Beyond Words: Identification of Back-Channel Communication Rules in Arabic and Development of Training Methods

Funded by DARPA’s Defense Sciences Office, via the Department of the Interior under Grant NBCH1050025 to the Information Sciences Institute of the University of Southern California, subcontracted under Subaward PO#105814.

Final Report

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1 Overview

The motivation for this project was as follows:

The rules governing real-time interpersonal interaction are today not well understood. With only a few exceptions, there are no quantitative, predictive rules explaining how to respond in real-time, in the sub-second range, in order to be an effective communicator in a given culture. This can be a problem in intercultural interactions; if an American knows only the words of a foreign language, not the rules of interaction, he can easily appear uninterested, ill-informed, thoughtless, discourteous, passive, indecisive, untrusting, dull, pushy, or worse. Short of long-term cultural exposure, there are today no reliable ways to train speakers to understand and follow such rules and attain mastery of interaction at the sub-second level.

The purpose of this research was to increase our knowledge and know-how in this area. We did so in four ways:

- We discovered the basic rules governing back-channel behavior (production of uh-huh, etc. as a display of serious listening) in Eastern Arabic.

- We developed a software-based training sequence to enable American speakers to understand and emulate the rules in Arabic and shown that it works.

- We showed that native-speakers of Arabic rate non-natives higher when they back-channel appropriately.
• We showed that non-trained Americans tend to misinterpret the Arabic back-channel cue, perceiving it as an expression of negative affect, but that this can be overcome by training.

2 Publications and Dissemination

These results have been disseminated widely.

2.1 Publications

American and Arab Perceptions of an Arabic Turn-Taking Cue, Nigel Ward and Yaffa Al Bayyari, submitted to the *Journal of Cross-Cultural Psychology*.


2.2 Talks


2.3 Public Web Sites

An overview of the findings regarding Arabic and links to full information is at http://www.cs.utep.edu/nigel/arabic/

An overview of what is know about back-channeling across cultures is at the Back-Channel Facts page: http://www.cs.utep.edu/nigel/bc/

2.4 Technology Transfer and Training

This grant led directly to support for follow-on research on the topic of Active Listening and Trust Across Cultures, Department of Defense, Counterintelligence Field Activity, 2007–2008, co-PI. $181,264.

Colonel Jeff Stalrow of the US Army Intelligence Center and School at Fort Huachuca has invited us to do an initial training session for his soldier-learners.

Two other funded activities have emerged as spin-offs of this project, with one more under consideration:


• Modeling the Time Course of Dialog as the Result of Multiple Interacting Processes, under submission to the NSF Human and Social Dynamics Program.

The grant supported a number of people who now have improved skills and knowledge enabling them to make future contributions in this area, including several who are continuing this work as part of the technology transfer and spin-off activities mentioned above. Specifically the grant supported 4 faculty members, 2 post-docs, 2 graduate students, 2 undergraduates, and 4 summer interns.

The grant also supported an initial step towards the formation of a nucleus of researchers working on these issues, as an outcome of the Special Session on The Prosody of Turn-Taking and Dialog Acts at Interspeech 2006, which we organized.

3 Software and Corpus

We produced a training suite consisting of three software components (all preliminary versions), all of which are available as freeware (without prejudice to the Government’s rights) at the URL below:

• Back-Channel Trainer
• Explanation of Arabic Back-Channel Cues
• Cue Production Evaluation Tool (Aizula)

In addition we produced the nation’s first collection of face-to-face dialogs in Iraqi Arabic, “The UTEP Corpus of Iraqi Arabic” (audio data in 6 CDs, archived at the Special Collections Department of the University of Texas at El Paso Library. Nigel G. Ward, David G. Novick and Salamah I. Salamah. 2006.) Responding to requests, we have given copies to researchers at USC-ISI, at USC-ICT, and at AFRL Wright-Patterson.

4 References

Software, quarterly reports, and other project documents are available at the private URL http://www.cs.utep.edu/nigel/dso/.