Attracting Assault: Victims' Nonverbal Cues

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*Potential victims may be signalling their
vulnerability to would-be assailants through
gestures, posture, and exaggerated movements.*

Are there specific movements or behaviors that identify a potential victim of an assault and which signal (or are perceived as signalling) this vulnerability to a criminal? If there are such movements, can they be identified? This study sought to answer these questions by examining the movements of individuals rated by criminals as likely to be assaulted.

The identification of such behaviors has important ramifications in terms of aid to those public agencies and officials attempting to solve some of the problems of assault. Any insight or further understanding of the variables involved in such a problem is invaluable in helping to apprehend criminals and decrease the frequency of assault. Identifying behaviors typical of potential assault victims would enable anti-crime decoys to attract more criminals. It would allow, too, major classes of victims (the aged and the infirm) to become aware of such behaviors so that they might become less vulnerable to assault.

Another important aspect of this study is its methodology—the use of Labananalysis, an established system of movement notation for the study of nonverbal communication. Labananalysis came into being in 1970. It grew out of two major notation systems: Labanotation, originated by Rudolf Laban (14), and Effort/Shape, originated by Laban and Lawrence (15).

As do many contemporary communication and behavioral science experts, Laban viewed movement as a process, rather than a series of static positions. He considered movement to be an extension as well as a reflection of emotions and thoughts, and not merely something which occurs sporadically as the result of external stimuli.

Labananalysis "can be used to describe the process of movement structure in terms of body parts used, path in space, weight transference and time duration" (3, p. 2). This notation system makes it possible to look at the specific aspects of nonverbal communication in terms of a systematic set of variables. Once behavior is stated in terms of movement variables, it is possible to analyze the resultant data to find out whether there are individual movements or combinations of movements inimical to potential victims that would be signals to a criminal, telling him or her that an individual is a potential target for assault.

Videotapes were made of persons selected at random while they were walking in one of the highest assault areas in New York City.

Taping took place between 10:00 a.m. and 12:00 noon over a three-day period; more sophisticated equipment for night shooting was not available. All persons were taped walking in the same direction at approximately the same distance from the camera. As far as could be determined, they were unaware that they were being taped. No sound was used and the videotapes were black and white.

Those persons taped were divided into four groups of 15 each, according to their age and sex. There were two groups of men, young and old, and two groups of women, young and old. Those classified as "young" appeared to be under 35 and those classified as "old" appeared to be over 40. These judgments were made initially by the senior author and were corroborated by several judges who viewed the films before they were shown to respondents. Obviously, more than 60 persons were videotaped. Tapes of those who could not be classified into specific age groups were discarded.

A scale for rating an individual's assault potential was established by discussing the videotapes with a group of 12 prison inmates at a large Northeastern facility. These men were selected from a group of criminals convicted of assault against persons unknown to them. They were chosen for their general intelligence and verbal ability by a prison official who knew them well and was responsible for their social and psychological well-being.

Each of the videotaped sequences was presented to this group of prisoners. They were asked to talk about the videotaped persons in terms of being targets for assault. Audiotapes were made of the inmates' discussion. Among other information, the audiotapes contained descriptive evaluations of each of the videotaped individuals. These evaluations, determined by the prisoners and in their own language, were used to establish a rating scale (Table 1) from 1 to 10, which could be used and easily understood by a second set of prisoners who were to serve later as respondents.

This second set of prisoners who were to rate the videotaped persons in terms of their assault potential consisted of 53 prison inmates who were other than the 12 used to establish the rating scale. These respondents all had been convicted of assaultive crimes ranging from murder to simple assault on victims

Table 1: Scale for rating assault potential

Description	Rating
A very easy rip-off.	1
An easy dude to corner.	2
You could take that one out.	3
Looks like a fairly easy hit.	4
You could stand the problem.	5
Could give you a little static.	6
Would be a problem. Could give you a hard time.	7
Hard dude to knock off. Wouldn't mess with him.	8
Would be heavy. Would give you a hard time.	9
Would avoid it, too big a situation. Too heavy.	10

unknown to them. All respondents were in minimum security and were selected from an eligible population of 80. Twenty-seven of these 80 chose not to cooperate for a variety of personal reasons. Eighty-seven percent of the respondents were black, eight percent were white, and six percent were Hispanic. Their ages ranged from 17 to 56, with 75 percent under 35. Forty-three percent of the respondents were single, 38 percent were married, 17 percent were separated, and 2 percent were divorced. In terms of education, only one inmate was illiterate and one was ungraded. Sixty-four percent had more than elementary school education; the remaining 32 percent had some elementary education.

The respondents viewed the videotapes in groups of 10 to 12. The tapes were rotated to control for order effects. The respondents were asked to rate each videotaped individual using the rating scale (see Table 1). The videotapes were then divided into two groups for Labananalysis. The first set of tapes consisted of all those in which individuals had been given a rating of 1, 2, or 3 by more than half the respondents. These 20 individuals formed the group designated as "potentially easy victims." The range of agreement was from 27 to 36 of the 53 respondents. The second set of tapes were those in which individuals had received ratings between 4 and 10 from more than half the respondents. This group of 19 individuals was designated as "non-victims" and served as a control group.

The individuals were distributed by age and sex as follows: among the older women, 8 were classified as potential victims and, for control purposes, the remaining seven older women were classified as non-victims. In each of the other three sub-groups—old and young men and young women—four persons in each group met the criteria for victims. For control purposes, four persons were selected, at random, from each of these non-victim groups in the above categories.

As indicated in Table 2, mean differences between victims and non-victims in rated assault potential were rather large. It should be noted, however, that the criteria for assigning individuals to the non-victim category were conservative and could mitigate against finding differences between groups. The random selection procedure used did not result in selecting persons with extreme ratings.

In examining the average assault ratings among the four groups, it was found that older men and women were rated as more likely assault targets than

Table 2: Average assault ratings by age and sex for victims and non-victims

	Victims		Non-victims		Total	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
Older women	8	3.2	7	4.8	15	3.9
Older men	4	2.3	4	5.0	15	4.0
Younger women	4	3.4	4	4.6	15	4.2
Younger men	4	3.6	4	5.3	15	4.8

younger men and women, as one might expect. In the victim sample studied, older men received the highest average assault rating. They were followed by older women, despite the fact that the older women had the highest individual assault ratings. These findings agree with the general crime statistics in the Northeastern United States.[1]

> *The videotapes were analyzed using a Labananalysis code and appropriate statistical analyses were used to determine which of these movement categories differentiated between victims and non-victims.*

The Labananalysis code consisted of 21 movement categories (see Figure 1). To establish rater reliability, a second trained dance analyst re-rated 6 of the tapes (40 percent) in terms of the 21-item movement code. The two analysts were in agreement in over 90 percent of their evaluations. For some of the 21 movement categories, it was not possible to observe all individuals. Since video-tapes were filmed under live conditions, clothing often obscured certain body movement. For example, when scoring stride, it was not always possible to see the length or width of the stride because legs were hidden by clothing, or the camera angle was bad.

Because of the expectation of low frequencies in some of the cells, Fisher's exact test was used in all cases to test for differences between victim and non-victim groups. Statistically significant differences were obtained for 5 of the 21 Labananalysis movement categories as described in Figure 1. These categories were stride length, type of weight shift, type of walk, body movement, and feet.[2]

Stride length. Since none of the victims had a short stride, the three categories for this variable were collapsed to two, and medium stride was compared to long stride. Among the 14 victims, 8 had medium strides and 6 had long strides. Among the non-victims, 15 had medium strides and one had a combination stride that was not classifiable. The difference between victims and non-victims was significant (p < .02).

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[1] According to a conversation with an information officer of the New York City Police Information Bureau, it may be that more males than females are assaulted because more solitary males than solitary females are on the city streets.

[2] Clothing obscured some of the movements of a number of individuals in these categories—ten in stride length, ten in type of weight shift, and two in body movement.

1. STRIDE LENGTH: Distance measured by a step.
   Short   Medium   Long

2. STRIDE WIDTH:
   Wide: stride extends beyond hip joint
   Narrow: within boundaries of hip joint

3. KNEES: Bent   Straight

4. TEMPO: Number of steps in five seconds.

5. TYPE OF PHRASE: A movement that has an exertion—recuperating rhythm which tends to organize itself into phrases that initiate, make a main statement and conclude. A series of movements comprising a section of a pattern. Scoring indicates where in phrase emphasis occurs:
   Explosive: beginning
   Swing: middle   Impacted: end

6. RELATION TO UPRIGHTNESS: Body's relationship to gravity in space.
   Vertical, Horizontal, Sagittal (back and forth)
   Neutral (erect, upright without any spatial stress)

7. TYPE OF WEIGHT SHIFT: The shift that occurs when transferring weight from one foot to the other while walking. Movement usually starts at the pelvis.
   Primarily lateral: weight shifted from side to side
   Three-dimensional: pelvis operates in a spiral and achieves a three-dimensional quality
   Primarily up/down: weight shift causes a bounce because body goes up and down
   Primarily forward/back: a sagittal movement

8. TYPE OF WALK:
   Postural: movement activates the whole body
   Gestural: movement activates only a part of body
   Non-specific: other

9. TYPE OF ENERGY:
   Held: energy retained in body
   Relaxed: energy permitted to flow easily
   Non-specific: other

10. AMOUNT OF ENERGY: Relative amounts of energy used.
    Low   High

11. USE OF WHOLE BODY:
    Mainly lower moves: body moves from waist down, upper body held
    Upper vs. lower: upper and lower parts move separately, sometimes in opposition to each other
    Variations in rhythm: no continuous pattern in body movement

12. BODY MOVEMENT:
    Unilateral: one side of body or one limb used
    Contralateral: two sides of body move in counterpoint—right arm, left leg then left arm, right leg

13. HEAD:
    Undifferentiated: head moves as unit with spine
    Gestural: head moves as a separate unit in relation to the spine

14. GAZE:
    Straight ahead   Down
    Non-specific

15. FEET:
    Swung   Lifted

16. LEFT ARM TYPE OF MOVEMENT:
    Swung   Other

17. LEFT ARM AMOUNT MOVED:
    Whole   Part

18. LEFT ARM HOLD:
    Held   Relaxed

19. RIGHT ARM TYPE OF MOVEMENT:
    Swung   Other

20. RIGHT ARM AMOUNT MOVED:
    Whole   Part

21. RIGHT ARM HOLD:
    Held   Relaxed

Figure 1: Movement code and definitions

Type of weight shift. The five categories for this variable were collapsed into two—three-dimensional versus "other" (lateral up/down, forward/back, and diagonal). Only four victims moved three-dimensionally, while six were in the "other" category. Among non-victims, eleven moved three-dimensionally and two were in the "other" category. Victims and non-victims differed significantly $(p < .03)$.

Body movement. For this movement there was a highly significant difference between the victim and non-victim groups $(p < .05)$. Nine of the victims analyzed moved contralaterally, and nine moved unilaterally. All twenty of the non-victims, however, moved contralaterally.

Type of walk. Among the 20 victims, 8 were rated as having postural movement, 8 as gestural, and 4 as non-specific. The movements of 17 of the non-victims were rated as postural and the one remaining "non-victim" was rated as non-specific. The difference between the two groups was significant $(p < .001)$.

Feet. The variable concerned with foot movement had two categories— swung and lifted. No one in the victim group swung their feet; seven lifted them. All 16 of the non-victim group swung their feet. This difference was significant $(p < .01)$.

> *From an examination and combination of those movements*
> *where significant differences were found between victim and*
> *non-victim groups, a movement profile or description*
> *can be developed of the typical victim and non-victim.*

The typical victim as perceived by the criminal respondents in this study would have either a long or a short stride, but not a medium stride. This is not a matter of specifically measured length in feet and inches, but rather is expressed in terms of bodily dimensions and how the leg moves, comfortably, from the hip joint when the weight is shifted and the leg extended. Thus, a long stride for a person who is five feet tall might be a short stride for someone who is six feet tall. This typical victim would probably move his or her body so that body weight would shift laterally, diagonally, or with an up/down movement. He or she would tend to walk gesturally rather than posturally. In terms of whole body movement, the typical victim would move unilaterally, one side at a time, rather than contralaterally, moving left arm and right leg and then right arm and left leg. (Even those victims who did move contralaterally combined this movement with upper and lower body parts moving against each other rather than moving together.) Finally, the victim would tend to lift his or her feet while walking rather than using a more fluid swing movement.

The picture drawn of the typical non-victim is a completely different one. The typical non-victim would use a medium stride, shift weight in a three-dimensional pattern (as if he or she were executing a "figure 8"), walk posturally, move contralaterally, and swing his or her feet.

The major difference between victim and non-victim as perceived by criminal respondents and as described by the Labananalysis notation seems to be the

difference that exists between postural and gestural movement. The terms posture and gesture refer to how much of the body participates in a movement. In postural movement, the initiation of the movement comes from the body center, while gestural movement is initiated from the body's periphery. Thus, gestural movement is discrete, separated, and limited to individual body parts. Postural movement, in contrast, always involves not only the observed or obvious movement of a specific body part, but affects and is reflected in the total body.

The prime difference between perceived victim and non-victim groups, therefore, seems to revolve around a "wholeness" or consistency of movement. Non-victims have an organized quality about their body movements, and they function comfortably within the context of their own bodies. In contrast, the gestural movement of victims seems to communicate inconsistency and dissonance. Condon and Ogden (5; see also 4) have called this phenomenon "interactional synchrony." Persons who communicate with each other tend to "move to a similar beat," while a lack of synchrony is found, for example, in autistic children.

The perceived victims are non-synchronous or anti-synchronous within themselves. Instead of body parts working to complement each other, as in a contralateral walk, the potential victim's body parts seem to move against each other, as in the non-fluidity of a unilateral body movement or the lifting rather than graceful swinging of the feet.

Our findings are also congruent with those of Goffman (11) and Hall (12). Goffman and Hall concur that within particular cultures, and their subcultures, people share perceptions of the kinds of behaviors that are acceptable and unacceptable. Some behaviors which differ from the norm are unacceptable but are ignored as being trivial or too embarrassing to note (torn clothing, an open fly). Other extremely unacceptable behaviors are so deviant as to be controlled by law (public nudity).

As noted by Scheflen (17), Bartenieff (1), and others who have used movement analyses to discover unconscious aspects of personality and mood, non-verbal communication often reveals, at an emotional and unconscious level, patterns of communication on the part of both sender and receiver. Although in choosing victims, our prison inmate respondents did not consciously base their selections on particular behaviors, they may have perceived such behaviors which denoted potential victims. In terms of Goffman's and Hall's constructs, the specifics distinguishing victim behavior were all actions that may be described as exaggerations of the norm. Extra long or short strides, unilateral body movements, and gestural (or outward) arm and leg movements are all other than usual public behaviors, and may be regarded as inappropriate. Perhaps some of the behaviors of the potential victims involve what Goffman refers to as "gestural hinting," whereby victims unconsciously state their vulnerability, and criminals (probably also on an unconscious level) "read" that message.

Further support for this idea comes from the respondents themselves, who indicated during these conversations that "any dude who looked different" would probably be a target of assault. Further questioning revealed "looking different" meant a different physical appearance in clothing and accessories. In

other words, beyond the unconscious awareness of behavioral differences, differences in modes of dress and display were consciously recognized as a sign of vulnerability.

The results of this study may be used to extend the efforts of other investigators who have concerned themselves with victim types (7, 8) and with the physiological and social characteristics shared by victims (9). A number of studies (6, 10, 13, 16) have called attention to the fact that people participate in their own victimization through the situations in which they place themselves. The results reported here extend these findings to include movement as an important component of potential victimization. A nonverbal dialogue seems to exist between criminal and victim through which the victim communicates his or her vulnerability to the criminal in much the same way that releasor mechanisms operate in the animal world (18; see also 2).

This finding might be relayed to potential victims in programs of behavior modification. Those who could not be properly trained to adopt new movements might at least be alerted to those aspects of their behavior which appear to signal vulnerability to assault. Just as it is possible to prevent some crimes by warning people about situations of potential victimization such as walking down a dark street close to buildings or flashing money in a crowd, so too it may be possible to prevent other crimes by informing people about how they might be inviting victimization by their own nonverbal cues.

REFERENCES

1. Bartenieff, I. and M. Davis. "Effort Shape, the Unity of Function and Expression." Unpublished manuscript, Department of Social Psychiatry, Albert Einstein Medical College, Bronx, New York.
2. Block, M. K. and G. J. Long. "Subjective Probability of Victimization and Crime Levels: An Econometric Approach." *Criminology* 2, May 1973, pp. 87-93.
3. Cohen, L. R. *Introductory Guide to Labananalysis.* New York: Dance Notation Bureau, 1978.
4. Condon, W. S. "Segmentation of Behavior." *Journal of Psychiatric Research* 5, 1967, pp. 221-235.
5. Condon, W. S. and W. D. Ogden. "Sound Film Analysis of Normal and Psychological Behavior Patterns." *Journal of Nervous and Mental Diseases* 143, 1966, pp. 338-374.
6. Curtis, L. "Victim Participation in Violent Crime." *Social Problems* (4), Spring 1974, pp. 594-605.
7. Drapkin, I. *Victimology: A New Focus.* Lexington, Md.: Heath Lexington Books. 1975.
8. Drapkin, I. and E. Viano. *Victimology.* Lexington, Md.: Heath Lexington Books, 1974.
9. Fattah, E. A. *Is the Victim Guilty: The Role of the Victim in Murder Incident to Robbery.* Montreal: Presses de L'Universite de Montreal, 1971.
10. Feyerham, W. H. and M. J. Hendelong. "On the Victimization of Juveniles: Some Preliminary Results." *Journal of Research in Crime and Delinquency* 11(1), January 1974.
11. Goffman, Erving. *The Presentation of Self in Everyday Life.* Garden City, N.Y.: Anchor, 1959.
12. Hall, Edward T. *The Silent Language.* New York: Fawcett, 1959.
13. Johnson, J. H. "Recidivist Victim: A Descriptive Study." *Criminal Justice* 4(1), 1973.
14. Laban, Rudolf. *The Mastery of Movement.* Boston: Plays, Inc., 1972.
15. Laban, R. and F. C. Lawrence. *Effort: Economy of Body Movement.* London: McDonald and Evans, 1967.
16. Law Enforcement Assistance Administration. *Survey Studies of Victims of Crime.* Washington, D.C., 1975.
17. Scheflen, A. E. *How Behavior Means.* New York: Jason Aranson, 1974.
18. Tinbergen, N. *The Study of Instinct.* Oxford: Clarendon Press, 1969.