Early Bilinguals Acquiring a Third Language: EEG and Behavioral Evidence

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I. BACKGROUND

- Multilingual World: 60% bi-/multilingualism
- Over 40 years of research on first and second language acquisition
- L2 and L3/Ln acquisition have to be regarded as different entities and subfields
- Most of the studies so far done on L3 acquisition on L2 learners acquiring an additional non-native language. Little literature on heritage speakers (acquiring a numerical L3 (e.g. Iverson 2009, 2010, Lloyd-Smith et al., 2017)

L3/Ln Models

- Addresses the initial stages of L3 grammar acquisition
- Both L1 or L2 can be the source of transfer
- Full transfer of one source language
- Language proximity between languages

Linguistic Proximity (Westergaard, 2017) & Scalpel Model (Slabakova, 2017)

- Transfer selection can happen from both L1 and L2
- Property-by-Property transfer following the parser’s need over development
- Structural proximity in the different domains

RESEARCH QUESTION 1

- How does language selection and transfer take place in the mind of a L3/Ln person?
- Is it wholesale transfer from the typological more similar language (therefore accrediting the TPM model), or does transfer happen at property-by-property base (as the other two models predict?)

RESEARCH QUESTION 2

- What can neurophysiological markers indicate about transfer properties, either complementing what behavioral evidence shows or highlighting processes that can not be picked up at the behavioral level?

III. PREDICTIONS

If for both domains Italian shows transfer into Latin, then this speaks for the TPM. If for case morphology we observe transfer from German and for adjectival position from Italian, then it could indicate property-by-property models. ERP markers should indicate at what level behavior is at

Case Morphology: P600 if transfer happens from German, whereas no effect if it does from Italian (or at least a bigger effect on German). Adjectival position: P600 if transfer happens from Italian (other way around)

II. METHODOLOGY

- EEG/ERPs combined with a grammatical judgment task
- Social background and language detailed questionnaires
- Language and Social Background Questionnaire (Anderson et al., 2018)
- Heritage language questionnaire (Lloyd-Smith et al., 2017)
- German-Italian HSs in Germany, German controls
- Italian-German HSs in Italy, Italian controls
- Ab inito Latin mini language paradigm (Sanz et al., 2015)

Vocabulary learning example

**Venefera (la strega, die Hexe)**

EEG paradigm

Case correct sentence

Barbarus (Nom.) uocat nuptam (Acc.). The strangers calls the bride.

VS.

Case violated sentence

Venefera (Nom.) uocat nuptius (Nom.)

The witch calls the messenger.

IV. RELEVANCE

The number of early bilinguals is incrementing worldwide at a steady pace. It is known that heritage speakers acquire new languages differently from their monolingual counterparts (behaviorally and cognitively). The final aim of my PhD is to investigate what are the differences in behavioral and online processing between early bilinguals and monolinguals while learning a L3/Ln language and possibly use the data to ameliorate foreign language acquisition, especially for heritage children.

REFERENCES


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