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When L1 becomes an L3: Adventures in re-learning

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AN EARLY BIRD



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*

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INTRODUCING HERITAGE SPEAKERS

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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

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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)

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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)

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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

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HL IS LIKE L2...

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

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HERITAGE ENGLISH



**Tammy
Tamasugarn**

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.

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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

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HERITAGE SPEAKERS AS L1 AND L3 LEARNERS

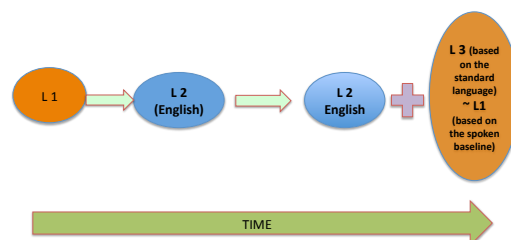
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PUSH FOR RE-LEARNING

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

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PUSH FOR RE-LEARNING



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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?

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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

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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

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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)

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INTERIM SUMMARY

- Heritage speakers only show selective advantages in phonology and specific lexical areas
- Why are these advantages only selective?

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WHY DO HERITAGE SPEAKERS STRUGGLE WITH GRAMMAR?

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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

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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

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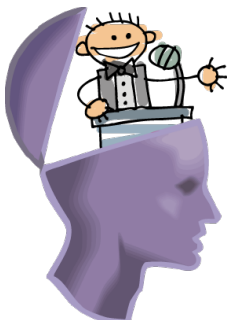
DISTINGUISHING INCOMPLETE ACQUISITION FROM ATTRITION

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**

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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?

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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)

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ADULT HERITAGE GRAMMAR IS DIFFERENT



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

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EXAMPLE: RELATIVE CLAUSES

the dog that the cat is chasing is old



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RELATIVE CLAUSES

Universal preference for subject relatives over object
relatives

The reporter

[**who** (__) attacked the senator]
admitted the error.

is preferred over

The reporter

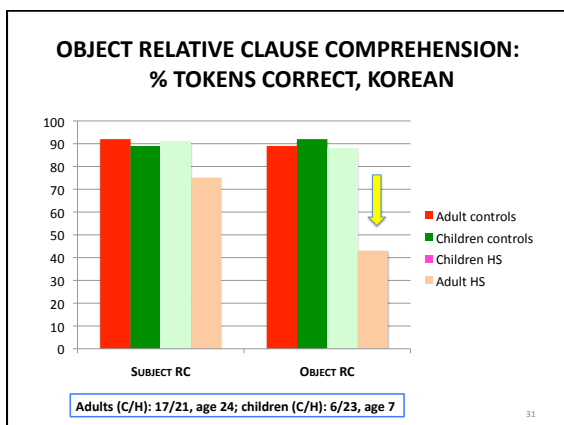
[**who** the senator attacked __]
admitted the error.

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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)

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- ### INTERIM SUMMARY
- Experimental results show a significant difference between child HS and adult HS
 - Children are significantly closer to baseline than adults
 - Adult HL is not simply fossilized child language

- 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?

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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?

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WHAT LEADS TO REORGANIZATION?

- Hypothesis: heritage speakers ignore functional elements and light morphology ("small stuff")

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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**

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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

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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

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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

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MISSING SMALL STUFF

- Heritage speakers struggle with functional elements, including inflectional morphology

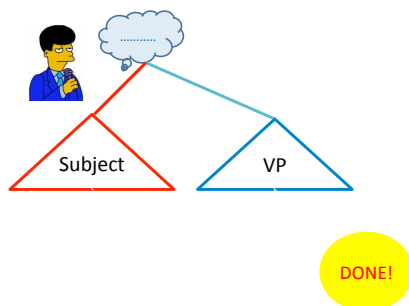
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CONSEQUENCES

- 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

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FIRST PASS (GOOD ENOUGH) PARSING



Cf. Ferreira 2005; Clahsen & Felser 2008

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THE NEXT BIG QUESTION

- Does shallow parsing lead to
- true structural deficits
 - or just to the appearance of such deficits?

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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

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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

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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

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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*

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CONCLUSIONS

Heritage speakers show recurrent deficits in functional elements (morphology, 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

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- 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

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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

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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

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