

Differences Between Americans and Arabs in the Production and Interpretation of Verbal and Non-verbal Dialogue Behaviour

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There are cultural differences in the way people behave in face-to-face dialogue. When observing or interacting with members of a foreign culture, we sometimes notice these differences and understand that they are merely differences in expression. In other cases, however, we may wrongly assign our own interpretation to a particular behaviour from the foreign culture, which may result in communication failure and even confrontation. In particular this can arise from nonverbal aspects of communication such as gesture, gaze, and interpersonal distance.

We are currently studying the dialogue behaviour of Americans and Arabs because these cultural groups appear to have marked differences which can lead to misinterpretation. We are investigating interpersonal distance, hand movements, head nods, gaze, and back-channel feedback. Our approach involves the collection and annotation of a corpus of face-to-face dialogues and the statistical comparison of behaviours in the two cultural groups. We are also studying differences in the interpretation of these behaviours both by dialogue participants and by outside observers.

First, in our study of proxemics, based on evidence of cultural differences in the literature, we compared the effect of two different interpersonal distances on the participants' impressions in our recordings (Americans and Iraqis). In half of the conversations the participants' chairs were placed at a distance reflecting Arab preferences according to the literature and in the other half the placement reflected American preferences. After each session each participant filled in a questionnaire in which they rated the level of trust they felt towards and from the other participant. We found that Iraqis were not affected by the different interpersonal distances but Americans were. The latter reported feeling more trust, both towards and from their interlocutor, when the chairs were further apart reflecting Americans' preferences. We are currently running further experiments to find out whether Americans and Arabs as outside observers of the recorded conversations have the same impressions.

Second, regarding the use of gesture in face-to-face conversation, we believe a speaker without appropriate gestural skills in a foreign culture is likely to misinterpret and to be misinterpreted in a cross-cultural interaction. We hypothesise there are differences between Americans and Arabs in their baseline frequencies of hand movements and head nods in dialogue. We have completed the annotation of these phenomena in our corpus and we will soon obtain results regarding this question. If there are indeed differences, these will most likely affect the interpretation that American and Arab observers would make of these dialogue behaviours. To find out whether this is the case, we will then run an experiment in which members of these cultural groups watch segments from the recorded dialogues and rate the level of trust, tension, agreement, and other measures observed in the dialogue participants. The presentation of video segments will be without sound, and faces will be blurred so that the subjects' judgments are based on the body movements in which we are interested rather than on facial expression or prosody. In a second part of the experiment we will investigate whether some simple training about the non-verbal conversational behaviour of Arab speakers could help Americans to make a correct interpretation of these behaviours.

Third, the meanings attributed to gaze behaviour may vary across cultures. We are currently investigating this in our corpus by analysing the gaze patterns of the conversation participants and the interpretations that observers make of these patterns.

Fourth, as an example of turn-taking behaviour, we have examined the production and interpretation of back-channel feedback. We hypothesised that the ability to respond to back-channel cues accurately and in a timely fashion is important and that the prosodic cue typically used in Arabic can be misinterpreted by English speakers, as it resembles, acoustically, a pattern used in English to express negative affect. In an experiment with American speakers perceiving synthesised Arabic

utterances and interactions we found that English speakers did indeed misinterpret the prosodic cue used by Arabic speakers to invite back-channeling from the listener. In particular, Arabic speakers often produce a steep continuous drop in pitch at times when feedback is welcome, but this is interpreted by English speakers as an expression of negative affect. In another experiment Arabic speakers gave judgments of the behaviour of American interviewers in synthesised audio recordings of interactions. In some cases the interviewer responded appropriately to Arabic backchannel cues and in other cases they responded randomly. We found that Arabic speakers judged the former more favorably, e.g. as showing better listener skills.

Our general goal is to understand some of the intricacies of face-to-face communication and in particular how different cultures display different behaviours to achieve the same conversational purpose. When the research is complete, in September 2008, we expect the results to be not only of scientific interest but also useful for helping build successful cross-cultural communication and promote understanding.