Argument asymmetries and *v*P

Previously: 10 constituency tests

Last week: Constituency tests as a window into hierarchical structure; structure-building with Merge and Adjoin

1 9 NP asymmetries[1]

Given two NPs, how can we tell their relative height?

1. <u>Binding Condition C</u>:

   *R-expressions* (NPs that are not pronouns) cannot be *c-commanded* by a coreferential NP (*antecedent*) (= bound). (<u>Underlined</u> NPs below are coreferential.)

   (1) a. * <u>He/John</u> likes <u>John</u>.

        b.   <u>His/John</u>'s mother likes <u>John</u>.

        c.   The rumor about <u>him/John</u> upset <u>John</u>.

   (2) a. * <u>He/John</u> thinks Mary likes <u>John</u>.

        b.   <u>His/John</u>'s mother thinks Mary likes <u>John</u>.

In particular, Condition C (and other asymmetries below) appear to be sensitive to the relationship of *c-command*:

   (3) **C-command** (originally by Tanya Reinhart; formulation here from Adger 2003:117):

   Node A c-commands node B if and only if A's sister either is B, or contains B.

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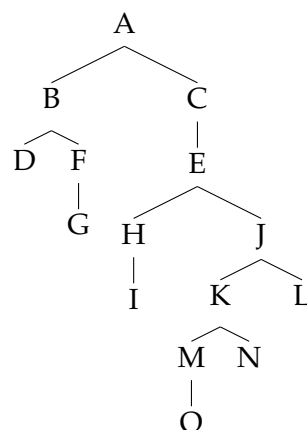
[1]Based on a handout by Jason Merchant.

2. <u>Binding Condition A:</u>

Reflexive (*-self*) and *reciprocal* pronouns (*each other*) must be <u>c-commanded</u> by their *antecedent* (<u>= bound</u>) within <u>their *binding domain*</u> .

(4) a.   <u>John</u> likes <u>himself</u>.

      b.   * <u>Himself</u> likes <u>John</u>.

(5) a.   <u>John and Mary</u> like <u>each other</u>.

      b.   * <u>Each other</u> likes <u>John and Mary</u>.

      c.   <u>John and Mary</u> like the pictures of <u>each other</u>.

(6) a.   * <u>John</u> thinks Mary likes <u>himself</u>.

      b.   * John and Mary think Bill likes each other.

(7) Reflexives in some languages do not have this locality restriction: (Mandarin)

Li taitai   renwei [laoshi xihuan <u>ziji</u>-de xiaohai].
Li madam think   teacher like   self-ɢᴇɴ child

'Mrs. Li thinks the teacher likes *self*'s child.'

3. <u>Binding Condition B:</u>

Regular pronouns must be *free (not bound)* within <u>their *binding domain*</u> .

(8) a.   * <u>John</u> likes <u>him</u>.

      b.   <u>John</u> likes [<u>his</u> parents].

      c.   <u>John</u> thinks [Mary likes <u>him</u>].

4. <u>Quantifier-pronoun binding:</u>

Pronouns whose reference changes depending on some other, quantificational NP (*bound pronouns*), must be below the quantificational NP.

(9) a.   <u>Every/No school</u> pays <u>its</u> students.

      b.   * <u>Its</u> students like <u>every/no school</u>.

      c.   * The review of <u>every book</u> upset <u>its</u> author.

5. <u>NPI licensing:</u>

Certain phrases like *anyone/anything/any NP* are called *Negative Polarity Items* (NPIs) and must have a higher, negative NP (or negation).[2]

(10) a.   No one saw <u>anything</u>.

       b.   * <u>Anyone</u> saw nothing.

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[2]If you are taking EL4203, you know that this description is woefully inadequate; see Ladusaw (1979). There are also uses of *any* which do not require negation, but often occur with modals, as in *John will/can eat anything*. These are called *Free Choice Items* and we won't discuss them here. (Some languages are more helpful than English and use different words for NPIs and FCIs.)

6. Each...the other:

    (11)   a.   Each boy hit the other (boy).

            b.   * The other (boy) hit each (boy).

    (12)   a.   Each boy claimed that the other boy broke the window.

            b.   * The other boy claimed that each boy broke the window.

Movement asymmetries:

7. Strong crossover (SCO): (Postal, 1971)

    (13)   We want to know who x is in the sentence "You think $\underline{x}$ said $\underline{x}$ will win":

         a.   Which guy do you think ___ said he will win?

         b.   * Which guy do you think he said ___ will win?

A *wh* phrase "crossing over" a coreferential pronoun leads to ungrammaticality.

8. Weak crossover (WCO): (Postal, 1971)

    (14)   a.   Which guy do you think ___ said [his mother] will win?

            b.   * Which guy do you think [his mother] said ___ will win?

Note: There are two differences between SCO and WCO. First, in SCO (13b), the coreferential pronoun c-commands the "gap" of the moved *wh*, whereas in WCO (14b), it does not. Second, speakers robustly reject SCO constructions with the intended interpretation, whereas WCO is "weak" because many speakers do not find such configurations ungrammatical.

9. Superiority: (Kuno and Robinson, 1972)

    (15)   We want to ask a question based on "You said who ate what":

         a.   Who did you say ___ ate what?

         b.   * What did you say who ate ___?

Exercise: 1. Write sentence with at least two NPs; 2. Exchange with friend; 3. Use at least three tests to see which NP is higher.

These NP asymmetries above show that subjects are consistently higher than objects: in particular, subjects c-command objects and objects do not c-command subjects. This supports our idea that there is a constituent containing V and the object, but not the subject:

(16) **Because the subject c-commands the object, but not the opposite:**

a. *
```
      /|\
     S V O
```

b. ✓
```
     /\
    S  ⋮
       VP
      /\
     V  O
```

c. ✓
```
        VP
       /\
      S  /\
        V  O
```
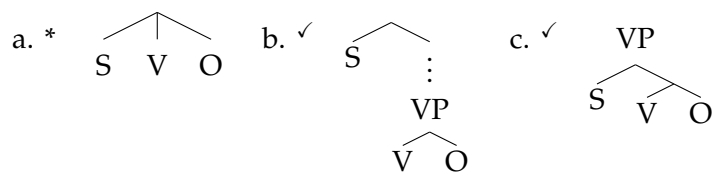
2 Non-configurationality

Unlike English, some other languages have very free word order. Where are subjects and objects in such languages?

(17) **Free(er) word order in Warlpiri (Pama-Nyungan; Australia) (Simpson, 1983, p. 140):**

    a. Kurdu-ngku ka-ju   nya-nyi   ngaju.
         child-ERG   PRES-OBJ:1SG see-NONPAST me-ABS

         'The child sees me.'   S AUX V O

    b. Kurdu-ngku ka-ju ngaju nya-nyi.   S AUX O V

    c. Nya-nyi ka-ju kurdu-ngku ngaju.   V AUX S O

    d. Nya-nyi ka-ju ngaju kurdu-ngku.   V AUX O S

    e. Ngaju ka-ju nya-nyi kurdu-ngku.   O AUX V S

    f. Ngaju ka-ju kurdu-ngku nya-nyi.   O AUX S V

- ERG = ergative case (transitive subject)
- ABS = absolutive case (transitive object or intransitive subject)
- OBJ:1SG = object agreement
- PERL = perlative case (a case for certain locations)

Warlpiri and other languages with very free word order have been called *non-configurational* (Hale, 1983). In particular, they seem to challenge the idea that subjects and objects are in an asymmetric structural relationship.

(18) **Condition A:**

    a. Purlka-jarra-rlu   ka-pala-nyanu   nya-nyi.
         old.man-DUAL-ERG pres.impf-SUBJ:3DUAL-REFLEX see-NONPAST

         'The two old men are looking at each other'   (Simpson, 1991, p. 163)

    b. * Purlka-jarra   ka-nyanu-palangu   nya-nyi.
         old.man-DUAL PRES.IMPF-REFLEX-OBJ:3DUAL see-NONPAST

         Intended: 'Each other are looking at the old men.'   (Legate, 2001, 2002)
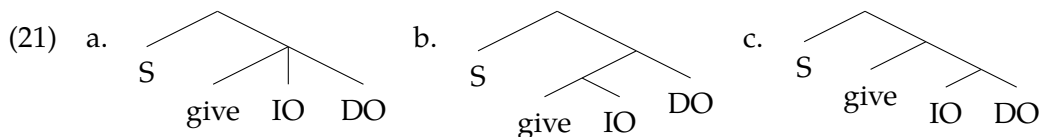
(19) **Condition B:**

    a. * Jakamarra-rlu ka-(nyanu)   nyanungu paka-rni.
         Jakamarra-ERG PRES.IMPF-(REFLEX) him   hit-NONPAST

         Intended: 'Jakamarra is hitting <u>him</u>.'   (Simpson, 1991, p. 170)

    b. Japanangka-rlu-nyanu yirra-rnu   mulukunpa nyanungu-wana.
         Japanangka-ERG-REFLEX put-NONPAST bottle   3-PERL

         '<u>Japanangka</u> set the bottle down beside <u>him</u>.'   (Simpson, 1991, p. 171)

But evidence from WCO and Condition C is less conclusive. See Legate (2001, 2002) for more discussion.

3 Ditransitives

(20)   I gave [NP John] [NP a picture].

John is the indirect object (IO)/*goal*; *a picture* is the direct object (DO)/*theme*

(21)   a.

```
        S
            give  IO  DO
```

b.

```
      S
          give  IO
                    DO
```

c.

```
      S
          give
                IO  DO
```

The NP asymmetries above are useful for determining the relative heights of the direct and indirect objects: (data from Barss and Lasnik 1986)

(22)   a.   I showed John/him himself (in the mirror).

b.   * I showed himself John (in the mirror).

(23)   a.   I showed every friend of mine his photograph.

b.   * I showed its trainer every lion.

(24)   a.   I denied no worker his paycheck.

b.   * I sent its reviewer every book.

(25)   a.   Which boy did you show ___ [his reflection] in the mirror?

b.   * Which lion did you show [its trainer] ___?

(26)   a.   Who did you give ___ what?

b.   * What did you give who ___?

(27)   a.   I gave each man the other's watch.

b.   * I gave the other's trainer each lion.

(28)   a.   I gave no one anything.

b.   * I gave anyone nothing.

How can we build (21c)? Recall that Merge results in binary trees and must be driven by selectional features:

(29)   **Merge**(α, β):

For any syntactic objects α, β, where α bears an unchecked selectional feature F, and β bears a matching categorial feature, call α the head and

a. let F be checked (written ~~F~~),

b. let $\gamma = \alpha \cap \overline{\Im}$, where $\overline{\Im}$ is the set of all unchecked non-inflectional features, and

c. return γ . Here we call γ the label (or projection).

```
  α   β
```

(30) **The basic idea:**

```
        S
       / \
      V   ?P
    give  / \
        IO   /\
            ?  DO
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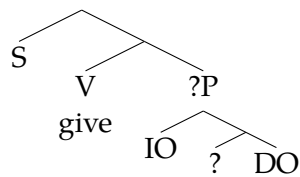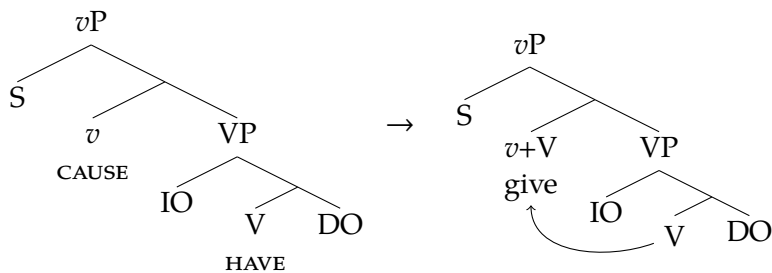
But intuitively, *give* selects for its objects, DO and IO.

(31) **A solution (Larson, 1988): V selects for the DO and IO and moves to *v*:**

```
        vP                              vP
       /  \                            /  \
      S    \                          S    \
          / \            →               /  \
         v   VP                      v+V    VP
       CAUSE / \                     give   / \
            IO  /\                        IO  /\
               V  DO                         V  DO
             HAVE
```

We will see other kinds of movement soon. We refer to movement of the head V to *v* as *head movement*.

(32) *give* = CAUSE + HAVE

   a. HAVE (later pronounced as *give*): [V; uN, uN]

   b. *v* (CAUSE): [*v*; uN] ("little v")

(33) **Hierarchy of projections (Adger, 2003, p. 135):**
   Every clause has *v* > V.

How do we know which argument has which interpretation?

(34) **Uniformity of Thematic Alignment Hypothesis (UTAH Adger, 2003, p. 138, from Baker 1988):**
   Identical *thematic relationships* between predicates and their arguments are represented syntactically by identical structural relationships when items are Merged.
   Examples:

   a. Specifier of *v*P: Agent

   b. Complement of V: Theme (direct object)

   c. Specifier of VP: Goal (indirect object)

Exercise: Ditransitive verbs can also introduce arguments in the form "DO to IO":

(35) John gave [NP=DO a book] [PP=IO to Mary].

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