The informativity of classifiers in the processing of Chinese by non-native speakers

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Can adult L2 learners of Chinese make use of pronominal classifiers to predict an upcoming noun?

Background

Chinese classifiers
- Mark noun class, generally based on inherent properties of the noun (e.g., shape, natural kind, function)
- Large inventory of classifiers in Mandarin Chinese
- Required after demonstrative or numeral

Processing classifiers in L1 Chinese
- L1 Chinese speakers use classifier to identify referent in visual scene (Huettig et al., 2010; Klein et al., 2012; Tsang & Chambers, 2011)
- Both class membership and semantic cues are utilized, with their respective contribution depending on the prototypicality of the target noun (Tsang & Chambers, 2011)

Predictive processing in L2
- No previous study on online processing of classifiers by L2 speakers
- L2 speakers of gender-marking languages fail to use gender cues on determinant (e.g., Lewis-Williams & Fernald, 2010), except
  - When L1 has a similar gender system (Dussias et al., 2013)
  - When L2ers have high lexical access speed (Hopp, 2013)
- With novel nouns learned in the experiment (Grüter et al., 2012)
- When cues are semantically transparent (Lewis-Williams & Fernald, 2009) e.g., la chica ‘the girl’ vs. el chico ‘the boy’

Materials

Eye-tracking experiment (=replication of Lewis-Williams & Fernald, 2007, with classifiers)
- 8 target nouns (4 tiao, 4 zhang), 32 test trials (16 SAME, 16 DIFFERENT), 24 fillers

Eye-tracking experiment (SAME classifier condition) (e.g. tiao vs. tiao) (DIFFERENT classifier condition) (e.g., tiao vs. zhang)

Classification Knowledge Test

Classifiers
- For long, narrow, flexible objects

Results

Discussion

L1: facilitation in window 3 (t(18) = 3.96, p = .001, d = .91)
L2: (marginal) facilitation in window 4 (t(15) = 2.04, p = .06, d = .37)

Further evidence for (weak) facilitation in L2 group: Distractor stops competing with target earlier in DIFFERENT vs. SAME condition.

Higher proficiency L2 speakers pattern more like native speakers.

Preliminary evidence that L2 speakers of Chinese can take advantage of semantically informative classifiers in real-time processing.

Why might classifiers be a better cue for L2ers than (grammatical) gender-marked determiners?
- Semantic association between classifier and noun
- Higher informativity of classifier due to smaller class membership

Next step: vary semantic informativity (semantically more vs. less informative classifiers) and entropy (membership size of noun class)

References