Unraveling Heritage Language (Re)acquisition

Silvina Montrul

University of Illinois at Urbana-Champaign
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  *Alyssa Martoccio*  
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A new trend

The changing face of many L2 classrooms, especially in Spanish, East Asian Languages and the Less Commonly Taught Languages (LCTLs).
Reality of Many L2 classrooms

Traditional foreign language classes geared for “typical” foreign language learners have increasingly had to open doors to bilingual speakers of minority languages.
L2 students

1. “typical” L2 learner, with no previous knowledge of the target language

2. Bilingual speakers of ethnic-minority languages or heritage language learners: exposed to the target language in childhood and have some command of the language.
In GENERAL, HL learners

- Have good oral comprehension of the language
- May be able to speak the language to different degrees
- Have good pronunciation
- Have lexical gaps
- Make grammatical errors
- Poor to minimal reading and writing skills
- Self-identify with their ethnic community
- Have a strong interest in learning more about their language
L2 classrooms

• Having learners with different linguistic/cultural backgrounds in the same class poses serious challenges for teachers.

• How do we make sure that the linguistic and cultural needs and goals of both L2 learners and heritage language learners are met?
Heritage Language Practitioners

• Hold the belief that, in general, heritage language (HL) learners are a very heterogeneous group (even within a language)
• L2 learners and HL learners are different
• In many ways, HL learners know “more” than L2 learners who start learning the language from zero.
• L2 learners and HL learners should be placed in different classrooms (tracks)
Yet

• Any pedagogical practice must be informed by a deep understanding of what L2 learners and HL learners have and do not have in common.
• Basic systematic empirical research on the linguistic and cognitive abilities of heritage language learners using experimental methods is only just emerging.

(HSs have been the domain of sociolinguistics)

• So far, research on heritage language teaching and learning has proceeded atheoretically.

• Heritage Language Acquisition is in need of a theory.
Valdés (Valdés et al. 2006, p. 119)

“Second language acquisition theories, as well as traditions now guiding traditional foreign language instruction have little to say about these students and what they should be taught. Existing research on incipient or developing bilingualism in foreign or second languages is of little relevance to teachers of heritage students. Moreover, views about second language (L2) developmental sequences and second language (L2) proficiency hierarchies can contribute little to the understanding of the instructional needs of this population. Taking on the challenge of maintaining and developing existing language resources among immigrants, refugees, and their children will involve a dramatic shift in focus by the profession. The dimensions of this shift in orientation can perhaps best be appreciated by comparing the characteristics of traditional foreign language students with those of the new target population of immigrant students.”
Second Language Acquisition

• Current theoretical views/theories of (L1 and) L2 Acquisition are **VERY** relevant to approach and explain the nature of linguistic knowledge in **both** L2 learners and heritage speakers.

• Heritage language learners afford the field of second language acquisition, and linguistics more generally, a **unique opportunity to evaluate**, from a different perspective current claims about
The basic and essential innate and environmental ingredients for successful, complete language acquisition

OR

What is a mature “idealized” native speaker?

At what age does one become a mature L1 speaker and under what environmental conditions?
Classic debates in L2 Acquisition

- The linguistic and cognitive nature of an L2 grammar
- Age effects
- Role of input
- Outcome of L2 acquisition
  -- persistent L1 influence
  -- fossilization
  -- incidence of native-like attainment
Example
Child-Adult differences

Why are the outcomes of L1 and L2 acquisition behaviorally distinct?
Two Broad Theoretical Views

The Representational Deficit View
- L2 acquisition and L1 acquisition are different.
- There is some sort of impairment of grammatical representations in adult learners

The Full Access View
- L2 acquisition and L1 acquisition are essentially similar.
- There is no impairment at the level of grammatical representations
- Differences between L1 and L2 learners arise from other extra-grammatical factors.
L1 acquisition

Early exposure to the language
Naturalistic setting (aural input)
Abundant input
Developmental errors
Control of basic aspects of language (phonology, some vocabulary, some linguistic structures)
Outcome is successful and complete
Fossilization/stabilization does not occur.
No clear role for motivation and affective factors to develop linguistic competence
More complex structures, vocabulary, and pragmatic aspects of language develop at school after age 5 when metalinguistic skills emerge.
Characteristics of Foreign Language Learning (Bley-Vroman 1989,1990)

- lack of success
- general failure
- variation in success, course, and strategy
- variation in goals
- correlation of age and proficiency
- fossilization
- indeterminate intuitions
- importance of instruction
- negative evidence
- role of affective factors
The Fundamental Difference Hypothesis

- Universal Grammar (UG) was available to construct an L1 but past a critical period, L2 learners no longer have access to Universal Grammar.
- L2 learners have access to UG as instantiated in their L1 and use general-problem solving cognitive mechanisms rather than an implicit linguistic mechanism to build a grammatical representation of the L2.
- Steady state of interlanguage is different in kind from native speakers’ knowledge.
  (see also Clahsen & Muysken 1989, Meisel 1997, Schachter 1990)

Compatible with other cognitive approaches to SLA (e.g., DeKeyser 2000, 2003; N. Ellis 2005; Ullman 2001; Paradis 2004).
The Incompleteness Hypothesis
(Schachter 1990, p. 93)

Question

“Is it possible for an adult learner of a second language to acquire native-like competence in the core aspects of the grammar of the second language?”

Answer

“Completeness is not a possible property of adult-acquired grammars since adults no longer have access to UG for the second language learning process.”
Bottomline

Child-Adult differences:
Incomplete acquisition and non-nativelike linguistic representations in the L2 are due to a late age of onset of acquisition.

Late age of acquisition has consequences for the linguistic, neurological and cognitive mechanisms that subserve efficient language acquisition that typically occurs in childhood.
Incomplete Acquisition

1. Developing grammars (L1, L2, bilingual)
2. Fossilized grammars (L2)

Incomplete grammars (fossilized) are common in early bilingualism as well

e.g., many bilingual speakers of ethnic-minority or heritage languages also fail to acquire age-appropriate linguistic competence in the heritage language (their L1).
Early bilingualism

**Simultaneous** or bilingual first language acquisition (before age 4)

**Sequential bilingualism** or early child L2 acquisition (before puberty)
Heritage Speakers

• Cases of unbalanced early bilingualism (even when the two parents speak the majority language at home).

• Cases of incomplete L1 acquisition
### HS look like L1 learners

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early exposure to the language</td>
<td></td>
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<tr>
<td>Naturalistic setting (aural input)</td>
<td></td>
</tr>
<tr>
<td>Abundant input</td>
<td></td>
</tr>
<tr>
<td>Control of features of language acquired very early in life</td>
<td>phonology, some vocabulary, some linguistic structures</td>
</tr>
<tr>
<td>Developmental errors</td>
<td></td>
</tr>
<tr>
<td>Outcome is successful and complete</td>
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<tr>
<td>No clear role for motivation and affective factors to develop linguistic competence</td>
<td></td>
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<tr>
<td>More complex structures, vocabulary, and pragmatic aspects of language developed at school after age 5 when metalinguistic skills emerge.</td>
<td></td>
</tr>
</tbody>
</table>
## HS also look like L2 learners

<table>
<thead>
<tr>
<th>Late exposure to the language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructed setting (aural and written input)</td>
</tr>
<tr>
<td>Varying amount of input</td>
</tr>
<tr>
<td>Developmental and transfer errors</td>
</tr>
<tr>
<td>Grammar may be incomplete</td>
</tr>
<tr>
<td>Outcome is variable proficiency.</td>
</tr>
<tr>
<td>Fossilization is typical</td>
</tr>
<tr>
<td>Motivation and affective factors play a role in language development</td>
</tr>
<tr>
<td>Experience with literacy and formal instruction</td>
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</tbody>
</table>
Heritage speakers

• Received input during the Critical Period
• Presumably learned their L1 through UG or implicit learning mechanisms
• Yet, input in middle-late childhood may have been insufficient to develop full linguistic skills in the heritage language (limited literacy)
Are incomplete L1 and L2 acquisition fundamentally different?
Both L2 learners and adult heritage speakers can have incomplete knowledge of the target language (L1 or L2).
L2 learner

Incomplete acquisition may be due to

1) variable and insufficient input

1) Learning mechanisms deployed for language acquisition in childhood are no longer available (i.e., accessibility to UG, implicit learning mechanisms)
Heritage speaker

Incomplete acquisition may be due to **variable and insufficient input in the L1** (including schooling)

Presumably, whatever language has been learned in childhood was done through the learning mechanisms available in childhood (through UG and implicit learning mechanisms).
Research questions

(1) Do Spanish heritage speakers have some advantages over post puberty L2 learners?

(2) If advantages are found, are these global or selective, i.e., only found in certain grammatical domains and language skills?
Au et al. (2002), Knightly et al. (2003)

Study of Spanish language overhearers (i.e., HS) and typical late L2 learners

Advantages for HS were found in phonology (VOT production) but not in morphosyntax.
## VOT Results

<table>
<thead>
<tr>
<th></th>
<th>Native speakers</th>
<th>Heritage speakers</th>
<th>L2 learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word initial /p, t, k/</td>
<td>19.3</td>
<td>19.6</td>
<td>*36.2</td>
</tr>
<tr>
<td>Word medial /p, t, k/</td>
<td>22.4</td>
<td>23.4</td>
<td>*31.2</td>
</tr>
<tr>
<td></td>
<td>L2 learners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Heritage speakers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>native speakers</td>
<td>2.2_c</td>
<td>3.5_b</td>
<td>3.3_b</td>
</tr>
<tr>
<td>voiceless /p,t,k/</td>
<td>4.3_a</td>
<td>4.4_a</td>
<td></td>
</tr>
<tr>
<td>voiced /b,d,g/</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Accent ratings (max 5)**
Knightly et al. (2003)

The bar chart compares the performance of native speakers, heritage speakers, and L2 learners in two tasks: GJT and Narrative. The chart shows:

- For GJT:
  - Native speakers: 91.8%
  - Heritage speakers: 63.6%
  - L2 learners: 62.5%
  - No differences indicated.

- For Narrative:
  - Native speakers: 98.6%
  - Heritage speakers: 50%
  - L2 learners: 52%

The chart indicates that there are no significant differences in performance between the groups for the GJT task.
Other Findings

**Håkansson (1995)**
Swedish expatriates and L2 learners of Swedish.
Swedish expatriates compared to native speakers on V2 order. L2 learners produced above 80% SV order instead of V2.
  gender agreement: L2 learners outperformed the Swedish expatriates

**Montrul (2005)**
Advanced, intermediate and low proficiency Spanish L2 learners and heritage speakers’ knowledge of lexico-semantic and syntactic properties of unaccusativity (intransitive verbs)
Advantages were found for low proficiency HS.

**Montrul (2006)**
Heritage speakers are better than L2 learners with some aspects of the Null Subject parameter (word order, agreement)
Research Program

To compare linguistic ability of proficiency-matched English-speaking L2 learners of Spanish (late bilinguals) and US-born Spanish heritage speakers (simultaneous bilinguals) in order to:

(1) inform theoretical debates in SLA on the nature of incomplete acquisition as a function of age;
(2) bring closer together the fields of SLA and Bilingualism (L2 acquisition and L1 loss);
(3) understand language external variables that determine bilingual outcomes in early bilinguals;
(4) contribute to the emerging field of Heritage Language Acquisition and teaching.
Do heritage speakers have advantages over proficiency-matched L2 learners due to their linguistic past?

Wh-questions

Object expression

Gender agreement
Participants

Baseline or control group
22 monolingually raised native speakers

Experimental Groups
72 L2 learners of Spanish
69 Spanish heritage speakers

All participants took a written Spanish proficiency test and completed a language background questionnaire (6-page long for the heritage speakers)
L2 learners

• Age 21.91 (18-25)
• L1 English, raised in English-speaking families
• Age of first exposure/acquisition of Spanish as a second language between the ages of 12-25 (high school, college)
• Enrolled in Spanish language classes at the University of Illinois at Urbana-Champaign
Heritage speakers

• Age 22.64 (18-30)
• Born in the US to Mexican parents
• Exposed to Spanish and English before age 6
• At least one of the parents had to be a first generation immigrant
• Schooled in the US
• Graduate and undergraduate students at UIUC, some of them enrolled in the same classes as the L2 learners
Heritage Speakers: Some Descriptive Stats

First language: Spanish (57%), English (35%), both (8%)
Parents: both parents from Mexico (88%)
one parent from Mexico (12%)
Language used at home
  Only Spanish (44%), Spanish and English (56%)
Languages parents spoke to participants
  Spanish (80%), English (5%), both (15%)
All participants had between 1-9 siblings and 20% lived with a Spanish-speaking grandparent
Language spoken with siblings
  Spanish (20%), English (48%), both (38%)
Relative strength of the languages
  48% felt Spanish was like a native language, 52% like a second language
Self rated proficiency: mean Spanish (3.9, range 1-5)
  mean English (4.88, range 4-5).
100% wanted to improve their ability in Spanish for both professional and personal reasons
Spanish Proficiency Test

• Cloze part (fill in the blanks by selecting one of four possible responses) (DELE test) = 30 points
• Multiple choice vocabulary test (MLA) = 20 points
• Maximum 50 points
• Has been widely used in many L2 acquisition studies
Proficiency Scores

- Native Speakers: M = 48.5
- L2 Learners: M = 36.88
- Heritage Speakers: M = 35.34
Some Overall Results
Gender Agreement
(Montrul, Foote and Perpiñán, in press)

- Written Picture Identification Task
- Written Gender Morphology Recognition Task
- Oral Picture Description Task
General Results: Linguistic Patterns

• Both L2 learners and heritage speakers make gender agreement errors in oral and written tasks
• Native speakers hardly ever made errors
• More errors with feminine than with masculine (default)
• More errors with adjectives than with determiners
• More errors with non-canonical than with canonical ending nouns
Written Picture Identification Task

L2 learners statistically more accurate than heritage speakers
Correlation b/Proficiency scores and WPIT

$L_2$ Learners
$r = .319$

Heritage speakers
$r = .614$
Written Gender Morphology Recognition Task

L2 learners statistically more accurate than heritage speakers
Correlation b/Proficiency scores and WGMRT

L2 Learners

\[ r = .653 \]

Heritage Speakers

\[ r = .807 \]
Oral Picture Description Task

Heritage speakers statistically more accurate than L2 learners
Correlation b/Proficiency scores and OPDT

L2 Learners

Heritage Speakers

$r = .416$

$r = .371$
Overall Results
Individual Results

• Many L2 learners, including Low proficiency, scored above 90% accuracy in the 2 written tasks.

• 4 of 72 L2 learners (3 advanced, 1 intermediate) performed above 95% accuracy on the 3 tasks (the range of variation of the native speaker group)

• 28 of 69 (4 low, 5 intermediate, 19 advanced) of Heritage Speakers performed at the native speaker level.
Incidence of Native-like Performance

- Control (n = 22)
- Heritage Speakers (n = 65) - 43% native-like
- L2 learners (n = 66) - 6% native-like
Object expression

- Clitics and Clitic Placement
- Word Order
- (Differential Object Marking)

Tasks: GJT, Oral Production, Online comprehension
Examples of clitics

(1) Juan la vio vs. *Juan vio la “Juan saw her”

(2) Para leerlo vs. *Para lo leer “To read it”

(3) Juan la quiere comprar.
   *Juan quiere la comprar.
   Juan quiere comprarla.
   “Juan wants to buy it.”
Topicalizations or CLL dislocations

(4) Juan llevó las carpetas a la oficina.  
Juan took the folders to the office

(5) Las carpetas *las* llevó Juan a la oficina.  
The folders, Juan took them to the office.
Grammaticality Judgment Task

Clitics precede finite verbs

<table>
<thead>
<tr>
<th>Group</th>
<th>clitiv-V</th>
<th>*V-clitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>native speakers</td>
<td>4.69</td>
<td>1.06</td>
</tr>
<tr>
<td>heritage speakers</td>
<td>4.16</td>
<td>1.39</td>
</tr>
<tr>
<td>L2 learners</td>
<td>4.37</td>
<td>1.31</td>
</tr>
</tbody>
</table>

no differences
Grammaticality Judgment Task

Clitics follow non-finite verbs

- Native speakers: 1.06
- Heritage speakers: 1.47
- L2 learners: 1.66

Subtitle: no differences

Legend:
- *Clitiv-V
- V-Clitic
Grammaticality Judgment Task

Clitic climbing in restructurating contexts

- **Native speakers**: 4.94 (climbing), 1.04 (*Mod-CI-Inf), 4.99 (no climbing)
- **Heritage speakers**: 4.31 (climbing), 1.24 (*Mod-CI-Inf), 4.6 (no climbing)
- **L2 learners**: 3.84 (climbing), 1.32 (*Mod-CI-Inf), 4.8 (no climbing)

Significant differences for clitic climbing
Clitic left dislocations (topicalizations)

- Native speakers: S-V-O 4.99, O-cl-V-S 4.57
- Heritage speakers: S-V-O 4.78, O-cl-V-S 3.47
- L2 learners: S-V-O 4.85, O-cl-V-S 2.42
Oral Narrative: Clitic production

<table>
<thead>
<tr>
<th>Group</th>
<th>Object NPs</th>
<th>Clitics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native speakers</td>
<td>51.3</td>
<td>48.7</td>
</tr>
<tr>
<td>Heritage speakers</td>
<td>43.5</td>
<td>56.5</td>
</tr>
<tr>
<td>L2 learners</td>
<td>21</td>
<td>79</td>
</tr>
</tbody>
</table>

Significant differences
Rate of Clitic Production

- Native speakers: 100% accusative, 92% dative
- Heritage speakers: 98.5% accusative, 78.1% dative
- L2 learners: 75.5% accusative, 20% dative

Significant differences noted between groups.
Clitic Climbing

- Native speakers: 60% no climbing, 40% clitic climbing
- Heritage speakers: 65.8% no climbing, 34.2% clitic climbing
- L2 learners: 86.1% no climbing, 13.9% clitic climbing

Significant differences
Word Order and Dislocations

- Online task
- Picture-sentence matching (visual)
Lo llaman por teléfono sus padres. (Cl-V-S)

Sus padres lo llamaron por teléfono (S-cl-V)
Overall Results

**Accuracy:** no differences between heritage speakers and L2 learners

**Speed:** heritage speakers faster than L2 learners
Wh-Movement
(Montrul, Foote and Perpiñán, in press)

Both Spanish and English have overt wh-movement in questions (i.e., they obey Subjacency)

Object extraction
(1) ¿Qué compró Juan en la tienda?
   *¿Qué Juan compró en la tienda?
   What did John buy at the store?

Adjunct island
(2) ¿*A quién habló José con María después de ver?
   *Who did Joe speak with Mary after seeing?
Some differences

Obligatory complementizer

(3) María dijo que ella es de Colombia.
    *María dijo ella es de Colombia.

    Maria said that (she) is from Colombia.

Embedded subject extraction (that-t effect)

(4) ¿Quién piensa María que es de Argentina?
    *Who does Mary think that is from Argentina?
Overall Results GJT

No differences

Grammatical

Ungrammatical

L2 learners

Heritage Speakers

Control

5.00 4.00 3.00 2.00 1.00
Extracts from Islands

![Bar chart showing the extraction scores for native speakers, heritage speakers, and L2 learners. The chart includes a main effect section.]
**Individual Results**

Response patterns on sentences with no complementizer and embedded subject extractions

<table>
<thead>
<tr>
<th>Response pattern</th>
<th>No comp subj. ext.</th>
<th>Embedded subj. ext.</th>
<th>Embedded obj. ext.</th>
<th>interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>reject</td>
<td>accept</td>
<td>accept</td>
<td>No grammar or processing deficit</td>
</tr>
<tr>
<td>B</td>
<td>accept</td>
<td>reject</td>
<td>accept</td>
<td>English-based grammar</td>
</tr>
<tr>
<td>C</td>
<td>reject</td>
<td>reject</td>
<td>reject</td>
<td>Processing deficit</td>
</tr>
<tr>
<td>D</td>
<td>accept</td>
<td>accept</td>
<td>accept</td>
<td>Grammatical and processing deficit  or response bias</td>
</tr>
</tbody>
</table>
Individual Results

- Correct (A): 86, 35, 17
- English-based (B): 0, 10, 7
- Processing Deficit (C): 14, 52, 69
- Grammar deficit/response bias (D): 0, 3, 7

Legend:
- Control
- Heritage speakers
- L2 learners
Summary

Both L2 learners and heritage speakers differ from monolinguals in production, judgment and on-line measures quantitatively.

L2 learners and heritage speakers are similar in many ways and very different in others.
Similarities

They both have gaps in their linguistic knowledge and make the same types of errors, even with aspects of grammar that are highly frequent in the input (gender).

They both show evidence of having abstract (even UG-constrained) linguistic knowledge and of aspects of the language that are not entirely obvious from input or instruction.
Differences

• Heritage speakers approximate native speakers more than L2 learners in several measures of different grammatical areas, (especially at the advanced and sometimes intermediate levels on the written proficiency measure).

• This suggests that despite incomplete acquisition, linguistic experience at an early age is beneficial.

• Indirect support for decline of the efficacy of language acquisition for the syntactic system as well, not just phonology.
Manifestation of Linguistic knowledge

Direct relationship between mode of acquisition, type of task, and task modality.

- **L2 learners**
  better at written tasks and tasks that are more explicit and metalinguistic

- **HL learners**
  better at oral tasks and at tasks that minimize metalinguistic knowledge and tap “implicit”, “automatic” linguistic knowledge
These comprehension/production dissociation, as well as manifestation of grammatical knowledge in different tasks validate current and ongoing debates on type of linguistic knowledge and learning in L2 acquisition.
Remaining questions

• How do we capture theoretically the relationship between implicit grammatical knowledge, explicitly acquired knowledge and use of linguistic knowledge regardless of how it is acquired in these two types of learners?

• How do we explain the comprehension and production dissociations as a function of linguistic experience in these two types of learners?
Possible solution

Integration of UG-type theory with processing and usage-based type theory, which are already available for L1 and L2 acquisition.

We do not have to reinvent the wheel to understand HLA.
In conclusion

- L2 acquisition has **A LOT** to offer to the emerging field of Heritage Language Acquisition
- Heritage Language Learners are **very relevant** to help us unravel the mystery of L2 acquisition after puberty at the cognitive and linguistic levels.
Once gaps and dissociations are detected

- How are these to be manipulated by classroom instruction?
- How do heritage language learners react to different types of instruction?
- Can HL learners reach their full linguistic potential in their heritage language in adulthood?
• Linguistic approaches to L2 acquisition in particular have been often criticized for not having pedagogical implications.

• Linguistic theory applied to L2 acquisition and adult early bilinguals is a crucial tool to identify systematic and measurable differences and similarities between these two types of language learners.

• Once we know what type of linguistic knowledge HS and L2 learners have or lack and this is communicated to the teaching profession, practitioners will be in a better position to advocate for separate classes/programs for HL learners, or to address both learners’ linguistic and pedagogical needs, especially when they find themselves sharing the same L2 class.
THANK YOU VERY MUCH