When L1 becomes an L3: Adventures in re-learning

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SETTING THE STAGE

• Obvious: Early child bilingualism is important
• What happens when child bilingualism is not given enough room to develop?
• A child bilingual develops into a heritage speaker

INTRODUCING HERITAGE SPEAKERS

HERITAGE LANGUAGE SPEAKER (HS)

• A person who grew up hearing (and possibly speaking) a language, who can understand and perhaps speak it to some degree, but who now feels more at home in another, more dominant language

HERITAGE SPEAKERS ARE A SIGNIFICANT PRESENCE

• About 30% undergrads in North American colleges are heritage speakers (Kagan & Dillon 2007, Carreira & Kagan 2009)
• In California, this percentage is even higher
• Given the demographic patterns and globalization, the phenomenon of heritage language is not going away (LoBianco 2010)
HERITAGE LANGUAGE (HL)

• A language that an individual is exposed to during childhood, usually in the home, that s/he does not learn to “full capacity”
• Learning is interrupted by the switch to a different dominant language
• Terminological point: the language of exposure is the baseline, — baseline is not necessarily the same as the standard language—because heritage speakers usually have no schooling (Polinsky 2000, Polinsky & Kagan 2007)

HL IS LIKE L1...

• Early exposure to language
• Naturalistic setting (auditory input)
• Good control of features acquired early in life (phonology, everyday lexicon, some structures)
• Developmental errors

HL IS LIKE L2...

• Varying amount and scope of input
• Resulting grammar is incomplete
• Developmental errors and transfer effects
• Variable proficiency
• Fossilized errors

SOME OBSERVATIONS

• High fluency...
• Damaged morphology
• Missing functional elements (a, the, be)
• Multiple redundancies and repetitions
• Short segments, no embeddings
• Word order different from the baseline

HERITAGE ENGLISH

Okay, everybody always thought like I grown up in States, but actually no. I was born in States, and when I four I moved back to Thailand with parents and I grown up in Thailand. So I definitely Thai. Everything, the culture, everything Thai. But I also know also American culture also because part of my family also in L.A.

HERITAGE SPEAKERS AS L1 AND L3 LEARNERS
PUSH FOR RE-LEARNING

- A growing trend in North America: learning one’s heritage language as “L2” in college
- Particularly apparent in the following languages:
  - Korean
  - Vietnamese
  - Arabic

HOW CLOSE IS HL TO THE L3 UNDER RE-LEARNING?

- The answer depends on the relationship between the baseline a heritage speaker was exposed to and the standard/norm used in an instructional setting:
  - Heritage Vietnamese is based on the southern dialect, Standard Vietnamese, on the central
  - Heritage “Chinese” is often Cantonese, not Mandarin
  - Heritage Spanish?

ADVANTAGES IN RE-LEARNING

- Adult heritage speakers who have not used their heritage language for a while have a distinct advantage in re-learning it
  - Phonological advantage
  - Lexical advantage

ADVANTAGES IN RE-LEARNING: PHONOLOGY

- Perception of contrasts in the heritage language
  - Hindi—Tees & Werker 1984
  - Korean—Oh et al. 2003
  - Spanish—Au et al. 2002, Knightly et al. 2003
- Production of phonological contrasts
  - Korean—Oh et al. 2003, Jun et al. 2006,
  - Spanish—Knightly et al. 2003
**Are there advantages in re-learning beyond phonology?**

• No apparent advantages (Spanish and Korean heritage speakers, low proficiency—Au et al. 2002, 2008; Oh et al. 2003, Knightly et al. 2003; Montrul 2006; Russian—Polinsky 2008)

• Small advantages in morphosyntax (Au et al. 2008, Flege et al. 1999), for speakers with better proficiency (childhood learners)

**Interim summary**

• Heritage speakers only show selective advantages in phonology and specific lexical areas

• Why are these advantages only selective?

**Possible reasons for selectivity**

• Baseline difference: the language taught in the classroom is different from the baseline HSs were exposed to in the home

• Incomplete acquisition: The grammatical system has not been fully learned

• Attrition: The grammatical system undergoes attrition

**Why do heritage speakers struggle with grammar?**

**Respecting the baseline**

• Understanding where heritage speakers come from

• Engaging heritage speakers in the comparison between their baseline and the classroom standard
  – Establishes regular correspondences between the two varieties
  – Helps develop HSs’ metalinguistic awareness
  – Empowers HSs by recognizing their dialect

**Distinguishing incomplete acquisition from attrition**

Do child learners (future heritage speakers) and adult heritage speakers have the same morphosyntactic deficits?

• If a child and an adult deviate from the baseline in the same way, the feature has not been acquired

• If a child and an adult perform differently, the feature has been acquired but lost/reanalyzed
**INCOMPLETE ACQUISITION: A CHILD IN THE HEAD**

Adult heritage language = fossilized child language, with the level of fossilization roughly corresponding to the age of interruption?

**EXAMPLE:**

**Absolutive construction in Spanish**

Muerto el perro, se acabó la rabia

*Navidado el perro, se sintió mejor*

While HSs accept the grammatical examples, they are less likely to reject the ungrammatical ones

(Montrul 2005, 2008)

**ADULT HERITAGE GRAMMAR IS DIFFERENT**

adult incomplete grammar undergoes attrition and is different from the “initial state” represented by heritage child grammar

**EXAMPLE: RELATIVE CLAUSES**

the dog that the cat is chasing is old

**RELATIVE CLAUSES**

Universal preference for subject relatives over object relatives

The reporter  
[who (__) attacked the senator]

admitted the error.

*is preferred over*

The reporter  
[who the senator attacked __ ]

admitted the error.

**RELATIVE CLAUSES IN ACQUISITION**

- Acquired early (2;0-2;6)
- Universal preference for subject relatives
- Error rate (wrong head choice), ages 4-6:
  - English: 10%-13% (multiple studies)
  - Indonesian: 11% (Tjung 2006)
  - Mandarin Chinese: 3.9% (Hsu et al. 2006, 2009)
  - Turkish: 4% (Slobin 1985)
  - Russian: 3.7%-4.2% (Fedorova 2005, Polinsky 2008)
OBJECT RELATIVE CLAUSE COMPREHENSION:
% TOKENS CORRECT, KOREAN

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- Experimental results show a significant difference between child HS and adult HS
- Children are significantly closer to baseline than adults
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• Adult heritage grammar ≠ fossilized child language, with the level of fossilization roughly corresponding to the age of interruption

• Adult heritage speakers show grammar reorganization
- Main reason: reduced exposure to the language

BACK TO WHERE WE STARTED:
Early L1 learners have L3 advantage in words but not in the morphosyntax...

... and morphosyntax may be particularly hard for L3 re-learning because of reorganization due to lack of exposure

WHY MORPHOSYNTAX?
(AND WHAT ELSE?)
SO NOW WE KNOW:
Both incomplete acquisition and attrition shape adult heritage grammars
• Which grammatical features are likely to be incompletely acquired and which are acquired but reorganized/reanalyzed later?
• What causes the reorganization?

MAPPING OUT NATURAL LANGUAGE
Which grammatical features are likely to be incompletely acquired, and which are acquired but reanalyzed later?
• An empirical problem...
• A challenge for existing theories?

WHAT LEADS TO REORGANIZATION?
• Hypothesis: heritage speakers ignore functional elements and light morphology ("small stuff")

MISSING PIECES
• Heritage speakers don’t notice the small stuff
• and pay dearly for that:
  • They have relatively poor control of morphology/functional elements
  • The morphological deficits are both in production and comprehension

DO HERITAGE SPEAKERS PRODUCE MORPHOLOGY?
• Montrul and Bowles 2008, Montrul 2008: heritage speakers of Spanish have a problem with a personal
  • They do not seem to have a problem with heavier prepositions and particles

DO HERITAGE SPEAKERS HEAR MORPHOLOGY?
• Put the horse that’s on the plate in the box
• Put the horse on the plate in the box

(Sekerina 2005)
DO HERITAGE SPEAKERS HEAR MORPHOLOGY?

• Heritage speakers’ adversaries:
  • Inflectional endings
  • Light connectors such as i, a, etc.
  • Functional elements in general

DO HERITAGE SPEAKERS HEAR MORPHOLOGY?

• Polinsky 2007: heritage speakers of Russian do not recognize gender agreement endings in adjective and ignore word-final gender cues on nouns;
  – the sensitivity deteriorates when the endings are unstressed
  – End-stressed neuter nouns are preserved at about 70%, end-unstressed neuter nouns are reanalyzed as feminines

MISSING SMALL STUFF

• Heritage speakers struggle with functional elements, including inflectional morphology

CONSEQUENCES

• Morphological deficits force speakers into the easiest parsing available:
  • First pass or “good enough” parsing:
    – Subject and predicate division without further subdivisions
    – Often works especially if there is no ambiguity

FIRST PASS (GOOD ENOUGH) PARSING

THE NEXT BIG QUESTION

Does shallow parsing lead to:
  • True structural deficits
  • Or just to the appearance of such deficits?

Cf. Ferreira 2005; Clahsen & Felser 2008
ADDRESSING THE BIG QUESTION

• optimize the conditions under which heritage speakers have to perform (e.g., give them more time, give them attentional support)
• degrade the conditions under which the controls (baseline speakers) have to perform (e.g., less time, noise, unrelated stressors)
• if there is an improvement for heritage speakers, then this is a timing problem

BACK TO CHILDREN/ADULT HS COMPARISON

Children’s performance improves under optimized conditions while heritage adults still perform poorly:
• Classifiers
• Relative clauses
• Lexical category recognition
• Reinterpretation of ambiguous case forms

WHAT STARTS OUT AS A TIMING PROBLEM

• and seems to be a processing problem for heritage children
• leads to a reorganization over the lifespan, hence divergent grammar in adult heritage speakers

CAN REANALYSIS BE STOPPED?

• Even if it cannot be fully stopped, it can be minimized by continuous exposure to the language
• We do not know how much input is too little but we do know that
  • some exposure is better than no exposure
  • which argues for the need to teach heritage speakers as much and as soon as possible

CONCLUSIONS

Heritage speakers show recurrent deficits in functional elements (morality, ordering)
These deficits start appearing as heritage speakers overlook "small details" and appear to be a processing (timing) problem in child speakers
However they gradually accumulate to such an extent that they force a reanalysis which results in a coherent but divergent grammar

• Main factors in the re-learning of a heritage language as an L3:
  • Differences between the baseline learned in the home and the standard L2 used in the instructional setting
  • The onset of a divergent grammar which limits the re-acquisition of the heritage language
FOR THE EDUCATOR:

- Heritage speakers have advantages shared with other early bilinguals
- Even passive exposure to heritage language (overhearing) is important
- Heavy exposure to heritage language is important because it can prevent the setting of the divergent grammar

FOR THE LINGUIST:

- Understanding the foundations of that grammar would allow us to understand the overall design of natural language better
- and will help us in theory construction
- L1, L2, and L3 are not static and can undergo significant reanalysis over a lifetime