Interaction in Violence
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ABSTRACT

The aim of the study is the examination of the actual process of eruption of the violent act. The study, therefore, concentrates on a stimulus-response interaction and examines the nature of the provocation, the nature of the reaction, and the relationship between the two factors. These three components constitute one cycle, and each cycle acts as a stimulus to the subsequent one.

If the first cycle of interaction is not clear to the parties, the interaction will tend to escalate in its intensity until the meaning of Alter’s action is clarified; then, if it is perceived as provoking it could erupt into violence. Or, if Alter’s meaning was finally defined by Ego as neutral or friendly, the tension will subside and jocular friendship might ensue. However, if the interaction is still ambiguous, the initial cycles might be forgotten, and the subsequent cycles, even if ambiguous, will be defined as provoking, and violence may erupt.

The aim of this study is the examination of the actual process of eruption of the violent act. We have, therefore, not taken into consideration the predisposition to violence as measured by biological and personality variables. The practice of ‘holding the level of analysis constant’ is generally accepted in criminological and sociological research. (Sutherland & Cressey 1966). This process may well have its disadvantages, but in the present

1. This study has been carried out under the auspices of the Ford Foundation through the Center for Research in Criminology and Criminal Law at the University of Pennsylvania.
study, we felt that the interactional dynamics of violence have enough independent processes to warrant their separate treatment.

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A full scale study of violence should include not only a study of the escalatory processes leading towards an eruption of violence (that is, verbal communication, gestures, and mutually-understood symbols), but also a study of the factors which are linked to the avoidance of violence. The non-violent sequel to a tension-laden interaction may be explained using the cognitive-dissonance and balance models in social psychology. (Brown, 1965, ch. 12). It is possible that homeostatic and congruity mechanisms may induce the actors to solve their dispute in a non-violent way. The present study, however, confines itself only to those interactions which escalate towards violence.

Similarly, many violent situations involve more than the two principle actors. Observers, both non-participant and participant, often play a part even to the extent of an all-out brawl. Our theoretical model, however, involves the conception of violence as a dyadic type of interaction between Ego and Alter, or two groups in a dyadic inter-relationship, and the present study, therefore, confines itself to an examination of the dyadic interaction which escalates towards violence. This interaction takes the form of cycles, and our hypotheses are based on the assumption that the interaction leading towards violence takes the form of an escalating series of stimulus-response cycles.

**THEORY AND HYPOTHESES**

The theoretical framework of the situational aspects of violence has already been presented in two articles (Banitt *et al.*, 1970; Shoaham, 1972) which consider that the biological, psychoanalytical and sociological aspects of violence are less relevant to the explanation of violence than the actual chain of events leading up to the violent act. The authors do not deny that the genetic and historical aspects are relevant in that they
can be used to provide a generalised explanation of violence in terms of probability. However these explanations do have an exclusionary aspect in that they explain violent acts only to the extent that a predisposition exists.

The situational aspect of violence, on the other hand, applies to all individuals, whether predisposed or not, and, furthermore, allows the complete explanation of violent acts, from the initial provocation through to the final eruption of violence. In other words, the situational explanation begins where the genetic and historical explanations leave off.

The study of violence as a situational phenomena contained in an interactional matrix of Ego and Alter has several important connotations. The first, obviously, is to add a new dimension to our understanding of violent acts. Second, it has important legal connotations. If a violent act is accepted as the inevitable result of a series of escalating stimulus-response cycles leading to a ‘point of no return’ the overall importance of mens rea and criminal responsibility as conceived by the criminal law may be open to doubt. This is so because the question whether it is Ego or Alter who inflicts the final (legally-defined) violent blow is seen to be solely a result of the structure of the situation. Third, there are preventive connotations. Once the perspective is placed on the situational aspect, the position of contributory factors (such as availability of weapons, use of alcohol, etc.) becomes clear, and preventive policies with regard to these factors may be implemented.

The main hypothesis of the study is that the outbreak of violence is the result of a series of interactions, called cycles, between Ego and Alter. Each cycle consists of stimulus and response, and, given favorable circumstances, will effect a new cycle with a higher level of provocation and consequent reaction, until a ‘point of no return’ is reached, after which the eventual eruption of violence is inevitable.

The following points are relevant to the primary description of our premise:

1. **Subjective perception of stimulus**: The stimulus may be either positive (provocative) or negative (non-provocative). The perception may be either realistic or non-realistic. The manner of perception of the stimulus may affect:

   2. **A reaction**, leading to either escalation of violence (in the case where a stimulus is perceived, either realistically or non-realistically, as provocative) or away from violence (in the
case where the stimulus is perceived, realistically or non-
realistically, as non-provocative (Goffman, 1962).

One of the main hypotheses was that the intensity of the first
act of the interaction is inversely related to the duration of the
interaction. This means that if the encounter begins with a
highly aggressive act the parties would come to blows very soon,
or one of the parties, usually the victim of the aggression, would
flee from, or evade the aggressive body. The underlying
assumption being that once the interaction has started, the
escalation towards violence, or the de-escalation from it, would
proceed in the same direction.

Thus, we expected the duration of the incident to be
predicted from the intensity of the first act of each of the
parties. The model tested is presented in Figure 1.

![Diagram](image)

Figure 1. The Relationships between the Intensity of First Acts
and the Duration of the Interaction.

The 'ambiguity' of each act was included, together with its
intensity, in order to indicate the range of possible meanings
that might have been ascribed to it. The model also indicates
that the characteristics of the first act of Alter were not
assumed to be independent of the characteristics of Ego's act.

A second, comparable, hypothesis was that the duration of
the interaction would be inversely related to its intensity. The
reason for this is that more intense reactions are expected to
lead to faster escalation. In other words, when the verbal
repartee, or exchange of gestures, is more intense it would lead
to a quicker eruption of violence.

A third hypothesis involves a test of one of our basic
premises: that the subjective meaning ascribed to acts and
situations is of crucial importance.

According to Stimulus-Response theories each action of
Ego is best predicted from the last action of Alter (with whom
Ego interacts). Conversely, if the phenomenologists, and the ethnomethodologists, who are paraphrasing some ontological and existentialist ideas, are right, the best predictor of the intensity and general nature of Ego's actions is not Alter's behavior, but Ego's own previous action. That means that Ego's behavior would be linked, not to the objective stimulus, but to the perception of this stimulus and its subjective interpretation by Ego. This either-or dichotomy of approaches is, of course, rather extreme. It stems from the behaviorists' complete disregard of the mechanisms within the 'Black Box' of the human psyche. On the other hand, the phenomenologists hardly concede any meaningful objective perception of Alter, the only authentic (and therefore meaningful) experience is Ego's own subjective interpretation of the stimuli he is exposed to.

Consequently, the existentialist would not impute any predictive power whatsoever to Alter's 'objective' stimuli which are, presumably, directed towards Ego. The truth, probably, lies here, as in many other cases, somewhere in the middle. The manifestation of a stimulus as a sheer disturbance, or change from a stable state, could, no doubt, be inferred from Alter's acts. However, whether Ego takes a hit on the shoulder as an exaggerated show of friendliness or as a belligerent provocation, is mostly an interpretative, subjective definition of Ego. However, as Ego's subjective definition of the situation is the cause for his subsequent reactions, Ego's subjective interpretation of Alter's behavior would, no doubt, be of a higher predictive potency for forecasting Ego's behavior than the sheer physical activity of Alter as observed by a 'neutral' judge.

Hence, Ego's actions would be related to his own mood and state of mind more than to Alter's actions. Therefore we expect the intensity of Ego's last act to predict his next act better than Alter's act would.
THE RESEARCH DESIGN

METHODOLOGICAL PROBLEMS

The nature of our subject of study does not allow a full-scale investigation based on observational techniques only, for two reasons. First, the outbreak of violence cannot be predicted, so that the amount of time and manpower involved in the observation of violence in the field would simply be economically impractical. Second, and perhaps more important, we felt that there are significant personality differences between those individuals who take part in acts of violence in observable situations, and those who do not, so that the results obtained from observational techniques alone would not pertain to a representative population sample.

In order to overcome those problems we chose the following four sources of data:
- analysis of court records
- content analysis of fictional accounts of violence
- role-playing
- observation

DATA COLLECTION

1. Analysis of court records.

The obvious problem connected with this method is that the information provided by the opposing sides is not always objective, for obvious reasons. We therefore concentrated on the evidence of objective witnesses (bystanders and police) and found that it was indeed possible to obtain the sequential order of events from these witnesses.

An unexpected problem which arose during the collection of data was connected with the court’s purpose of excluding all irrelevant facts. The problem was that many facts which were irrelevant for legal purposes, were vital for our purpose. The average number of acts recorded per case was only 5 (that is, 3 cycles). We were therefore not able to include these data in every phase of processing.

All cases of offences against the person appearing in the Tel Aviv Magistrate’s court during 1969 were recorded.
2. Content analysis of fictional accounts of violence.

The basic assumption underlying our use of this method was that fiction is a true, albeit dramatic, reflection of reality. Naturally, fiction making use of violence for purposes of exploitation (violence for violence's sake), such as detective and war stories, was expressly excluded. The data was collected by university students taking courses in Hebrew and English literature. The students were asked to provide selections describing violent interactions, but were not informed of the purpose behind the request.

We examined the selections provided, and excluded those which did not represent a detailed and sequential description of events which could be translated into terms of stimulus-response cycles.

3. Role-playing.

The use of role-playing in psychological research and therapy is based on the assumption that the actor's subjective perception of the given situation results in his acting-out his own problems through the media of the given situation, so that the behavior enacted in the role-playing is, in fact, true or 'natural' behavior. This being the case, the use of this method is highly suitable for our study.

This assumption was borne out by the results obtained. We used four potential violence-provoking situations, which we took from the fictional accounts mentioned above, and used two groups of actors. One group comprised university students studying drama, and the other, a group of working-class adolescents from a working-class neighborhood.2

The intellectual and cultural gap between the two groups was illustrated by the results. The role-playing arising out of the same given situation was markedly different in content for the two separate groups.

However, the content of the reactions of the individual

2. This group included members of a group who had recently written, produced and acted a most successful play, 'Panther', reflecting their and their peer group's problems, making their suitability for our study twofold: While providing contrast to the middle-class group of university students, their dramatic experience provided them with the interest and understanding necessary for successful role-playing.
members within each separate group was similar. These results also tend to support our assumption that the enactment reflects real life. For example, one situation involved a wife who was obliged to support the family because her husband refused to work. She returned from a hard day's work, prepared to begin the chores of housework, and was enraged by her husband's demand that she make him a cup of coffee. The content of the average university 'wife's' reaction was something like this — 'Oh, when will you finally take a job and stop making excuses that every job you're offered doesn't suit you!' The average slum 'wife's' reaction, on the other hand, was markedly different in content — 'I'm fed up with you! you spend the whole day hanging around with her, and doing the bars with your mates. You'd rather play snooker than work!'

Because none of the participants were informed of the purpose of the research, there were many instances of enactments resulting in peaceful solutions. These instances were not used in the final analysis.

4. Observation.

Your leaders dealing with 'marginal youth' from all over the State were contacted and asked to describe instances of violence, both physical and verbal, in which they had been involved or which they had observed.

Once again, the workers were not informed of the purposes and nature of the research, so that many observations were not suitable, either because they involved more than two participants, or because the description was incomplete and unable to be translated into terms of stimulus-response cycles. These instances were not used in the final analysis.

All material collected by these four methods was arranged in the form of simple sentences, in sequential order for each case, each sentence representing a single act.

After screening out cases with incomplete registration of the interaction and non-relevant cases, we were left with 105 court cases, 18 cases from the literature, 27 direct observations and 16 role-playing data files. Since these are rather small numbers, all our conclusions should be seen as primary indications, rather than tests of theories.
THE RESEARCH INSTRUMENT

Our principle problem was to find a standard and objective measure of stimulus intensity. The problem was further complicated by the unlimited number of possible stimuli.

The obvious measure of stimulus intensity is reaction; however, the fact that stimulus perception differs with personality and cultural factors destroys any possible uniformity of reaction. The fact that reaction is culturally determined was proved by our tentative attempt to produce a rating scale. We gave a number of provocative statements to a group of students and to a group of working-class adolescents from interstitial areas to rate the stimulus intensity. We have found a marked difference in total results between the two groups.

In order to find a measure of stimulus intensity which would not be distorted by personal, cultural and ethnic variables, we first examined 90 potential stimuli, in the form of single sentences. These stimuli were presented to a grading group of eight working-class adolescents from working-class areas. They were asked to rate each sentence subjectively according to their perception of its provocative content, using seven possible degrees of intensity, from 0-6. We then selected those items for which the degree of agreement was largest, and constructed a scale of six grades of intensity, from 0-5. A concise and precise verbal description of each grade of intensity was a literal impossibility, so that the final scale consisted of the six degrees of intensity, each degree being characterized by several stimuli sentences (see Table 1).

Once the scale was constructed, it was used in the following way: A new list of stimuli-sentences was prepared, and given to the judges, together with the scale. The judges were asked to rate each item according to the item in the scale that it resembled most closely. For example, if the list were to contain an item stating 'she picked up the rolling pin and hit him with it,' it would be judged most similar to the scale item 'he raised his hand and slapped her,' and would therefore be given a rating of five. The grading was, therefore, in accordance with the degree of similarity between the sentences and not in accordance with the perceived provocative content, and may be referred to as objective grading.

The objectivity and validity of the scale were then tested. First a small group of adults, all of middle-class status but of
different ethnic origins and ages, rated a set of 80 stimuli by the
above-mentioned method, comparing them to those of the
subjective scale. The degree of intra-group agreement was
between 85-90 per cent and the disagreements were of no more
than one degree. We can conclude, therefore, that the rating
system is reliable, in so far as the results were uniform and did
not reflect cultural or age differences of the members of the
group.

In order to test the validity of the scale, the same set of
stimuli was given to a group of working-class adolescents. This

<table>
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<tr>
<th>Intensity level</th>
<th>Stimuli</th>
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| 0              | - She stood between him and the shelf and wouldn't let him get to it.  
                | - She asked him to leave her alone.  
                | - He asked the policeman to let him off. |
| 1              | - The inspector came by and moved his motorcycle. |
                | - The clerk didn't react at all. |
                | - She doesn't deserve higher grades. |
| 3              | - I'll call the landlord. |
                | - Watch out, I've got ten buddies and after the movie we'll beat you up. |
                | - He cursed the driver coming opposite him. |
| 4              | - He said to the inspector, "You lousy bastard, why did you move the motorcycle?" |
                | - The storekeeper refused to exchange the TV set. |
                | - Zvi was driving his lorry when Moshe overtook him, zig-zagging dangerously. |
| 5              | - You think everyone's a whore like you. |
                | - Give me back all the money I've paid and I'll teach you good and proper; I'll bash your head in (tenant to landlord). |
                | - He raised his hand and slapped her. |
group was asked to grade the stimuli according to the subjective method used by the original grading group, whom they resembled.\(^3\) The degree of intra-group agreement was high.

Total scores for both the middle-class and working-class groups were obtained, taking average scores on items where disagreement existed. A comparison of the total scores for both groups revealed 80 per cent agreement. Inter-group differences on specific items were mostly of one point only, and none was more than two points. This comparison demonstrated that the objective grading of the middle-class group equalled the subjective grading of the working-class group and thus demonstrated the validity of the scale as a measurement of the provocative intensity of the stimuli.

We would like to mention at this point the reason for basing our scale on the subjective perception of this working-class group. The adolescents who made up the group were mostly first generation Israelis whose parents had come from under-developed countries and had made their homes in a semi-slum, working-class, area close to Tel Aviv. The adolescents who made up the grading group were to some degree upwardly mobile, most of them having at least some years of secondary education, and some degree of success in the army and/or at work. However, they still attracted the label of 'marginal' or 'underprivileged' youth and did exhibit a degree of 'sour-grapes' resentment usually found among youth of this type. Their environment, in particular, ensured a fair amount of contact, both participant and non-participant, with violence, and we assume that their perception of the stimuli would be typical of the social group where violent interactions are most prevalent.

The reason for not using the same group to grade the collected data was simple and practical: the group was not prepared to continue their co-operation beyond a point; once the novelty-value had worn off, the job of grading the collected data was seen (and quite rightly so) as a lengthy and tedious task. This task was carried out, as mentioned previously, by members of the middle-class group who had carried out the grading for the objective testing.

Finally, each act, in each of the series of interaction, was

\(^3\) This procedure was repeated a second time during the grading of the data by the middle-class group, as a safety measure, using sentences randomly selected from the data. The same degree of validity was obtained.
rated on the six-grade scale by three independent raters. The inter-rater correlations at this stage ranged from 0.60 to 0.70. These correlations are not high and seemed to indicate the existence of a yet unnoticed factor which influenced the raters.

Since differences between raters were not constant, and the degree of disagreement between ratings differed from one case to another, it seemed that the unnoticed factor was independent of the raters. It seemed reasonable to hypothesize this factor to be the 'objective' ambiguity of each act. Therefore each act was given two scores: a score for intensity (the mean of the three ratings) and a score for ambiguity (the sum of squared differences among ratings).

FINDINGS

The first hypothesis was tested by multiple regression that predicts the duration of the interaction, i.e. the number of cycles, from the intensity and ambiguity of the two acts (stimulus and response) that constitute the first cycle of interaction. This procedure follows the model presented in Figure 1 and assigns weights to its components.

This model, when tested, yielded a multiple correlation of 0.17 and 0.21 in the data which we have gleaned from the court records and the observations, whereas the correlations from literature and the role-playing data were 0.73 and 0.66 respectively.

The large differences between the correlations for the observations and court data and those of the literature and role-playing data may be related to the real life situations of the former, and the rather inchoate registration of the interactions, because court data are, by nature, partial, and the observations were registered post-factum. On the other hand, the two other sources were simulated, but the reliability of registration in these cases was optimal.

The hypothesis that the duration of the interaction is negatively related to the intensity of the first cycles was tested by correlating the mean intensity of the first six actions with the duration of the interaction, and it was indeed upheld. The correlation coefficients were -.40, -.60 and -.61 for the observations, literature and role-play data, respectively.

The model presented in Figure 2 was tested by a series of
multiple regressions. Each time the intensity of an act was predicted from the intensity of Person A's last act and from the intensity of Person B's last act. We expected the regression weights of person A's last act to be higher than those of the other.

We repeated this procedure four times, predicting the intensity of Acts 3 to 6. The expected relationships were found for three of the four acts when the literature and observation data were used, and for two of the four acts for the role-play data. For two other cases (one with the observation data and one with the role-play) the findings are inconclusive.

CONCLUSION

Finally, we may state our major conclusion as follows: the development of the interaction will vary with the clarity of Alter's stimulus, as perceived by Ego. If the meaning of Alter's actions has been clearly perceived as either provoking, neutral or friendly by Ego, he will react accordingly. However, if Alter's action is ambiguous to Ego because cultural definitions are different, a breakdown of communications mars Alter's real intention, or a difference in sensitivities will make Ego perceive Alter's action in a way that its outward manifestations will conflict with its meaning as conveyed to Ego, resulting in ambiguities. Consequently, Ego will try, within a number of cycles of interaction to clarify to himself and to Alter what the actual nature of the interaction is. If Ego succeeds in clarifying the ambiguity as to Alter's intentions, the interaction will either erupt in violence, or the partners will depart in fright, or make a mutual unilateral tacit decision to avoid further conflict.

However, if Ego is not successful (within a few cycles of interaction) in clarifying for himself Alter's intention, their interaction will tend to become more and more intense, until a violent eruption becomes more probable.

To conclude, then, if the first cycle of interaction is not clear to the parties, the interaction will tend to escalate in its intensity until the meaning of Alter's action is clarified; then, if it is perceived as provoking it could erupt into violence. Or, if Alter's meaning was finally defined by Ego as neutral or friendly, the tension will subside and jocular friendship might ensue. However, if the interaction is still ambiguous, the initial
cycles might be forgotten, and the subsequent cycles, even if ambiguous, will be defined as provoking, and violence may erupt.

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