of the violence would instigate a greater amount of aggression than would the same violent event presented in a more factual manner. This was found to be true for subjects who had been anger-aroused, but not true for non-aroused subjects using shock intensity as the measure of aggression. Again the results were consistent with Tannenbaum (1972) and Schlottmann et al. (1974) who suggested that the emotional arousal capability of the material was perhaps equally as important as its content in precipitating aggression. Though the exposure to violence in itself was sufficient to increase the subsequent aggression in non-aroused subjects, the high amount of emotionality in the printed account did not seem to appreciably effect the amount of energy arousal. However, it seems that the emotionality of the account had a potentiating effect on subjects who were already anger-aroused. The added emotionality factor in the violent account increased the amount of energy generated in the angered subject, and resulted in

greater increases in aggression when given the opportunity to express their high level of arousal in the subsequent aggressive activity. The witnessing of violence in association with an angering incident appears to be the condition which is most conducive to fostering a high degree of further aggression.

The hypotheses were supported only for the data on shock intensity. When the duration of administered shocks was used as the dependent measure, it was found that only the angered subjects who were exposed to the factual account of violence gave shocks of significantly longer duration. For the rest of the subjects, whether or not the subject had been anger-aroused prior to his exposure to the reading selection seems to have made little difference in the length of time which he chose to shock the confederate. It also seems that the angered subjects whose arousal is then accentuated by exposure to a highly emotional account of violence tend to inhibit the duration of the shock which they administer and instead concentrate on manipulating the intensity. On the other hand, the subjects who were angered and then read an account of violence which was factually written reduced their inhibitions against giving shocks of longer duration and took into consideration both the intensity and the duration of the shock as viable means of expressing their aggressive tendencies.

In previous research in which intensity and duration were both used as dependent measures of aggression the results have been inconsistent. In his study of modeled aggression on subsequent aggressive behavior, Hartmann (1969) claimed that intensity and duration were compensatory measures of aggression, and suggested that the interaction of the two measures was the proper evaluative criterion to use. However, in light

of the high degree of variability and inconsistency found with duration measures by other researchers, the validity of Hartmann's suggestion is very much in doubt. Berkowitz and LePage (1967), and Leow (1967) both reported a greater variability of results with duration than with intensity measures. The correlations between the two measures varied from $-.50$ to $.49$ with no apparent logical pattern. Henry (1973) also found the results of the two measures to be only slightly consistent. It appears that the comparability of the two measures as indications of aggression is doubtful, and that studies using some combination of intensity and duration as the dependent measure must be interpreted with great caution to avoid drawing inaccurate conclusions.

As in previous research, the correlations between the intensity and duration data varied from $-.53$ to $.39$, and did not seem to fall into any prescribed and logical pattern. None of the correlations were significantly different from zero. Further investigation directed specifically at the relationship between these two measures of aggression would be useful.

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APPENDIXES

APPENDIX A

INSTRUCTIONS FOR PRE-TEST

Hi--I'm Lyle Anderson. I'm a graduate student in clinical psychology--and my doctoral dissertation deals with the field of parapsychology. I'd like to get to know both of you--what are your names? Are either one of you familiar with parapsychology or extrasensory perception? Have you ever experienced what you think was an extrasensory experience? Would you like to try?

As you know, extrasensory perception is the ability to communicate with another person through thoughts. In this experiment I'm looking at the effect on ESP ability of several different variables. One of these is the threat of electric shock. The electric shocks which one of you will receive will vary from mild to strong, but none of the shocks will ever be so great as to cause any physical harm. If you'd rather not participate you may leave.

First we have to select which one of you will receive the shock and who will be the one to administer it. In the box are two slips of paper --would you reach up and choose one please (to confederate)? Let's see --it says that you're to receive the shocks--so that means that you'll be the one to administer it.

In front of you is a shock board with levers numbered from one to ten. The shock from lever #1 is mild, ranging up to #10 which is strong.

I'll take John in and hook the electrodes up to him in the next

room. Your job will be to push the single lever here marked "ready," and then concentrate on the first color on the list in front of you. John will try to receive your thoughts, and when he thinks he knows the color, he'll respond over the microphone from the other room with the color. If he is right--then don't shock him. If he's wrong then shock him with any degree of shock that you want to. The shock will continue as long as the lever is pressed down. If he receives some thoughts from you and is correct--you also put an X in the blank on the answer form opposite the ones that he got right. The first two colors on the list are for practice so that you can both get used to the idea--so don't shock him for the first two times if he's wrong. After that go down the list in order, and shock any wrong answers. Be sure to press the levers down firmly when you shock him.

Do you both understand? Do you have any questions? ~~OK~~--I'll go hook John up to the machine and then come back and tell you when we're set up to go.

Call me when you've both completed the first list.

APPENDIX B

INSTRUCTIONS FOR INTELLIGENCE TEST

Now--it's been found that intelligence is one of the things which correlates positively with ESP ability. So I want you both to take an intelligence test. It's a short test. Some of the questions may be harder than they first appear, though, so you may not get all of them correct. Go ahead and complete the first page and then stop. I'll tell you when to begin with question 1. (After Ss have completed first page). Any questions? OK--go ahead and begin.

APPENDIX C

WESTERN INTELLIGENCE SCALE

Name _____

Age _____ Date _____

Classification _____

INSTRUCTIONS: You are to answer questions and solve problems. This test takes very little time. But you must read carefully and do your best. How well you work now may tell how well you can learn. This is a test of your ability to learn. Be sure to answer all questions. Below are sample questions to be answered. Complete these sample questions and wait for the examiner's instruction before continuing.

5 SADNESS is the opposite of:

1. Numbness 2. Misery 3. Trouble 4. Pessimism
5. Gladness

The right answer is Gladness. This is number "5", so "5" is the answer on the line to the left.

Now you do the next one.

_____ What is the number left out?

- 66 62 58 _____ 50 46

The right answer is "54", so "54" should be the answer on the line at the left.

Do the next one.

_____ GO - LEAVE. . . Mean:

1. Same 2. Opposite 3. Neither same nor opposite

Go - Leave mean the "same", so "1" is the number that should go on the line at the left.

STOP

WHEN THE EXAMINER TELLS YOU TO DO SO, TURN THE PAGE AND ANSWER THE QUESTIONS.

- ___ 1. WARFARE means the opposite of:
 1. Amnesty 2. Fighting 3. Battle 4. Tactics
 5. Siege
- ___ 2. Which word differs from the others?
 1. Pastor 2. Plumber 3. Physician 4. Physicist
 5. Psychologist
- ___ 3. Arrange the words below to form a sentence. Is this sentence:
 1. True 2. False 3. Not certain

FOODS AND ARE BREAD AS USED BUTTER

- ___ 4. Oil sells at 30¢ a quart. At this price, how many quarts can you buy for \$4.50?
- ___ 5. Which number does not belong?
 27 24 21 18 14 12 9 6
- ___ 6. How many pairs of names below are the same:
 Johnson, B. C. Johnstone, B. C.
 Wright, T. H. Wright, T. H.
 Terrell, R. A. Terrell, R. A.
 Oliver, L. T. Oliver, T. L.
- ___ 7. The meanings of the two statements below are:
 1. Same 2. Opposite 3. Neither same nor opposite
- All's well that ends well.
 Let sleeping dogs lie.
- ___ 8. WINTER means the opposite of:
 1. Autumn 2. Spring 3. Summer 4. Fall
 5. Cold
- ___ 9. What number should follow the last number below?
 256 64 16 4 1 ___
- ___ 10. A soldier hits a target with a rifle 90% of the time. How many shots must he shoot to make 27 hits?
- ___ 11. From these three parts which figure below can be made?

1.

2.

3.

4.

- ___ 12. A jet plane travels 450 miles in 50 minutes. At this rate, how many miles will this plane travel in an hour?
- ___ 13. If the first two statements below are true, what is the last statement?
1. True 2. False 3. Not certain
- Most female dogs are smart.
This is a female dog.
This dog is smart.
- ___ 14. EXPENDITURE - RECEIPT mean:
1. Same 2. Opposite 3. Neither same nor opposite
- ___ 15. What is the number left out?
130 122 113 ___ 92 80
- ___ 16. A dealer bought a number of television sets for \$16,000. He sold them for \$19,000, making a profit of \$150 on each set he sold. How many sets did he sell?

END

APPENDIX D

INSTRUCTIONS FOR READING SELECTION TASK

Now--it's been found that concentrating on the same thing at the same time tends to improve your ESP performance. I'm going to give you each a copy of a news story to read--and I want you both to concentrate on it while you're reading it. See if you can feel anything from the other person. When you're finished I'm going to ask you a few questions about what you read--so read carefully and concentrate. Any questions?

APPENDIX E

EMOTIONAL-VIOLENT SELECTION

It often doesn't take very much to throw an entire large city into a state of panic and mass hysteria. In this case it was the vicious murders of several young single women in the prime of their lives. Each of the women had been sadistically tortured and brutally strangled in the safety of her own apartment. And in each case there appeared to be no reason for the killing. No clues were found, nothing was stolen, the murderer had even been let into the apartment by the victim herself. The women were all young and attractive, and each lead a very normal and inconspicuous life. Yet the ironic twist to the story is that each of the women voluntarily let into her apartment the insane murderer who was to be the last person that she was ever to see alive.

It was because of this that Gary Chamberlain skipped up the stairs and knocked on the apartment door of his fiancée, Barbara Sims. Barbara was a dark-haired, attractive, 23 year old graduate student who was looking forward to a career in opera. An excellent singer, she was constantly practicing for the day when she would be able to fulfill her dream. But today he was worried about her. Earlier that morning he had found a note from Kim Freeman, a close friend of Barbara's, who was also a student in the music department.

"Gary--I'm kind of worried about Barb," the note said. "She didn't show up for rehearsal this morning and I haven't seen her all

day. If you see her--tell her to call me. - Kim"

The rehearsal was for a production of Aida that Barbara was to appear in later in the month, and she had never missed a rehearsal before--no matter what came up. That was one of the things that had first attracted him to her when they met on the campus three years before. She was warm, outgoing, and excited about her volunteer work at the Medfield School for Retarded Children where she helped the handicapped children to sing and have fun with music. He knocked a couple of times, and no one answered, so used the key she had given him to open the door. As the door swung open his heart began to pound. The usually neat apartment was torn apart. He rushed in--and then he saw Barbara. Her clothes had been torn off of her and she was lying on her back on the sofa, her left leg hanging stiffly over the back, and her right leg dangling loosely to the floor. Her hands had been tied behind her with wire so tightly that the cushion was stained with blood from the gashes in her wrists. The skin on her neck was blue from the pressure of the nylon stockings which had been twisted tightly around it, and they were caked with blood from the slash across her throat.

Paralyzed with horror, Gary tore the blindfold from her face. Her eyes were glassy and white, and her favorite scarf had been stuffed into her mouth. Her hands were cold and clammy, and her body was mutilated and lifeless.

Though it appeared that Barbara had been strangled, death had come as a result of stabbing--22 times, four of the wounds had torn open her throat, the other 18 stab wounds described an unmistakable bull's eye design on each of her breasts--a large circle enclosing a smaller circle--and a final stab wound right in the center. In a

moment of frenzy the killer had carved "KISS ME" on the inside of each of her thighs. A bloody butcher knife with a five-and-a-half inch blade was found in the splattered kitchen sink. The murderer had wiped the blood from his hands with her blouse. The police surgeon said that she had been dead for 24 to 36 hours. The newspaper that she had been reading was still on the table beside the sofa. It turned out to be the last thing that she ever did.

The pattern was the same--the nylon stockings, the vicious mutilation of the body, the sadistic torture before death. And as in all the other cases, there seemed to be no reason why anyone could hate her so much that they'd do to her body what had been done that day. The police theorized that the killer was a homicidal maniac.

APPENDIX F

FACTUAL-VIOLENT SELECTION

It has often been found that disturbances in the life of large cities may be traced to one particular event or series of events. One often quoted example is the unexplained homicides of several young women in a major city in the recent past. In each case the women were unmarried and living alone. The investigation of the incidents revealed that the motive could not have been theft, as nothing had been stolen from any of the apartments where the homicides took place. An additional factor which puzzled the police is that in no case was there any sign of forcible entry. All of the victims seemed to be rather average women, who led very normal and inconspicuous lives. It was hypothesized that the assailant must have gained entry through some sort of deception, belying the true intent of the visit.

An account of one of the incidents related that Gary Chamberlain had appeared at the apartment of his fiancée, Barbara Sims. Miss Sims was a dark-haired, 23 year old graduate student in music, who was aspiring to a career as an opera singer. She was very talented, and diligent in her practicing in pursuit of the day when she would have the opportunity to realize her desire to sing professionally. Earlier in the day Mr. Chamberlain had received a note from Miss Kimberley Freeman, a close friend of Miss Sims, which had caused him to be concerned about her. The note read "Gary--I'm kind of worried about Barb. She didn't

show up for rehearsal this morning and I haven't seen her all day. If you see her--tell her to call me. -- Kim". The rehearsal was for a college production of Verdi's Aida in which Miss Sims was to appear later in the month. She had been very involved in practicing for her performance, and had not been absent from any of the previous sessions. Miss Sims was described by her friends as warm and outgoing, and often talking about her involvement as a music therapist at the Medfield School for Retarded Children.

Mr. Chamberlain received no response to his knocks on the door, so he let himself into the apartment with a key which had been given to him. As he opened the door, he found the contents of the apartment strewn around the room in a state of disarray. He entered the apartment and found Miss Sims' unclothed body on the sofa in the living room. Her wrists had been bound behind her back, and two of her nylon stockings were found knotted around her neck. She had also received a laceration on her throat.

Temporarily very confused and disoriented, Mr. Chamberlain removed a blindfold which had covered the victim's eyes and a scarf which had been used as a gag. Miss Sims did not respond to efforts to revive her, and she was listed as dead-on-arrival at a local hospital.

The coroner's report stated that death had not occurred by asphyxiation as had been assumed, but rather as the result of a series of wounds which she had received in the course of the attack. Evidence of lacerations was found in the area of the victim's neck and throat, and circumscribing both breasts. Additional wounds were discovered in the region on the inside of each thigh. The murder weapon was assumed to be a fixed blade knife which was found in the kitchen sink of the apartment.

The blood type found on the weapon matched that of the victim. The coroner's report estimated that 24-36 hours had incurred since the time of death. A local newspaper, which the victim was apparently reading at the time of the incident, was found on the table beside the sofa.

Police confirmed that the elements of the homicide were identical to the pattern of previous attacks. The assailant gained entry without force, used articles of the victim's clothing to prevent her from resisting, and performed some sort of ritual before murdering the victim. No apparent motive had been discovered in any of the homicides. The police theorized that the fugitive was mentally unstable, and recommended psychiatric evaluation in the event of his apprehension.

APPENDIX G

NON-VIOLENT SELECTION

What does it take to set up the third largest fair in the United States? Ralph Woods, as grounds superintendent at the Tulsa State Fair, has the difficult task of preparing the fair grounds and numerous buildings for the influx of exhibitors and participants of the 1972 fair. This year's fair will be held from Sept. 28 to Oct. 8.

Woods has a good background for handling a fair. This will be the twenty-ninth he has handled. Besides setting up the fair, sometimes two and three times in the same area, Woods is responsible for the estimated one and a half million fair visitors and for planning for the disposal of tons of trash.

Woods primary job is taking care of the fair grounds and buildings throughout the year. This year a great many of the buildings on the grounds have been repainted and new roofs have been put on the Pavillion and General Exhibits Building. There has also been extensive renovation around the grounds. Even though almost a half million dollars have been expended--profits derived in the past two years of operation by the Tulsa Fairgrounds Trust Authority--to build new structures and renovate other old buildings, Woods cannot get a good start on putting the buildings into shape for the fair until the last minute.

"They are either in use, or are serving as storage facilities," Woods explained to this reporter. "The buildings that are not being

used are put into shape as far in advance as possible. The rest of them? Well, my men have to continue working on them as the various exhibitors move in," he said.

Woods has a fairly large regular crew to care for the fair grounds, but a number of part-time workers are added to the force to expand it to about 150 a week before the fair starts. It remains at that number until about two weeks after the end of the fair.

Fortunately for Ralph Woods, the various commercial exhibit booths are erected by a privately contracted firm and are finished by the exhibitor. But even then preparing for the fair is no small task for Ralph Woods and his dedicated crew. The animal exhibit barn is probably Wood's biggest headache each year. The buildings, 200 feet wide by 1767 feet long, with a 200 foot by 200 foot addition to the north, is the largest animal barn in the entire world. More than 7000 animals are housed in the barn and adjoining building during the fair. Sometimes the amount of space available is not enough. The fair employees are forced to move about 5,000 more bales before the fair begins.

A contract food dealer generally supplies more than 20,000 pounds of feed and exhibitors bring 10,000 to 15,000 more. It is Woods' responsibility to see that the straw and feed are stored properly.

When the animals begin to arrive a few days before the fair begins, every county in the state, several other states and Canada are represented, certain of Woods' employees must supervise the loading and unloading of trucks and vans and make sure that the animals are taken to the proper pens in the barn. Other employees put the hundreds of pens together, with the knowledge that every board, bolt and post in the building will have to come down in just two short weeks.

The horse exhibits change three times during the fair. For this reason, the stalls must be thoroughly cleaned three times during the fair. Other areas are only cleaned twice, on the fifth day and at the end of the fair. The daily cleanup of the barns, straw and manure produces a mountain of material which is then sold in bulk to various individuals for potting soil. The tons of trash taken from the midway and walkways are taken to a private dump.

Another side job that is handled by Woods is providing dormitory facilities for those who stay on the fairgrounds throughout the fair. "We go on 16-hour days one week before the fair, then work around the clock during the fair. We all get very little sleep then," Woods concluded.

APPENDIX H

QUESTIONS FOR VIOLENT SELECTIONS

- ___ 1. Who discovered the body?
 - a) her mother
 - b) her fiance
 - c) her father

- ___ 2. The murderer was believed to be
 - a) her fiance
 - b) mentally unstable
 - c) heavily armed

- ___ 3. Beverly Sims was
 - a) a writer
 - b) a housewife
 - c) studying for a career in opera

- ___ 4. Death occurred as a result of
 - a) knife wounds
 - b) gunshot wound
 - c) strangulation

- ___ 5. The victim lived in
 - a) a rural area
 - b) a large city
 - c) a small suburb

APPENDIX I

QUESTIONS FOR NON-VIOLENT SELECTION

- ___ 1. Ralph Woods is superintendent of
 - a) the OSU fair
 - b) Tulsa World Fair
 - c) Oklahoma State Fair

- ___ 2. How many assistants does Woods have during the fair?
 - a) 10
 - b) 75
 - c) 150

- ___ 3. Woods salary for the year is
 - a) \$10,000
 - b) \$6,000
 - c) not stated in article

- ___ 4. Woods is not responsible for the
 - a) barns
 - b) buildings
 - c) fair finances

- ___ 5. True or false: Woods is responsible for finding dormitory space for those who stay on the fairgrounds throughout the fair.

APPENDIX J

INSTRUCTIONS FOR POST-TEST

Now--for the last task I'd like to see if the shock and the period of concentrating together has enhanced your ability to perceive each other's thoughts. I'd like you to repeat the extrasensory learning experiment again. Remember that you only shock wrong answers. The shocks still range from mild in #1 to strong in #10. Go in order down the list. When you're concentrating on a color push the "ready" lever. We'll take two practice to get warmed up--and then begin to shock any wrong answers.

APPENDIX K

EXPERIMENTAL DATA FOR INTENSITY OF SHOCK

| | <u>Emotional</u> | | | <u>Factual</u> | | | <u>Non-Violent</u> | | | | | |
|------------------------------------|------------------|------|----------|----------------|-----------------|----------|--------------------|-------------|-----------------|------|------|------|
| | Pre | Post | <u>d</u> | Pre | Post | <u>d</u> | Pre | Post | <u>d</u> | | | |
| Anger- Aroused (Insult) | S ₁ | 4.4 | 6.3 | 1.9 | S ₁ | 4.5 | 5.5 | 1.0 | S ₁ | 1.9 | 2.4 | 0.5 |
| | S ₂ | 6.3 | 7.7 | 1.4 | S ₂ | 8.6 | 9.6 | 1.0 | S ₂ | 4.7 | 5.2 | 0.5 |
| | S ₃ | 4.8 | 7.3 | 2.5 | S ₃ | 2.3 | 3.1 | 0.8 | S ₃ | 5.6 | 6.0 | 0.4 |
| | S ₄ | 4.6 | 5.9 | 1.3 | S ₄ | 5.1 | 6.1 | 1.0 | S ₄ | 2.3 | 2.9 | 0.6 |
| | S ₅ | 3.0 | 4.8 | 1.8 | S ₅ | 5.2 | 6.2 | 1.0 | S ₅ | 2.4 | 3.0 | 0.6 |
| | S ₆ | 3.4 | 4.8 | 1.4 | S ₆ | 4.3 | 4.9 | 0.6 | S ₆ | 4.5 | 5.0 | 0.5 |
| | S ₇ | 3.6 | 5.4 | 1.8 | S ₇ | 2.3 | 3.1 | 0.8 | S ₇ | 4.9 | 5.6 | 0.7 |
| | S ₈ | 5.1 | 6.5 | 1.4 | S ₈ | 4.6 | 6.1 | 1.5 | S ₈ | 4.5 | 5.4 | 0.9 |
| | S ₉ | 3.8 | 5.4 | 1.6 | S ₉ | 4.9 | 5.6 | 0.7 | S ₉ | 1.9 | 1.9 | 0.0 |
| | S ₁₀ | 5.3 | 6.9 | 1.6 | S ₁₀ | 5.4 | 6.1 | 0.7 | S ₁₀ | 4.1 | 4.8 | 0.7 |
| $\bar{x} =$ | 4.43 | 6.10 | 1.67 | $\bar{x} =$ | 4.72 | 5.63 | 0.91 | $\bar{x} =$ | 3.68 | 4.22 | 0.54 | |
| Non- Aroused (No Insult) | S ₁ | 2.9 | 3.5 | 0.60 | S ₁ | 3.6 | 4.2 | 0.60 | S ₁ | 2.4 | 2.6 | 0.20 |
| | S ₂ | 2.4 | 3.5 | 1.10 | S ₂ | 6.2 | 6.9 | 0.70 | S ₂ | 5.1 | 5.5 | 0.40 |
| | S ₃ | 4.0 | 4.5 | 0.50 | S ₃ | 4.5 | 5.1 | 0.60 | S ₃ | 5.2 | 5.4 | 0.20 |
| | S ₄ | 6.1 | 6.7 | 0.60 | S ₄ | 3.8 | 4.0 | 0.20 | S ₄ | 3.6 | 3.6 | 0.00 |
| | S ₅ | 5.7 | 6.1 | 0.40 | S ₅ | 3.1 | 3.4 | 0.30 | S ₅ | 2.2 | 2.4 | 0.20 |
| | S ₆ | 2.9 | 3.5 | 0.60 | S ₆ | 2.2 | 2.7 | 0.50 | S ₆ | 4.2 | 4.5 | 0.30 |
| | S ₇ | 6.3 | 6.9 | 0.60 | S ₇ | 3.6 | 4.0 | 0.40 | S ₇ | 6.9 | 7.3 | 0.40 |
| | S ₈ | 3.4 | 4.2 | 0.82 | S ₈ | 4.6 | 5.7 | 1.10 | S ₈ | 5.6 | 6.1 | 0.50 |
| | S ₉ | 6.4 | 6.9 | 0.50 | S ₉ | 4.8 | 5.5 | 0.70 | S ₉ | 5.2 | 5.7 | 0.50 |
| | S ₁₀ | 6.8 | 7.3 | 0.50 | S ₁₀ | 5.0 | 5.4 | 0.40 | S ₁₀ | 5.0 | 5.4 | 0.40 |
| $\bar{x} =$ | 4.69 | 5.31 | 0.62 | $\bar{x} =$ | 4.14 | 4.69 | 0.55 | $\bar{x} =$ | 4.54 | 4.85 | 0.31 | |

APPENDIX L

EXPERIMENTAL DATA FOR DURATION OF SHOCK

| | <u>Emotional</u> | | | <u>Factual</u> | | | <u>Non-Violent</u> | | | | | |
|------------------------------------|------------------|------|----------|----------------|-----------------|----------|--------------------|------|-----------------|------|------|------|
| | Pre | Post | <u>d</u> | Pre | Post | <u>d</u> | Pre | Post | <u>d</u> | | | |
| Anger- Aroused (Insult) | S ₁ | 2.38 | 2.33 | -.05 | S ₁ | 1.69 | 1.64 | -.05 | S ₁ | 1.33 | 1.20 | -.13 |
| | S ₂ | 2.18 | 1.89 | -.29 | S ₂ | 1.43 | 1.75 | 0.32 | S ₂ | 0.84 | 0.56 | -.27 |
| | S ₃ | 0.89 | 0.70 | -.18 | S ₃ | 0.50 | 1.04 | 0.54 | S ₃ | 1.56 | 1.58 | 0.02 |
| | S ₄ | 0.83 | 0.91 | 0.08 | S ₄ | 1.61 | 1.46 | -.15 | S ₄ | 1.56 | 1.66 | 0.10 |
| | S ₅ | 1.07 | 1.32 | 0.25 | S ₅ | 1.57 | 2.19 | 0.62 | S ₅ | 1.32 | 1.11 | -.20 |
| | S ₆ | 2.06 | 2.04 | -.01 | S ₆ | 2.00 | 2.46 | 0.46 | S ₆ | 0.97 | 1.15 | 0.18 |
| | S ₇ | 1.31 | 1.16 | -.15 | S ₇ | 1.34 | 1.44 | 0.10 | S ₇ | 1.04 | 0.50 | -.53 |
| | S ₈ | 0.99 | 1.02 | 0.02 | S ₈ | 0.96 | 0.92 | -.04 | S ₈ | 1.69 | 1.67 | -.02 |
| | S ₉ | 0.71 | 0.69 | -.02 | S ₉ | 3.27 | 5.26 | 1.97 | S ₉ | 0.73 | 1.17 | 0.45 |
| | S ₁₀ | 2.68 | 3.37 | 0.71 | S ₁₀ | 1.61 | 2.01 | 0.41 | S ₁₀ | 0.50 | 0.62 | 0.12 |
| | $\bar{x} =$ | 1.51 | 1.55 | 0.04 | $\bar{x} =$ | 1.60 | 2.02 | 0.42 | $\bar{x} =$ | 1.16 | 1.13 | -.03 |
| Non- Aroused (No Insult) | S ₁ | 1.62 | 1.89 | 0.28 | S ₁ | 0.60 | 0.68 | 0.08 | S ₁ | 1.54 | 1.34 | -.20 |
| | S ₂ | 0.84 | 0.94 | 0.10 | S ₂ | 1.68 | 1.54 | -.14 | S ₂ | 0.79 | 0.94 | 0.15 |
| | S ₃ | 1.53 | 1.55 | 0.02 | S ₃ | 0.52 | 1.04 | 0.52 | S ₃ | 1.07 | 1.12 | 0.04 |
| | S ₄ | 2.81 | 2.05 | -.76 | S ₄ | 1.20 | 1.15 | -.05 | S ₄ | 0.90 | 0.85 | -.05 |
| | S ₅ | 0.68 | 0.55 | -.13 | S ₅ | 0.67 | 0.72 | 0.05 | S ₅ | 1.14 | 0.98 | -.16 |
| | S ₆ | 1.20 | 1.58 | 0.38 | S ₆ | 0.63 | 0.81 | 0.19 | S ₆ | 0.67 | 0.67 | 0.00 |
| | S ₇ | 1.12 | 1.49 | 0.37 | S ₇ | 1.25 | 0.85 | -.39 | S ₇ | 0.67 | 0.66 | -.01 |
| | S ₈ | 0.34 | 0.54 | 0.20 | S ₈ | 1.23 | 1.54 | 0.31 | S ₈ | 1.03 | 1.11 | 0.08 |
| | S ₉ | 0.17 | 0.23 | 0.06 | S ₉ | 2.11 | 2.29 | 0.19 | S ₉ | 1.10 | 0.61 | -.50 |
| | S ₁₀ | 0.69 | 0.60 | -.09 | S ₁₀ | 0.65 | 0.46 | -.19 | S ₁₀ | 0.85 | 0.75 | -.10 |
| | $\bar{x} =$ | 1.10 | 1.14 | 0.04 | $\bar{x} =$ | 1.05 | 1.11 | 0.06 | $\bar{x} =$ | 0.98 | 0.90 | -.08 |

VITA

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Doctor of Philosophy

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