5a. Morphosyntax in L2A

CAS LX 500 Topics: Language acquisition

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Missing morphology

In L1A, we observe that kids don't always provide all the morphology that adults do. At this level of description, the same thing happens in L2A—L2'ers show optionality/variability in their use of verbal and nominal inflection.

But what does this mean? Specifically, is this telling us about the *morphology* or about the *underlying structures*?

Which comes first?

There are a couple of different ideas out there about the connection between morphology and syntax in acquisition.

Does learning the morphology lead to acquisition of syntax? Or does the syntax provide the things morphology needs to be learned for?

Morphology vs surface form

What is the relation between morphology and functional structure? (This is important if we intend to use morphological realization to *diagnose* functional structure.)

Obviously, it's not just about the surface form.

(1) A deer always eats my bagel. Deer are funny.

(2) A goose alway eats my bagel. Geese are funny.

(3) A wug always eats my bagel. Wugs are funny.

Morphology and functional structure

There is at the very least an *abstract* level of morphology, perhaps related to the distinctions that the surface morphology *can* make.

Point is: regardless of the surface realization, plurals act plural, finite verbs act finite—a separation between syntax and morphology.

(4) I cut my bagel. I had cut my bagel. I will cut my bagel. On Tuesdays, one cuts one's bagel with a penknife.

(5) I toasted my bagel. I had toasted my bagel. I will toast my bagel. On Tuesdays, one toasts one's bagel extra-dark.

(6) I went to class. I had gone to class. I will go to class. On Tuesdays, one goes to class *sans* bagel.

(7) I wrote a letter. I had written a letter. I will write a letter. On Tuesdays, one writes letters about bagels.

Reminder about root infinitives in L1A

We've already seen some evidence by now from L1A for the view that the (abstract) syntax comes first: The evidence used to motivate the Small Clause hypothesis was that the overt functional words were generally missing. Yet, Poeppel & Wexler (1993) showed that in German, children will put finite verbs in second position.

Abstractly, getting V2 right requires a pretty sophisticated structure, including CP. But there aren't (m)any *overt* Cs in the production of these children.

So—the conclusion would seem to be that the structure is there, but the words/morphology isn't quite.

Omission of morphology in L2A

Adult L2'ers also drop a lot of morphology, will produce non-finite forms...

This raises the question (in the general ballpark of "how much is L2A like L1A?") as to whether second language learners show this effect as well.

Rephrasing a bit, what we're talking about is essentially the *structural complexity* of the learner's (L1A/L2A) knowledge (at a given point).

Morphology and structural complexity

It has been pretty well established by theoretical linguistics that adult native languages are quite complex, containing functional phrases like AgrP, TP, and CP, and there is a lot of support for this idea that most if not all parametric differences stem from properties of the abstract functional morphemes (often reflected in surface morphology).

Evidence for structure in L1A

Verb movement (if it conforms to the rules of adult native-speaker verb movement, anyway) serves as evidence for this complex functional structure, since the verb *moves* to a functional head (T, for example).

The evidence (like that just reviewed) suggests very strongly that kids learning German and French produce sentences that comply with the rules of adult syntax—and thus make reference to this complex functional structure. These kids seem to "know about" the TP and the CP and the rules that pertain thereto.

Rich agreement to syntax

There is a longstanding observation—not really originating in the acquisition literature—that languages with *rich agreement morphology* tend also to be the languages that allow null subjects, move the verb to T.

Various attempts have been made to try to see this as an implicational relationship: The agreement paradigm *determines* the features in the syntax (e.g., "strong" features causing V to move to T). (This is a form of the morphology-before-syntax hypothesis.)

This would make acquisition easier—but it also doesn't seem to quite work. There are verb-raising languages without rich morphology, for one thing.

Syntax to morphology

A different view, perhaps a bit more widely adopted, is that the syntax makes available the features and structures upon which the morphology operates.

We might even think of this as an abstract tree that is first built, and then "pronounced" in a second step.

Several studies have found that while inflection appears to be relatively poor, other things that AgrP/TP are responsible for seem to be there.

The responsibilities of TP/AgrP

Table 6.2 from White (2003)

% in obligatory contexts	3sg	past	suppl. *be*	overt subj.	nom	V in VP
Haznedar 2001	46.5	25.5	89	99	99.9	—
Ionin & Wexler 2002	22	42	80.5	98	—	100
Lardiere 1998a,b	4.5	34.5	90	98	100	100

Minimal Trees: reminder, continuation

Vainikka & Young-Scholten, in a series of papers, proposed the **Minimal Trees** model for second language acquisition.

The basic idea is that the starting point for second language syntax is a very reduced syntactic structure, which gets more complex over time. It is much like the Small Clause model in L1 acquisition—beginning L2'ers have syntactic structures that consist only of a VP, and as they advance, their trees become taller.

L2A takes place in stages, with grammars that successively replace each other.

Minimal Trees: Initial state and transfer

V&YS propose a certain kind of "full transfer"—but limited to the VP.

Since the initial grammar only generates VP, only parameters that affect the VP level are transferred from the L1. Most relevantly: headedness transfers.

Other parameters (such as whether the verb raises to I) do not transfer.

Minimal Trees: evidence

We saw evidence of headedness transfer (VP), but the other part of the proposal is that functional categories are missing—we're looking for the same sort of evidence we sought for in the Small Clause model of L1 acquisition.

Things associated with missing parts of the structure should be missing (or maybe default). Working backwards, if there is no C, we should expect no complementizers (*that*, *if*) and no *wh*-questions. If there is no I, we should expect no modals/auxiliaries, verb raising, or subject agreement. (Perhaps this could be made more refined by considering TP and AgrP separately.)

VP stage: data

At the VP stage, V&YS find a lack of: verb raising, auxiliaries and modals, agreement, complementizers, *wh*-movement, questions, embedded clauses. Differentiation between VP-i and VP-ii has to do with whether the head is initial (VP-i) or final (VP-ii). (All of the auxiliaries and modals came from Rosalinda (Sp.): three *wolle* 'want' and five *is(t)* 'is'. She doesn't *control* IP yet?)

stage	L1	Aux	Modal	default agr
VP	Kor	1	1	68%
VP	Tur	0	1	75%
VP-i	It	0	0	65%
VP-ii	It	0	0	82%
VP-i	Sp	8	5	74%
VP-ii	Sp	1	1	57%

TP stage: data

A little further along, some auxiliaries and modals, Korean/Turkish speakers raise the verb about 46% of the time (but note: TP in German is head-final, yet in L2 TP stage it must be assumed to be head-initial), still a lot of default agreement.

stage	L1	Aux	Modal	default agr
TP	Sp	21	9	41%
TP	Tur	0	5	68–75%

AgrP stage: Korean/Turkish speakers raising the verb 76% of the time, some embedded clauses with complementizers, complex *wh*-questions attested.

Minimal trees: assessment

The stages are not very clean—why are there *any* complementizers in the AgrP stage? Perhaps a better way to think about it is in terms of competition between AgrP and CP grammars, where the CP grammar initially loses most of the time, but gains power.

Though, also, there are NegPs and DPs, even in the VP stage, which are functional categories. And there is evidence that, e.g., English children learning French seem to manage to raise the verb. And we need to assume that some of the CP functions can be "emulated" in lower phrases (*wh*-questions in pre-CP stages, head-initial TP in order to get V2 in pre-CP stages), though again maybe this can be answered in terms of grammar competition.

Minimal trees: relies on morphology

Notice too that all of the evidence here is basically about whether the L2'ers *provided* the right morphology.

So, if we assume that the morphology must be in place before the syntax gets there, then we have something like support for Minimal Trees. But that didn't seem to work too well for L1A. And it's not going to wind up working for L2A either.

Prévost & White

Prévost & White (1999, 2000) investigated the question of how other reflexes of finiteness correlate with overt morphology… Essentially: Can Poeppel & Wexler (1993)-style results be obtained by L2'ers?

Like kids do during L1A, second language learners will sometimes omit, and sometimes provide, inflection (tense, subject agreement on the verb). Does lack of inflection correlate with the verb being treated as a non-finite form *syntactically*? Can we find evidence of functional structure in the L2'ers IL?

Prévost & White: Subjects, method

Prévost & White examined the position of verbs with respect to negation for finite forms and non-finite forms, and looked at the proportions of verb forms that appear in places where a finite form is required vs. where a nonfinite form is required.

Prévost & White looked at spontaneous speech data from two adults learning L2 French (from Moroccan Arabic, after a year) and two adults learning L2 German (from Spanish and Portuguese, after 3 months). Monthly interviews followed for about 2 years.

Prévost & White: Verb placement

	L2 French				L2 German			
	A		Z		A		Z	
	V-N	N-V	V-N	N-V	V-N	N-V	V-N	N-V
Finite	90	3	135	0	82	2	74	4
Nonfinite	6	44	7	5	9	12	13	29

Finite verbs: overwhelmingly before negation (correct).

Nonfinite verbs: variable.

Prévost & White: Results

Subject	Oblig. Fin		Oblig. Nonfin.	
	+Fin	–Fin	–Fin	+Fin
A(F)	767	243	278	17
Z(F)	755	224	156	2
A(G)	389	45	76	7
Z(G)	434	85	98	6

Almost no finite (inflected) verb forms in non-finite contexts.
Plenty of non-finite verb forms in finite contexts.

Prévost & White: Hypotheses

Impairment Hypothesis The learners don't really (consistently) understand the inflection or how to use it. Their knowledge of inflection is "impaired." Their trees don't contain the functional XPs.

Missing *Surface* Inflection Hypothesis The learners will sometimes pronounce finite verbs in their infinitive form (the verbs *act* finite, the functional XPs are there, but the learner couldn't find the right inflected form in his/her lexicon in time, so s/he used the default form). The nonfinite form is essentially a *default*.

Prévost & White: Predictions

Possibility 1 (impairment) predicts basically no correlation between verb movement and inflection.

Possibility 1.5 (like L1): L2'ers go through an "optional infinitive stage" just like L1'ers. Predicts finite verbs act finite, infinitives act like infinitives.

Possibility 2 (mispronouncing a finite verb by using its nonfinite form) predicts that: (a) when the finite form is pronounced, the verb will be (and act) finite—it will move; (b) when the nonfinite form is pronounced, it might act finite or nonfinite.

Prévost & White: Conclusions

Prévost & White's data supports the hypotheses that:

(These) second language learners know the difference between finite and nonfinite verbs. They know that finite verbs move, and that nonfinite verbs do not move.

The only real errors they make are essentially lexical retrieval errors (errors of pronunciation), pronouncing abstractly finite verbs as infinitives.

(One question: Why the infinitive? Is it really an unmarked form universally? Does it depend on what the *citation* form is? Is it due to the language-particular morphology?)

L2A and L1A

One thing this tells us is that, despite possible appearances to the contrary, second language learners' interlanguages are quite systematic and complex, and the L2 learners have the same kind of abstract structural knowledge incorporated into their IL that we can argue for in the case of L1 learners.

We don't know really to what extent "UG" played a role, based only on this—after all, we know that the L1 had the full structural complexity of a natural language, including the distinction (perhaps abstract) between finite and nonfinite, and including (perhaps abstract) subject agreement, etc. There's no reason that knowledge of the distinction between finite and nonfinite *couldn't* simply carry over ("transfer") to the IL during L2A.

Morphology ≠ syntax

This suggests that morphology is rather distinct from syntax. It is possible to have the syntax right and the morphology wrong. And to some extent, morphology is not provided by UG, must be learned, and moreover must be *retrieved*.

(The view of Distributed Morphology under which morphology is a separate system given the task of pronouncing a syntactic structure (and which allows for the sort of defaults we seem to see) seems well suited to describe this.)

Universal principles

Looking at the case-marker omission study earlier, we found some evidence that L2'ers were using the "ECP" (universal principle of language regulating the use of silent structures), even when not having been trained.

The conclusion here is muddy: Because it is a universal principle, it may have come via transfer from the L1, or it might have come to the L2 from the same source as it came to the L1 (UG).

Transfer and parameter resetting: headedness

We saw that there is some evidence for transfer from the L1—in particular, with respect to headedness. Early IL of L2'ers where the headedness differs from their L1 shows the L1, rather than L2 word order.

This is, however, quickly repaired. So, the headedness parameter in the IL does seem to be able to be "reset."

Transfer and parameter resetting: verb raising

We also looked at White's (1991) study of French speakers in an intensive English course, and at the question of whether they acquired the verb raising parameter.

The results were: (a) in order to make progress, the L2'ers seemed to need either to get negative evidence (via explicit instruction, worked best) or be flooded with positive evidence (worked less well), (b) the behavior of the L2'ers in the post-tests did not appear to work like the parameter setting was expected to (the "clustering" was missing), (c) most of the positive effects in either case were washed out by the intervening academic year.

The conclusion here seems to be that we don't have much evidence for *this* parameter being resettable. So perhaps parameters differ.

Transitions through parameters space

We also saw evidence in the use of reflexives, where languages differ on two dimensions, that L2'ers might pass through a stage that differs from *both* the L1 and the L2, which could be explained as a result of having reset just one of the two parameters at a certain point.

Best evidence we have so far of the possibility that L2'ers proceed through a "parameter space" (like L1'ers are presumed to do—although we'll see next week that there really has been almost no observable evidence that L1'ers have misset parameters). The results here a bit shaky insofar as one theoretical view of the typology predicts a correlation between monomorphemic anaphors and their ability to have long-distance antecedents, given that Izumi (2007) found no evidence of L2'ers treating LD anaphors as monomorphemic.

Morphology

And, today, we've seen (a) evidence of functional structure in the IL, (b) evidence about the relationship between functional structure and morphology.

What this suggests is that morphology can lag behind syntax—which isn't perhaps so surprising, since it is *certain* that morphology must be learned, that's not going to come from UG or from L1.

This does *not* give us very much insight into the question of what role UG plays in L2A, since there's nothing in these results that couldn't have come from the L1 via transfer.