Selective specifiers and the location of PF information   Kenyon Branan • ZAS

Overview

- Some syntactic operations seem to be sensitive to phonological properties of the elements involved.

- This raises a big question: **where is that information located so that the syntax may make reference to it?**

- At least two conceivable answers, with different implications for how we want to theorize:

  - It's not really phonological information (but the learner might posit formal features on the basis of phonological shape)
  - It is phonological information (with some admissable syntactic derivations getting filtered out later on down the road)

- This talk focuses on cases of *size-selective specifiers* as a case study: cases where whether or not movement to a specifier position is allowed is determined by the size of the mover.

  (An example of this in a bit)

- We'll see that both the answers seem to be right, but not for all cases.

Roadmap

- Selective specifiers and two kinds of model for them

- Tagalog clitics: syntactic encoding of phonological properties

- Bùlì predicate fronting: a PF filter on movement

- Recap, conclusion, and implications

An introduction to selective specifiers

- As alluded to: some specifier positions don't allow specifiers to be "too large".

- An example from German:

(1) *Marias / *Dieser Frau   sorfältige Beschreibung Ottos*
    M.   this   woman careful   description O.
    'Maria's/*this woman's careful description of Otto'   Koopman (2014)

- Question: what is it about spec,DP (or wherever it is that prenominal possessors are located in the German DP) that disallows one sort of element but allows the other?
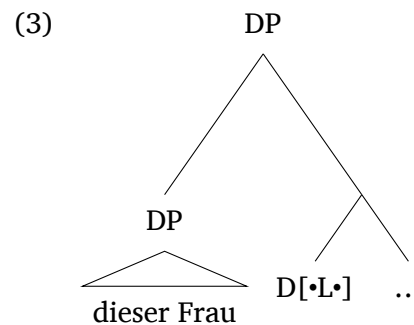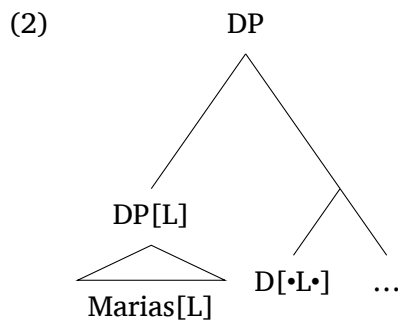
Option 1: a syntactic property

- One option would be to encode this *featurally* in the syntax.

- Basically, this involves making a sub-categorial split between types of nominals.[1]

- One sort of nominal (e.g. (some) proper names) bears a particular feature, which I'll call [L] (implicitly having to do with lightness[2])…

… other nominals do not.

- I'll use spec,DP as a cover term for wherever it is that German prenominal possessors end up (following Abney (1987)).[3]

- The relevant D in German is specified for a particular property: it must have an element which bears [L] in its specifier.

- Whether or not one of the sentences shown before is licit is determined by the featural specification of the specifier.

(2)
```
                 DP
               /    \
              /      \
          DP[L]       \
          /  \      D[•L•]   …
    Marias[L]
```

(3)
```
                 DP
               /    \
              /      \
            DP        \
           /  \     D[•L•]   …
      dieser Frau
```

- One advantage of this approach (for German): complex proper names.

(4) *Herrn   Schmidts Rede*
    mister.GEN Schmidt's speech
    'mister Schmidt's speech'

(5) *Klein Marias Katze*
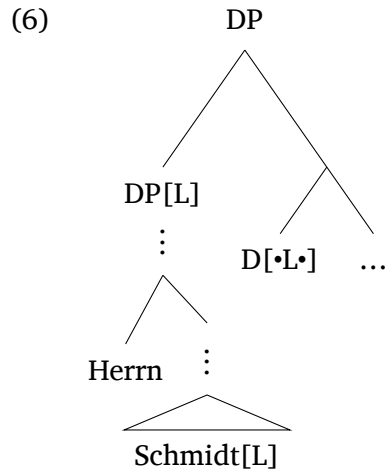   Little Mary's cat
    'Little Mary's cat'   Krause (1999)

- The presence of [L] on a nominal is determined by the root: i.e. whether or not it is the right sort of proper name.[4]

- The presence of modifiers (like titles and adjectives) on the proper name in question shouldn't affect the presence of [L] on the nominal as a whole.

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[1]See Roehrs (2020) for an approach along these lines specifically for German possessors.

[2]See also Cardinaletti and Starke (1994), Kishimoto (2000), Landau (2007), and Aravind (2017) for proposals the presence or absence of movement-driving syntactic features systematically corresponds to phonological weight in this way.

[3]See Roehrs (2020) for some discussion of the left edge of the German DP.

[4]This could be done either by locating [L] on a particular D head which appears in the context of proper names, or by having [L] located on the root and then percolated up to DP. See Danon (2011), Norris (2014), and Atlamaz and Baker (2018) for some discussion of this latter approach.

(6)

```
                    DP
                   /  \
                  /    \
             DP[L]      \
              ⋮        / \
              |       D[•L•]  …
             /\
          Herrn  ⋮
             /‾‾\
          Schmidt[L]
```

- For this theory: regardless of how large you make the possessor in question, it's the presence of [L] that should determine whether or not whether or not it may appear as a prenominal genitive.
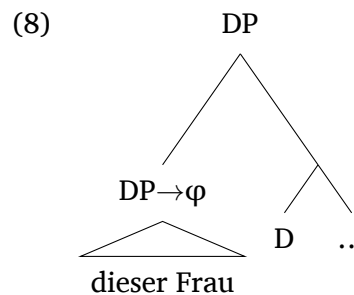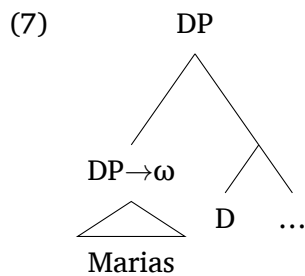
Option 2: a phonological filter

- Another approach would be to make use of a *prosodic filter* on the size of the specifier in question Krause (1999) and Koopman (2014).[5]

  (To account for the complex possessor facts above: Krause (1999) suggests that both involve a process of compounding, which allows them to satisfy said filter)

- On this approach, the relevant D head could be specified to only allow elements that map to a particular prosodic category in its specifier.

  – I.e. it would allow an ω (=phonological word), but not a φ (=phonological phrase)

- (7) would satisfy this specification, while (8) would not.

```
(7)          DP                    (8)            DP
            /  \                                 /  \
           /    \                               /    \
      DP→ω        \                     DP→φ          \
       /\          / \                   /‾\           / \
      /‾‾\        D    …                 /   \         D    …
    Marias                          dieser Frau
```

- At least two options for cashing this out:

  – Allow the syntax to make reference to the prosodic status of (potential) specifiers.[6]

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[5]See also Koopman and Szabolcsi (2000), Koopman (2005, 2011), Buell and Sy (2005), and Ishizuka (2008) for proposals about such size filters in cases other than German possessors.

[6]Violating traditional views of modularity, but in line with proposals like those made by Richards (2010, 2016), Branan (2018a), Branan (2018b), Hehl et al. (2019), Lee (2020), and Potsdam (2021)

- Appeal to *prosodic subcategorization,* as following Inkelas (1989), Zec and Inkelas (1990), Zec (2005), and Tyler (2019), a.o. Non-pronunciation of the possessor will give rise to a violation of *Recoverability* (see Fiengo and Lasnik 1972 for a concise argument for such a condition).

- One advantage of this approach (for German): the badness of coordinated proper names in possessor position.

(9) *[*Marias und Susies*] *sorgfältige Beschreibung Ottos*
   M.   and S.   careful   description O.
   "Maria and Susies careful description of Otto"

- Coordinate structures of this sort are going to "bump" the possessor over the size limit allowed for the specifier position that it occupies.

- Note also that this fact is a problem for the featural theory sketched before:

  - It is commonly assumed that features of both elements in a coordinate structure are in principle able to percolate "up" to the coordinate as a whole.[7]

  - While it has been argued that such percolation is asymmetric (primarily to account for patterns of *closest conjunct agreement,* where a left- or right- peripheral conjunct controls agreement), both of the conjuncts should bear [L].[8]

  - Saying that [L] doesn't percolate — contrasting with other nominal features — feels unsatisfactory.

What we've learned

- Selective specifiers exist.

- They could be explained as a featural requirement of certain heads.

- Or they could be explained as a prosodic requirement of certain heads.

- German prenominal possessors are not a good place to look to build an argument for one of these types of theory over the other. Each theory ends up having to deal with recalictrant facts that are highly suggestive of the other.

Tagalog clitics

- A crash couse in relevant parts of Tagalog (Philippines; Austronesian): generally predicate initial, with post-verbal arguments being freely ordered. One argument — here, the agent — is selected as the *pivot.*

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[7]See in particular Kiss (2012) for an argument that percolation may be symmetric in this way.
[8]

(10) a. *Lumunon*   [*ang*   *ina*   ] [*ng*   *mani*   ]
          AV.swallowed   NOM mother   GEN peanut
          'The mother swallowed a peanut.'

     b. *Lumunon*   [*ng*   *mani*   ] [*ang*   *ina*   ]
          AV.swallowed   GEN peanut   NOM mother
          'The mother swallowed a peanut.'   Richards (2017b)

- Clitics precede nominal arguments, and have a second position distribution.

(11) a. *Natuto* *siya*   *ng*   *wikang*   *Instsik*
          AV.learn 3S.NOM GEN language Chinese
          'She learned Chinese.'

     b. *Hindi siya*   *natuto*   *ng*   *wikang*   *Instsik*
          NEG   3S.NOM AV.learn GEN language Chinese
          'She didn't learn Chinese.'   Kaufman (2010)

- In cases where this can be made particularly clear, we see that nominal arguments are banned
  from the clitic position.

(12) **Hindi ang *pangulo* *natuto*   *ng*   *wikang*   *Instsik*
     NEG   NOM president AV.learn GEN language Chinese
     'The president didn't learn Chinese.'   Kaufman (2010)

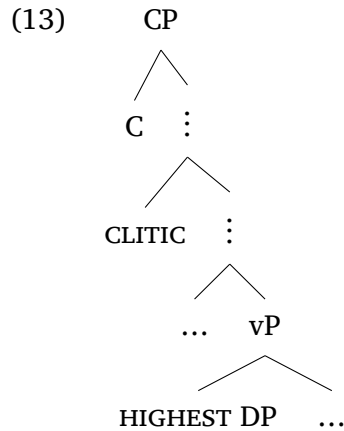- If we take clitic movement to be syntactic, then this looks like a case of a selective specifier.

- Movement to this position is allowed …

… but only if the moved element is phonologically light, e.g. a clitic.

- Two questions:

    – Is this syntactic movement?
    – If so, can the selectivity of the specifier in question be clearly attributed to either
      movement of elements bearing [L] or the prosodic status of the occupant?

- Both are on the table:

    – Richards (2017b) shows that argument DPs consistently map to independent phonologi-
      cal phrases…
    … while Kaufman (2010) argues at length that clitics in Tagalog really are phonological
      clitics.

Three arguments for Tagalog clitics undergoing syntactic movement

- The basic claim: there is some position that clitics must move to in Tagalog, that is higher
  than the highest non-argument, as schematized below.

(13)
```
        CP
       /\
      /  \
     C    ⋮
         /\
        /  \
    CLITIC  ⋮
           /\
          /  \
        ...   vP
             /\
            /  \
   HIGHEST DP   ...
```

- The arguments:
    - Escaping ellipsis
    - Restrictions on cliticization
    - Domains for Ā-movement

Escaping ellipsis

- One argument for clitic movement in Tagalog comes from Richards (2003).

- DP arguments may be freely dropped in Tagalog. Richards argues at length that this arises as a process of (verb-stranding) vP ellipsis, rather than the presence of *pro* or DP ellipsis.

- One argument for this comes from the in-elidability of arguments with a pronominal clitic antecedent, as shown below.

(14) *Sinabi kong magbibigay **ako**   ng   pera   sa   simbahan*
      TV.said COMP AV.give   **nom.1sg** GEN   money   DAT   church

      'I said that I would give money to the church...'
      at   nagbigay nga   *(ako)
      and AV.gave indeed *(NOM.1SG)
      '...and indeed I did'   Richards (2003)

- This contrasts with arguments with a nominal antecedent, which may either be elided or realized as a pronominal.

(15) *Sinabi kong magbibigay **si   Juan** ng   pera   sa   simbahan*
      TV.said COMP AV.give   **NOM Juan** GEN   money   DAT   church

      'I said that Juan would give money to the church...'
      at   nagbigay nga   (siya)
      and AV.gave indeed (NOM.3SG)
      '...and indeed he did'   Richards (2003)

- This follows naturally if clitics undergo syntactic movement (as described above).

- Some domain — following Richards, the vP — is that marked for ellipsis.

- Clitics consistently escape that domain, and may not be elided.

- Arguments do not escape that domain, and must be.

Clitic inventories

- Another argument comes from the inventory of Tagalog argument clitics themselves.

- Like many languages of the Phillippines, Tagalog has a restricted set of pronominal clitic paradigms.

- One paradigm may be used for *any subject/topic/pivot/…argument…*

… while the other is restricted to *non-subject/topic/pivot/…agents*.

- Pronominal arguments that aren't either can't be realized as clitics.

- Erlewine and Levin (2021) develop an account of this restriction that makes reference to two theoretical mechanisms:

  – Clitics undergo syntactic movement to a position above spec,vP.
  – Syntactic movement to such a position is restricted to elements that occupy spec,vP.

- Agents generally occupy spec,vP by dint of being agents (following Kratzer 1996 and much subsequent work)…

… while pivots are promoted to spec,vP as a consequence of their pivot-hood (following Aldridge 2004; Rackowski and Richards 2005, a.o.)

Extraction domains

- Hsieh (2021) discusses restrictions on A'-extraction in Tagalog in a new light.

- He shows that a particular process — termed *Genitive Inversion* — appears to apply in certain domains, but not others. Whether or not the process may apply determines whether or not the domain is transparent or opaque for extraction.

- Genitive Inversion is a process of fronting genitive pronominal clitics to a clause-initial position (see Hsieh for some discussion of what needs to be done to allow them to be pronounced in said position).

- Ā-movement in Tagalog is commonly taken to target only the pivot…

… but Hsieh (2021) shows that extraction of non-pivot agents (which could otherwise be realized as genitive clitics) is allowed when other conditions necessary for Genitive Inversion to take place are met.

- He suggests that this is a result of Ā-movement in Tagalog generally involving null operator movement…

... with null operators otherwise patterning with clitic pronouns in their distribution.[9]

- Following Hsieh, this restriction and the exceptionality of agents could be taken to reflect syntactic movement of the null operator through the high position normally occupied by pronominal clitics.

"Clitic coercion" as evidence for an [L] feature

- Before, we saw that there's a particular position that Tagalog argument clitics move to syntactically, and that there's good reason to think this happens in the syntax.

- We might then wonder: is this a result of the position that these clitics move being selective for a syntactic feature, [L], or the prosodic properties of the elements that occupy this position.

- Facts involving "'clitic coercion", examples shown below, suggest that the position is sensitive to [L], rather than prosodic status of the occupant.

(16)	*Hindi*	*sila*	*ng*	*lima*		(17)	*Hindi*	*ako*	*at*	*si*	*Juan*
	NEG	3PL.NOM	GEN	five			NEG	1SG.NOM	and	NOM	J.

	darating			*darating*
	AV.ASP-arrive			AV.ASP-arrive

'They five won't arrive.'   'Me and John won't arrive.' Kaufman (2010)

- Both of the cases above should be ruled out on a prosodic specification story: there just seems to be too much "stuff" in the relevant position for it to satisfy a putative prosodic requirement.

- In particular: whatever you use to rule out something like (18) should also rule out (17).

(18) **Hindi* **ang pangulo** *natuto* *ng* *wíkang* *Instsik*
     NEG NOM president AV.learn GEN language Chinese

     'The president didn't learn Chinese.'   Kaufman (2010)

- Clitic coercion is the sort of thing that a syntactic story should be able to account for.

- For (16), the presence of such a modifier should not affect the presence or absence of [L] on DP.

- To be concrete, we could say that Tagalog pronouns are instances of D that lack overt NP complements, following Postal (1966, a.mo.); clitic pronouns are just those pronouns that bear [L].

- The analysis of (17) depends on exactly what you want to say about coordinate structures.

- As mentioned before, it seems to be the case that features of the conjuncts or coordinated nominals are often able to percolate "up" to the coordinate structure as a whole.

- Presumably, in (17), [L] is able to percolate up in the way we expect syntactic features to be able to.

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[9]See Browning (1987), Richards (2017a), and Branan and New (2021) for some discussion of null elements of this sort.

- Suggesting that [L] does indeed behave as more well-studied syntactic features do.

Bùlì predicate fronting

- Having just shown you that selective specifier effects can arise strictly from the syntax, I'll now try to argue that they can also arise from a prosodic filter.

- The argument comes from Bùlì (Ghana; Mabia/Gur) predicate fronting.
  (Uncited data in this section are thanks to Abdul-Razak Sulemana, to whom I am very grateful.)

- Bùlì has a fairly strict SVO word order, with a singular process of Ā-movement used for *wh*-movement and focus fronting.[10]

- Pertinent to the discussion here, Bùlì displays a process of *predicate fronting,* an example of which is shown below.

(19) *ká   dē̄-kā   àtì À̀tìm dè̀   mángò-kǔ*
     FOC eat-NML C   A.   eat.PST mango-DEF
     "It's eating that Atim did to the mango."

- Predicate fronting looks like the aforementioned process of Ā-movement:

    - Fronted element appears in a clause initial position
    - Focus particle *ká* may appear prior to the fronted constituent
    - Complementizer *àtì* appears between fronted element and subject

- The main difference is that it gives rise to obligatory doubling of the fronted material, namely the verb.

- See Hiraiwa (2005) for a variety of arguments that Bùlì predicate fronting seems to be like any other garden-variety instance of Ā-movement.

- Our point of interest comes from cases where predicate fronting occurs in contexts where the VP as a whole is taken as the logical focus.

- Here, two patterns appear to be allowed when there is an internal argument: it may be left behind, as in (20a), or it may be pied-piped as in (20b).

(20) a. *ká   dē̄-kā   àtì À̀tìm dè̀   mángò-kǔ*
        FOC eat-NML C   A.   eat.PST mango-DEF

    b. *ká   mángò-kǔ   dē̄-kā   àtì À̀tìm dè̀*
       FOC mango-DEF eat-NML C   A.   eat.PST
       "It's eating the mango that Atim did."

- This latter pattern is our point of interest.

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[10]See Hiraiwa (2005) and Sulemana (2016) for some discussion

- When pied-piping of an internal argument takes place, there is a restriction on the size of the internal argument: it may not consist of two distinct words.

(21) *ká   mángò kpìón dɛ̄-kā   àtì Àtìm dè
     FOC mango big   eat-NML C A.   eat.PST
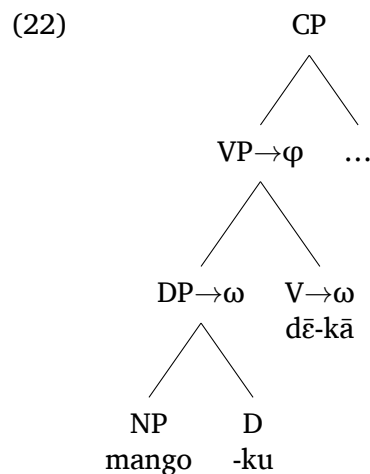
   "It's eating a big mango that Atim did."

- This is a clear instance of a selective specifier requirement…

… and one that can't be easily expressed using a featural system

- The reason for this is that element that bumps the fronted predicate over the acceptable threshold is not part of the extended projection of the phrase that occupies the specifier position.
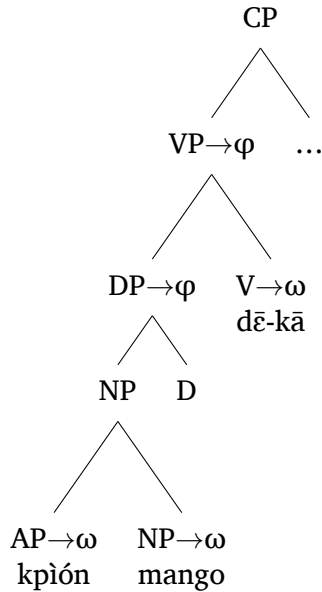
- In other words: if Bùlì Vs generally bear [L]…

… the presence of an internal argument shouldn't determine whether or not [L] is there.

- On the other hand, this is the sort of thing that could be easily accounted for with a PF filter (independent of the architectural assumptions one makes to implement it).

- More specifically, we could say that spec,CP in Bùlì disallows specifiers that map to non-minimal φ, in the sense of Ito and Mester (2012, et seq.).

- When the specifier is simple, as in (22), the verb and its internal argument each map to an ω, with the VP mapping to a φ. This specifier is thus a minimal φ, since it dominates no other minimal φ.

(22)
```
                    CP
                   /  \
              VP→φ    …
              /  \
         DP→ω    V→ω
         /  \    dɛ̄-kā
       NP    D
     mango  -ku
```

- When the specifier is complex, as in (23), the verb maps to ω while the internal argument maps to φ. The specifier is not a minimal φ — it dominates another φ — and so will violate the ban in question.

(23)

```
                          CP
                         /  \
                      VP→φ   …
                      /  \
                 DP→φ    V→ω
                 /  \    dɛ̄-kā
              NP    D
             /  \
        AP→ω    NP→ω
        kpìón   mango
```

- More generally, the presence or absence of internal material — unrelated to that of the head of a constituent in a selective specifier position — should matter if that selectivity refers to prosodic constituency.

- The Bùlì case discussed here contrasts with the Tagalog case, which we saw was clearly syntax-driven.

- There, material internal to certain specifiers was irrelevant for determining whether its size-selective requirement was met…

… and the featural encoding of a selective specifier satisfier seemed to be able to percolate up.

- Here, internal complexity matters for determining whether or not a selective requirement may be met, in a way that a featural system can't easily encode.

Bùlì tone spread as evidence for a PF filter

- The analysis above, of course, is contingent on a particular prosodic distinction in Bùlì: DPs that have just one word map to ω, while DPs that have two or more map to φ.

- The idea that binarity might matter in this way is not particularly controversial — — but it would be nice to see some corroborating evidence for this in the language at hand.

- Here's said corroborating evidence.

- Bùlì — as should be evident — has a tone system:

  – Underlyingly: H, M, L
  – Surface rising tone is a predictable variant of underlying H.

- It has a process of *low tone spread* (LTS; Akanlig-Pare and Kenstowicz 2002; Schwarz 2003), which applies between adjacent syllables.

- LTS is one of the ways that rising tone may arise.

    – If an underlying L is followed by an underlying H, the H is realized as a rising tone.

- LTS applies across a number of morphosyntactic boundaries (Akanlig-Pare and Kenstowicz 2002; Schwarz 2003; Branan 2018b).

- We'll consider ditransitives here.

- LTS may take place from the first object onto the second object in a ditransitive clause when both consist of a single word.

(24) nà:b: "chief"; bík: "boy"
      …L H → L LH
      Fì   tὲ   nà:b bǐ:k
      2.SG give.PST chief boy
      'You gave the chief a boy.'

    - When the second object consists of two words, LTS is blocked.

(25) nà:b: "chief"; bík: "boy"; bīaká: "dog"
      …L H → L H
      Fì   tὲ   nà:b [bí:k bīaká   ]
      2.SG give.PST chief   boy dog.DEF
      'You gave the chief the boy's dog.'

    - Adding a word to the first object has the same effect.

(26) nà:b: "chief"; bík: "boy"; bīaká: "dog"
      …L H → L H
      Fì   tὲ   [bīaká   nà:b] bí:k
      2.sg give.pst   dog.DEF chief   boy
      'You gave the dog's chief a boy.

    - This sort of underapplication is what we use prosodic domains to explain.

    - DPs that consist of a single word map to an ω, while those that consist of two map to φ.

    - If LTS may apply only within a φ, then we have a way of understanding the patterns above…

… in a way that dovetails nicely with what we would want to say to capture the size-selective property of Bùlì spec,CP.

Before moving on

- One of the things that we might wonder is whether making a fronted nominal sufficiently large would block its movement, in the same way that making a VP sufficiently large does.

- As far as I know this isn't the case.

- LTS generally applies between adjacent syllables within the nominal domain…

… regardless of whether or not the either of the elements in question are part of a syntactically branching constituent or not.

Recap, conclusions, and implications

- What we've seen:
    - A case for selective specifiers that involves syntactic encoding   Tagalog
    - A case for selective specifiers that involves prosodic encoding   Bùlì
    - A case for selective specifiers that remains unclear   German

- From this, we can conclude:
    - Languages are able to make the [L]/non-[L] distinction, which plausibly cues off of something like prosodic weight.
    - Languages are able to impose size filters on specifiers, which make reference to the prosodic status of the element in specifier position.
    - Distinguishing between the two is non-trivial: both for the analyst and the learner.

- One of the things that we might expect, then, is that there should be variation between speakers in cases where the data underdetermines possible analyses.

    (Think: scope of Korean quantifiers in object position w.r.t. negation, following Han, Lidz, and Musolino (2007))

- At least for German, this seems to be on the right track: Krause (1999), Koopman (2014), and Roehrs (2020, a.o.) all note that size restrictions on prenominal possessors in German seem to be subject to cross-speaker variation.

- One explanation: variation arises when learners pick an analysis consistent with the input…

… but there are multiple consistent analyses.

- More interestingly, the data often underdetermine the hypothesis space for a learner *even for one theory*.

- Take Tagalog: two hypotheses for the distribution of [L]

    [L] is assigned to pronominal elements

    [L] is assigned to classes of lexical item with a sufficient number of monosyllabic items in them

- Given that clitics in Tagalog are either mono- or di- syllabic (depending on case)…

… and there is a strong pressure within Austronesian towards a disyllabicity requirement for lexical words (Blust, 2013, 2017) …

… this latter hypothesis might not be as strange as we think.

- For at least some speakers, monosyllabic proper names have an unusual property: they may behave like clitics in appearing in second position (Otanes and Schachter 1972; Billings 2005).

(27) *Hindì si   Juan darating   bukas*
      NEG   NOM Juan AV.arrive tomorrow

      'Juan won't be coming tomorrow.'   Otanes and Schachter (1972)

- One explanation: for the speakers that like (27), the've gone with the "syllable count" theory, and assigned [L] to (at least some) proper names …

… for the speakers that don't, they've gone with the "pronominals only" theory.

- If this is on the right track, we'd expect variation similar to that of the German case.

Thanks!

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