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Appropriation in an alien language: An experimental-semiotic study of sociolinguistic meaning

Any linguistic utterance carries social meaning in addition to semantic content. The variants that allow this meaning to be conveyed are transmitted through social interaction, and social factors play important roles in the cultural evolution of language. The use of communication systems to mark identity is also widespread in nature, suggesting that the cognitive underpinnings of sociolinguistic behaviour are relatively ancient. However, in spite of the clear importance of sociolinguistic behaviour to cognitive semiotics and language evolution, links between these fields and sociolinguistics are not strong, and few experimental-semiotic studies have directly investigated sociolinguistic questions. Here we present a study that does precisely this, using an artificial language game to test a hypothesis derived from sociolinguistic fieldwork.

The study is based on interviews conducted in 2012-2013 with white residents of a low-income neighbourhood in Philadelphia with a high degree of racial segregation and tension. Several male speakers were found to exhibit TH-fronting, a feature of African-American English (but not white Philadelphian English). Surprisingly, higher rates of TH-fronting were found in speakers who expressed aggressive negative views about their African-American neighbours. A likely explanation for this is that TH-fronting among these speakers was due to an association with toughness and "street" culture rather than African-American identity.

We tested this hypothesis with an experimental-semiotic study. The basic paradigm involved groups of four participants playing a computer game, with each player assigned to one of two alien species: Wiwos and Burls, with Burls depicted as tougher than Wiwos. Before playing, participants learned a small "alien language", which differed slightly for the two species (e.g., fuzuki vs. buzuki). Then they played a series of rounds in which they were paired with each other and could chat (by typing messages in the alien language), trade resources, and fight. In one experiment we manipulated whether forms used by Burls were explicitly associated for the Wiwos with Burls or with "tougher aliens". Consistent with the hypothesis, Wiwos in the latter condition appropriated Burl forms significantly more than in the former condition. In a second (ongoing) experiment, we investigate whether introducing a distinction between "peaceful" and "hard" Wiwos, with the latter having traits in common with "Burls", leads to greater appropriation of Burl forms by the latter, as a means of distinguishing themselves from their peaceful conspecifics.