

## GESTURING AND SELF-CONTACT OF RIGHT AND LEFT HALVES OF THE BODY: RELATIONSHIP WITH EYE-CONTACT<sup>1</sup>

VEZIO RUGGIERI, CARLOTTA CELLI, AND ANTONELLA CRESCENZI

*University of Rome*

*Summary.*—We examined the correlations among eye-contact, gesturing, and self-contact behaviors for 26 female university students during different neutral and emotional situations. There was a statistically significant positive correlation between eye-contact and right gesturing in two of four situations ( $r_s$ , .37, .33) and a significant positive correlation (.33) between left self-contact and eye-contact during an initial relational contact.

This research examined the relationship between eye-contact, gesturing and self-contact in different stimulus situations. The literature on nonverbal communication has examined self-contact and gesturing behaviors during emotional situations (9, 13), in relation to depression (4, 12), and anxiety (7, 16).

In our previous research (11) we demonstrated that different stimulus situations elicit different forms of self-contact and gesturing behaviors. In this way (a) when the subject was asked to recall an embarrassing experience and paid more attention to his internal state than to the interaction with the environment, an increase of self-contact appeared, more relevant in the left side of the body; (b) when the subject was more interested in communicating and gave more attention to the environmental stimuli than to himself, gesturing increased on the right side of the body; (c) if the social contact produced anxiety (like an interaction of first contact) self-contact appeared on the right side of the body. From this we hypothesized that the right half of the body is more activated, producing gesturing or self-contact behaviors, when the interpersonal component is predominant. On the contrary, the left half is activated, producing self-contact, when more attention to internal contents is given. In both cases self-contact has the role of reducing the arousal related to anxiety and frustration.

The ample literature shows a relationship between eye-contact and depression (5, 6, 14), interpersonal distance (1, 14, 15), intimacy of conversational content, and masking emotions (2, 3). Now we hypothesize that eye-contact, which has always a meaning in interpersonal interaction, should be positively correlated with free-gesturing behavior, especially on the right side of the body, more likely for right-handed subjects in the communication. Eye-contacts should correlate negatively with self-contact.

We want to examine the relationship between gesturing, self-contact and

<sup>1</sup>Request for reprints should be sent to Vezio Ruggieri, Via Bisagno 28, Roma, Italia 00199.

eye-contact during four stimulus situations which are: (a) of first interpersonal contact, (b) neutral, (c) emotional, recalling frustrating experience, and (d) emotional. In these situations cognitive components are predominant with respect to the emotional ones.

## METHOD

### *Subjects*

The experimental group of 26 female university students were between 19 and 35 yr. of age. All subjects verbally declared themselves right-handed.

### *Materials*

Eye-contact was recorded by a trainer-interviewer who pushed a button connected to a writing recording system every time she perceived a gaze encounter with the subject. In this way each eye-contact was graphically transcribed on paper which also indicated its duration. The button was positioned out of sight on the reverse side of the table top, located to the side of the interviewer. We have considered as gesturing behavior any noticeable movement of arm, hand, or finger not in moving contact with another part of the body and as self-contact behavior a response that involves motion of one part of the body in contact with another (10). Gestural and self-contact behaviors were recorded on videotape; the apparatus was located behind a one-way mirror in a room adjacent to the experimental one.

### *Procedure*

The experiment was carried out at the Institute of Psychology, University of Rome. The experimental situation involved a standardized interview between the subject and a female interviewer. The subject and the interviewer were seated facing one another; a small table was located to the side; the chairs were placed a meter apart. A microphone, linked with the videotape in the adjacent room, was placed on the table. The experimenter, located behind the one-way mirror, filmed the gesturing and self-contact behavior with a telecamera connected with the videotape. Durations (in percentage, with respect to the total duration of the response) of the gestures produced independently by the right and the left hands were calculated separately. The same procedure was used for self-contact.

After formulating the questions during the response period, the interviewer was instructed to look fixedly at the subject, using the same method as that used by Exline (1, 2) and to avoid using gestures. The interviewer pushed the button, connected with the written recording system, every time she perceived eye-contact and held down the button for its entire duration.

The interview concerned four questions which provided two different contexts: the first two questions referred to neutral situations; the latter two referred to more personal situations. The interviewer presented the situation to the subject as follows: "This is an experiment on conversation, and the microphone which you see on the table will tape what we say. I will ask you a series of questions on several aspects of your life. You are not obliged to respond to the questions; however, should you wish, you may speak as long as you like. Immediately following the interview I will explain the aim and the meaning of the questions. (a) How do you normally occupy your day? (b) Can you tell me generally how you passed your vacation this past summer? (c) Surely you have, on occasion, found yourself in an embarrassing situation. How did you feel and how did you react? (d) The male-female relationship is a difficult one. On the basis of your personal experience, what are the most problematic situations?"

## RESULTS

Mean scores and standard deviations for each of the variables in the different situations are presented in Table 1. There is a positive correlation between eye-contact and right gesturing in the second (Pearson's  $r = 0.37$ ,  $p < 0.05$ ,  $df = 24$ ) and fourth situations (Pearson's  $r = 0.33$ ,  $p < 0.05$ ,  $df = 24$ ).<sup>2</sup> Only one significant positive correlation was noted between left self-contact and eye-contact in the first situation (Pearson's  $r = 0.33$ ,  $p < 0.05$ ,  $df = 24$ ).

TABLE 1  
MEANS AND STANDARD DEVIATIONS OF VARIABLES IN FOUR SITUATIONS

Measure	Situation 1		Situation 2		Situation 3		Situation 4	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Right gesturing	14.79	17.18	15.91	16.14	16.10	15.71	24.41	22.71
Left gesturing	21.46	26.15	19.04	20.64	13.05	17.53	18.75	21.45
Right self-contact	81.64	19.46	79.55	16.57	80.26	21.80	69.40	26.62
Left self-contact	69.58	32.66	73.05	27.59	86.16	18.31	80.00	23.52
Eye-contact	59.18	18.92	50.89	17.19	43.03	14.91	45.27	13.87

Our results confirm the hypothesis only partially. In fact statistically significant positive Pearson's correlations between eye-contact and right gesturing appear in Situations 2 (neutral) and 4 (cognitive and emotional). These two situations are different from the first (of new contact) and the third (emotional) situations. In the Situation 3 an evident emotional involvement is present and induces the subject to pay more attention to himself than to the environment. In the first situation there is probably a high level of anxiety related to the novelty of the social interaction. In Situations 2 and 4 the component "communication" was not inhibited by patterns of "internal" stimuli. In the fourth situation the subject in fact is more interested in communicating his opinion about male-female relationships even if this argument has an emotional component. So it is interesting that in the second and fourth situations eye-contact becomes parallel to gesturing on the right side of the body which is most likely in the interaction for right-handed subjects.

The statistically significant positive Pearson's correlation between left self-contact and eye-contact in the first situation indicates that the first interpersonal contact produces anxiety and need for reassurance that may be satisfied by a tactile self-stimulation (self-contact), considered by some authors (8) as a protective micro-caress. But we think that further research must confirm this result and suggest more exact interpretations.

<sup>2</sup>Tables of other correlations are on file in Document NAPS-04018. Remit \$4.00 for fiche or \$10.45 for photocopy to Microfiche Publications, P.O. Box 3513, Grand Central Station, New York, NY 10017.

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