24.949

Language Acquisition

Class 5
Root Infinitives

Last class

- Truncation Model of Root Infinitives

  ‣ children don't know that root clauses need to be full CPs, and sometimes stop structure building at some earlier point

Last class

- The predictive power of the Truncation model of RIs lies in the monotonicity constraint on the truncation mechanism:

    ➡ if TP is missing in RIs, everything above must also be missing

- *wh*-questions, epistemic adverbs, case…

Case errors

- Among the ways in which "kids talk funny" are in their use of subject pronouns in English:

  (1) a. Him fall down.   (Nina, 2;3)
       b. Her have a big mouth. (Nina, 2;2)

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- What does this mean with respect to what the children know about syntax? Do they simply not know the right forms for pronouns?

Illustrative asymmetries

- Localized problem with **subject case**

  - children who make these case errors do not make similar errors with objective or oblique cases (Rispoli 1992, Vainikka 1993, Schutze & Wexler 1996)

  - So: not reducible to a delay in learning the pronominal forms.

Illustrative asymmetries

- An **English-specific** phenomenon

  ‣ Among those languages whose learners display an OI stage in development, English is fairly unique in concurrently having a main-clause ACC stage.

  ‣ Children acquiring languages like Russian (Babyonyshev, 1993), Dutch (Powers, 1995), German (Schutze ,1995) and Faroese (Jonas, 1995) all go through an OI stage, but invariantly produce adult-like NOM subjects.

Illustrative asymmetries

- Striking correlation between case errors and (non)-finiteness.

  ▸ Children don't make subject case errors when the verb form is finite.

  ▸ It's only with the root infinitives that case errors arise

Finiteness and Case

Case	Schütze & Wexler (1996) 3 kids 1;11-3;1		Loeb & Leonard (1991) 7 kids 2;11-3;4	
Case	Finite	Nonfinite	Finite	Nonfinite
NOM	559	291	436	75
Non-NOM	**21**	155	**4**	28
% non-NOM	**3.6%**	39.4%	**0.9%**	27%

Default case

- The vast majority of the errors are object case pronouns in subject position. Why might that be?

- Conjecture: children's ACC subjects have the **default case form**, i.e. the form that appears when there is no obvious case-assigner.

(1) a. Me/*I like linguistics.
  b. Who did it? Me?*I.
  c. Me/*I too.
  d. Me/*?I and Sherry are co-teaching this class.

Default case

- This might explain why subject case errors are so apparent in English but not in other languages. If children are using the default case in subject position, it will be an obvious error in English.

- In many other languages, German for instance, the default case is NOM, so the same as it would have been anyway.

(1) Der, den habe ich gesehen.
    He, him have I seen

A simple story that doesn't work

- Still a question of why children are producing default case in the first place.

- What a truncation theorist might say:

  ▸ If T is responsible for both agreement *and* case, perhaps a missing T explains the finiteness-case-error correlation

A simple story that doesn't work

- **Problem 1:** a good chunk of children's non-finite utterances consist of NOM subjects!

- **Problem 2:** There are a few accusative subjects with past tense verbs, but those are predicted to have been nominative under such a story.

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Schütze and Wexler 1996

- The inflectional layer is split into (at least) TP and AgrP.

  ▸ Division of labor among the two wrt to what assigns case to nominals and what determines the temporal properties of the clause.

- The grammar of children in the RI-Stage: the matrix clause may lack Agreement and/or Tense projections.

Schutze & Wexler 1996

- **More formally** (slightly anachronistic)**:**

  ‣ AgrP dominates TP.

  ‣ Agr bears a φ-probe and has NOM case features. T bears interpretable Tense features.

  ‣ Child grammar allows for optional omission of Agr or T (or both), resulting in consequences elsewhere (e.g. case)

Schutze & Wexler 1996

- **Morphological assumptions**

  ▸ [tns=pres, agr=3sg] —> -s

  ▸ [tns=pst] —> -ed

  ▸ else —> ∅

Predicted Possibilities

✳ T and Agr both included: finite verb, NOM subject

✳ T missing, Agr included: nonfinite verb, NOM subject

✳ T included and past, no Agr: past tense verb, but ACC SUBJECT

✳ T included and not past, no Agr: non-finite verb and ACC SUBJECT

✳ T and Agr both missing: non-finite verb and ACC SUBJECT

✳ Not predicted to occur: 3sg present verb, ACC SUBJECT

Schutze & Wexler 1996

- What this explains:

  ▸ why there are so many nominative subjects with root infinitives: those are cases where **T was missing but Agr was there**.

  ▸ "Exceptions" where past tense forms appeared with non-nominative subjects: those were cases where **Agr was missing, but T is specified [past]**.

Unique Checking Constraint

- ATOM reduces one question to another: Why are Agr and T sometimes omitted in child grammar?

- Related to this is the question of why some languages (Italian, Spanish, etc.) do not seem to exhibit the RI phenomenon, which is supposed to arise from the omission of Agr or T.

Unique Checking Constraint

- Wexler (1998/2011): what's special about children in the root infinitive stage is that they are subject to the **Unique Checking Constraint**

  ‣ Subject DPs, which start out vP-internally, raise to T because the functional head possess an EPP feature.

  ‣ Both Agr and T have EPP features, with the result that in adult grammar, subject DPs must raise through both projections.

  ‣ **Problem with kids:** child can have the DP check at most one EPP feature.

Best of bad options

- If Agr and T are both present in the structure, and the EPP feature on one of these heads remains unsatisfied (due to UCC), the derivation would crash.

- So there are three constraints, and only two can be satisfied at once.
  - ‣ Tense constraint: A main clause must include T.
  - ‣ Agr constraint: A main clause must include Agr
  - ‣ The Unique Checking constraint

- **Minimize Violations:** Given two representations, choose the one that violates as few grammatical constraints as possible. If two representations violate the same number of constraints, then either one may be chosen.

RI vs. non-RI languages

- Recall:

(1) **The Null-Subject/Root-Infinitive Correlation** (Wexler 1998)
    A language goes through an RI-Stage if and only if that language is not a language in which null-subjects are licensed by inflection.

RI vs. non-RI languages

- A common analysis of null-subject languages: their agreement suffixes are actually 'pronominals' (doubled clitics)

- These pronominal affixes contain their own *interpretable* φ-features, and serves to independently check the EPP-feature of Agr.

- Since the subject DP needn't ever check the EPP-features of two functional heads, there is no conflict between UCC and the condition that all clauses contain Tense and Agreement projections.

Assessment: vs. Truncation

- Both "structural simplification" models

- Crucial difference: truncation involves simply stopping structure-building at some earlier point in the derivation, ATOM/UCC involves more selective omission of elements.

Assessment: vs. Truncation

Divergent empirical predictions regarding wh-questions:

- Predicted by Truncation: the fact that RI-wh-questions are rare or nonexistent in French and Dutch

- Consistent w/ ATOM/UCC but not Truncation: the availability of RI wh-questions in English

  ‣ On the other hand, given UCC, are *wh*-questions consistent with this model, assuming EPP features on v and C need to be checked by the moving element?

Assessment: vs. Truncation

Divergent empirical predictions regarding case errors:

- Not obvious how to derive the case error patterns on a Truncation analysis.

- If OIs are missing T and thus are vPs, the subject would have to be vP-internal. Assuming classical case theory, it is not clear how the subject would ever receive NOM case. The prediction should be default case across-the-board, unlike what we find.

- Suppose that when NOM surfaces in an RI, a larger structure is actually in place. Perhaps TP dominates AgrP, which is responsible for NOM, and NOM subject + V_{inf} constructions are missing TP, but contain AgrP.

  - Then, the NOM-ACC alternation is predicted.

  - However, the past tense "exceptions" (ACC with V_{ed}) are not.

Assessment: can the core tenets be maintained?

- Core assumptions of ATOM/UCC

  i) Agr/T split

  ii) Structural NOM as assigned as a consequence of φ-agreement (Chomsky 2000; 2001)

  iii) Children know these components of grammar, either because they never have to learn them, or have learned them by the time they are in the RI stage.

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  i) Agr/T split

  - no longer a standard assumption, but perhaps not a big issue

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  - a hotly debated issue, may be some good reasons to abandon

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  - an empirical issue, and possibly wrong

Assessment: can the core tenets be maintained?

- **Test environment:** French, which has more transparent agreement and default case is non-NOM

  ▸ Prediction of ATOM/UCC: If a language has RI and default case is non-NOM, non-NOM subjects should surface at least some of the time in RI clauses.

Subject case in French

- Subjects in French may surface as:
  (i) full DPs, on which case distinctions are not marked (1)
  (ii) subject clitics, which only have the NOM form (2) or
  (iii) strong or 'tonic' pronouns that show up in positions where the
  clitic cannot, e.g. coordination, left-dislocation, etc. (3)

  (1) *Les Belges sont les plus braves*
      The Belgians are the most brave

  (2) *Ils   sont fous.*
       3plCL.NOM are mad

  (3) *Moi, j' ai   gagné*
       1Sg,1sgCL.NOM have.1SG won

Subject case in French

- Given that the relevant strong forms show up in positions canonically taken to be non-case positions, we might assume that they have default case.

- **Question:** do RI-children overuse these forms?

Subject case in French

- Children produce *moi* with infinitival (-T, -Agr) verbs (Pierce 1992, Ferdinand 1996)

  (1) *moi mettre ça comme Pol* (Max 2;3)
      me put-INF that like Pol
      'I put it like Pol.'

  (2) *moi dessiner la mer* (D1, 1;10)
      me draw-INF the sea
      'I draw the sea.'

Subject case in French

- Children do distinguish between *moi* and *je* (Pierce 1992):

  a. <u>Word order:</u> only *moi* is ever produced in post-verbal positions

  b. <u>Relative ordering</u> in dislocation constructions: *moi je* but never **je moi*

  c. *moi*, but never *je* with infinitival morphology on the verb

- Evidence that children take *moi* to bear default case: children never use *moi* in place of the object clitic *me*

Subject case in French

Complications…

- Children also produce *moi* with clearly finite verbs, i.e. [+T, +Agr] verbs according to UCC/ATOM

(1) *moi ai cassé ça là.*   (Anne 2;2)
    me have.1SG broken that there
    'I broke that there'

Subject case in French

Complications…

- French-acquiring children at this stage produce utterances like (1) with agreement mismatches. Crucially, children's errors are systematically asymmetric: they over-use the 3SG verbal ending.

- 3SG has been analyzed as an elsewhere form that shows up when agreement is underspecified (de Cat 2001, 2005), so it can be taken as tentative supporting evidence that children in the RI stage optionally underspecify/omit Agr to the exclusion of T.

- BUT, children also produce *je* with [+T, -Agr] verbs

    (1) *moi, j 'est pas méchant.* (Tom 2;4)
       me, I be.3SG not nasty
       'I'm not nasty.'

    (2) *moi aussi, je va monter.* (Anne 2;9)
       me too, I will.3SG go.up
       'I'll go upstairs, too

Upshot

- In light of the data above, it looks like the two assumptions below cannot be simultaneously maintained:

- (i) NOM case entails [+Agr]
(ii) Default agreement is the result of [-Agr]

Sidebar

- Analogous 3Sg overuse happens also in what's supposed to be a non-RI language (Spanish, Grinstead 1996).

- How should we interpret this in relation to the RI/Null Subject generalization?

Assessment: can the core tenets be maintained?

- **Test environment:** Embedded infinitives in English, where there is no Agr present by design

    ▸ Prediction on ATOM/UCC: never over-produce NOM in these environments, where there is no NOM-licenser in the first place

Subject case in embedded infinitives

- Children in the RI-stage produce sentences like (1)-(3):

    (1) ECM complements
        a. I want **she** to get off (Lara, 3;02)
        b. I want **he** to be up tree (Aran, 2;07)

    (2)   Causative complements
        a. I won't let **he** have it (Aran, 2;9)
        b. Let **she** sit still (Eleanor, 2;9)

    (3)   Direct perception complements
        a. Wanna see **I** put my mask on? (Peter 2;10)

Upshot

- The fuller pattern of case errors produced by children in the RI stage suggest that a crucial assumption of the ATOM/UCC model — that Agr is responsible for NOM case — might have to be abandoned.

- Once we abandon it, the critical advantage the model had over the alternative is lost!

Bare sentences elsewhere

- Haitian Creole (Déchaine 1991)

  (1) Pyè vann bèf yo.
  Pyè sell cattle DET
  'Pyè sold the cattle.'

- Fòngbè (Fitzpatrick 2006)

  (2) Lili tùn Kòkù
  Lili know Koku
  'Lily knows Koku'

- AAE (Labov 1969, Déchaine 1995)

  (3) She like cake.

Factativity

- Haitian Creole (Déchaine 1991)

  (1) Pyè vann bèf yo.
      Pyè sell cattle DET
      'Pyè sold the cattle.'   ~ past

  (2) Sisi renmen chat mwen.
      Sisi like cat 1SG
      'Sisi likes my cat.'   ~ present

- AAE (Labov 1969, Déchaine 1995)

  (3) a. She like cake.   ~ She likes cake.
      b. She eat the cake.   ~ She ate the cake.

Factativity

- Generalization:

  ‣ stative predicates in bare sentences receive a *present* interpretation

  ‣ eventive predicates:

    – receive a *habitual* interpretation if atelic/unbounded

    – receive a *past* interpretation if telic/bounded

The quickest primer on the semantics of tense

- Preliminaries:

    i. Moments: Time is made up of infinitesimally small 'moments' (or 'instants'), of type *i*
        M = the set of moments (instants)

    ii. Ordering: The set M is structured into a dense, strict total ordering (<)

    ‣ complement of TP is a predicate of times, of type <i,t>

The quickest primer on the semantics of tense

Pronominal analysis of Tense (Partee 1973 et seq.)

- T-heads are pronominal anaphors referring directly to temporal intervals (or moments).

- As anaphors, they bear a pronominal index, and their extension is determined by the variable assignment.

The quickest primer on the semantics of tense

- Tense features introduce presuppositions that restrict the potential referents of these pronouns (just like phi-features on type e pronouns)

(1) $[\text{Past } [\text{pro\_i}]]^g$ is defined only if $g(\text{i}) < t_0$
    if defined, then $[\text{Past } [\text{pro\_i}]]^g = g(\text{i})$

(2) $[\text{Pres } [\text{pro\_i}]]^g$ is defined only if $g(\text{i}) = t_0$
    if defined, then $[\text{Pres } [\text{pro\_i}]]^g = g(\text{i})$

Déchaine's analysis

- T in bare sentences is headed by a semantically vacuous T∅

  (1) [∅ [pro_i]] = g(i)

- How do we assign an interpretation to g(i)?

  ‣ Anchor it relative to the utterance time and interpret it as overlapping with it.

    – if stative predicate, overlap is no problem; states *are*

    – if eventive predicate, since events are not instantaneous

    – Solution: "stativize" it by viewing it as historical, i.e. interpreting it as "having happened"

Bare sentences in Standard American English

- Fitzpatrick 2006

  (1) You like my cat?

  (2) You go to the party?

  (3) Anyone have a pen?

  (4) Anyone told Mary we're leaving?

- **Claim:** English doesn't have Haitian-style T∅, but in restricted environments, T ends up in a place where it cannot be interpreted

Bare sentences in Standard American English

- But people have argued, based on factative-like effects and other evidence, that what we call English present is T∅ (Dechaine 1995, Sauerland 2002)

- How might we tell if child RIs are in fact grammatically-licensed?

Taking stock

- Some of the core background assumptions and empirical generalizations that the main models of RIs are built on need to be scrutinized again

- Anglocentricity might be particularly problematic here

Next week

- A-movement [readings TBD]

- Final project topics!!