THE CONTRIBUTION OF GENERAL FEATURES OF BODY MOVEMENT TO THE ATTRIBUTION OF EMOTIONS

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ABSTRACT: The present study was designed to assess the contribution of general features of gross body movements to the attribution of emotions. Eighty-five adult subjects were shown ninety-six videotaped body movements, performed by three actors. Each movement was determined by seven general dimensions: trunk movement, arm movement, vertical direction, sagittal direction, force, velocity and directness. Using rating scales, the subjects judged the compatibility of each movement with each of twelve emotion categories. The results showed which movement features predicted particular ratings. Emotion categories differed as to the amount, type, and weights of predicting movement features. Three factors were extracted from the original ratings and interpreted as Rejection-Acceptance, Withdrawal-Approach, and Preparation-Defeatedness.

Do certain body movements suggest emotional states, and if so, what characteristics of body movement contribute to the inference of distinct emotions? Gross movement reactions can be observed in many contexts, varying from sports to public demonstrations (Morris, 1977). In dance, one of the oldest cultural expression forms (Sachs, 1937), body movements are deliberately used as a prime vehicle of expression. Still, the potency of gross body movements (movements that involve the entire body) to express emotional contents is a rather neglected topic in nonverbal research. The present study is an attempt to assess (1) whether untrained observers agree on the kind of emotions that certain body movements convey and (2) what features of body movement contribute to the attributions of emotions.

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Theoretical Framework Of The Present Study

Why would certain body movements be expressive of particular states? Ekman and Friesen (1967, 1969) hypothesized that certain body movements help a person to cope with an experienced emotion. Thus, body movements might reflect relevant action tendencies that are closely linked with emotional states. Frijda (1982, 1986) suggested that the understanding of movement expressions is based on the perception of such general action tendencies, along with the level of activity on the part of the mover. "One perceives the subject's opening up or closing down, his reticence or responsiveness, his fuller or lesser presence, et cetera." (Frijda, 1982, p.112). Consequently, it can be expected that general movement features might strongly influence the expressive value of body movements. General features are such characteristics as force, velocity, and spatial orientation (see Wallbott, 1980, for an extensive review). For instance, if a movement is characterized by extreme muscle strength, while there is no real physical barrier to be removed or handled, this feature may contribute to the inference of fear, or anger. Similarly, if a person suddenly steps back without any physical reason to react in that manner, the sagittal direction of this movement may contribute to the inference of surprise or amazement.

A number of studies, influenced by Laban analysis of movement, demonstrated the usefulness of general features as units of analysis. Such parameters as tension flow, dynamic complexity, and general spatial direction were found to be related to, for instance, schizophrenia (Davis, 1970), psycho-sexual development (Kestenberg, 1975), and severity of family problems (Dulicai, 1977).

Next, it can be asked how specific the inferences are, in other words: what kind of states can be discriminated? Dittman (1987) has argued that we can at best make probabilistic statements, based on the observation of a number of movements in a particular situation. He states: "These inferences cannot be couched in very specific terms, the way one might paraphrase what someone has said." (Dittman, 1987, p. 60). I agree with Dittman, that the attributions of states are based upon estimations. However, it can be argued that the agreement among observers, as well as the degree of specificity of their attributions, will vary with the combinations of relevant features that can be detected in a movement. For instance, moving backward might be indicative of fear, shame, and surprise. If just that feature were clearly visible, a rather general attribution could be made, for instance retreat. However, suppose the target not only moves backward, but at the same time slowly drops his head, while he folds his arms around