Week 5b. Tree-building and wrapping up L2A & UG

CAS LX 400
Second Language Acquisition

Functional categories

- Recall that last time we talked about functional categories and the higher abstract syntactic structure of sentences in general as well as in the context of L1A and L2A.
- Today we’ll start off by looking at a proposal made by Anne Vainikka and Martha Young-Scholten which concerns the course of acquisition of these functional categories.

Vainikka (1993/4), L1A

- Recall that this is the structure of an adult clause. This is where kids end up.
- Notice the form of the pronoun: It is in nominative case (like I, he, they), a special case form reserved for SpecAgrP in finite clauses (cf. me, him, them or my, his, …).

Vainikka (1993/4), L1A

- Very early on, kids are observed to use non-nominative subjects almost all the time (90%) like:
  - My make a house – Nina (2;0)
  - The fact that the subject is non-nominative can be taken as an indication that it isn’t in SpecAgrP.

Vainikka (1993/4), L1A

- Vainikka’s proposal (following others as well) is that children who do this are in a VP stage, where their entire syntactic representation of a sentence consists of a verb phrase.

Vainikka (1993/4), L1A

- As children get older, they start using nominative subjects
  - I color me – Nina (2;1)
- But interestingly, they do not use nominative subjects in w/ questions
  - Know what my making? – Nina (2;4)
Vainikka (1993/4), L1A

- I color me
  - Nina (2;1)
- The nominative subject tells us that the kid has at least AgrP in their structure.
- Know what my making?
  - Nina (2;4)
- Normally wh-movement implies a CP (wh-words are supposed to move into SpecCP).

Vainikka (1993/4), L1A

- Know what my making?
  - Nina (2;4)
- However, if there is no CP, Vainikka hypothesizes that the wh-word goes to the highest specifier it can go to—SpecAgrP. Which means that the subject can’t be there, and hence can’t be nominative.

Vainikka (1993/4)

- So, to summarize the L1A proposal: Acquisition goes in (syntactically identifiable stages). Those stages correspond to ever-greater articulation of the tree.
  - VP stage:
    - No nominative subjects, no wh-questions.
  - AgrP stage:
    - Nominative subjects except in wh-questions.
  - CP stage:
    - Nominative subjects and wh-questions.

Vainikka & Young-Scholten’s primary claims about L2A

- Vainikka & Young-Scholten take this idea and propose that it also characterizes L2A… That is…
- L2A takes place in stages, grammars which successively replace each other (perhaps after a period of competition).
- The stages correspond to the “height” of the clausal structure.

Vainikka & Young-Scholten

- Vainikka & Young-Scholten (various publications) look at naturalistic L2A (migrant workers in Germany with different L1 backgrounds, including Turkish [SOV], Korean [SOV], Spanish [SVO], and Italian [SVO]).
- Vainikka & Young-Scholten explore the development of L2 phrase structure in some detail—and also have chosen speakers that can be informative concerning the possible transfer of headedness parameter.
V&YS—headedness transfer

- Cross-sectional: 6 Korean, 6 Spanish, 11 Turkish.
- Longitudinal: 1 Spanish, 4 Italian.
- In at least the early part of the VP stage, speakers seem to produce sentences in which the headedness matches their L1 and not German.

<table>
<thead>
<tr>
<th>L1</th>
<th>L1 head</th>
<th>head-final VPs in L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean/Turkish</td>
<td>final</td>
<td>98</td>
</tr>
<tr>
<td>Italian/ Spanish (I)</td>
<td>initial</td>
<td>19</td>
</tr>
<tr>
<td>Italian/ Spanish (II)</td>
<td>initial</td>
<td>64</td>
</tr>
</tbody>
</table>

Predictions

- Different parts of the tree have different properties associated with them, and we want to think about what we would predict we’d see (if Vainikka & Young-Scholten are right) at the various stages.

V&YS L2A—VP stage

- At the VP stage, we find lack of
  - No evidence of verb raising.
  - No consistent agreement with the subject.
  - No modals or auxiliaries.
  - No complementizers.
  - No complex sentences (embedded sentences)
  - No wh-movement.

V&YS—headedness transfer

- VP-i: L1 value transferred for head-parameter, trees truncated at VP.
- VP-ii: L2 value adopted for head-parameter, trees still truncated at VP

<table>
<thead>
<tr>
<th>L1</th>
<th>VPs</th>
<th>V-initial</th>
<th>V-final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bongiovanni</td>
<td>I</td>
<td>20</td>
<td>13 (65%)</td>
</tr>
<tr>
<td>Salavatore</td>
<td>I</td>
<td>44</td>
<td>35 (80%)</td>
</tr>
<tr>
<td>Jose</td>
<td>S</td>
<td>20</td>
<td>15 (75%)</td>
</tr>
<tr>
<td>Rosalinda</td>
<td>S</td>
<td>24</td>
<td>24 (100%)</td>
</tr>
<tr>
<td>Antonio</td>
<td>S</td>
<td>68</td>
<td>48 (71%)</td>
</tr>
<tr>
<td>Jose</td>
<td>S</td>
<td>37</td>
<td>37 (100%)</td>
</tr>
<tr>
<td>Lina</td>
<td>I</td>
<td>24</td>
<td>17 (71%)</td>
</tr>
<tr>
<td>Salavatore</td>
<td>I</td>
<td>25</td>
<td>19 (76%)</td>
</tr>
</tbody>
</table>

All came from Rosalinda (Sp.); three instances of wolff ‘want’ and five with is(t) ‘is’—evidence seems to be that she doesn’t control IP yet.

Predictions

- T/Agr (=INFL):
  - Modals and auxiliaries appear there
  - Verbs, when they raise, raise to there.
  - Subject agreement is controlled there
- C
  - Complementizers (that, if) appear there
  - Wh-questions involve movement to CP
V&YS L2A—VP stage

- At the VP stage, we find lack of
  - verb raising (INFL and/or CP)
  - auxiliaries and modals (generated in INFL)
  - an agreement paradigm (INFL)
  - complementizers (CP)
  - wh-movement (CP)
- Antonio (Sp): 7 of 9 sentences with temporal adverbs show adverb–verb order (no raising); 9 of 10 with negation showed neg→verb order.
- Turkish/Korean (visible) verb-raising only 14%.

V&YS L2A—VP stage

- The early Italian & Spanish files showed little in the way of adverbs, though 9/10 negative utterances had negation before the verb.
- The later files showed more adverbs, but no usable negation; 7/7 of the verbs preceded the adverbs (‘now’, ‘always’).

V&YS L2A—VP stage

- At the VP stage, we find lack of
  - verb raising (INFL and/or CP)
  - auxiliaries and modals (generated in INFL)
  - an agreement paradigm (INFL)
  - complementizers (CP)
  - wh-movement (CP)
- No embedded clauses with complementizers.
- No wh-questions with a fronted wh-phrase (at least, not that requires a CP analysis).
- No yes-no questions with a fronted verb.

V&YS L2A—TP stage

- After the VP stage, L2 learners move to a single functional projection, which appears to be TP.
- Modals and auxiliaries can start there.
- Verb raising can take place to there.
  - Note: the TL TP is head-final, however.
- Agreement seems still to be lacking (TP only, and not yet AgrP is acquired).

V&YS L2A—TP stage

- Characteristics of the PT stage:
  - optional verb raising (to T)
  - some auxiliaries and modals (to T)
  - lack of an agreement paradigm (not up to AgrP yet)
  - lack of complementizers (CP)
  - lack of w/h-movement (CP)

<table>
<thead>
<tr>
<th>stage</th>
<th>L1</th>
<th>Aux</th>
<th>Mod</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP Sp</td>
<td>21</td>
<td>9</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>TP Tur</td>
<td>0</td>
<td>5</td>
<td>68–75</td>
<td></td>
</tr>
</tbody>
</table>

Now, Korean/Turkish speakers raise the verb around 40% of the time.

V&YS L2A—AgrP stage

- After the TP stage, there seems to be an AgrP stage (where AgrP is head-initial—different from the eventual L2 grammar, where AgrP should be head-final).
- Properties of the AgrP stage:
  - verb raising frequent
  - auxiliaries and modals common
  - agreement paradigm acquired
  - some embedded clauses with complementizers
  - complex wh-questions attested.
V&YS L2A—AgrP

• Properties of the AgrP stage:
  – verb raising frequent
  – auxiliaries and modals common
  – agreement paradigm acquired
  – complex wh-questions attested
  – Turkish/Korean speakers raising the verb 76% of the time.
• CP structure? Seems to be “on its way in”, but V&YS don’t really have much to say about this.

Stages

• So, L2’ers go through VP, TP, AgrP, (CP) stages…
• An important point about this is that this does not mean that a L2 learner at a given point in time is necessarily in exactly one stage, producing exactly one kind of structure.
• The way to think of this is that there is a progression of stages, but that adjacent stages often co-exist for a time—so, “between” the VP and TP stages, some utterances are VPs, some are TPs.
• This might be perhaps comparable to knowledge of register in one’s L1, except that there is a definite progression.

V&YS—some implications

• V&YS on transfer: Recall that under modern views, the parameters are properties of the functional heads, the XPs above VP (like TP, AgrP, and CP). If all you transfer from the L1 is the VP, you don’t expect that parameters pertaining to higher projections would transfer from the L1. For example, if having wh-movement is a property of C, we wouldn’t expect (if V&YS are right) that having wh-movement would transfer from L1 to the IL.
• Yet we’ve seen that there is reason to believe that French->English learners seem to transfer V->T movement, which should be a property of T. In response, V&YS propose (essentially) that: anyone (regardless of their L1) will assume V->I initially (for reasons they give but I won’t review).
• Perhaps, but it’s testable at any rate.

V&YS summary

• So, Vainikka & Young-Scholten propose that L2A is acquired by “building up” the syntactic tree—that beginner L2’ers have syntactic representations of their utterances which are lacking the functional projections which appear in the adult L1’s representations, but that they gradually acquire the full structure.
• V&YS also propose that the information about the VP is borrowed wholesale from the L1, that there is no stage prior to having just a VP.
• Lastly, V&YS consider this L2A to be just like L1A in course of acquisition (though they leave open the question of speed/success/etc.)

Vainikka & Young-Scholten

• Summary of the proposed stages

<table>
<thead>
<tr>
<th>Top XP</th>
<th>V-mmt</th>
<th>aux/modals</th>
<th>oblig subjs</th>
<th>S-V agrt</th>
<th>embedded w/ C</th>
<th>question formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>TP</td>
<td>opt</td>
<td>some</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>AgrP</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Paradis et al. (1998)

• Paradis et al. (1998) looked at 15 English-speaking children in Québec, learning French (since kindergarten, interviewed at the end of grade one), and sought to look for evidence for (or against) this kind of “tree building” in their syntax.
• They looked at morphology to determine when the children “controlled” it (vs. producing a default) and whether there was a difference between the onset of tense and the onset of agreement.
• On one interpretation of V&YS, they predict that tense should be controlled before agreement, since TP is lower in the tree that AgrP.
Paradis et al. (1998)

- Agr reliably before T
- 3pl late among agreement.
- Future late among tense.

<table>
<thead>
<tr>
<th>Agr before T</th>
<th>T before Agr</th>
<th>Both T and Agr at outset</th>
<th>3pl before tense</th>
<th>3pl after tense</th>
<th>Both 3pl and tense at outset</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

- Both 3pl and tense at outset
- Past before Fut
- Fut before Past
- Both Fut and Past at outset

6 2 7

Paradis et al. (1998)

- So, the interpretation of this information might be that:
- (Child) L2A does seem to progress in stages.
- This isn’t strictly compatible with the tree building approach, however, if TP is lower than AgrP. It would require slight revisions to make this work out (not necessarily drastic revisions).

Summary of “UG in L2A” part

- We’ve met the concept of UG in terms of principles (like Subjacency, Binding Theory) and parameters of variation (Subjacency bounding nodes, Binding domains, null subject, V->T), justified in large part by the complexity of language, the paucity of useful data, and the uniform success and speed of L1’ers acquiring language.

Summary of “UG in L2A” part

- We’ve approached the question of whether UG still operates in second language acquisition from a number of angles.
- Looking at the speaker’s knowledge of the second language (the interlanguage), we find that there is a lot of systematicity there, complexity which also seems to be more than the linguistic input could motivate.

Summary of “UG in L2A” part

- The question then becomes: Is this systematicity “left over” (transferred) from the existing L1, where we know the systematicity exists already? Or is L2A also building up a new system like L1A?
- We’ve seen that universal principles which operated in L1 seem to still operate in L2 (e.g., ECP and Japanese case markers).
Summary of “UG in L2A” part

- We met a number of hypotheses about the extent to which UG constrains L2A: the full access proposal which claims that L2’ers can set parameters in their IL to any value allowed by UG, the indirect access proposal which claims that L2’ers are stuck with the parameters originally set in their L1, and the partial access proposal which says that some parameters are re-settable, and others are not.

Summary of “UG in L2A” part

- We’ve seen lots of evidence pointing in various directions.
- The binding theory results (English vs. Japanese vs. Russian) seem to suggest that the parameters of binding theory are re-settable in the IL.
- The head-parameter results also point toward re-settabiltiy.
- The verb-raising results (English vs. French) seem to suggest that the verb-raising parameter is not re-settable in the IL.

Summary of “UG in L2A” part

- In particular, we expect that if a parameter is re-set in the IL, all of the properties that follow from that parameter are also found in the IL.
- We seemed not to see this in the verb-raising experiments, but we did seem to see this in the binding theory experiments.

Conclusions?

- Although it will be hard to find two researchers who wholly agree, it seems like we have reason to believe that:
  - UG does constrain IL and second languages
  - For at least some parameters, L2’ers are pretty much stuck with the L1 settings, although for others, L2’ers can acquire a language with any of the settings made available by UG.
  - For many parameters, transfer of the L1 settings seem to be the starting point.

What else is there?

- Principles & Parameters models of UG provide a strong theoretical backdrop against which we can ask detailed questions about the systematicity of an L2’ers IL knowledge.
- Nevertheless the “UG approach” is still primarily concerned with what is (or can be) learned and not so much how it is learned or what conditions affect this learning.
- The how aspect, the more practical aspect, is also important and has also been extensively studied… often from completely different points of view. These questions are what we’ll turn to next…