The role of Intersubjectivity in ordering the Left Periphery

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Rethinking Cartography

Larson (2017) proposes alternative approach to capture ordering facts: instead of a strict functional hierarchy, multiple features in the same head are ordered by an ordering relation $\aleph$, which aligns the projection order with the feature order

- Reduces complexity of structural representation: only phrasal layers that are being used are projected
- Can account for more flexible ordering facts as seen in (4)
- Proposes ordering relation $\aleph$ that could be derived from conceptual notions i.e. level of subjectivity would underlie relative ordering of adjectives (Scontras et al. 2017)

Larson proposes that this approach could be extended to other phrasal hierarchies such as the left periphery. We take on that challenge.

*Left Periphery here refers to projections within the CP-domain, regardless of whether realized material appears at the left or right edge at surface.

Theoretical Background: Cartography

Cartographic approaches to syntax (Cinque & Rizzi 2008):
- Extend the traditional [CP][IP][VP, ...] structure to provide a more fine-grained structural mapping of different functional projections.
- Often base the extended projections and ordering thereof on cross-linguistic ordering restrictions on the linearization of constituents, i.e.: (1)

  Ordering of adjectives in the extended DP:
  Size > Length > Height > Weight > Shape > Color ... (Scott 2002)

(2) Ordering of constituents in the left periphery (extended CP):
 illac > Force > Topic > Focus > Topic > Finiteness > Tense ...

(Rizzi 1997)

- Captures nuanced linearized ordering preferences cross-linguistically.
- Strictly assumes:
  - this fine-grained structure is universal and always present (even when not specified for a value)
  - only one feature projected per head

Problems with strict cartography (van Craenenbroeck 2009, Larson 2017):
- There is no upper-limit to the amount of phrases that can be postulated.
- Not all constituents combinations obey strict ordering preferences, e.g.:
  - (3) big red boat - red big boat
  - (4) red circular patch - circular red patch (Trusswell 2009)

- Not clear what principles exactly underlie the structural orderings.

Experimental Background: Subjectivity

Scontras et al. (2017): the relative ordering of adjectives in noun phrases can be attributed to their perceived level of subjectivity.

- Positive correlation between the acceptability of an adjective in non-adjacent position to the noun (with another type of adjective interfering), and the perceived ‘subjectivity’ of those adjectives.

- The subjectivity of a noun was measured in two ways:
  - ‘direct’ measure: participants were asked to indicate (on scale from 0-1) how ‘subjective’ an adjective, e.g. ‘old’, is,
  - ‘indirect’ faultless disagreement validation, ‘if John says “the apple is old”, and Mary “the apple is not old”, can they both be right?’

Experiments: Ordering the Left Periphery

Methods.
- Two MTurk studies. 45 participants each. 15 sentences pp: 2 items per condition (Table 1) + 5 controls (explicitly-hearer-oriented)
- Derived from factual statements about outer space in informal register.

Experiment 1: ‘direct’ measure intersubjectivity (Figure 1a).

Experiment 2: ‘indirect’ measure intersubjectivity: speaker-identification task manipulating whether there is a dynamic ongoing relationship between speaker and addressee or not (Figure 1b).

Data Analysis.
- Excluded 12 Exp1/ 8 Exp2. Fitted linear mixed-effects models [intersubjectivity ~ condition + (1|participant) + (1|item)]

Table 2. Hypothesized Level of Intersubjectivity in the Left Periphery

- Sentence Condition Projection IS
- a. Jupiter and Saturn are made of gas, right?: particle illoc$\cdot$+illoc question Force$\cdot$+[Q] high
- b. What are Jupiter and Saturn made of? topic Top$\cdot$+[Top] focus Foc$\cdot$+[Foc] declarative Fin$\cdot$+[Fin] low

A. Experiment 1: Direct Measure of Intersubjectivity.

How much is the speaker taking into account the listener’s thinking?

B. Experiment 2: Indirect Measure of Intersubjectivity.

Space museum scenario, a sentence uttered by a real-life tour guide (dynamic relationship) or a pre-recorded virtual tour guide (no dynamic relationship).

“So according to you Pluto’s a planet?”

“Who uttered this sentence?”

No at all. A lot.

Hypothesis: The ordering of the projections in the left periphery is positively correlated with the expressed level of intersubjectivity, in that the further the projection is from the IP, the more dependent its content is on IS.

Discussion

- Hypothesis partially supported: level of IS is correlated with relative ordering of illoc$\cdot$>Force$\cdot$>Fin$\cdot$>Foc$\cdot$>Top$\cdot$
- Ordering of constituents can be attributed to some conceptual reality (measured both directly and indirectly)
- In-progress: testing hypothesis in a more precise and fine-grained way by Replicating Exp 1 & 2 in Cantonese, where elements of the LP are overtly marked by final sentence particles (Sybesma & Li, 2007).