The Cycles of Interaction in Violence

SHLOMO SHOHAM, SARA BEN-DAVID, RIVKA VADMANI, JOSEPH ATAR AND SUZANNE FLEMING

Abstract

This study of the situational aspects of violence suggests that a violent act may be best explained and understood by regarding the act as an escalating series of stimulus-response interactions between two persons. The basic unit of such a series is the cycle which is described and explained. A scale for measuring the intensity of the cycle is constructed, and its reliability and objectivity is tested and proved. Methods of data collection and processing for constructing and using the scale are described, as well as the applicability of the scale to different cultures. The scale is used to verify the suggested hypotheses that the intensity of stimulus decides the form taken by the interaction, and that the escalation towards violence occurs more rapidly when the provocative intensity is high.

I. INTRODUCTION

The theoretical framework of the situational aspects of violence has already been presented in two articles¹ which consider that the


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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 genetical 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 may exist.

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 genetical and historical explanations leave off.

The study of violence as a situational phenomena contained in an interactional matrix of alter and ego has several important connotations. The first, obviously, is to add a new dimension to our understanding of violent acts. Secondly, 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 placed open to doubt, as 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. Thirdly, 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:
The Cycles of Interaction in Violence

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. Corrective techniques, leading either to 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). ²

3. Form taken by the cycles: In the event of violence, this is seen as a causal chain of interaction between ego and alter. The form of the cycles will be effected to varying degrees by: —

4. Content of the cycle: This involves the degree of provocation, objective and perceived, contained in the stimulus. The provocation may take the form of an action, gesture or verbal expression, and may have varying degrees of effect, in the light of specific cultural or personal connotations.

The interactional nature of these four factors, and their mutual effect on the nature of the cycle, can be represented diagrammatically, as in Figure 1. ²

FIGURE 1

<table>
<thead>
<tr>
<th>Negative Response</th>
<th>Positive Stimulus</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-violent</td>
<td>conformity based on</td>
</tr>
<tr>
<td>culturally approved</td>
<td>non-violent twisting</td>
</tr>
<tr>
<td>interaction</td>
<td>of perception</td>
</tr>
<tr>
<td>Illusive perception</td>
<td>realistic perception</td>
</tr>
<tr>
<td>towards a violent</td>
<td>towards a violent</td>
</tr>
<tr>
<td>solution</td>
<td>solution</td>
</tr>
</tbody>
</table>

² For a detailed discussion of corrective techniques, see Goffman, E., Interaction Ritual: Essays In Face-to-Face Behaviour, Chicago: Aldine, 1967.

II. THE AIMS AND HYPOTHESES OF THE STUDY

The aim of the 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.\(^3\) This process may well have its disadvantages, but in the present study, we felt that the interactional dynamics of violence have enough independent processes to warrant their separate treatment.

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 stimulus to the subsequent one.

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.\(^4\) It is feasible 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 interrelationship, 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

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on the assumption that the interaction towards violence takes the form of an escalating series of stimulus-response cycles.

**THE HYPOTHESES**

1. The nature of the response is in direct relation to the nature, both form and content-wise, of the stimulus, so that the possible number of responses, and hence cycles, arising from a specific stimulus, is limited.

2. The intensity of the interaction is inversely proportional to the number of cycles leading towards violence: that is, the lower the intensity of the interaction, the greater number of cycles leading to violence, and the higher the intensity, the lower the number of cycles.

**III. THE RESEARCH DESIGN**

**METHODOLOGICAL PROBLEMS**

The nature of the subject phenomenon does not allow a full-scale investigation based on observational techniques only, for two reasons. Firstly, 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. Secondly, and perhaps more importantly, 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 these problems and to cover the field completely, we chose the following four methods of research:

- Content analysis of court records
- Content analysis of fictional accounts of violence
- Role-playing
- Observation

**DATA COLLECTION**

1. *Content 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 5 (that is, 3 cycles)* which does not represent a total sequence. 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 sustained by the results obtained. We used four potential violence-provoking situations, which we took from the

* See Figure 4.
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 interstitial areas. *

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 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 returns from a hard day’s work, prepared to begin the chores of housework, and is enraged at 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.

Workers 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 purpose 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

* This group included members of a group who had recently written, produced and acted a most successful play, “Panther”, reflecting their own and their peer group’s problems, making their suitability for our study two-fold. While providing contrast to the middle-class privileged group of university students, their dramatic experience provided them with the interest and understanding necessary for successful role-playing.
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.

IV. THE RESEARCH INSTRUMENT

Our principal 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 conformity of reaction. The fact that reaction is culture-controlled 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 for stimulus intensity, and 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/ethnic variables, we first took 80 potential stimuli, in the form of single sentences.

The stimuli were presented to a grading group of 8 working-class adolescents from interstitial areas. They were asked to rate each sentence subjectively according to their perception of its provocative content, using 7 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 6 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 exemplified by several stimulus-sentences (see Table 1).

Once the scale was constructed, it was used in the following way. A new list of stimulus-sentences was prepared, and given to the subjects, together with the scale. The subjects were asked to rate each item

\(^*\) On our original testing we used 7 grades of intensity, but we were obliged to combine the last two items (nos. 6 and 7) because of the amount of disagreement they aroused.
TABLE ONE
SUBJECTIVE GRADING SCALE (reduced version)

<table>
<thead>
<tr>
<th>INTENSITY LEVEL</th>
<th>STIMULI</th>
</tr>
</thead>
</table>
| 1               | — 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 policewoman to let him off. |
| 2               | — 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. |

Objectively, 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 5. 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 was then tested. Firstly, 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 the stimuli to those of the subjective scale. The degree of intra-group agreement was between 85–90, and the
disagreements were of no more than one degree. We can conclude, therefore, that the rating system is objective, in so far as the results were uniform and did not reflect cultural or age differences of the members of the group. Members of this group continued to work for the project, grading all the data collected by the four methods described above.

In order to test the validity of the scale, the same set of stimuli which had been given to the middle class group was given to a group of working-class adolescents. This group was asked to grade the stimuli according to the subjective method used by the original grading group, whom they resembled.* 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% agreement. Inter-group differences on specific items were mostly of one point only, and none were 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 why the basis of our scale was the subjective perception of a working-class group. The adolescents who made up the group were mostly first generation Israelis whose parents had come from underdeveloped countries and had made their homes in the semi-slum, or interstitial area close to Tel Aviv. The adolescents who made up the grading group were to some degree more upwardly mobile than their parents, 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 attract the label of “marginal” or “underprivileged” youth and do exhibit a degree of resentment usually found amongst youth of this type. Their environment, in particular, ensured a fair amount of contact, both participant and non-participant, with violence, and we assumed that their perception of the stimuli would be typical of the social group where violent interactions are most prevalent.

* 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.
The reason why we did not use the same group to grade the collected data was the simple and practical one that the group was not prepared to continue their co-operation beyond the point where the situation was no longer interesting. 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 objectivity testing.

The construction and use of the grading scale as described above is a reliable way to obtain an objective rating of perceived intensity of provocation. It can be applied to different sub-groups belonging to the same broad social group as the original grading group. The applicability or non-applicability of the scale to different sub-groups is easily seen by comparing the total objective score of the different sub-groups to that of the subjective score of the original grading group, as we did in our validity check. Should the degree of disagreement indicate that the cultural differences between the two groups are too great to allow the application of the scale, a new scale can be constructed using a more suitable grading group.

V. DATA PROCESSING

DEFINING THE CYCLE

As mentioned above (see Section I), the cycle is seen as a unit in a chain of action in which the first stimulus is the “trigger” and the last response is the violent action. For this purpose, we have construed the cycle as a matrix of three interrelated actions, representing the interaction between ego and alter. The response arising out of the first stimulus also acts as stimulus for the following reaction and is represented as Rs. This matrix may be represented diagrammatically (see Figure 2).

FIGURE 2

<table>
<thead>
<tr>
<th>Action Number</th>
<th>Type of Action</th>
<th>Actor</th>
<th>Reactor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S</td>
<td>Ego</td>
<td>Alter</td>
</tr>
<tr>
<td>2</td>
<td>Rs</td>
<td>Alter</td>
<td>Ego</td>
</tr>
<tr>
<td>3</td>
<td>R</td>
<td>Ego</td>
<td></td>
</tr>
</tbody>
</table>
When the final reaction is no longer perceived as stimulus, (either because of corrective techniques used by the reactor or because the reaction was the final act), the cycle ends.

In real life situations, the action continues for more than one cycle, until the final reaction is no longer perceived as stimulus. A series of five actions may be represented diagrammatically (see Figure 3). The division of the same series into cycles is shown in Figure 4. Generally accepted psychological theory usually represents such actions as made up of stimulus-response pairs. Our representation using cycles of three actions (stimulus-response/stimulus-response) is simply a different way of construing the usual S–R pairs. The advantage of our conception is that the cycle describes the continuity of the action, making the interdependent relationships of all the actions clear. Figure 4 shows how the effect of the first action continues to influence the cycle to the final action.

**FIGURE 3**

**SERIES OF FIVE ACTIONS SHOWING INTERRELATIONSHIP BETWEEN STIMULUS–RESPONSE**

<table>
<thead>
<tr>
<th>Action Number</th>
<th>Type of Action</th>
<th>Actor</th>
<th>Reactor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S</td>
<td>Ego</td>
<td>Alter</td>
</tr>
<tr>
<td>2</td>
<td>Rs</td>
<td>Alter</td>
<td>Ego</td>
</tr>
<tr>
<td>3</td>
<td>Rs</td>
<td>Ego</td>
<td>Alter</td>
</tr>
<tr>
<td>4</td>
<td>Rs</td>
<td>Alter</td>
<td>Ego</td>
</tr>
<tr>
<td>5</td>
<td>R</td>
<td>Ego</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 4**

**SERIES OF FIVE ACTIONS REPRESENTED BY CYCLES**

<table>
<thead>
<tr>
<th>No. of Action</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle 1</td>
<td>S</td>
<td>Rs</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cycle 2</td>
<td>S</td>
<td>Rs</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cycle 3</td>
<td>S</td>
<td>Rs</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actor</td>
<td>Alter</td>
<td>Ego</td>
<td>Alter</td>
<td>Ego</td>
<td>Alter</td>
</tr>
</tbody>
</table>
FIRST HYPOTHESIS

Our first hypothesis was that the number of cycles arising out of an initial response is limited. According to this hypothesis, the diagrammatic representation of chain (ref. Figure 3) should change in form according to the degree of intensity of the stimulus. Figure 5 is a graphical representation of a cycle of violence, presented for didactic purposes only, in order to illustrate how the effect of stimulus intensity may be represented.

Figure 5 demonstrates that the deciding factor for the form of the escalatory process is not the actual degree of intensity of stimulus, but rather the difference in intensity between S, Rs and R. In other words, the escalation towards violence may be described and measured in terms of the discrepancy of intensity of interaction.

FIGURE 5
CHAIN OF INTERACTION SHOWING ASSUMED EFFECT OF STIMULUS INTENSITY

Thus, once all the actions had been graded, the cycles were grouped according to patterns. For example, the following 3 cycles all formed the same pattern:
For the sake of convenience, we recorded each pattern in terms of
\( a = 0 \), where "a" represents the lowest intensity in the cycle, and all
the cycles having the same pattern were grouped together.

**SECOND HYPOTHESIS**

Our second hypothesis was that the number of cycles leading to the
final act is inversely related to the intensity of stimulus.

We were not able to use simple correlation techniques in order to
demonstrate the relationship between the total number of acts and
their intensity, because the form of the total interaction is not necessarily
a simple linear escalation, but may well take a more complicated form,
depending on the intensity of any given stimulus. (Ref. Fig. 5).

In order to process the data, we used a regression formula which
introduces the dynamic form taken by the escalation. The following
formula was used:

\[
Y = b_0 + b_1 X + b_2 X^2
\]

The line drawn from this equation using the customary regression
formula has the property that the sum of squares of vertical deviations
of observations from this line is smaller than the corresponding sum
of squares of deviations from any other line.\(^3\)

This formula was computed for each cycle, where \( b_0 \) = mean intensity
of total interactions of the cycles; \( b_1 \) = the gradient (that is, the
expression of the linear relationship between the intensity of each act
and its sequential number); \( b_2 \) expresses the non-linear connection
between these factors. In other words, the formula expresses the relation-
ship between the intensity and the sequential number of the act
in the interaction.

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5. See *Introduction to Statistical Analysis*, Wilfrid J. Dixon and Frank J. Massey
VI. RESULTS

FIRST HYPOTHESIS

The results of the data processing were divided into four groups according to the method of data collection used, and data for the four groups were divided according to the number of patterns formed. The results are presented in Graph Number 1.

Graph 1 shows us that the greatest intensity difference between acts was from 0–3. Thus the number of possible patterns was 81 (4 grades of intensity combined with 3 possible positions). Of these 81 possible patterns, only 18 were found to appear more than four times. This is a small number of patterns in relation to the number of possible patterns, and we may therefore conclude that the frequency is not random, and that there are deciding factors. We also found that the
frequency of the patterns within the four groups was similar, indicating that the deciding factor is the same for all four methods of data collection.

The pattern appearing most often was that of three actions on the same level of intensity, that is:

\[
\begin{array}{ccc}
S & R_s & R \\
0 & 0 & 0 \\
\end{array}
\]

The second, third and fourth most frequent patterns were 001, 010, and 011. This supports the hypothesis that the governing factor is the initial stimulus intensity.

These results support the hypothesis that the number of possible cycles is limited, and is related to the stimulus intensity.

SECOND HYPOTHESIS

As mentioned above, the data collection from court hearings did not provide a sufficient number of acts to enable the use of the regression analysis, and therefore computations were made for three methods only.

During computation, we found that \( b_2 \) (which expresses the non-linear connection between the sequential number of the action and its intensity) was not significant, and therefore the following formula was used:

\[
Y = b_0 + b_1 X
\]

The results found for the three methods are seen in graphs 2 (fictional accounts of violence), 3 (role-playing), and 4 (observations).

Graphs 3 and 4 showed a clear trend in the expected direction. The lower the intensity of interaction, the lower the gradient (representing the total number of acts), and the higher the intensity, the higher the gradient. This trend may be seen by the marked connection between \( b_0 \) and \( b_1 \).

In other words, the results of role-playing and observational techniques tended to prove the inverse relationship between the degree of intensity of the action and the total number of acts, as suggested in the hypothesis.
The results obtained from the fictional accounts of violence (see Graph 2) did not support the hypothesis. There are several possible reasons. First, it is possible that our scale was not suitable for the contents of the accounts, as they represent a wide variety of cultures. Secondly, it is quite feasible that the accounts included only those acts perceived by the author to represent reality, and that in real life, other acts would be included. The possibility that the accounts did not represent a random sample of interactions must also be taken into account.

The results obtained from fictional accounts, while not supporting the hypothesis, are not sufficiently conclusive to disprove it completely. In fact, the results did show a superficial trend in the expected direction.
VII. DISCUSSION

This study is only the beginning of the empirical verification of the intricate and vast field of the situational aspects of violence. We have established that the situational interaction of violence may indeed be quantified and measured, and have devised a measuring instrument. The cyclic conception of the escalation towards violence has been shown to be tenable, and we have also demonstrated that the escalation towards violence is related to the perceived intensity of the initial provocation. Finally, we have shown that there is a distinct relationship between the number of cycles, the intensity of the interaction, and the escalation.
towards violence. When the intensity is high, the number of cycles is less and the duration of the interaction is shorter. *Per contra*, when the intensity is low, the number of cycles is larger and the duration of interaction longer.

We realise that our measures may be crude, and that their application to different cultural settings may involve the drawing-up of new scales. However, the first step in the investigation of the situational aspects of violence has been made, and any further contemplated research may do well to take our study as a base and a first stepping-stone.