6-1971

The Effects of Visual Feedback and Level of Aggression on the Application of Noxious Stimuli

Gary W. Rawson
University of Nebraska at Omaha

Follow this and additional works at: https://digitalcommons.unomaha.edu/studentwork

Part of the Psychology Commons

Recommended Citation
https://digitalcommons.unomaha.edu/studentwork/85
The Effects of Visual Feedback and Level of Aggression on the Application of Noxious Stimuli

A Thesis
Presented to the
Department of Psychology
and the
Faculty of the Graduate College
University of Nebraska at Omaha

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

by
Gary W. Rawson
June, 1971
Accepted for the faculty of the Graduate College of
the University of Nebraska at Omaha, in partial fulfillment
of the requirements for the degree Master of Arts.

Graduate Committee

Richard L. Hekoff, Psychology
Kenneth A. Diefendorf, PsyD
Roger J. Hasker, Biology
Chairman

Claron C. Kerley
Acknowledgements

I would like to thank the members of my committee for the time and constructive criticisms which were lent to me during the planning, running, and writing of this study. Specifically, Dr. C.C. Kessler, my chairman, Dr. R.L. Wikoff, Dr. K. Deffenbacher, and Dr. R. Sharpe.

I would also like to thank Mr. James Thomas for his criticisms and use of his office for the hours spent in working out many problems.

My special thanks go to my wife, Judy, for the constant encouragement and hardship which she has withstood the past four years.

I wish also to thank my parents for the constant encouragement which they have given me throughout my entire education and life in general.
Table of Contents

The Problem ............................................. 1
Purpose .................................................. 5
Hypotheses ............................................... 5
Method .................................................... 6
Subjects .................................................. 6
Equipment ............................................... 7
Experimental Apparatus ............................... 7
Confederate ............................................. 8
Aggression Scale ....................................... 9
Procedure ............................................... 9
Results .................................................. 10
Correlational Analyses ................................. 14
Discussion ............................................... 14
Applied Implications ................................. 18
Implications for Future Research .................... 18
Debriefing Results ..................................... 19
Conclusion ............................................... 20
References ............................................. 21
Appendices ............................................. 23
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Means and Standard Deviations for Intensity</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Analysis of Variance for the Intensity Variable</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Means and Standard Deviations for Duration</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Analysis of Variance for the Duration Variable</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Differences in Shock Duration Between Treatment Groups</td>
<td>13</td>
</tr>
</tbody>
</table>
Abstract

Sixty-four male undergraduate students who were enrolled in an introductory psychology course were used as subjects to determine the effect which visual feedback and level of aggression have on the application of a noxious stimulus to another human being. Equal numbers of high and low aggressive Ss, based on Edwards Personal Preference Schedule scores, were randomly assigned to one of four treatment groups, defined by type of visual feedback. The Ss were permitted to select the intensity and duration of hypothetical electric shock which they could apply to a male confederate as punishment for supposedly incorrect responses in a learning task.

Results of the study strongly indicate that shock duration is a function of type of visual feedback but not level of aggression while the opposite is the case for shock intensity.
The Effects of Visual Feedback and Level of Aggression on the Application of Noxious Stimuli

Gary W. Rawson
University of Nebraska at Omaha

A great deal of psychological research substantiates the contention that human behavior is influenced via feedback which provides information regarding the effect that an act has on an object, event, or another person. Having acted and then obtained feedback, a person continues or modifies his behavior depending upon the produced result in comparison with the desired outcome (Thorndike, 1932; Leavitt and Mueller, 1951; Reynolds and Adams, 1953; Greenspoon and Foreman, 1956; and Baker and Young, 1960).

There is also a tremendous amount of literature present in the area of aggression. For the purposes of this study, the review on aggression centers around the question: What happens to people when they see an aggressive act, or when they are involved in an aggressive situation, not necessarily being the aggressor?

In a study investigating the contagion of aggression Wheeler and Caggiula (1966) found that if S is instigated to aggression and observes an aggressive model, the amount of yielding by the target to aggression will not effect S's aggression. They also confirmed that instigation to aggression combined with observation of an aggressive model will produce a greater frequency of aggression by S than
a single additive model of effects would predict.

Bandura, Ross, and Ross (1963) conducted a study involving vicarious reinforcement and imitative learning. The study was designed to determine influence of response-consequences to a model on the imitative learning of aggression. The study consisted of having part of the sample view an aggressive model who was rewarded and the other part view an aggressive model who was punished. Children who witnessed the aggressive model rewarded, showed more imitative aggression and preferred to emulate the successful aggressor than those who witnessed the aggressive model punished.

The above results were substantiated by Bandura (1965). In this study, groups of children observed an aggressive film-mediated model who was rewarded, punished, or left without consequences. Response to the model produced differential amounts of imitative behavior. Children in the model punished condition performed significantly fewer matching responses than did those in the model rewarded and no consequences groups.

Buss (1966) investigated the effect of harm on subsequent aggression. The Ss (aggressors) were given opportunities to shock two successive victims. In the experimental group the first victim indicated that he had been harmed by the shock. He indicated this by stating that his finger was asleep when the subject was removing the contacts after the experiment was finished. In the control group there were no indications of harm to the first victim. The overall
effect of harming a victim was a drop in aggression intensity to the second victim. This effect varied slightly with the gender of the aggressor and considerably with the gender of the victim, but was found to be unrelated to verbal reports of being concerned.

A study testing the influence of aggressive models upon children's behavior toward a human target and an inanimate target was conducted by Hanratty, Liebert, Morris, and Fernandez (1969). Children were shown films on which an adult male model aggressed against a human clown. Half of the children were later given the opportunity to aggress, as the model had, against a human clown while the other half aggressed against an inflated plastic clown. Children aggressed, as expected, in both groups. However, aggression against the plastic clown was greater. This indicated the children knew the difference between the two models. It also bolsters the hypothesis that aggressive models produce aggressive observers. The above point is substantiated in a review given by Soares and Soares (1969).

As seen earlier in a study by Buss (1966) feedback did seem to effect the aggressive behavior of adults. This view is supported by a study done by Geen (1970). The study was designed to arouse Ss to aggress and then present them with evidence that they were successful in hurting the person responsible for that arousal. Results indicated that feedback of suffering from the victim, leads Ss to inhibit their expression of physical aggression.
Brock and Buss (1964) studied the effects of justification for aggression and communication with the victim. They utilized the following four independent variables: (a) justification for aggression; (b) shock intensity; (c) opportunity for communication with the victim; and (d) sex. These were related to dependent measures of obligation to shock, guilt, estimate of injury, attraction to shock again, and the feeling of being qualified to give shock. The main finding of this study indicated that obligation, guilt, estimate of injury, and unwillingness to repeat the experiment were all greater when there was no justification or communication when the shock level was high.

The basic problem with which the present study was concerned dealt with the influence which visual feedback has on the aggressive behavior of human subjects. The phenomenon of visibility, the direct visual feedback of the effects of the aggressor's actions, has been dealt with only twice. Milgram (1965) reports pilot work suggesting that possibly it is easier to harm a person when the victim is unable to observe an aggressor's actions than when he can see what is being done to him.

This view was partially confirmed by Tilker (1970). In this study, feedback to the subject was varied in each of three treatment groups. Group one received no feedback, group two received auditory feedback only, and group three received auditory and visual feedback. Results indicated that if one gets involved, feels responsible, and gets maximum feedback,
in this case both auditory and visual, he will react in a socially responsible manner.

A basic format for hypothetical shock situations was employed by Milgram (1963). This included the use of a trained confederate (victim) who was given a series of problems to solve. When a mistake was made, the subject applied shock to the victim.

**Purpose**

The primary purpose of this study was to investigate the effect that two independent variables, visibility and aggressiveness, have on the amount and duration of shock that S administers to a victim. The secondary purpose was to establish additional construct validity for the aggression scale of the Edwards Personal Preference Schedule.

Visibility was manipulated and the personality trait was used for purposes of classification. Visibility was defined, for the purposes of this study, as the type of visual contact between S and the victim. In group one ($V_1$) the S could see the victim but the victim could not see S. In group two ($V_2$) neither S nor the victim could see each other. In group three ($V_3$) the victim could see S but S could not see the victim. In group four ($V_4$) both S and the victim could see each other. The Ss were also divided as to high and low aggressiveness across the four treatment groups.

**Hypotheses**

The basic hypothesis to be tested in this study was that duration and intensity of shock are related to the condition
of visibility and level of aggressiveness. This major hypothesis was investigated by testing the following specific hypotheses.

The following hypotheses are concerned with shock intensity.

Hypothesis I: There is a significant difference in mean intensity of administered shock as a function of states of visibility.
Hypothesis II: There is a significant difference in means for intensity of administered shock between high and low aggressive groups.
Hypothesis III: There is a significant interaction between visibility and aggression for intensity of shock.

The final three hypotheses are related to shock duration.

Hypothesis IV: There is a significant difference in mean duration of administered shock as a function of states of visibility.
Hypothesis V: There is a significant difference in means for duration of administered shock between high and low aggressive groups.
Hypothesis VI: There is a significant interaction between visibility and aggression for duration of shock.

Method

Subjects

The sample used in this study consisted of 64 males who were selected from the total male population (approximately 300) of the Introductory Psychology course at the University
of Nebraska at Omaha, which has a requirement for participation in research. Males were used because it is felt that they are more aggressive than females (Hartup and Himeno, 1959); thus, it was felt that males would provide more definitive results. Sex was not manipulated as a variable because of the necessity of keeping the number of Ss low due to the heavy use of Introductory Psychology students in other projects.

The selection procedure consisted of administering the EPPS to 135 male students who responded to a request for subjects. The final 64 students were selected from this pool, 32 of them being in the top quartile of scores and 32 being in the bottom quartile. Equal numbers of high and low aggressive students were randomly assigned to each of the four treatment groups. There was a significant difference in high and low aggression scores in each group and there was no significant difference in scores between the four treatment groups.

**Equipment**

Experimental apparatus. The apparatus constructed for this study was a modified form of the "aggression machine" discussed by Buss (1961). It consisted of a panel of five switches, a separate panel of five lights, two finger electrodes, a power supply, and a multiple channel recorder. The five switches were labeled for successive levels of shock and this panel was placed in the subject room on a table in front of S. The five lights on the second panel were wired to operate when the corresponding switch was closed. This
panel was placed in the victim's room but was hidden from the view of S. The recorder indicated the duration of shock and the intensity of the shock level. This, as well as the power supply, was placed out of view of S in the victim's room. The two electrodes were attached to the victim's right and left forefingers. A diagram of the above is shown in Appendix A.

The study was performed in two semi-soundproof rooms with a one-way mirror between them. The rooms included an inter-com set up and are maintained by the Psychology department.

Confederate. The confederate was the recipient of the hypothetical shock and reacted as though he were receiving an actual shock.

The confederate's performance had to be constant for each S and therefore had to be standardized. The confederate was instructed on how to react to each level of shock when he viewed the corresponding cue which was the light which signaled shock intensity and duration. Reactions from low to high were as follows: (1) slight body twitch; (2) right arm movement; (3) right and left arm movement; (4) right and left arm movement with slight head jerk; and (5) right and left arm movement with pronounced head jerk to the left. At no time did the confederate make any verbalizations. The confederate was a drama student and was drilled in this exercise. He was judged by four Psychology professors each of whom viewed him separately. The four judges indicated that his
performance was plausible and consistent.

Aggression scale. The Edwards Personal Preference Schedule (EPPS) was administered to each of the Ss before they were assigned to one of the four treatment groups. The EPPS has proven to be a reliable instrument. Edwards (1959) reports that studies done on the EPPS indicate that its coefficients of internal consistency for each of the 15 personality variables range from .60 to .87. The test-retest reliability coefficients range from .74 to .88. Internal consistency for the aggression scale is .84 and the stability coefficient is .78.

Pure criterion measures for the personality variables measured by the EPPS are not available. Buros (1970) states that no studies have been reported which indicate construct validity on any of the 15 scales. He strongly suggests that the EPPS be used for experimental purposes only until this validation is determined. This was precisely its use in this study.

Procedure

The task which S was led to believe the confederate was undertaking was a learning task. It consisted of a list of numbers for which the confederate had to learn the square roots.

The 16 Ss in each of the four treatment groups were instructed to apply any level of hypothetical shock for any length of time up to ten seconds when the confederate failed to give the correct answer to the problem. The numbers and the standardization of correct and incorrect responses may
be found in Appendix B. The only factor that varied was the visibility existing between S and the confederate.

When S entered the room he was given the instructions which appear in Appendix C. He was told, depending upon the condition, whether or not the victim could see him. Thus, all Ss were aware of the visual relationship between themselves and the victim. The Ss were debriefed and questioned individually after they had completed the experiment. They were asked not to mention the nature of the research to their fellow students.

Results

The six major hypotheses were tested by two randomized complete-block analyses of variance. Where appropriate, significant Fs were tested using Duncan's procedure. Since there were no significant interactions, tests for simple effects were not made.

The level of significance in all instances was set at p<.05. The means and standard deviations for intensity are presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
<th>V4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Aggression</td>
<td>X 2.23</td>
<td>X 2.713</td>
<td>X 2.348</td>
<td>X 2.836</td>
<td>X 2.559</td>
</tr>
<tr>
<td>SD</td>
<td>.671</td>
<td>.636</td>
<td>.985</td>
<td>.453</td>
<td>.732</td>
</tr>
<tr>
<td>Low Aggression</td>
<td>X 1.65</td>
<td>X 2.375</td>
<td>X 2.138</td>
<td>X 2.188</td>
<td>X 2.008</td>
</tr>
<tr>
<td>SD</td>
<td>.457</td>
<td>1.03</td>
<td>.893</td>
<td>1.11</td>
<td>.907</td>
</tr>
<tr>
<td>Total</td>
<td>X 1.94</td>
<td>X 2.54</td>
<td>X 2.29</td>
<td>X 2.53</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>.629</td>
<td>.847</td>
<td>.923</td>
<td>.892</td>
<td></td>
</tr>
</tbody>
</table>
The results for the hypotheses dealing with intensity may be seen in Table 2.

TABLE 2
Analysis of Variance for the Intensity Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>63</td>
<td>45.2348</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>3</td>
<td>3.8305</td>
<td>1.2768</td>
<td>1.910</td>
</tr>
<tr>
<td>Aggression</td>
<td>1</td>
<td>3.5627</td>
<td>3.5627</td>
<td>5.328 **</td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>0.3980</td>
<td>0.1327</td>
<td>0.198</td>
</tr>
<tr>
<td>Error</td>
<td>56</td>
<td>37.4438</td>
<td>0.6686</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at <.025 level.

Hypothesis I

There is a significant difference in mean intensity of administered shock as a function of states of visibility.

The data concerning the relationship between the intensity of applied shock and the type of visual feedback did not support the difference predicted in Hypothesis I. There was no statistically significant difference in mean intensity of shock for levels of visibility.

Hypothesis II

There is a significant difference in means for intensity of administered shock between high and low aggressive groups.

The data collected in conjunction with Hypothesis II confirm the prediction that there was a significant difference (p<.025) in the intensity of shock applied by high and low aggressive groups, the high aggression groups applying more
intense shocks.

Hypothesis III

There is a significant interaction between visibility and aggression for intensity of shock.

There was no statistically significant interaction between visibility and aggression for intensity of shock.

The means and standard deviations for duration are presented in Table 3. The data concerning the three hypotheses concerned with duration are presented in Table 4.

TABLE 3

Means and Standard Deviations for Duration

<table>
<thead>
<tr>
<th></th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
<th>V4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Aggression</td>
<td>X .661</td>
<td>X 1.025</td>
<td>X .995</td>
<td>X .604</td>
<td>X .821</td>
</tr>
<tr>
<td>SD .415</td>
<td>SD .285</td>
<td>SD .795</td>
<td>SD .155</td>
<td>SD .492</td>
<td></td>
</tr>
<tr>
<td>Low Aggression</td>
<td>X .479</td>
<td>X 1.078</td>
<td>X .895</td>
<td>X .613</td>
<td>X .757</td>
</tr>
<tr>
<td>SD .274</td>
<td>SD .645</td>
<td>SD .364</td>
<td>SD .512</td>
<td>SD .507</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>X .570</td>
<td>X 1.05</td>
<td>X .927</td>
<td>X .614</td>
<td></td>
</tr>
<tr>
<td>SD .352</td>
<td>SD .488</td>
<td>SD .602</td>
<td>SD .378</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 4

Analysis of Variance for the Duration Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>63</td>
<td>15.5561</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>3</td>
<td>2.6954</td>
<td>0.8985</td>
<td>3.980 **</td>
</tr>
<tr>
<td>Aggression</td>
<td>1</td>
<td>0.0663</td>
<td>0.0663</td>
<td>0.294</td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>0.1525</td>
<td>0.0508</td>
<td>0.225</td>
</tr>
<tr>
<td>Error</td>
<td>56</td>
<td>12.6420</td>
<td>0.2257</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at < .025 level.
Hypothesis IV

There is a significant difference in mean duration of administered shock as a function of states of visibility.

There was a significant difference (p < .025) between the four visibility groups as to duration of shock.

The comparisons of visibility group combinations may be seen in Table 5. All but one comparison, the one between the two groups where S could see the victim, were significant at the .05 level as determined by Duncan's Procedure.

TABLE 5

Differences in Shock Duration
Between Treatment Groups

<table>
<thead>
<tr>
<th></th>
<th>V_2</th>
<th>V_3</th>
<th>V_4</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_1</td>
<td>.48*</td>
<td>.35*</td>
<td>.03</td>
</tr>
<tr>
<td>V_2</td>
<td></td>
<td>.13*</td>
<td>.45*</td>
</tr>
<tr>
<td>V_3</td>
<td></td>
<td></td>
<td>.13*</td>
</tr>
</tbody>
</table>

* Significant at < .05 level.

Hypothesis V

There is a significant difference in means for duration of administered shock between high and low aggressive groups.

The prediction that there is a significant difference in means for duration of shock between high and low aggressive groups was not confirmed.

Hypothesis VI

There is a significant interaction between visibility
and aggression for duration of shock.

There was no statistically significant interaction between visibility and aggression for duration of shock.

Correlational Analyses

To investigate the dependent variables more thoroughly, correlations were made between intensity and duration of shock overall and for each of the four treatment groups. Significant correlations were found between intensity and duration overall ($r = 0.383; p < .01$), and between intensity and duration for the two-way visibility group ($r = 0.651; p < .01$).

Discussion

It was determined that intensity of applied shock is related to aggression. This suggests that perhaps the chosen intensity level is a function of each S's individual aggressiveness. This premise is supported by the fact that Ss who scored high in aggression gave significantly higher intensities of shock than did those Ss with low aggression scores.

The fact that there was no significant interaction between visibility and aggression for intensity of shock adds additional support to the conclusion that applied shock intensity was a function of aggressiveness alone. People had different levels of aggressiveness with which they entered the experimental situation.

There was no relationship between shock intensity and states of visibility. This suggests that the chosen intensity level is not connected with visual feedback. A possible explanation for this finding is that the intensity level
was chosen prior to seeing any results of the application of that level and that it was a function of aggressiveness.

This study also showed that duration of applied shock is related to visibility; that is, that duration of shock is a function of visual feedback.

This can be explained by considering the point that a given S chooses an intensity level, applies that level, receives feedback, and then either holds the button down or terminates the shock. The intensity level is predetermined by aggressiveness, but the duration of the level depends on what reaction S sees from the victim. This point is substantiated when viewing the six treatment group comparisons presented in Table 5.

In the comparison between the group where neither S nor the victim saw each other and the group where they could see each other, the non-visibility group applied a significantly longer duration of shock than did those in the two-way visibility group.

In the group where S could not see the victim, but the victim could see S, it was determined that a significantly longer duration of shock was administered than by the two-way visibility group where they could see each other.

Subjects in the group where there was no feedback applied a significantly longer duration of shock than did those in the group where the Ss could see the reaction of the victim.

In the group where the victim could see S, a significantly
longer duration of shock was applied than in the group where S received visual feedback.

In the case of the non-visibility group and the group where S could not see the victim but knew the victim could see him, the non-visibility group administered a significantly longer duration of shock. This suggests that the fact that S knew he could be identified effected his willingness to apply a long duration of shock, even though he had no visual feedback.

The only comparison that was not statistically significant was between the two-way feedback group and the group where S could see the victim but the victim could not see S. An explanation for this is that in both groups S could see what the effect of the shock had.

In all cases where visual feedback to S was present, the duration of shock was significantly lower (p<.025) than in cases where visual feedback was not present.

It was also found that intensity of applied shock and duration of shock were correlated. However, the correlation was greatest in the two-way visibility situation. This fact probably accounts for most of the correlation; ie, it inflates the overall correlation.

The correlation between duration and intensity for the two-way visibility group suggests that when seeing the victim in this task-oriented situation, people feel obligated to level some punishment. However, they tend to minimize it or use a combination which minimizes it.
This may be looked at in terms of control. If people are basically aggressive, the situation might limit aggression; i.e., if the victim seriously frustrated S, a shock of longer duration may be given than in a situation where the victim is neutral. Control of aggression may be due to accountability or consequences of action. Accountability is external and consequence of action has a moral or social basis. Thus, intensity and duration are correlated in people, but the situation limits it.

The aggression scale of the EPPS was found to be valid in this situation. Subjects with high aggression scores did in fact administer higher levels of shock intensity than did Ss with low aggression scores. The fact that the correlation between aggression scores and overall intensity of shock was found to be significant, but not good enough for prediction ($r = .250; p < .05$), may have been due to the relatively low corrected reliability coefficient ($r = .561$) for internal consistency.

The results of this study substantiate the findings reported by Brock and Buss (1964), Buss (1966), and Geen (1970) in that adults, who aggress against Ss who in some way indicate pain or discomfort as a result of the aggressive act, do have a tendency to perform acts of lesser aggression in subsequent trials.

More specifically, the results of this study indicate that being able to see the results of an act directed against another person has a significant bearing on changing that
act in subsequent occurrences. This point substantiates the findings reported by Milgram (1965) and Tilker (1970). The results add to the above studies in that it is shown how the different types of visual feedback effect aggressive behavior.

**Applied Implications**

This study also brings out some important implications in applied situations. The first point is that there is a definite need to improve all types of feedback that people receive. While this study dealt with visual feedback, other types of information may have important effects.

There is also a very definite need to minimize opportunities for anonymity. This point could be utilized in areas such as rallies or demonstrations. The point is to isolate members into small groups, or even individually, so their actions can be observed.

Another important aspect to consider is that of accountability. People do feel accountable for their actions. If people are seen, they tend to act or react in a more socially responsible manner.

**Implications for Future Research**

An important implication for future research would be to vary the environmental setting, the task, or the context. For example, $S$ could be instructed to apply shock in the presence of others. Another obvious addition would be the introduction of frustration directed at the aggressor.

Using the aggression variable, one could also investigate
its relationship to visual feedback varying Ss as to ethnic background, education, and environmental background. Frustrating the aggressor would also prove interesting in any of these situations.

Debriefing Results

There were three important points that were discussed in the individual debriefing sessions which followed the running of each S.

The first point was that of task believability. Each S was asked if he believed the task involved was legitimate. The majority of the Ss reported the task to be believable.

Each S was also asked if he actually believed he was applying shock to the victim. In the two groups where visual feedback was present all but one or two Ss reported that they actually thought they were applying shock.

In both of the above cases some Ss in the two non-visual groups reported that they were not certain about the actual application of shock but admitted that they really had no reason not to believe they were applying shock to someone.

Five of the 16 Ss in the visibility group where both S and the victim had visual contact with each other reported that they did not look at the victim all the time. Reasons for this ranged from not wanting to see the victim's reaction to the fact that they were trying to follow the list of numbers that they had to read.

One main fault in this study was the fact the E did not instruct S to look at the victim as much as possible during
the task. This could have improved the relationship between the duration of applied shock and the visual feedback present.

Another obvious shortcoming was the fact the E did not keep precise records on Ss statements during the debriefing sessions. Having done so would have added valuable information.

Conclusion

The results of this study suggest that shock duration is a function of visual feedback and that shock intensity is a function of aggressiveness.

People have some degree of aggressiveness. All things taken equally, they will manifest the aggressiveness unless they (a) see the consequences; and/or (b) are held accountable. However, the accountability seems to be secondary to the consequences in that the two groups where the victim was seen had the lowest mean duration and the group where the victim saw S, a condition of accountability alone, had the next highest mean.

Aggression must be considered in the context of intensity and duration. In terms of suppressing aggressive behavior via seeing consequences, it appears that this primarily influences the duration but not the intensity, although there is some evidence that the two are correlated, especially in the case where both accountability and seeing consequences prevails.
References


Milgram, S. Some conditions of obedience and disobedience to authority. *Human Relations*, 1965, 18, 57-75.


Appendices
Appendix A
Diagram of Apparatus

Electrodes

S Panel

V Panel

Power Supply

Multiple Channel Recorder
Appendix B

Sequence of Presentation and Incorrect Responses

<table>
<thead>
<tr>
<th>Numbers and Sequence:</th>
<th>Sequence</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>3*</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>6*</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>9*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>11*</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>12*</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>15*</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>17*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>22*</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>25*</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>27*</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>28*</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>29*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

* Incorrect Response
Appendix C

Instructions

This is an experiment to determine if the administration of shock facilitates learning. We would like you to help us out. The task consists of having you read a set of numbers to the subject. The subject will then attempt to give you the square roots of these numbers.

Before you is a paper with 30 numbers. Beside each number is its square root. You are to read through the numbers and their square roots once to the subject in the next room. Read them slowly. When you have finished, I want you to read the first number. The person in the next room will in turn give you a number which he feels is the square root of the number you read. If he is correct in his response, go to the next number. If he is incorrect, you are to give the subject a shock of any of the five intensities which are available to you. You can do this by pressing one of the five buttons on the panel in front of you. You may leave the button down for any length of time up to ten seconds. If you must deliver shock, do so, then go on to read the next number.

The person in the next room will be given a retest on the same numbers at a later time today. Are there any questions?