F Apr 20

Discussion summary: Clahsen et al. (2010), part 1 [Inflectional morphology]

Overview

Structure of article: Review of prior studies

Focus:

- Adult L2 learners (compared to L1 speakers)

- Morphological processing of complex words
  - Online tasks specifically
  - Irregular vs. regular inflection [what kind?]
  - Derivational morphology
  - Morphosyntactic phenomena (agreement, case)

Background: L2

What are some ways in which L2 acquisition is different from L1 acquisition?

Background: L2

What are some ways in which L2 acquisition is different from L1 acquisition?

- Learner already has a grammar
- Learner is older
  - More cognitive development
  - Different social situation
  - Effect of critical period (?)

Background: L2

What is known about L2 performance on morphological processing tasks?

- L2 learners known to have non-target-like performance on inflectional morphology, morphosyntax

- Why?
  (a) Performance factors
    - L1 transfer effects on L2?
    - L2 slower/more difficult?
  (b) Grammar is different

Background: L2

If "the grammar is different," how?

- Shallow-structure hypothesis

- Ullman view (like Pinker, but with attention to neurological mechanisms)
  - L1 involves **declarative memory** and **procedural system**
  - Effect of maturation is to enhance the declarative system and attenuate the procedural system
  - Prediction: Adult L2 learners rely more on stored forms and less on grammatical system

Background: Past participles in German

- Past participle is formed with:

  ge + STEM + suffix

  - (no **prefix** if base verb has certain prefixes)
  - **stem** may or may not undergo a change
  - regular **suffix** is /-t/; /-ən/ also used here

- What is the general design of the German past-participle stimulus sets?
  - Why is this a nice phenomenon to investigate (compared to English)?

Background: Past participles in German

Interesting because:

- The regular/irregular ratio is not as skewed in German as it is in English, especially for high-frequency verbs

- Phonological similarity between the participle and the root for these German verbs is the same in the regular and irregular conditions

L1 — Regular/irregular inflection

Sonnenstuhl, Eisenbeiss, & Clahsen (1999)

- German past participles

- Priming study
  - Cross-modal priming: subjects heard a spoken prime and were then shown a written target [task=lexical decision]

L1 — Regular/irregular inflection

Experiment design

- Baseline condition: Identity condition
  - Same form (1sg) presented as both prime and target (*kaufe-kaufe* ‘buy’-‘buy’)

- Test condition: Regular vs irregular participles
  - Regular participles (*gekauft-kaufe*)

    —> full stem-priming effect
  - Irregular participles (*geschlafen-schlafe* ‘slept’-‘sleep’)

    —> reduced priming effect

L1 — Regular/irregular inflection

Interpretation

- Regular participles allow morphological decomposition

- Irregular participles, being lexically stored, do not

L2 — Regular/irregular inflection

Are there *qualitative* L1/L2 differences in processing inflectional morphology?

- Studies disagree on this question
  - Process is fundamentally different?
  - L2 participants are just slower?

L2 — Regular/irregular inflection

Hahne, Mueller, and Clahsen (2006)

- ERP study
- Morphological violations in German participle and noun plural forms
  - Adult learners with L1=Russian
  - Control group of German native speakers

L2 — Regular/irregular inflection

Hahne, Mueller, and Clahsen (2006)

- LAN — reflects early morphosyntactic processing
  - More consistent effect in L1 group than L2 group
  - Interpretation: L2 group doing less morphosyntactic processing

- P600 — reflects processing of combinatorial structure
  - Found for both L1, L2 groups

L2 — Regular/irregular inflection

Neubauer and Clahsen (2009)

- Regular vs irregular participle forms in German

- Participant groups:
  - Highly proficient L2 adult learners, L1=Polish
  - L1 speakers of German

L2 — Regular/irregular inflection

- Results

Table 1 Summary of experimental findings on regular and irregular participles in German

	Lexical decision experiment		Priming experiment			
	-t participles	*-n* participles	*-t* participles		*-n* participles	
	Low Freq.-High Freq.	Low Freq-High Freq.	Test-Identity	Test-Control	Test-Identity	Test-Control
L1	17 ms	57 ms*	12 ms	−62 ms*	45 ms*	−27 ms*
L2	85 ms*	67 ms*	54 ms(*)	−11 ms	41 ms*	−44 ms(*)

Note. The table presents response time (RT) differences between the low- and the high-frequency conditions in the lexical decision experiment and between Test versus Identity and Test versus (unrelated) Control conditions in the priming experiment.
*Significant at $p < .05$ by subjects and items.
(*)Significant at $p < .05$ by subjects.
Source. Data from Neubauer & Clahsen (2009).

- Are these differences due to slower processing speed for L2 participants?

L2 — Regular/irregular inflection

- What do the authors conclude about the processing of regular vs. irregular inflection in L1 vs. L2 speakers?
  - Where do the two groups show different effects?
  - What do the authors think this means — what view of L1/L2 difference do they support?