

Non-verbal Behaviors and Communication Strategies

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Abstract

Communication studies have pointed out various alignment and grounding phenomena (Pickering et al. 2004), (Garrod et al. 2004), (Argyle et al. 1976), (Kendon 1967), (Clark 1996). Although these phenomena are generally confirmed, there are varieties among individuals in coordinating their behaviors. This paper attempts to characterize the factors that affect the styles of non-verbal behaviors in communication. The occurrences of such non-verbal behaviors as gazing, pointing, nodding, and body posture are analyzed, and the results suggest that difference in communication strategies affects the styles of non-verbal behaviors.

Keywords: Non-verbal behaviors; communication

Method

An experiment was conducted in a tourist-information setting. 18 university students who played the “customer” role were asked to obtain information on sightseeing spots from a subject who played the “clerk” role (a professional information clerk). The information was given through communication between a customer and a clerk in front of information display panels. Subjects’ non-verbal behaviors are measured by a Vicon Motion Capture System and NAC EMR-8B head-mount eye-trackers (see Ito et al. (2006)).

Analysis 1: Factor Analysis

We conduct a factor analysis of the occurrences of their non-verbal behaviors (the principal method, promax rotation). Four factors were extracted and named as follows:

Factor I - Cooperative: Characterized by a physical reaction to each other and cooperative interaction

Factor II - Clerk-led: Characterized by the clerk’s positive attitude when appealing to a customer

Factor III - Customer-led: Characterized by customer’s interest in interaction with the clerk rather than in the panels

Factor IV - Non-interactive: Characterized by the customer tendency to acquire information at an individual pace

Analysis 2: Comparisons between Different Types of Interaction

The 18 sessions were divided into two groups by hierarchical cluster analysis using factor scores for each subject. The main features of Cluster I are the high factor scores

for the Cooperative Factor and low factor scores for the Clerk-led Factor, and the main features of Cluster II are low scores for the Cooperative factor and high scores for the Clerk-led Factor. Correlation analysis of non-verbal behaviors within each cluster shows different characteristics of the two.

Although total duration of joint gazes at the panels and mutual gazes at partners show strong negative correlation in Cluster II (joint gaze: $\rho = -.833, p < .01$), such correlation is not found in Cluster I. This shows a severe conflict in Cluster II between social interaction and attention to physical information sources.

Another difference is the influence of the clerk on customer behaviors in interaction events. The guiding gazes of the clerk are strongly correlated to the duration of customer gazes at the panel in Cluster I ($\rho = .833, p < .01$), and this shows that the clerk’s activity highly influences customers in Cluster I where the interaction is mainly partner-oriented. Cluster II, where interaction style is rather panel-oriented, does not show such correlation.

Conclusion

We analyzed the non-verbal behaviors of participants in a tourist-information setting from an interactivity viewpoint. Factor analysis extracted four factors of interaction organization, and comparison among clusters shows that these factors affect the styles of coordinating non-verbal behaviors. These findings give hints for characterizing communication styles from the non-verbal behaviors of participants.

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