

The Effect of Language Context on the Persistence of Bivalent Features in the Speech Prosody of Russian Heritage English Speakers

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Evidence suggests that language context, or the primary language spoken in the surrounding environment affects the formation of phonological categories in bilingual children, both in terms of phonetic [1] and prosodic features [2]. The question then arises as to how stable these representations may remain throughout the lifespan, when changes in language context occur after a critical or sensitive period of language acquisition has passed [3,4]. Young learners like heritage language (HL) speakers excel at acquiring narrow syntax and the segmental features of a language [5], whereas speech prosody, in particular, involves numerous cues realized on the word and phrase level. Arguably, acquiring suprasegmental phenomena places greater attentional and processing demands on the learner, requiring the knowledge of phonetics, morphophonetics, and discourse-level structures. If we consider that fuzzy categories are formed in part as a result of the mind's reluctance to hold two representational systems when one approximate one will suffice [6], there is reason to believe that speech prosody may be particularly susceptible to the formation of approximate representations [7]. Research studies have shown that despite communicative pressures which might condition a shift in the use of prosodic features in response to a changing linguistic environment, initial linguistic rules and systems nonetheless remain difficult to overrule. Instead, HL speakers preferentially produce bivalent phenomena that are shared between language systems, thus preserving linguistically important features that are tolerated, if somewhat unusual within the heritage linguistic system [8,9]. However, the persistence of this tendency over time, as HL speakers spend greater time in a heritage language context, has not yet been investigated.

This paper investigates this scenario in a case study of Russian HL speakers of English over the course of three years, during which they move from their native homes to different locations around the world (UK, China). Four teenagers (14-18, 2F) in two families were born and brought up in St. Petersburg, Russia, and relocated as teenagers to Yorkshire and East Anglia in the United Kingdom, with one individual subsequently moving during this period to China. While native speakers of Russian, the children were brought up as heritage speakers of English, which they learned through interaction with their English native speaker parent. Audio samples of the same four sentence were collected a few months after their initial move to the UK, and three years later. This data was compared to the same recordings collected from four extended family members (2 per family, 2F) who permanently reside in the UK and do not speak Russian. The paper describes the prosody of these HL speakers at each time point on the basis of the recordings, comparing the data to the local norms exhibited by their family and to their own recordings produced at the later time period. The discussion of this data describes how bivalent and incompatible suprasegmental features of the native system contribute to the native-like and non-native-like aspects of their phonological representations, referencing a novel proposal for an autosegmental-metrical model of Russian language prosody [10]. Features that are proposed to be an integral part of the Russian prosodic system (i.e., carry fundamental and systematic linguistic information) [10] appear to be particularly robust in their resistant to change, while other bivalent features that bear linguistic meaning which is less fundamental to interpreting the sentence within the native system show greater loss over time.

A variety of diagrams will be referenced in this paper to illustrate native, bivalent, and incompatible features of the linguistic systems (Russian, English). Representative examples compare the two recordings of a focus construction produced by the female HL speaker from Yorkshire with the same data by female native speakers of UK English, shown in Figure 1.

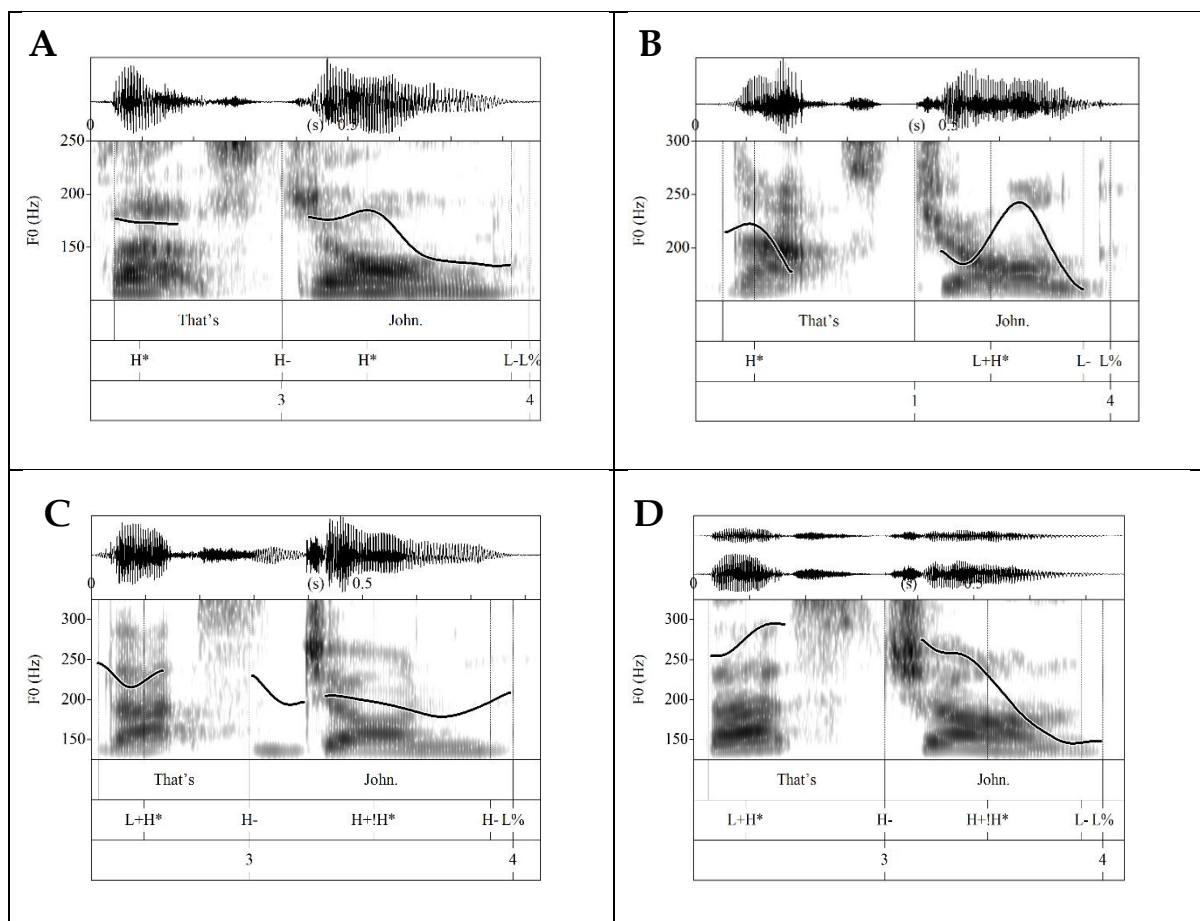


Figure 1. Focus construction. Female native speakers from (A) East Anglia (80s) and (B) Yorkshire (50s) produce this focus construction with an elevated pitch accent on the second word, as either a single high tone or rising bitonal pitch accent. The female heritage speaker (Yorkshire) produces the focus construction with bivalent features that are uncommon for native speakers. (C) This includes the initial rising bitonal pitch accent and the high sentence-final boundary tone in the initial recording (18-y.o.). The falling pitch accent on the word in focus is arguably incompatible with English prosodic norms for an item in a focus position. (D) These phenomena are retained in the later recording (21-y.o.), with the exception of the high sentence-final boundary tone, which is less systematically important for Russian prosody [10].

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