Is there focus-marking in the syntax?

Kenyon Branan, Michael Yoshitaka Erlewine
National University of Singapore

Corresponding handout (with footnotes and references) on the GLOW program page

1 The question(s)

- The sentences in (1) are string-identical and convey the same information, but are acceptable in different contexts:

  (1) a. Alex gave BRIE a flower.
      b. Alex gave Brie a FLOWER.

- The parallel contrast in (2), with *only*, leads to a truth-conditional difference:

  (2) a. Alex only gave BRIE a flower.
      b. Alex only gave Brie a FLOWER.

- The position of the pitch accent seems to co-vary with a difference in interpretation — in common terms, they differ in the position of *focus*.

The position of focus affects multiple modules of grammar:

- phonology: affecting the prosodic representation;
- semantics: specifying the position of variation across quantificational alternatives;
- (morphosyntax: triggering morphosyntactic reflexes of focus)

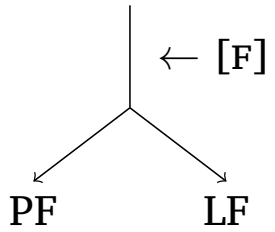
(3) **The correspondence problem:**
How do we explain such correlations between phonology, semantics, and syntax?

1.1 F-marking

> "I suggest the following way, which does minimal violence to the theory as a whole. One artificial construct is required: **a syntactic marker F** which can be associated with any node in the surface structure... Two systems of rules will make use of the marker F, one in the semantics and one in the phonology."
>
> — Jackendoff 1972: 240 (emphasis ours)

In modern terms, we might call F-marking a feature, which is then interpreted at the interfaces:

(4) **The inverted Y-model (Chomsky and Lasnik, 1977; Ladusaw, 1983; a.o.):**



The sentence pairs above vary in the position of F-marking:

(5) a. Alex (only) gave [Brie]$_F$ a flower.
b. Alex (only) gave Brie [a flower]$_F$.

- The phonology (can) reflect F-marks in its prosody: In English and many other languages, every F-marked constituent bears a pitch accent; see e.g. Selkirk 1984 §5.3.2.
- F-marking indicates the *logical focus* — the locus of variation across *alternatives* that are used for the interpretation of focus-sensitive operators (e.g. *only*, *even*), for discourse congruence, etc. See e.g. Rooth 1985, 1992, Krifka 2008.

- Syntactic F-marking has been called “the standard GB/Minimalist approach to focus” (Szendrői, 2004: 232) and remains so today. But it is not without criticism:

  - The insertion of [F] in the narrow syntax violates Inclusiveness (Chomsky, 1995: 209). (Zubizarreta 1998: 30, Szendrői 2004: 237–239)

  - Some have therefore entertained models of focus correspondence without F-marking.

  - After reviewing F-marking vs F-less theories, Szendrői (2004: 232) concludes: “neither of the approaches can be favoured over the other one on conceptual grounds.”

1.2 Today's question

As a concrete hook into the F-marking debate, today we (re)frame the debate around (6):

(6) **The syntactic reality question:**
Are there *(morpho)syntactic* processes that make reference to F-marking?

- If *yes*: Great! F-marking is real, so the correspondence question is (more) straightforward.
- If *no*: We must aggressively pursue/adopt F-less approaches to focus phenomena.

Roadmap

2 Yes! There is F-marking in the syntax

I (mitcho) argue that, yes, there are morphosyntactic processes that target F-marking:

① [F] gets attracted for movement

② [F] gets agreed with

③ [F] is retained under ellipsis

2.1 Focus movement ①

Many languages have constructions move focused phrases to dedicated positions:

(7) a. Kenyon will lose this debate.
b. It's [Kenyon]$_F$ that ____ will lose this debate.
c. It's [this debate]$_F$ that Kenyon will lose ____.

(8) Mari [egy kalapot]$_F$ nézett ki ____ magának. (Hungarian; É Kiss, 1998: 249)
Mary a hat.ACC picked VM herself.DAT
'Mary picked [a hat]$_F$ for herself.'

► Identification of the target of movement requires reference to [F].

2.2 Pied-piping

Of course, what is moved is sometimes not just what is F-marked — i.e. the logical focus, as determined by the interpreted semantics. This is *pied-piping* (Ross, 1967).

(9) It's (only) [Kenyon's [second]$_F$ argument] that ____ will be compelling.

(10) Anna [a [tegnapi]$_F$ cikkeket] olvasta ____. (Hungarian; Horvath, 2000: 199)
Anna the yesterday's articles-ACC read
'Anna read [yesterday]$_F$'s articles (not today's).'

There are broadly two approaches to pied-piping in the literature:

1. Feature-percolation: (Chomsky 1973 a.o.; see also Heck 2009)

   The [F] feature can be inherited by (certain) containing phrases.

2. Particle/(Q) insertion: (Horvath 2000, 2007; Cable 2010 a.o.)

   What is actually being targeted for movement is a phrase formed by a particle, **PRT** (Q for Cable). The particle then must be in a particular local configuration with [F] (or *wh*).

► Notice that both of these approaches still make reference to the position of focus / [F].

2.3 Focus agreement ②

Movement is certainly the most widely described and studied instance of a syntactic response to focus. But other syntactic processes can target [F] too. For example:

- The Papuan language Lavukaleve has focus particles (*f*- and *h*-series), which inflect for the φ-features of their focus (Terrill 2003; see also Gould 2012).

The focus constructions in (11) trigger the appearance of a sentence-final *h*-series focus marker, which agrees in φ-features with the focused constituent.

(11) **Focus agreement in Lavukaleve** (Terrill, 2003)

a. [nalo ga]$_F$ ta la-na o-ne-Ø **hi**. p. 209
intestines(n) ART.SGN just 3DUMO-in 3SGS-give-SGN HEO.3SGN
'...then he just gave [the offal$_{neut}$]$_F$ to them$_{dual.masc}$.'

b. [Ngai]$_F$ ta buku hoina a-nuve-a **heo**. p. 313
1sg(f) just conch(m) DEM.SGM 3SGMO-own-SGF HEO.3SGF
'Only [I$_{fem}$]$_F$ own that conch$_{masc}$.'

c. [Foiva vo]$_F$-ne fo'foira o-a-i-v **hiv**. p. 209/296
PRO.PL 3PLO-with work(f) 3SGFO-1SGS-do-PL HEO.3PL
'It was with [them]$_F$ that I did work$_{fem}$.'

- ► The existence of [F]-targeting φ-agreement strengthens the argument for [F] in syntax.
  - Whereas focus movement may, in some cases, be amenable to a non/less-syntactic account — e.g. one where focus "movements" have a prosodic (non-featural) motivation, to ensure alignment of focus with prosodic edges (see e.g. Féry, 2013) — such alternate analyses do not extend to focus agreement.
  - φ-agreement is a syntactic process *par excellence*; e.g. the result of Agree.
  - Furthermore, there are many φ-targets in (11), so [PROBE:φ] is insufficient. We need Agree to find a target with [F], i.e. using [PROBE:F], and then copy back the φ-features of its target (see Baier 2018 for independent motivation for this possibility).

2.4 Fragments and ellipsis ③

(12B) appears to just be a *fragment*, corresponding here to the *wh*-word in (12A).

(12) A. *Who* did Alice see?
B. [Beth]$_F$.

A widely adopted approach to fragments is to treat them as underlyingly clausal, but the result of an ellipsis process (Merchant 2004, Weir 2014 a.o.; but see also Ginzburg and Sag 2000; Stainton 2006; Jacobson 2016).

There are broadly two approaches to fragment-generating clausal ellipsis:

1. The focused constituent moves out of the clause, which is then elided:

   (13) [Beth]$_F$ ~~[Alice saw ____]~~

2. The focused constituent stays in situ, and the surrounding material is deleted:

   (14) ~~[Alice saw~~ [Beth]$_F$ ~~]~~ (See Griffiths & Struckmeier, later today for discussion.)

► In either case, we again need some syntactic reference to the logical focus / [F].

Summary

Syntactic processes clearly make reference to [F]:

① [F] gets attracted for movement

② [F] gets agreed with

③ [F] is retained under ellipsis

And as a bonus, with the syntactic reality of [F] firmly established, the correspondence problem is (more) easily resolved!

3 No! There is no F-marking in syntax

Here I introduce two new empirical challenges against F-marking in the syntax:

❶ Another class of mismatches

Mismatches (like pied-piping) can be even worse than we thought, and motivate a closer look at the role of *particles*.

► A proposal and rebuttal to the Yes position:

What we thought was reference to [F] (①, ②, ③) is reference to *particle phrases*.

❷ Evidence from *secondary fronting in pied-piping*

In particular, systematic differences in behavior between *wh*-elements and focus strongly challenge the position that [F] is syntactically real.

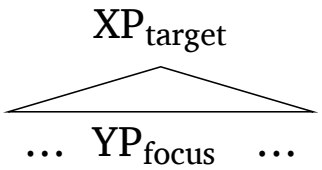
Then in §4, after you've all been convinced, we'll discuss what an F-less world might look like.

3.1 Another mismatch: Anti-pied-piping (Branan and Erlewine, 2020) ❶

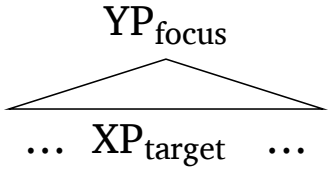
We've already seen that morphosyntactic processes that putatively target an F-marked element (①, ②, ③) sometimes instead target some other element nearby, as in *pied-piping* (15).

► I now present another form of mismatch, schematized in (16):

(15) **Pied-piping:**



(16) **Anti-pied-piping:**



- For pied-piping (15), it is natural to describe the morphosyntactic target as related to [F] "from above" (§2.2).

► However, anti-pied-piping (16) will lead to us more seriously divorce the target of such operations from the logical focus.

(17) **Anti-pied-piping in Japanese particle placement:** (based on Kuroda, 1965: 81)

[[Hanako]-**mo** daigaku-ni hairi]$_F$, [[Fujiko]-**mo** yome-ni it]$_F$-ta.
Hanako-also college-DAT enter Fujiko-also bride-DAT go -PAST
'[Hanako entered college]$_F$ and [Fujiko got married]$_F$, too.'

(18) **Anti-pied-piping in Hungarian focus movement:** (Kenesei, 1998: 77)

Péter **[a Hamletet]** [olvasta fel ____ a kertben]$_F$, nem pedig [úszott]$_F$.
Peter the Hamlet read VM the garden.INE not rather swim
'Peter [read out Hamlet in the garden]$_F$, rather than [swim]$_F$.'

- These are examples of sentence focus (roughly TP/*v*P) in Japanese and predicate focus (roughly *v*P/VP) in Hungarian.
- A morphosyntactic strategy for marking focus targets *a proper subpart* of the logical focus (subject in Japanese, direct object in Hungarian).

Patterns like these are widely attested: in Branan and Erlewine 2020, we show such patterns in roughly 50 languages from around 30 distinct genera.

Awing • Bangla • Breton • Buli • Burmese • Croatian • Czech • Dagbani • English • Even • Ewe French • Garrwa • German • Gurene • Gùrùntùm • Haitian Creole • Hausa • Hindi-Urdu Hinuq • Hungarian • Imbabura Quechua • Ishkashimi • Japanese • Kakataibo • Kîîtharaka Kikuyu • Kokama-Kokamilla • Konkomba • Korean • Kɔnni • Lak • Latin • Maslit • Navajo Polish • Qunqi Dargwa • Russian • Sandawe • Somali • Tagalog • Tangale • Telugu • Tibetan Tilapa Otomi • Tundra Yukaghir • Turkish • Welsh • Wolof • Yaeyaman • Yoruba

- ► No existing theory for pied-piping mismatches that I'm aware that can account for patterns like these.
  - – Percolating [F] downwards won't provide a straightforward solution…
  - … since it runs into an A-over-A problem.

More generally…

(19) **Empirical claim:** There are no morphosyntactic process "targeting focus" that does not tolerate any pied-piping or anti-pied-piping type mismatches, always targeting *specifically* the logical focus, as determined semantically.

We therefore need a theory where *all* morphosyntactic reference to focus is in fact indirect.

3.2 A proposal and rebuttal to §2: The role of particles

Let's revisit the role of *particles*, following Horvath 2000, 2007 and Cable 2010 on pied-piping.

(20) **Analytical claim:** All (apparent) morphosyntactic reflexes of focus involve probing/identifying a *particle phrase*, not the logical focus (via [F]).

- Particle phrases are formed by adjoining a particle PRT to a constituent. These particles may be unpronounced, following Horvath and Cable.
- The particle PRT itself may be *semantically inert*, with a corresponding operator OP on the clausal spine which then introduces the corresponding semantics (see also Lee, 2004; Hirsch, 2017). This is crucial for modeling anti-pied-piping; on this view, there is no expectation that PRT's sister is the focus or contains the focus.

Of course, in order to explain the fact that particles often *do* adjoin directly to the logical focus, we have to then explain where particles go.

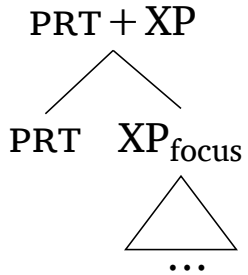
(21) **The particle placement problem:** (which we return to in section 4)
Given a structure XP, a portion(s) of which may be focused, how does the grammar determine where to adjoin a particle within XP, without F-marking?

Although this is certainly a non-trivial problem, once we solve it (once) in a manner allowing for observed mismatches (pied-piping, anti-pied-piping, etc.), all apparently focus-targeting morphosyntactic processes can then refer to the output of this process.

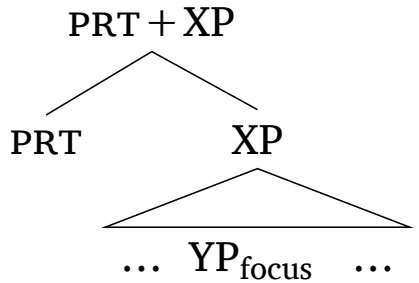
- ► The particle theory defuses all of the arguments for F-marking in section 2, without syntactic reference to [F].

First, the particle is introduced into the structure:

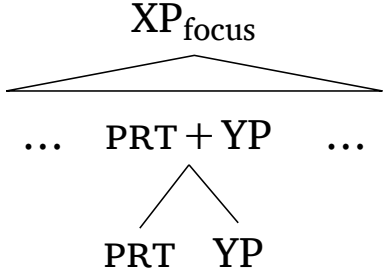
(22) **No mismatch:**



(23) **Pied-piping:**



(24) **Anti-pied-piping:**



Focus movement ①:
Movement targets the particle phrase, following Horvath 2000, 2007; Cable 2010. Recall that PRT may be unpronounced.

Focus agreement ②:

Agreement targets the particle phrase. Returning to Lavukaleve (11), it turns out that Lavukaleve also has constituent focus particles (*f*-series) which adjoin here to the focus. The sentence-final *h*-marker can simply probe for the particle phrase (with *f*- or a null variant) and φ-agree with it.

(25) **Lavukaleve** (Terrill, 2003: 277)

a. [Aira la **feo**] fo'sal na aua **heo**.
woman(f) ART.SGF PRT.3SGF fish(m) ART.SGM ate.AGR HEO.3SGF
'[The woman]$_F$ ate a fish.'

b. Aira la [fo'sal na **fin**] oum **hin**.
woman(f) ART.SGF fish(m) ART.SGM PRT.3SGM ate.AGR HEO.3SGM
'The woman ate [a fish]$_F$.'

Fragments and ellipsis ③:

Fragments also allow for mismatches such as pied-piping, which can be modeled by taking fragment-formation to be sensitive to particle phrases (see e.g. Griffiths, 2019).

- All apparent syntactic reference to focus *can* — and in fact *should*, given (19) — be recast in terms of reference to particle phrases. This is what we expect in a world where there is no F-marking in syntax.

- Of course, we still have to explain particle placement (21), which we return to in §4.

3.3 Evidence from secondary fronting ❷

In an F-less world:

- [F] is *not* a feature of lexical items, nor added specifically to the logical focus:
  As we saw, apparent syntactic reference to focus is always targeting a particle phrase.
- In contrast, [WH] is a lexical feature, at least in some languages:
  Movement specifically of a *wh*-element, without pied-piping, might be possible.

► This explains two previously observed generalizations regarding *secondary fronting* inside pied-piped constituents (Coon 2009, Heck 2009, Cable 2010):

(26) **Secondary fronting in French:** (Heck, 2009: 91)

la fille [$_{PP}$ *dont* au frère ____] tu plais ____

the girl of.who to.the brother you please

'the girl whose brother you please'

1. Secondary fronting does not itself pied-pipe.
2. Secondary fronting applies to *wh*-movement but not focus movement.

(27) **Tzotzil** (Aissen, 1996: 481, 485)

I-'ixtalaj [$_{DP}$ s-kayijonal [$_{DP}$ y-osil [$_{DP}$ li j-tot]]]-e.
ASP-ruin A3-firelane A3-land the A1-father -ENC
'My father's land's firelane was ruined.'

(28) a. [*Buch'u* [$_{DP}$ s-kayijonal [$_{DP}$ y-osil ____]]] i-'ixtalaj ____?
who A3-firelane A3-land ASP-ruin
'Whose land's firelane was ruined?'

b. * [[*Buch'u* [$_{DP}$ y-osil ____]] [$_{DP}$ s-kayijonal ____]] i-'ixtalaj ____?
who A3-land A3-firelane ASP-ruin

► The contrast in (28) shows — although Tzotzil allows pied-piping in *wh*-movement — secondary fronting inside the pied-piped constituent does not itself allow pied-piping.

• Follows straightforwardly if pied-piping involves movement of a particle phrase…

… while secondary movement targets specifically [WH].

- Suppose a particle (Cable's Q) is merged to the *wh*-containing DP in cases of pied-piping:

  (29) ruined [$_{\text{PRT}+\text{DP}}$ PRT [$_{\text{DP}}$ firelane [land *who*]]]

- This PRT might be specified to probe for [WH], in the cases of secondary fronting:

  (30) ruined [$_{\text{PRT}+\text{DP}}$ *who* PRT [$_{\text{DP}}$ firelane [land ____]]]

- A higher [PRT] probe can then attract the entire PRTP:

  (31) [$_{\text{PRT}+\text{DP}}$ *who* PRT firelane land ____] ruined ____

- Secondary fronting targets [WH], so only the *wh*-element moves.
- Pied-piping is impossible here, since PRT doesn't probe for [PRT], but for [WH].
- The primary fronting itself, of course, is movement of the PRT phrase.

Notice that secondary fronting in (30) was possible due to probing by PRT for [WH].

- ► Secondary fronting of focus should not be possible, because [F] is not a syntactic feature!

There are many languages with secondary fronting in *wh*-movement, where it has been noted that there is no corresponding secondary fronting in focus movement:

(32) **Quiegolani Zapotec** (Black, 1994: 168–169)

N-dux [$_{DP}$ xnaa noo] [$_{DP}$ lo noo].
S-angry mother 1EX face 1EX

'My mother was angry with me.' (literally "my face")

(33) a. *[$_{DP}$ Lo *txu*] n-dux xnaa noo ____?

face who S-angry mother 1EX

b. [*Txu* [$_{DP}$ lo ____]] n-dux xnaa noo ____?

who face S-angry mother 1EX

'With whom was my mother angry?' (literally "whose face")

(34) a. [$_{DP}$ Lo Jose], n-dux xnaa noo ____?

face Jose S-angry mother 1EX

b. *[Jose [$_{DP}$ lo ____]], n-dux xnaa noo ____?

Jose face S-angry mother 1EX

'My mother's angry with [Jose]$_F$.' (literally "Jose's face")

► The same contrast — secondary fronting in *wh*-movement but not in focus movement — has also been explicitly observed in Copala Trique (Broadwell and Key, 2004), K'iche' (Broadwell, 2005), and San Dionisio Ocotepec Zapotec (Broadwell, 2010).

This pervasive distinction between *wh*-elements and logically focused elements is *expected* in a world without F-marking.

- PRT might be specified to probe for [WH], triggering so-called secondary fronting.
- Were there F-marking in the syntax, we might then expect PRT to (be able to) attract [F].
- The systematic absence of secondary fronting in focus-pied-piping, in languages that have secondary fronting with *wh*-pied-piping, is immediately explained if there is never any F-marking in the syntax.
- $\text{PRT}_{[\text{PROBE:F}]}$ would be an impossible lexical item, since there's no [F] in the syntax.

Summary

❶ Mismatches in syntactic reference to focus are even worse than we might have thought, motivating an abandonment of syntactic reference to [F].

❷ The behavior of secondary fronting strongly suggests that reference to [F], unlike the lexical feature [WH], really is impossible.

► Instead, all apparent reference to focus is in fact reference to particle phrases, defusing the arguments in §2.

(Concession and) Objection!

- The arguments above indeed defuse the initial arguments for direct syntactic reference to focus (①, ②, ③), and argument ❷ in fact strongly suggests that there is no [F] to refer to.
- But the heterodox position needs to account for the basic facts! Recall:

(3) **The correspondence problem:**
How do we explain such correlations between phonology, semantics, and syntax?

- In other words: how would such a model account for the distinction we started out with?

(35) a. Alex only gave BRIE a flower.

b. Alex only gave Brie a FLOWER.

- And I will also remind you of another problem you have: the *particle placement problem*. For example, how do we derive the following contrast, without reference to [F]?

(36) Intended: 'Alex only gave $[\text{Brie}]_F$ a flower.'

a. Alex gave *only* Brie a flower.

b. *Alex gave Brie *only* a flower.

(Assuming the *only*s here are semantically inert particles, with a contentful ONLY operator above, following e.g. Hirsch 2017.)

4 A sketch of an F-less world

In order to live in the F-less world, we indeed have to solve two problems:

1. The semantic correspondence problem:

   How can our interpretation be sensitive to focus, without reference to F-marking?

2. The particle placement problem: =(21)

   Given a structure XP, a portion(s) of which may be focused, how does the grammar determine where to adjoin a particle within XP, without F-marking?

4.1 Semantic correspondence without F-marking

Let's step back and remind ourselves of the semantic effect of "focus-sensitivity":

- Certain phenomena need to identify a *set of alternatives* to quantify over. "Focus" is the locus of variation across these alternatives (Rooth 1985; Krifka 2008, a.o.).

► It's important to recognize that the exact set of alternatives is *always* underdetermined.

1. The exact position of focus itself is often underdetermined by the surface form.

   As already discussed in Halliday 1967: 207–208, Chomsky 1970, and Jackendoff 1972, if not earlier, F-marking is not directly represented by prosody in English:

   (37) **From Chomsky 1970: 91–93, reformatted with F-marking notation:**
   Was it an ex-convict with a red SHIRT that he was warned to look out for?

   a. 'Was it [an ex-convict with a red shirt]$_F$...'
      — No, he was warned to look out for [an AUTOMOBILE salesman]$_F$.

   b. 'Was it an ex-convict [with a red shirt]$_F$...'
      — No, he was warned to look out for an ex-convict [wearing DUNGAREES]$_F$.

   c. 'Was it an ex-convict with [a red shirt]$_F$...'
      — No, he was warned to look out for an ex-convict with [a CARNATION]$_F$.

   d. 'Was it an ex-convict with a red [shirt]$_F$...'
      — No, he was warned to look out for an ex-convict with a red [TIE]$_F$.

Idea: Use the phonology to restrict possible focus construals.

- ► Start with a phonological structure (metrical/prosodic information) and allow that to restrict the possible positions of focus, which ultimately is underspecified.
- See e.g. Neeleman and Reinhart 1998; Reinhart 2006; Szendrői 2001, 2003 (see discussion in Szendrői 2004; Arregi 2016), Roberts 1997: 148; recently Büring 2015, 2019.

2. Even when the position of focus is clear, we still don't know the exact set of alternatives that we refer to; we only know its *shape*.

(38) Q. Where in Europe have you been before?

A. I've only been to Berlin.

(39) Q. Where in Germany have you been before?

A. I've only been to Berlin.

Idea: We can look at the discourse and let that inform our idea of the set of alternatives.

- ► More specifically, we could even imagine that the alternatives that focus-sensitive operators refer to are always *Questions Under Discussion*, and therefore can be partially determined by the structure of the discourse. (*Partially*, as QUDs can also be implicit.)
- See e.g. Roberts 1996/2012; Beaver and Clark 2008 and much subsequent work.

- ► With these two ideas — looking at the phonology and the discourse, and letting both inform our assumed choice of alternatives — we can get a long way towards triangulating the set of alternatives without direct reference to the position of focus.
  - In a production context, starting from an intended meaning (see also Sauerland and Alexiadou, 2020), we can imagine different phonological choices and use the heuristic above as a filter.
  - But does it get us all the way there? (for audience participation)

4.2 Syntactic correspondence (particle placement) without F-marking

Idea: Particle placement is also based on the phonological structure:

- ► A particle adjoins to a constituent that is aligned with a phonologically prominent word.
  - See Branan and Erlewine 2020 (revision in prep) for a definition of "aligned with" which serves to address observed leftmost requirements and preferences in both pied-piping and anti-pied-piping particle placement.
  - Particles may also avoid adjoining to given material (see e.g. Schwarzschild, 1999) (if such information is visible) or deaccented material.

► This reliance on phonological information predicts that particle placement may behave somewhat differently in a language without prosodic reflexes of focus.

Ngamo (Chadic) has focus particles that can appear in various positions in the clause, independent of where the focus is:

(40) **Particle placement in Ngamo** (Grubic, 2015: 188)

(**Yak**) Kule (**yak**) salko (**yak**) [bano]$_F$ (**yak'i**) mano (**yak'i**).
only Kule only build.PRF only house only last.year only

'Kule only built [a house]$_F$ last year.'

Notably, Ngamo doesn't have prosodic reflexes of focus (Grubic, 2015), so there is even less information that can be used to inform the grammar in where the particle should be adjoined.

Q: How can particle placement refer to the phonology, if its output (particle phrases) then feeds the syntax?

A: We propose that particle placement takes place during **cyclic Spell-Out** by phase (Uriagereka, 1999; Chomsky, 2000, 2001). When a phase undergoes Spell-Out:

i. the pronunciation of its terminal nodes, their word order, and prosodic phrasing are calculated (see e.g. Dobashi 2003, 2010; Ishihara 2004, 2007; Fox and Pesetsky 2005; Kratzer and Selkirk 2007; Kahnemuyipour 2009; Sato 2012);

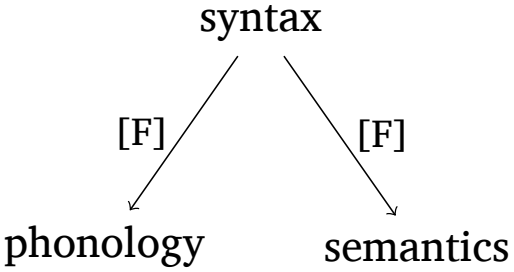
ii. the particle can be Late Adjoined, with reference to this information.

Further syntactic operations can then build on this result. See Branan and Erlewine 2020 for further discussion.

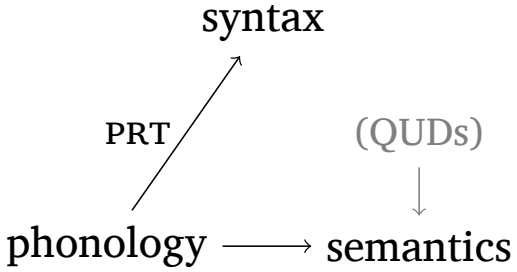
5 Conclusion

- ► There are compelling reasons that suggest that there is no F-marking in syntax — i.e. a syntactic feature annotating the logical focus.
- We believe this forces us to abandon the widely adopted F-marking approach (41) and instead aggressively pursue an F-less theory of grammar. We sketched how this might be possible in §4, also schematized in (42), but other options may also be possible.

(41) **Correspondence with F-marking:**



(42) **Correspondence without F-marking:**



- We should also be investigating the syntactic reality — as evidenced by direct, non-mismatching syntactic targeting — of other purported information-structural features in the syntax ([TOP], [CT], [G]).

Thank you!

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