

## The Formation of Mutual Understanding in Conversation: An Embodied Approach

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**Abstract :** The mutual understanding in conversation is very important for human relations. This study investigates the mental function of the formation of mutual understanding between two people in conversation using the embodied approach. Forty people participated in this study. They are divided into pairs randomly. Four conversation situations between two (make/listen to fun or pleasant talk, make/listen to regrettable talk) are set for four minutes each, and the finger plethysmogram (200 Hz) of each participant is measured. As a result, the attractors of the participants who reported "I did not understand my partner" show the collapsed shape, which means the fluctuation of their rhythm is too small to match their partner's rhythm, and their cross correlation is low. The autonomic balance of both persons tends to resonate during conversation, and both LLEs tend to resonate, too. In human history, in order for human beings as weak mammals to live, they may have been with others; that is, they have brought about resonating characteristics, which is called self-organization. However, the resonant feature sometimes collapses, depending on the lifestyle that the person was formed by himself after birth. It is difficult for people who do not have a lifestyle of mutual gaze to resonate their biological signal waves with others'. These people have features such as anxiety, fatigue, and confusion tendency. Mutual understanding is thought to be formed as a result of cooperation between the features of self-organization of the persons who are talking and the lifestyle indicated by mutual gaze. Such an entanglement phenomenon is called a nonlinear relation. By this research, it is found that the formation of mutual understanding is expressed by the rhythm of a biological signal showing a nonlinear relationship.

**Keywords :** embodied approach, finger plethysmogram, mutual understanding, nonlinear phenomenon

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