Week 10.  
Parameters, transfer, and functional categories in L2A

Parameters

- Languages differ in the settings of parameters (as well as in the pronunciations of the words, etc.).
- To learn a second language is to learn the parameter settings for that language.
- Where do you keep the parameters from the second, third, etc. language? You don’t have a single parameter set two different ways, do you?
- “Parameter resetting” doesn’t mean monkeying with your L1 parameter settings, it means setting your L2 parameter to its appropriate setting.

Four views on the role of L1 parameters

- UG is still around to constrain L2/IL, parameter settings of L1 are adopted at first, then parameters are reset to match L2.
- UG does not constrain L2/IL but L1 does, L2 can adopt properties of L1 but can’t reset the parameters (except perhaps in the face of brutally direct evidence, e.g., headedness).
- IL cannot be described in terms of parameter settings—it is not UG-constrained.
- UG works the same in L1A and L2A. L1 shouldn’t have any effect.

Some parameters that have been looked at in L2A

- Pro drop (null subject) parameter (whether empty subjects are allowed; Spanish yes, English no)
- Head parameter (where the head is in X-bar structure with respect to its complement; Japanese head-final, English head-initial)
- ECP/that-trace effect (*Who did you say that t left? English: yes, Dutch: no).
- Subjacency/bounding nodes (English: DP and IP, Italian/French: DP and CP).

Null subject parameter

- The best parameters are those which have several different effects. There are a number of things which seem to “cluster” with the availability of null subjects (providing clues as to what the actual parameter is).
  - null subjects are allowed
  - no pleonastic (dummy) pronouns (it’s raining)
  - rich verbal agreement
  - verb can precede subject in declaratives (came John)
  - Embedded subject can be questioned with overt that

- Spanish (+NS) L1 learning English (–NS)
  - An error constituting transfer of +NS would be omitting a subject in an English sentence, which requires a subject.

- English (–NS) L1 learning Spanish (+NS)
  - What would count as an error constituting transfer of +NS? Trickier—have to look for context where Spanish would definitely drop the subject, and see if English speakers incorrectly retain the subject. Even then, does that mean the Spanish learner doesn’t have the parameter down, or just hasn’t worked out the pragmatics of where a subject should be dropped?
Null subject parameter

White (1985)

- 32 Spanish (+NS)
- 2 Italian (+NS)
- 37 French (–NS)
- learning English (–NS)

- Testing not only for null subjects but also for properties that “cluster” with null subjects (all of which—then—are different between Spanish and English, but the same between French and English).

- White (1985), gramm. judg. task

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Spanish</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjectless U</td>
<td>61</td>
<td>89</td>
</tr>
<tr>
<td>Subjectful G</td>
<td>90</td>
<td>97</td>
</tr>
<tr>
<td>VS U</td>
<td>91</td>
<td>96</td>
</tr>
<tr>
<td>SV G</td>
<td>81</td>
<td>85</td>
</tr>
<tr>
<td><em>that</em>-trace U</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>other mmts G</td>
<td>79</td>
<td>79</td>
</tr>
</tbody>
</table>

- Percent correct at identifying ungrammatical (U) as ungrammatical and grammatical (G) as grammatical.
- Spanish is +NS, French is –NS, English –NS
- Probable methodological problems with VS, SV, and *that*-trace sentences.

Null subject parameter

White (1985), question formation

<table>
<thead>
<tr>
<th></th>
<th>correct</th>
<th><em>that</em>-trace</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish (n=22)</td>
<td>17</td>
<td>71</td>
<td>12</td>
</tr>
<tr>
<td>French (n=30)</td>
<td>20</td>
<td>42</td>
<td>38</td>
</tr>
</tbody>
</table>

Elizabeth believes that her sister will be late. Who does Elizabeth believe (*that) t will be late?

Null subject parameter

Phinney (1987)

- English->Spanish and Spanish->English
- Perhaps questionable methodology (written, exam in one case, class composition assignment in the other, Spanish speakers had English in school—perhaps not entirely learned as an adult, English speakers only had exposure in college), but...

Null subject parameter

Phinney (1987)

- Omission of pleonastic pronoun subjects.
  - can’t be omitted in English, must be omitted in Spanish.
- English->Spanish (SSL) always omitted pleonastic.
- Spanish->English (ESL) sometimes omitted pleonastic.
  - Spanish: Carrying over [+NS] from L1.
  - English: Not carrying over [–NS] from L1.
Null subject parameter
Phinney (1987)

<table>
<thead>
<tr>
<th></th>
<th>ESL1</th>
<th>ESL2</th>
<th>SSL1</th>
<th>SSL2</th>
</tr>
</thead>
<tbody>
<tr>
<td>referential</td>
<td>13</td>
<td>6</td>
<td>83</td>
<td>65</td>
</tr>
<tr>
<td>pleonastic</td>
<td>56</td>
<td>76</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

- Why would [+NS] be transferred and not [–NS]?
- Perhaps there is a default (first setting) of the null subject parameter: [+NS].
  - Learners of a [–NS] language need to change that parameter.
  - Learners of a [+NS] language already have it right.

Word order parameters

- Japanese is head-final (SOVIC)
  \[ \text{[CP IP S [VP O V I C]}} \]

- English is head-initial (CSIVO)
  \[ \text{[CP C [IP S I [VP V O ]}}} \]

- This is a parameter by which languages differ—but it should be pretty obvious to the L2 learner.

Word order parameters
Clahsen and Muysken (1986)

- Arguing for a non-UG-based view of L2A. That is, that L1A of German and L2A of German are different.
- (L1) kids get SOV order right away.
- L2 learners coming from Romance use SVO order (not just V2), but this isn’t even transfer, since L2 learners coming from Turkish also use SVO order (not SOV).
- To the extent that people learn the SOV German order, it’s due to (unnatural) rules transforming underlying SVO structures to the SOV forms.

Word order parameters
Clahsen & Muysken

- C&M looked at naturalistic production data.
- They suggest that L2 learners extract the “canonical” order (SVO) and stick with that (later learning to move non-finite verbs to the end).
- White: But how do they arrive at the canonical order? How can they tell that the Adv-V-S-O order is non-canonical?
Word order parameters (*UG?)
Clahsen & Muysken

• L2 learners do seem to have assumed SVO, producing things like Adv-SVO, SV_{sFin} O, … “canonical order”??
• Most languages are uniform with respect to headedness—but German isn’t. CP is head initial, while VP is head-final (IP could be either).

• German has mixed headedness (CSIOV) – \([CP \ [IP \ S \ [VP \ O \ V ]]\)
• Learner of German could easily assume German is head-initial—that is, SVO.

Vainikka & Young-Scholten

• Vainikka & Young-Scholten explore the development of L2 phrase structure in some detail—concentrating to some extent on the headedness parameter.
• They are looking at naturalistic L2A (migrant workers in Germany with different L1 backgrounds, including Turkish [SOV], Korean [SOV], Spanish [SVO], and Italian [SVO]).

Vainikka & Young-Scholten

• Vainikka (1993/4) argued for this in L1A of English. In particular:
• Acquisition goes in (syntactically identifiable stages). Those stages correspond to ever-greater articulation of the tree.
  – VP stage: no NOM subjects, no wh-questions.
  – IP stage: NOM subjects except in wh-questions.
  – CP stage: NOM subjects and wh-questions.

Vainikka & Young-Scholten’s primary claims about L2A

• 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.
• L2 learners do transfer the structure of the VP from their first language, but nothing else.

Vainikka & Young-Scholten

• V&YS propose that phrase structure is built up from just a VP all the way up to a full clause.
• Similar to Radford’s L1 proposal except that there is an order of acquisition even past the VP (i.e., IP before CP). Also similar to Rizzi’s L1 “truncation” proposal.
• V&YS propose that both L1A and L2A involve this sort of “tree building.”

V&YS—headedness transfer

• Cross-sectional: 6 Korean, 6 Spanish, 11 Turkish. Longitudinal: 1 Spanish, 4 Italian.
• In 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/English (I)</td>
<td>initial</td>
<td>19</td>
</tr>
<tr>
<td>Italian/English (II)</td>
<td>initial</td>
<td>64</td>
</tr>
</tbody>
</table>
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></th>
<th>NL</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>
<td>7</td>
</tr>
<tr>
<td>Salvatore</td>
<td>I</td>
<td>44</td>
<td>35 (80%)</td>
<td>9</td>
</tr>
<tr>
<td>Jose</td>
<td>S</td>
<td>20</td>
<td>15 (75%)</td>
<td>5</td>
</tr>
<tr>
<td>Rosalinda</td>
<td>S</td>
<td>24</td>
<td>24 (100%)</td>
<td>0</td>
</tr>
<tr>
<td>Antonio</td>
<td>S</td>
<td>68</td>
<td>20</td>
<td>48 (71%)</td>
</tr>
<tr>
<td>Jose</td>
<td>S</td>
<td>37</td>
<td>23</td>
<td>14 (38%)</td>
</tr>
<tr>
<td>Lina</td>
<td>I</td>
<td>24</td>
<td>7</td>
<td>17 (71%)</td>
</tr>
<tr>
<td>Salvatore</td>
<td>I</td>
<td>25</td>
<td>6</td>
<td>19 (76%)</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th></th>
<th>stage</th>
<th>L1</th>
<th>Aux</th>
<th>Mod</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP</td>
<td>Kor</td>
<td>1</td>
<td>1</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>VP</td>
<td>Tur</td>
<td>0</td>
<td>1</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>VP-i</td>
<td>It</td>
<td>0</td>
<td>0</td>
<td>34  (65)</td>
<td></td>
</tr>
<tr>
<td>VP-ii</td>
<td>It</td>
<td>0</td>
<td>0</td>
<td>29  (63)</td>
<td></td>
</tr>
<tr>
<td>VP-i</td>
<td>Sp</td>
<td>8</td>
<td>5</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>VP-ii</td>
<td>Sp</td>
<td>1</td>
<td>1</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>

- 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—FP stage

- After the VP stage, L2 learners move to a single functional projection, but its identity is underspecified—it isn’t really Tense or Agr, it’s some amalgamation of the two.
- Modals and auxiliaries can start in F.
- Verb raising can take place to F.
- Agreement seems still to be lacking (the features of F have not been determined).
V&YS L2A—FP stage

- Characteristics of the FP stage:
  - optional verb raising (to F)
  - some auxiliaries and modals (to F)
  - lack of an agreement paradigm (F not specified)
  - lack of complementizers (CP)
  - lack of wh-movement (CP)

Now, Korean/Turkish speakers raise the verb around 46% of the time.

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

V&YS L2A—AgrP stage

- After the FP 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
  - some embedded clauses with complementizers
  - 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.

Vainikka & Young-Scholten

- Summary of the proposed stages

<table>
<thead>
<tr>
<th>Top</th>
<th>XP</th>
<th>V-mnt</th>
<th>aux/ modals</th>
<th>obl</th>
<th>S-V</th>
<th>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>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>FP</td>
<td>opt</td>
<td>some</td>
<td>no</td>
<td>no</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>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

V&YS vs. the world

- Grondin & White:
  5-year old English→French

- No real evidence for VP stage (yet data collection may have started too late), and some evidence that suggests the properties of IP (V→I) and CP (that) were not inherited from L1.

V&YS vs. the world

- Lakshmanan/Selinker:
  4-year old Spanish→English and
  4-year old French→English

- Contra claim that CP is there from the beginning, it seems that embedded clauses, yes-no questions, and wh-questions appear much more frequently in the second half of the transcript.

- Contra claim that IP is there from the beginning (based on is), it appears that is is probably a main verb at this point—not used as an auxiliary.
V&YS vs. the world

- Epstein et al. (1996) [next week]
- Imitation experiments (Japanese->English).
- About 70% correct on IP constructions
- Only about 45-50% correct on CP constructions.
- Explanation simply based on complexity and distance of movement (for CP) seems unsatisfactory, and the results fit nicely in the tree building view.

Vainikka & Young-Scholten

- L1A of German (VP and IP head-final, CP head-initial in the adult language) in terms of “tree building”:
- It’s hard to catch German kids at the “VP stage”—most data that has so far been examined has the verb moved out of final position (i.e. the “IP stage” at least). Dutch, though, may yield some evidence for a VP stage in a similar language.

ECP: that-trace effects

- We know that the positive evidence won’t lead a learner to the generalization that that is disallowed when a subject is extracted from an embedded sentence.
  - John arrived yesterday.
  - Mary said John arrived yesterday.
  - Mary said that John arrived yesterday.
  - Who arrived yesterday?
  - Who did Mary say that arrived yesterday?
  - *Who did Mary say that t arrived yesterday?

V&YS—some implications

- Movement is generally considered to be driven by functional projections (e.g., whether a language has wh-movement is a property of C).
- If all you transfer is the VP, you won’t transfer movement properties from your L1.
- Schwartz (1996) claims that French->English learners seem to transfer V->I.
- V&YS propose a somewhat complicated story that boils down to: anyone (regardless of their L1) will probably assume V->I initially because of L2 learners’ attentiveness to words and not affixes, and because auxiliaries are in I or inverted to C.

ECP: that-trace effects

- The setting of the head parameter should be obvious in the primary data. Does the head come before or after the complement?
- The setting of the Null Subject parameter should also be obvious. Are there pleonastic pronouns in it’s raining?
- ECP (that-trace) and Subjacency (bounding nodes) are parameters which require much more subtle evidence in order to be correctly set.

ECP: that-trace effects

- that-trace is ok in Dutch.
  - Wie denk je dat hem gisteren gezien heeft?
  - Who do you think that he saw yesterday?
- The parameter is supposed to be a property of C; in Dutch C (dat) is a proper governor, and so a trace in subject position in properly governed. In English, C (that) is not a proper governor, hence the that-trace effect.
- If UG is available, Dutch->English learners should be able to set the parameter properly on C eventually. If not, we’d expect that to be forever treated like dat.
ECP: *that*-trace effects

- Dutch->English learners given a preference task (how is the sentence with *that* compared to the sentence without *that*?).
- They seem to get the differential behavior between subjects and objects, not expected based on Dutch—except was this checked?

<table>
<thead>
<tr>
<th></th>
<th>Control (n=30)</th>
<th>Dutch group (n=62)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+<em>that</em></td>
<td>–<em>that</em></td>
</tr>
<tr>
<td>subjects</td>
<td>0</td>
<td>98.5</td>
</tr>
<tr>
<td>objects</td>
<td>9</td>
<td>81</td>
</tr>
</tbody>
</table>

Subjacency and bounding nodes

- A much more subtle parameter is the setting of bounding nodes for Subjacency.
- Subjacency: A single movement cannot cross two bounding nodes.
- English: Bounding nodes are DP and IP.
- French/Italian: Bounding nodes are DP and CP.

<table>
<thead>
<tr>
<th></th>
<th>control</th>
<th>group 1</th>
<th>group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNP</td>
<td>96</td>
<td>80</td>
<td>81</td>
</tr>
<tr>
<td>wh-island</td>
<td>91</td>
<td>65</td>
<td>80</td>
</tr>
</tbody>
</table>

Subjacency and bounding nodes

- *What* [IP did Mary believe [DP the story [CP t_i that [IP John saw t_i ]]]]?
- *What* [IP did Mary wonder [CP whether [IP John would do t_i ]]]?

Parameters

- To reiterate a point from last time, *parameters* seem like one of the best places to look for evidence that UG still plays a role in L2A.
- Languages differ in the value of parameters.
- During L1A, one setting is picked.
- If only L1 can be consulted while learning L2, then we might expect only that setting to be available. (Transferred—and perhaps even kept, with additional mechanisms to derive deviations).
- If a L2 learner can *reset* a parameter (from either a transferred setting or a default one), then this means that the options are still there.
For next time:

- Read Epstein, Flynn and Martohardjono (1996):
  - Target article (first 37 or so pages)
  - Responses by these people, roughly prioritized:
    - Archibald et al. (2)
    - Bhatt & Bhatt (2)
    - Borer (1)
    - K. Hale (1)
    - Clahsen & Muysken (2)
    - Schwartz (2)
    - Vainikka & Young-Scholten (3)
    - White (3)
  - Author’s response (last 7 pages or so before references)
- No summary due.