Third Language Acquisition (L3) in Adulthood and Linguistic Transfer

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Road Map for TODAY’S TALK

- Broad Focus: Introducing L3 Acquisition
  - Who are L3 learners?
  - General background on L3 issues
  - Models of L3 morphosyntactic transfer

- Narrow Focus: Articulating the Typological Primacy Model (TPM)
  - Why does multilingual transfer happen the way it does?
  - Can we really predictively model transfer beyond obvious language pairings?

- Implications and Lingerering Questions
  - What are the larger implications of studying this beyond L3?
  - Future questions and directions

MULTILINGUALISM: THE FEW OR THE MANY?

Everyone grows up hearing many different languages. Sometimes they are called ‘dialects’ or ‘stylistic variants’ or whatever, but they are really different languages. It is just that they are [sometimes] so close to each other that we don’t bother calling them different languages. So everyone grows up in a multilingual environment. Sometimes the multilingual environment involves systems that are so unlike that you call them different languages. But that is just a question of degree; it is not a question of yes or no.

(Chomsky, 2000:59)

WHO QUALIFIES AS AN L3ER?

What is an L3 Learner? Who Qualifies?

(1 point for each if an L3 learner)

- Bjöern is from Sweden and his mother is as well, but his father is from England and he is a naturalistic bilingual (seemingly balanced) from childhood. Now, as an adult, he is learning German.
- Cindy is from Los Angeles, both of her parents are from Mexico and only speak Spanish. Cindy’s first language is Spanish, but she started learning English at 5 when she went to school and is now dominant in English. At the age of 20, she starts to learn Portuguese.
- Paul is from Pennsylvania. She took Spanish in school starting at 14 and was very successful, and now majoring in Spanish in college she is obliged to take Portuguese and started this semester.
- David lives in Canada and although his first language is English he has taken French since he was 8. At the age of 11, he is not totally fluent yet in French but has begun this year to take Spanish.
- Patxi is from Bilbao. He learned Spanish as a first language and was exposed to some Basque in the community and with friends at a very early age. At the age of 7, he learned Basque in full immersion school. He is now 12 and has been taking English for some years.

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What is an L3 Learner? Who Qualifies?

- Ana Luiza is from Portugal. She took English since she was in the second grade and turned out to be very successful. At 22, she moved to Brazil and is being confronted with what seems to her like a new language, although she already understands it (MOSTLY).
- Silvia is from Barcelona. In her community everyone speaks Catalan and Spanish. She is taking English at school this year at the age of 11.
- Manny is from Jamaica. He speaks Jamaican English as his native language, but also speaks standard English equally well. He was not exposed to Patois as a child, but is now learning it in college.
- Patsy is a native English speaker from Chicago. She is not Hispanic, but lived in a Spanish-speaking community all her life and learned it naturally as a young child. At 13 she decided to take French as her foreign language requirement in school. Now in college, at 21, she is starting to take Arabic.
- Roger is from BC Canada. He has been exposed to English and his family’s aboriginal language since birth. He is a passive bilingual with only functional verbal skills in Inuktitut. At 10 he started the process of learning French.

(see Rothman, Cabrilli Amaro, de Bot 2013)

What ARE YOUR SCORES, OUT OF 10?

- What criteria did you use?
  - Time/age?
  - Proficiency in an L2/2L1?
  - Type of bilingual?

- Uncertainty about what counts as an L2/L3/Ln?
  - Environment/Context?
  - More number of previous languages?

- Uncertainty of what counts as a language/dialect?
  - Are any variables more important than others?
  - This depends on your questions or interests!
  - Are all L3 learners the same?

THINGS TO AGREE (TO DISAGREE?) ON...

- There is no concrete, objective (concept) definition of what an L3 learner is.

- Research thus far has not addressed all the possible questions that should be asked about adult multilingualism.

- BUT, the field is young and we are trying!

- Theory building across sub-disciplines and paradigms is needed (and underway) to arrive at the relevant questions, make predictions and test them properly.

DISTINGUISHING L3/Ln FROM L2/2L1

Failing to properly differentiate true L2 from L3/Ln has inadvertent damaging impacts for important questions studied in SLA (see e.g. DeAngelis, 2007).

What do bilinguals bring to L3 that monolinguals do not to L2?

- Superior metalinguistic knowledge (see e.g. Cenoz, 2003)
- L3 learners have access to more grammatical options (see e.g. Flynn et al., 2004)
- Cognitive benefits to executive functions and attention enable bilinguals to (see e.g. Bialystok, 2009; Kastl 2013):
  - Ignore irrelevant information
  - Resolve conflict among competing alternatives
  - Minimize costs associated with task switching

L3 QUESTIONS TO AGREE ON?

- What are the relevant factors to be looked at/considered in L3 acquisition?

- What are the variables/factors involved that explain the start, development, use and outcomes of multilingualism?

- How is multilingual acquisition different from monolingual and true bilingual acquisition… or is it?

- How does the study of L3 transcend the study of just L3?
Starting at the Beginning:

Turning to L3 Transfer Models and the Initial Stages

WHAT IS TRANSFER?
- Related to theoretical assumptions regarding what constitutes linguistic mental representation
- Transfer of rules (learned) vs. transfer of grammar (acquired): What is the difference?
- What do formal linguistic studies mean when referencing transfer? Well, what do I mean anyway…

L3 ACQUISITION: FOCUS ON THE LEXICON

Lexicon:

What we know: Previous knowledge, experience, and metalinguistic awareness aid/change the process

L3 ACQUISITION: MODELS OF MORPHOSYNTAX

- What variables motivate/activate/select/delimit "transfer" at the level of syntactic mental representation?
- Cumulative Enhancement Model (CEM)
- L2 Status Factor Model
  Bardel & Falk (2007); Falk & Bardel (2011)
- Typological Primacy Model (TPM)

L3 INITIAL STATE/STAGES MODELS

- The Cumulative Enhancement Model (CEM) (Flynn, Foley & Vinnitskaya, 2004; Berkes & Flynn 2013)
  - Existing language systems can facilitate L3/Ln acquisition or remain neutral.
  - Negative, or non-facilitative transfer is predicted to never occur.
  - CEM based on data from L3 oral production of restrictive relative clauses in L1 Kazakh / L2 Russian / L3 English speakers.
  - Their results demonstrated that experience in any previous language (the L1 and the L2) can be utilized in the acquisition of any subsequent language.

- The L2 Status Factor Model (Bardel & Falk, 2007; Falk & Bardel, 2010, 2011)
  - Maintains that the L2 is privileged for morphosyntactic transfer
  - Bardel and Falk (2007) examine the placement of negation in two different groups, L1 V2/L2 non-V2 and L1 non-V2/L2 V2, learning either Swedish or Dutch (V2) as an L3.
  - Falk and Bardel (2011) offer evidence from L3 German placement of object pronouns from speakers of English and French as L1s and L2s.
  - Bardel and Falk (2012) offer an explanation based on Paradis’ declarative vs. procedural memory systems divide of L1 and L2 as an explanation. L2 is elected for transfer because it is declarative, and therefore, more easily accessible.
L3 INITIAL STATE/STAGES MODELS

  - Structural similarity as determined by the parser across languages is ultimately the decisive factor conditioning initial stages L3 transfer.
  - The underlying syntax of either the L1 or the L2 is transferred (in the sense of Full Transfer/Full Access, Schwartz and Sprouse 1996, a.o.).
  - This predicts the possibility of facilitative and non-facilitative transfer.
  - Predictability obtains when the factors that underlie how the parser determines typological proximity are articulated and proven tenable.

EVIDENCE FROM OUR ROMANCE FRIENDS

- Borg (2013): Future of probability; English/Romance \( \rightarrow \) L3 Spanish
- Cabrelli Amaro (2013): Subject-to-subject raising; English/Spanish \( \rightarrow \) L3 Port.
- Foote (2009): Grammatical aspect; English/Romance \( \rightarrow \) L3 Romance
- Giancaspro Halloran and Iverson (in press): DOM English/Spanish \( \rightarrow \) Port.
- Ionin, Montrul, and Santos (2011): Articles; English/Spanish \( \rightarrow \) L3 Port.
- Iverson (2009, 2010): Noun-drop; English/Spanish \( \rightarrow \) L3 Port.
- Montrul, Dias, and Santos (2011): Syntax of clitics; English/Spanish \( \rightarrow \) L3 Port.
- Núñez (2011): Existentials; English/Romanian/Serbo-Croatian \( \rightarrow \) L3 Spanish
- Rothman and Cabrelli Amaro (2007, 2010): Null/overt subjects; English/Spanish \( \rightarrow \) L3 Italian and L3 French
- Rothman (2010, 2011): Word order, adjectival placement and semantic mapping; English/Spanish \( \rightarrow \) L3 Port.

AIM OF THE PRESENT RESEARCH PROGRAM

- How do we test between these models?
- Is transfer only facilitative? If so, then transfer should either be positive or remain neutral and not obtain.
- Is there an L2 status factor for syntax? If so, transfer should be shown to be both facilitative and non-facilitative, and crucially based on the L2 only
- Is typology/comparative structural similarity a deterministic factor for syntactic transfer? If so, transfer should be shown to be both facilitative and non-facilitative but crucially not solely based on the L2, but rather relative typological proximity

A good RECIPE for testing this:

- Mirror image methodology (Bardel & Falk, 2010; Rothman, 2010)
  - **STEP 1**: Keep the L3 constant (e.g. Portuguese)
  - **STEP 2**: Alternate the same previous acquired languages as L1 and L2 (e.g. English/Spanish & Spanish/English)
  - **STEP 3**: Choose a property where the typologically closer language (e.g. Spanish) differs from the L3 (e.g. Portuguese) and the other language would provide the target grammar (e.g. English)

<table>
<thead>
<tr>
<th>CEM</th>
<th>L1 Status</th>
<th>TPM</th>
</tr>
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<tbody>
<tr>
<td>Group 1</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Eng-Sp</td>
<td></td>
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<tr>
<td>Group 2</td>
<td>+</td>
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<tr>
<td>Sp-Eng</td>
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NARROW QUESTION

What variables select/delimit grammatical “transfer” at the initial stages of multilingualism (i.e., when there are choices)?

**ANSWER:**

Typological Proximity is the most influential factor
CLARIFYING TWO POINTS

Typological Primacy Model: Initial State transfer for multilingualism occurs selectively, depending on the comparative perceived typology of the language pairings involved, or psycho-typological proximity. Syntactic properties of the closest (psycho)typological language, either the L1 or L2, constitute the initial state hypotheses in multilingualism, whether or not such transfer constitutes the most facilitative option.

(Rothman, 2011: 112)

Initial State vs. Initial Stages?
What is the initial state in L3 really?
Perceived?

(see Rothman 2013, in press for discussion and clarification)

WHY?

The TPM

- Based on general economy and cognitive-processing factors, essentially, typologically motivated transfer is a reflex to avoid redundancy in linguistic acquisition and to maximize cognitive resources.
- Transfer is complete and from one system (L1 or L2): lessens the cognitive burden if complete (in the spirit of FT/FA Schwartz and Sprouse 1996)
- Transfer occurs in an unconscious “best guess” manner early on, it is not dependent on similarity at the surface level, even if surface similarity coincides with underlying linguistic representational similarity.
- Makes predictions for all language triads, based on an articulated proposal of how the internal parser determines structural proximity.

PROPOSAL

The parser determines typological proximity on a continuum of at least four linguistic factors

the lexicon
phonological/phonotactic cues
functional morphology (form; function)
basic syntactic structure

This list is meant to be implicationally hierarchal, representing cues that are more available/usable to/by the parser earlier in the L3 process.

THE LEXICON

- The claim: Highest degree of lexical similarity between the L3 and one of the two previous systems has effects beyond lexical acquisition.
  - Lexical similarity is usable/detectable early on.
  - If there is some to great crossover in the lexicon the parser assumes crossover will exist in the other domains of grammar.

FOR EXAMPLE: Spanish/English → Portuguese

- The parser should detect that much of the Romance lexicon overlaps. As such, the parser is able to make sense of the target L3 input much sooner than say an English-Japanese learner of Portuguese might.
- If these learners recognize, albeit unconsciously, that a large number of the verbs are shared lexically then why would the argument structure be any different?
- If so, why would the syntax related to verbs be different at all, for example, word order (e.g. VS in intransitives), the features involved that require verb movement, and so on and so forth.
- For the most part, such an unconscious strategy would not be incorrect and thus not only economical, but facilitative.
- Lexical similarity would be a good, early indicator of which of the two systems would be facilitative to transfer.
When Languages are Genetically Related Like Romance: Lexicon

PHONOLOGICAL INFORMATION

- Phonetic and phonological information is readily and unambiguously available to the L3er in abundance from the very beginning of exposure.

In the absence of rich lexical crossover or in addition to it, phonological similarities across the L3 and the L1 and L2 could prove useful to hone the parser in on overall “perception” of structural similarities.

AN EXAMPLE

- Let’s ponder the case of Chinese-Japanese bilinguals acquiring Spanish as an L3; the parser might use several phonological similarities across all three languages. To highlight just one example, all three languages have a general prohibition on complex codas.

However, from relatively little input, it seems reasonable that the parser could detect the more pronounced proximity of the Spanish vowel system to Japanese or the fact that the [+coronal] feature, for example, is contrastive in Spanish and Japanese, yet not in Chinese.

The point: such information might be usable, despite the fact that neither of the two languages can be said to be obviously typologically similar at the lexical level.

Can L3ers really perceive this early on?

- Cross-sectional research by Cabrelli Amaro (2013) testing L3 Portuguese phonology acquisition by L1 English/L2 Spanish and L1 Spanish/L2 English learners has shown that learners from the earliest of L3 exposure are able to reliably detect both differences and similarities in phonological properties at the segmental and suprasegmental levels between the L3 and their other known languages.

- This is true even with participants who have only had quite little (classroom) exposure to the L3 AND regardless of the status of the Spanish system (an L1, L2 or a heritage grammar (2L1)).

- Research like Cabrelli Amaro’s shows that phonological differences and similarities are perceived very early on by L3 learners.

MORPHOLOGY

- In the absence of or in addition to lexical and phonological similarities, (functional) morphology might be another source.

For example, Spanish, Portuguese and Italian have verbal person agreement and tense, aspect and mood morphemes as well as nominal morphemes for gender and number that not only have similar morphophonological forms but represent the same formal features.

MORPHOLOGY CONT.

- But the relationship need not be as transparent as described; imagine English/Spanish bilinguals, order of L1-L2 acquisition notwithstanding, learning L3 Greek.

- Morphologically speaking, Spanish provides more evidence for transfer selection than English given its strong morphological paradigms. Spanish and Greek have gender and number (Case also for Greek) in the nominal domain; voice, aspect, tense, number agreement in the verbal domain.

- Detecting the morphological type: isolating/aggultanative/polysynthetic may prove useful early on:

  e.g. Spanish/Quecha → L3 English→ Spanish wins!
I doubt you would want to bring this up since it claims to support the CEM, but there's a recent dissertation that looks at L1 Korean/L2 English/L3 Japanese and shows L2 Eng to L3 Japanese transfer in perception. The author's name is Onishi and he just graduated from U of Arizona.
**SYNTAX**

- In the absence of or in addition to lexical, phonological and morphological similarities, basic syntactic structure could be used by the parser.

Although much of the subtleties and nuances of the target L3 syntactic system is certainly (probably) not available to L3 speakers at the initial stages, things like default (canonical) word order, head directionality, and the like should be perceptible even at the earliest of stages.

If the L3 happens to be genetically related to one of the previously acquired languages then indeed more complex syntactic properties might be detected at early stages, e.g. the presence of clitic object pronouns in the case of Romance languages.

**SUMMING UP**

- TPM predications are based on an articulated proposal of how the internal parser determines typological (structural) proximity in linguistic terms, independent of actual language relatedness (even if there is crossover by happenstance). Typology is not (necessarily) an intuitive notion and need not be when linguistically defined.

- If multilingual transfer is essentially a reflex or unconscious strategy for general economy considerations to avoid redundant acquisition, the parser is scanning input at first exposure to make decisions about which system is the "best bet" independent of actual language. (see work by Rebecca Rast and Suzanne Carroll and colleagues on novice L2 acquisition).

- The parser obviously has no preference or motivation to select what seems obvious based on anecdotal observations of similarity, but rather is charged with determining what would be the most economic choice linguistically.

**SYNTAX, CONT.**

- Recall that the TPM definitively rejects the idea that transfer happens in a property-by-property manner and as such it predicts the possibility of non-facilitative transfer in the domain of syntax.

- By stipulating that the syntactic information used early on are those syntactic properties that are detectable from the earliest of L3 exposure, one need not "wait" for significant exposure to the L3 for syntax proper to play a deterministic role in the unconscious assessment of typological proximity.

- Syntactic structure is offered as the final of four possible linguistically-based cues precisely because syntactic structure sits at a "deeper" level of linguistic competence than the other cues we have highlighted.

**IMPLICATIONS………**

- L3 research makes significant contributions to linguistic theory, especially adding to our understanding of the composition of the mental representation of language, the interface of cognition and language acquisition and how language is acquired more generally.

- Data from L3 studies highlight the core principle of language acquisition, the interface of cognition and language acquisition and how language is acquired more generally, which is economy.

- Why shouldn’t the mind unconsciously avoid redundancy in the learning/acquisition process?

- **Bottom Line**: All acquisition is the same, multilingualism simply opens up possibilities to see different traces/surface manifestations of essentially the same process and universal guiding principles.

**SUMMING UP**

- Recent research in a larger array of language triads provides further evidence that typology, as defined here, is the most deterministic factor:

  - Tuvan/Russian/English, (Kulundary & Gabriele, 2012)
  - Uyghur/Russian/Turkish, (Özçelik, 2013)
  - Polish/French/English, (Wrembel, 2012)
  - Spanish/Basque/English (Slabakova and Garcia Mayo, in press)

If transfer happens the way the TPM or the L2 Status factor suggest and thus “misanalysis” is possible, this alone MAKES L3 acquisition very unique in terms of the formal learning task implicated. It also makes it SPECIAL in interesting ways.

**LOOSE ENDS**

- This proposal places a large burden on knowing the structures of all three languages for the researchers to calculate “how” the parser would be predicted to determine structural proximity in a given triad. Great opportunities for cross-disciplinary work between theorists, acquisitionists and psychologists.

  - What happens in pairings where it is fair to claim that there is relatively equal structural crossover? Is that ever really the case?

  - Are all bilinguals the same, would early bilinguals (heritage speakers) be different than later bilinguals (L2ers) for L3? If so, why?

    (see Rothman in press)

  - Does proficiency in the languages matter for what the TPM and other models predict?

    (see Hammarberg 2010)
Definitions:

- Cognitive: I am referring to a mental action or process of acquiring knowledge.

- Cognitive Economy: by which I intend that human cognition economically defaults to learning paths of minimal exertion.

- Reflex: an involuntary byproduct of X.

- Structural Similarity: I am referring to linguistic properties that overlap cross-linguistically at the level of mental representation, whether at the lexical or grammatical levels.

LOOSE ENDS

Can this be tested with more online methodologies such as EEG/C sug (see Alemán Bañón and Rothman, in prep)

Can/should heritage language bilinguals taking courses in the standard HL in college be considered L3ers? (see Polinksy, in press)

What are the implications for language teaching, if any?

Of course, all of this embodies empirical questions; don’t believe me, together let’s test this proposal!!!

SELECTED REFERENCES


Minimalist approach to parametric variation (e.g. Baker 2008; Roberts and Holmberg 2008) which distinguishes between macro- and micro-parameters.

Typological Primacy Model (e.g. Cabrelli Amaro and Rothman 2010; Richards 2004) which distinguishes between macro- and micro-parameters.

Minimalist approach to parametric variation (e.g. Baker 2008; Roberts and Holmberg 2008) which distinguishes between macro- and micro-parameters.


SELECTED REFERENCES (CONT.)


TPM: Lexical-Syntactocentric Approach

The parser determines typological proximity in the following manner:

Lexical similarity

Macro-parametric similarity

Minimalist approach to parametric variation (e.g. Baker 2008; Roberts and Holmberg 2010; Richards 2004) which distinguishes between macro- and micro-parameters.

Macro-parameters: “Core” properties are products of the narrow syntax and are semantically vacuous both in terms of triggers and effects.

PROPOSAL: Syntax proper plays a secondary deterministic role at the level of macro-parameters: similarity and its determination for L3 to L2 system: either macro and micro-parameters.
Macro-parameters:

- **Examples**: Head-complement directionality and word order; null/overt subjects; V(erb)2(nd)

- In child L1, the earliest grammatical phenomena belong to this core. E.g. word order and head-complement ordering in the VP are almost error free (e.g. Radford 1990; Guasti 2002; Snyder 2007).

- In child bilingualism, this is also true; delays or “differences” in path and/or ultimate attainment are largely with micro-parametric properties (see Tsimpli 2013 for review).

- This provides evidence that relatively little input is needed for these properties and that we seem to be hard-wired to be attuned to the input for evidence of these properties.