Lexical Access of Code-switched Words in Mandarin-English Bilinguals

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Question
• Is bilingual lexical access selective or non-selective?

Background
• Soares & Grosjean 1984: Sequential lexical access
• Bürki-Cohen et al al 1989: Base language effect

Hypothesis
• General: Lexical access will be slower in bilingual situation (i.e. code-switching) due to selective lexical access manifesting in an inhibitory base language effect
• Specific: Reaction time (RT) for identifying a nativized code-switched target word > code-switched target word > monolingual target word

Experiment
Forced-choice identification

Procedure:
• Training Session
• Experiment (audio stimulus, response)
• Language Background Questionnaire

Participants:
• Speaker: Female Mandarin Chinese-English bilingual
• Listener: 5 Mandarin Chinese-English bilinguals

Target onset phonemes:
• [x] vs. [h]
• [ts] vs. [ds]

Stimuli:
• Control/Monolingual: carrier phrase + target word, both English or both Mandarin
• Code-switched/Bilingual: carrier phrase + code-switched target word
• Nativized code-switched: target word code-switched but produced with base language phonology

Results
Average:
• Supports hypotheses: RT for nativized code-switched target word > code-switched target word > monolingual target word

Individual:
• Participants faster at identifying L1 target words regardless of base language
• P4: L1 English speaker > identify English targets faster regardless of base language
• P2: Early AOA (age of arrival) for English, continued exposure to L1 Mandarin > exhibits expected base language effect in both languages
• P1, P3, P5: L1 Mandarin speaker, late AOA for English > identify Mandarin targets faster regardless of base language

Discussion & Conclusion
• When averaging across participants, lexical access is slower in a code-switched/bilingual situation
• However, averaging obscures individual results
• Lexical access seems modulated by a bilingual’s “critical period” exposure as measured by AOA
• Being a dominant L1 speaker is associated with overall faster identification of L1 target words
• Perhaps, base language effect occurs only with more balanced bilinguals
• Possible that bilingual lexical access is non-selective, and lexical units from the dominant language have higher resting-level activation

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Selected References