there is no word

IMPLICATIONS FOR THE PHONOLOGY-SYNTAX INTERFACE

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roadmap

Part 1: there is no Align/Match X^0

- words of all sizes
- is there even a (complex) X^0 to Match?

Part 2: there is no Align/Match XP

- the base on which the PH rests is unstable
- phono-syntactic non-isomorphism is (virtually) non-existent
- if there is isomorphism, what does that mean?

Part 3: There is no Align/Match Clause

- Variability at the clause boundary and production planning

there is no Match X^0

PART 1:

what's in a word?

The fallacy of the X^0 word.

"The set of Match constraints … exploit… the notions clause, phrase and word, **which presumably play a role in any theory of morphosyntax.**" (Selkirk 2011)

- That X^0 is the basic form of a word cross-linguistically is demonstrably untrue.
- Syntacticians do not generally assume 'word' as a primitive.

(see Julien 2002, Newell et al. in press, Gribanova & Shih in press, Leu 2014, among others)

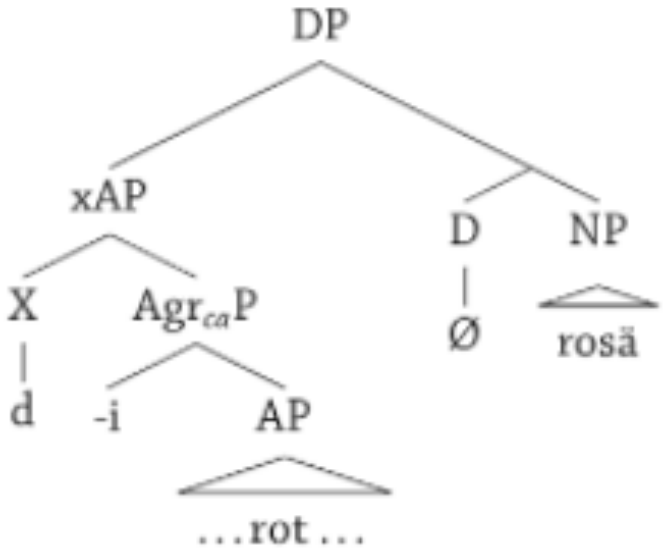
little(est) words

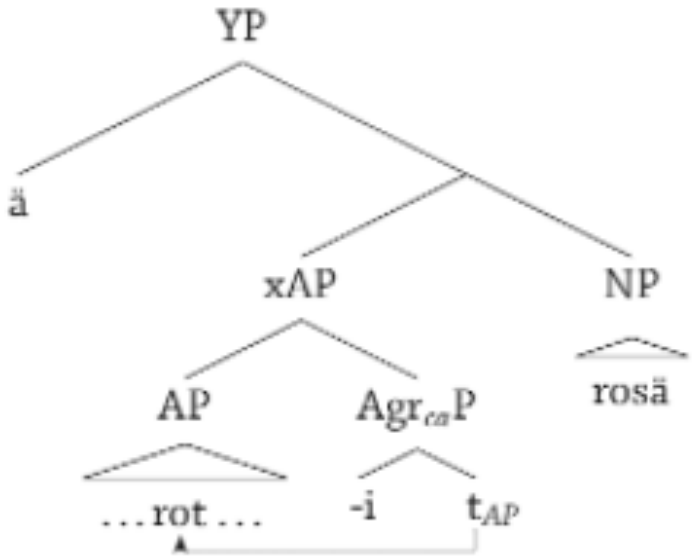
- All work on Prosodic Phonology takes function words to be (a) generally dependent phonologically, and (b) to instantiate X^0s.
- Swiss German adjectival inflection is a 'clitic' on its specifier, just like English possessive 's' (The queen of England's hat).
- The morphemes that make up a function word may belong to separate XPs, and the base of affixation may be functional.

little(est) words

(1) a. di rot rosä
'the red rose'

b. ä roti rosä (Swiss German)
'a red rose' (Leu 2014: 58)





little words

The basis of SPE's # vs +, and of LMP's Level 1 – Level 2 morpho-phonology is that words are *not* single prosodic domains.

(2) a. cómparable

[compare $_{\sqrt{}}$] able $_{a}$]

b. compárable

[compare $_{\sqrt{}}$] $\varnothing$ $_{v}$]able $_{a}$]

Many people working on Prosodic Phonology now accept the role of phases in the determination of phonological domains (see Adger 2007, Marvin 2002, Arad 2003, Svenonius 2004, Dobashi 2003, Ishihara 2007, Kratzer & Selkirk 2007, Newell 2008, Elfner 2011, Bobaljik & Wurmbrand 2013, Newell & Piggott 2014, among many others)

little words

What is unclear is how the PH helps us to capture (2).

(2)	a.	cómparable	b.	compárable
		[compare $_{\sqrt{}}$] able $_{a}$]		[compare $_{\sqrt{}}$] $\varnothing$ $_{v}$]able $_{a}$]

- PH: ((cómparable $_{\omega}$) ((compáre $_{\omega}$) able $_{\omega}$)
  - Main stress is assigned within the most deeply embedded ω
- **but** this could also be : assign stress upon Spell-Out
  - (2a) Phase 1: cómparable (2b) Phase 1: compáre Phase 2: compárable
- Importantly, the latter account *also* explains the semantic effects related to the phonological domains in (2), which the PH cannot.

little words

It is neither phases nor the PH that determine whether an outer affix will be incorporated into the smallest domain within the word.

(3)a. [[[compare $_{\surd}$] abil $_{a}$] ity $_{n}$]
((còmparabílity $_{\omega}$)

b. [[[[compare $_{\surd}$] $\varnothing$ $_{v}$] abil $_{a}$] ity $_{n}$]
((compàre $_{\omega}$) abílity $_{\omega}$)

c. [[[young $_{\surd}$] er $_{a}$] vs. more beautiful
(younger $_{\omega}$) (more $_{\omega}$)(beautiful $_{\omega}$)

d. [[[sing $_{\surd}$] $\varnothing$ $_{v}$] er $_{n}$]
((sing $_{\omega}$) er $_{\omega}$)

little words

Newell (2016) argues for a modular account of level 1 vs level 2 morphemes.

(4) a.

C	V	C	V	C	V	C	V	-	C	V	C	V	C	V	-		C	V	
|	|	|	|	|	|	|	|		|	|	|	|	|	|			|	|	→
c	ʌ	m	ə	p	e	ɹ	ø		ø	ə	b	ɪ	l	ø		ɪ	t	i	

b.

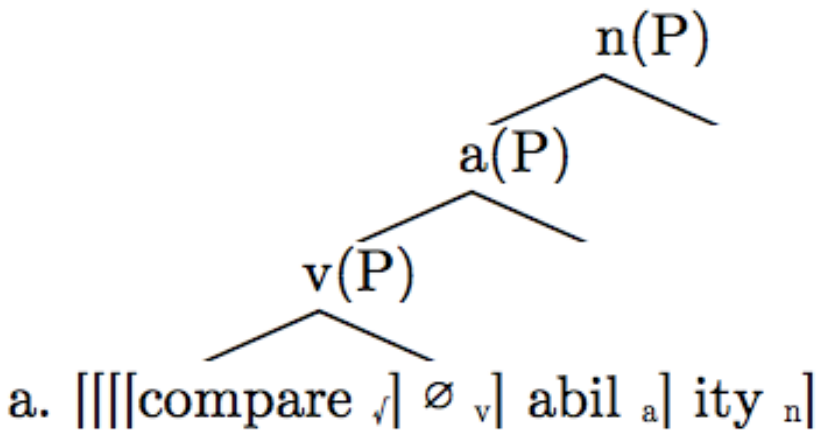
C	V	C	V	C	V	C	V	-	C	V	C	V	C	V	C	V
|	|	|	|	|	|	|	|		|	|	|	|	|	|	|
c	ʌ	m	ə	p	e	ɹ	ø		ø	ə	b	ɪ	l	ɪ	t	i

- Non-isomorphy does not need to make any reference to PH domains.

little words

Interestingly, in derived words is there is often no evidence *for* head movement, and *some* evidence against it. (ex. wíchax-ne-n-qal (Cupeño), picker upper vs picking up)

(5)



NB: Bare Phrase Structure

does not distinguish X^0 and XP

in this type of structure.

To propose that head-movement occurs to create words is a circular argument.

little words

- The phonological domains in 'little words' (derivational morphology) do not correspond to single X^0s.
- Morphemes themselves do not determine categorically whether they will be inside the smallest 'word' or will be phonological adjoiners (ex. the two -*able*s).
- Phase-by-phase interpretation captures the uniform behaviour of root-attached affixes. The Prosodic Hierarchy does not.
- Sub-word phonological information can be crucial for determining the domain-status of an affix (and can lead to non-isomorphism).
- Syntacticians have evidence for cycles/phases, but 'word' is not a syntactic primitive.

big words

(6) b. pe-yax-qál
3SG-say-imp.past.sg
'S/he said'

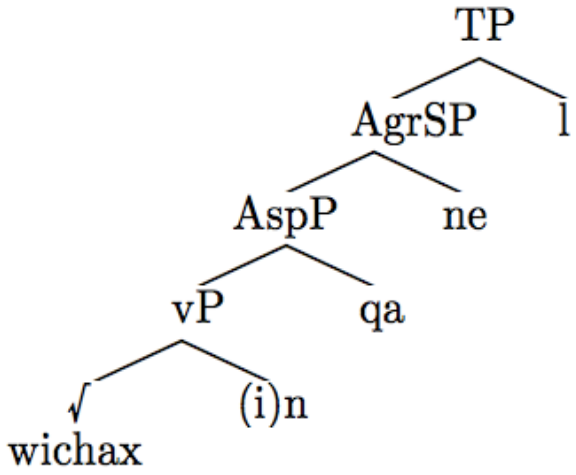
The proposal that X^0 is the syntactic correlate of the PW is demonstrably false. Words may contain elements that sit both higher and lower than vP (so, quite far apart, syntactically speaking).

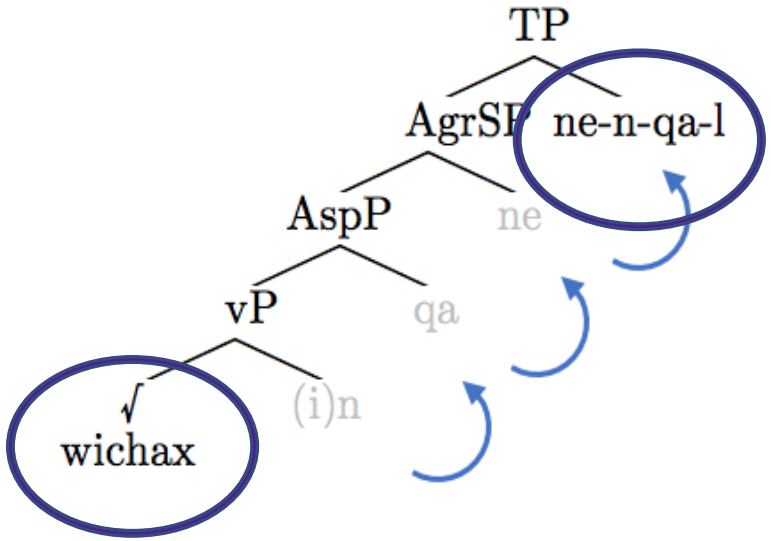
So, it is not the case that verb-raising creates complex X^0s and therefore bigger words.

(6) a. wíchax-ne-n-qal

throw-1sg-IN-imp.past.sg

'I was throwing it'





big words

- If polysynthetic languages had been used as the basis for Prosodic Phonology, PW = Clause

(7) [uqa-limaar-vi-liung-inna-nngit-tunga $_{CP}$] = PW (Inuktitut)
speak-all.of-nom-make-always-NEG-DEC.1SG
'I was not always making libraries.'

(8) [ni-gi:-ini-a:gam-ose $_{CP}$] = PW (Ojibwe)
1p-past-there-snowshoe-walk
'I walked there in snowshoes'

big words

- The 'big words' in (7) and (8) are not created through head-movement.
- Arctic Quebec Inuit demonstrates VP ellipsis

(9) Anaanaa, qamutinnguarani aitsigumalirtunga
anaana qamutik-nnguaq-ganik ai-tsi-guma-liq-junga
mother sled-imitation-MOD.1SG get-ATP-want-ING-PAR.2SG
'Mother, I want to get my toy sled now.'

(10) Gunnailutit!
1-gunnaiq-lutit ELLIP-no.longer-ICM.2SG
'Don't you [get it]!

(11) Gumavunga!
1-guma-vunga ELLIP-want-IND.1SG
'I want to [get it]!'

(Compton & Pittman 2010, from Swift and Allen, 2002:146)

big words

- (9)-(11) is comparable to English VP ellipsis, another construction that shows us that head-movement ≠ word-formation.

(12) Seonaid likes phonology and Lisa does [VP] too.

The Ojibwe example in (7) is parsed as multiple word-internal phonological domains (like the derived words in English in (2)-(5). These domains correspond to phases (footing never crosses a phase boundary. (Newell & Piggott 2014)

(13) [[(ni-gi:) [[(ini) $_{aP}$][(a:gam-ose) $_{vP}$] $_{vP}$] $_{CP}$]

there is no Match X^0

- **It is clear that the cross-linguistic default for word-size is not X^0.**
- **'Word' is in no way a syntactic primitive that the phonology could match with.**
- Smallest phonological domain does not = Syntactic word.
- Whether a morpheme is part of a word or not is not correlated with its syntactic position.

there is no Match X^0

- Syntactic elements that have been argued to be constructed via head-movement (complex X^0s) may be captured in other frameworks (ex. spanning Brody 2000, Svenonius 2012).

- Many syntacticians question whether head-movement is a possible syntactic operation. (Chomsky 2000, Koopman and Szabolcsi 2000, but Travis 1984, Matushansky 2006, Preminger 2017).

- We need to examine how Spell-Out + lexical information (morphological or phonological) can explain P-Domains.

an alternative

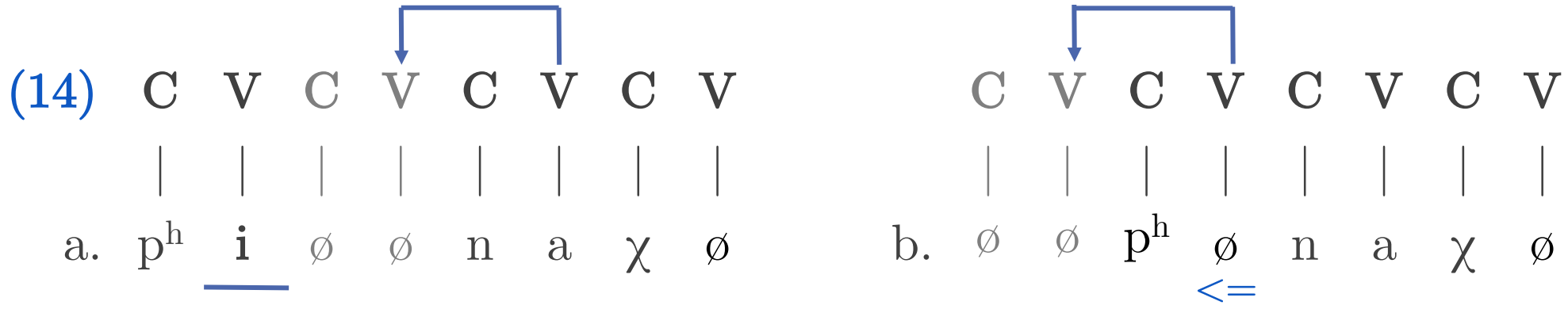
We saw above a CVCV alternative account of suffixal word domains in English. An empty CV inserted at the beginning of a phase/word makes predictions about phase-initial domains (Scheer 2009 and subsequent work).

‘one’s own bed’
refl bed

‘one’s own eyes’
relf eyes

(Nivkh)

(14)



Data (Shiraishi 2006) Analysis (Piggott, Travis, Newell 2016)

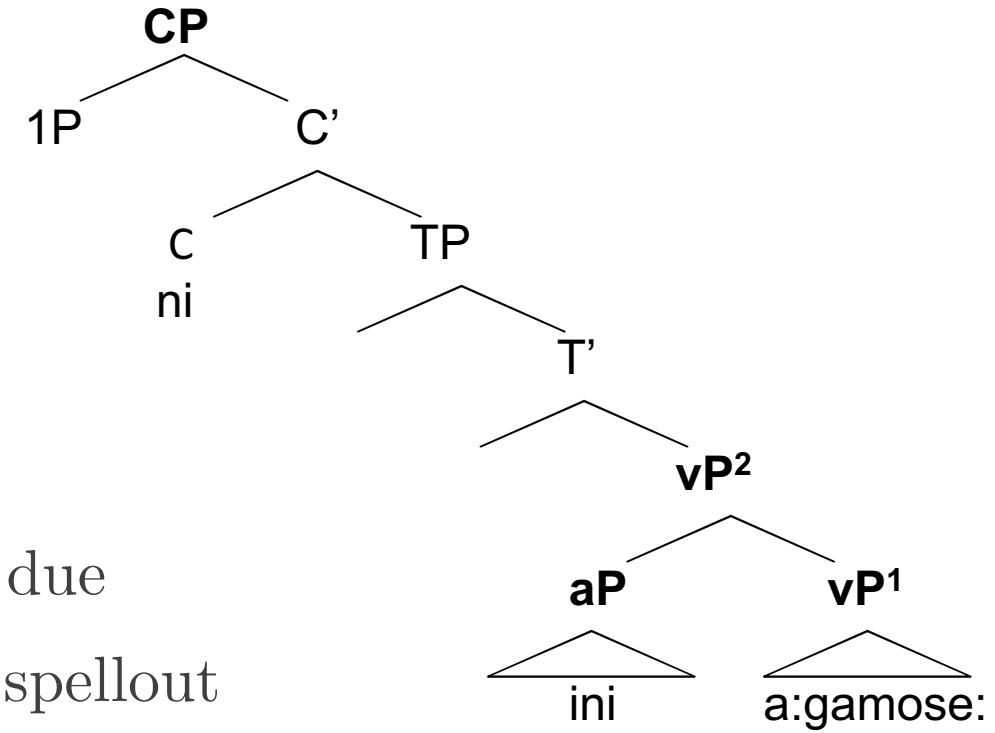
an alternative

Adjunction and Phases can also account for distinct domains evidenced within words:

*(nidi)(nida:)(gamo)(se:)

(15) (nidi)(ni)(a:)(gamo)(se:)

'I walk there in snowshoes'



The word-medial degenerate foot above is due to the fact that the aP adjunct undergoes spellout from the bottom up.

the alternatives presented

The effects proposed to be due to the Prosodic Hierarchy can be explained by:

- Syntactic cycles/phases. These cycles make predictions in the syntax and the semantics that the PH does not make. Ex. VP phases track not only phonological breaks but delimit domains for cyclic XP movement and phrasal idioms.
- Adjunction. Adjuncts are interpreted at PF and LF before merger. This, again makes predictions in the syntax and the semantics that the PH does not make. Adjuncts may participate in Bracketing paradoxes and only add meaning compositionally to the structure with which they are merged. (Newell & Scheer 2007, Newell 2008)
- Initial CV. Makes predictions about consonant clusters, consonant strength and initial-syllable vowel deletion that the PH does not make (Scheer 2009)

there is no Match XP

PART 2:

Implications for the hierarchy

- If there is no X^0/PW, is there an XP/PPh?
- Many people working within the framework of the PH have incorporated phases/cycles into their work.
- Selkirk & Kratzer (2007) and Selkirk (2011) admit that the original motivation for the Prosodic Hierarchy – non-isomorphism – is no longer an issue, but still adheres to the proposal that there is a PPh.
- Here I'd like to take the original phrases that motivated the PPh and demonstrate how one might account for the data without the PH.

(non)-isomorphism

Non-isomorphism between syntactic and phonological domains is *the* motivation for the Prosodic Hierarchy.

- Most (if not all) of the arguments for non-isomorphism in N&V do not follow through.
- The majority of the examples motivating non-isomorphism involve adjuncts/prefixes.

Jean a des livres || assez nouveux

Adjectives in French (and other languages) are analysed as specifiers of specific functional projections in the DP. (Cinque 2004)

Pre- vs post- nominal adjectives can often be analysed as being specifiers that have or have not been moved over by N^0.

(16) a. [un [grand [homme $_{nP}$] $_{aP}$] $_{DP}$] b. [un [[homme $_{n}{}^{0}$] grand [$t_{i\ nP}$] $_{aP}$] $_{DP}$]

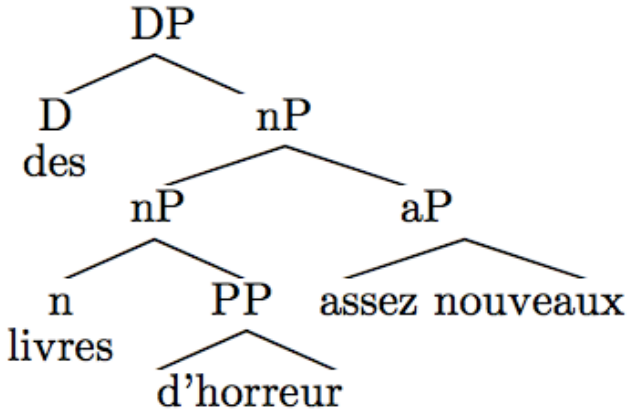
French predicative adjectives

But, predicative adjectives, in French, are argued to be adjuncts (hence phonological and semantic islands). Predicative adjectives can be determined to be as such, as they must follow the complements of the noun.

(17) a. Jean a des livres assez nouveux

b. Jean a des livres d'horreur assez nouveaux

c. *Jean a des livres assez nouveaux d'horreur



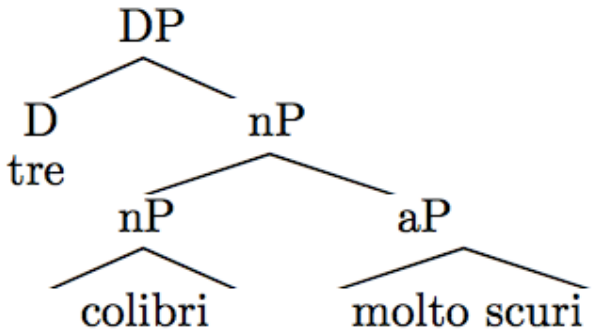
If the head (livres) had head-moved over the AdjP, then we would expect it to be able to leave its complement behind – compare 'La destruction immédiate de l'armée)

Ho visto tre colibri || molto scuri

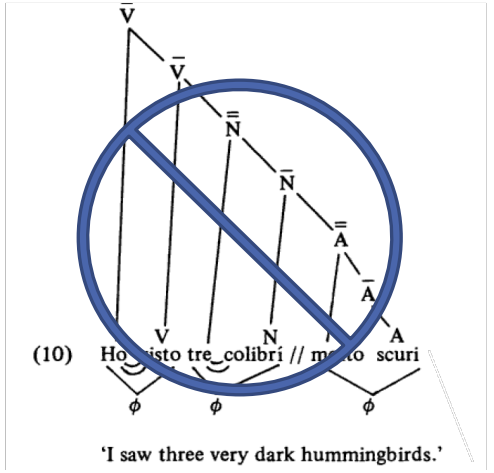
Unlike what was proposed in N&V : There is no-nonisomorphism :

Like in French, the post-nominal adjuncts can be merged late and high, like the predicative adjectives, or like a relative clause.

(18)a. [tre [[colibri [molto scuri $_{aP/CP}$] $_{nP}$] $_{DP}$]



Modifer is not in the complement of N



N&V : 171

this is the cat || that ate the rat || that stole the cheese

Relative clauses have also been argued to be adjuncts:

Many syntacticians have proposed that the CPs are adjuncts, (the place where they adjoin / the timing of their adjunction being still controversial)

(18) [this is [the cat [that ate the rat [that stole the cheese $_{\text{CP}}$] $_{\text{CP}}$] $_{\text{DP}}$] $_{\text{CP}}$]

There is no phono-syntactic non-isomorphism here.

(Fox & Nissenbaum (1999) Lebeaux (1988), among others)

Back to words for a minute...

Intervocalic s-voicing and its variability

(19) risudivizione (N&V 126)

[[ri-sudiviz]ione] bracketing paradox?

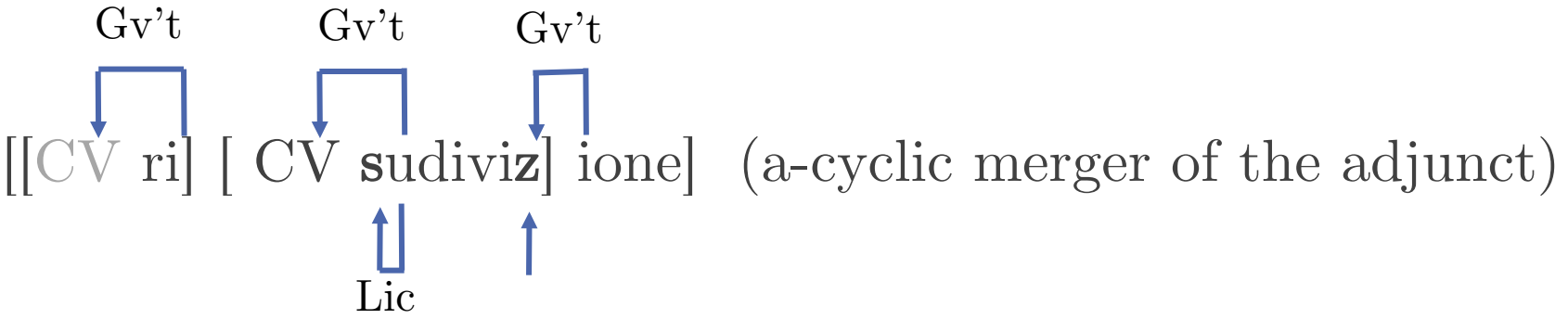
No. All bracketing paradoxes involve an adjunct (Newell 2008).

ri– is an adjunct (semantically and phonologically separate from its base)

Adjuncts merge a-cyclically, and undergo spell-out before merger.

A CV analysis

(20) a. [CV [sudivis $_{\sqrt{}}$]ione $_{nP}$] (verbal and nominal phases)

b. 

(a-cyclic merger of the adjunct)

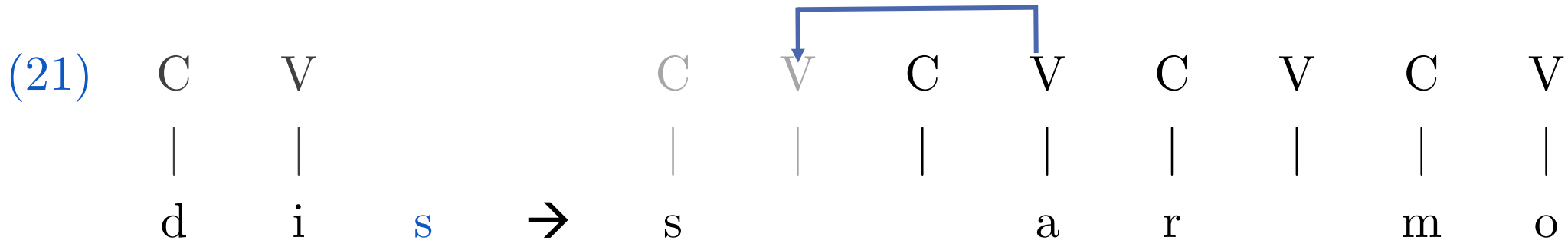
The root-final s is in a weak (intervocalic) position, and therefore undergoes lenition (government). The root-initial s is in a strong (onset) position (licensing).

And prefix-final *s*?

Like N&V note, Italian does not generally allow C-final words.

In CVCV this means no final empty nuclei are permitted (a language-specific parameter)

If no final V, then 's' in prefixes like 'dis' float. Dis is an adjunct:



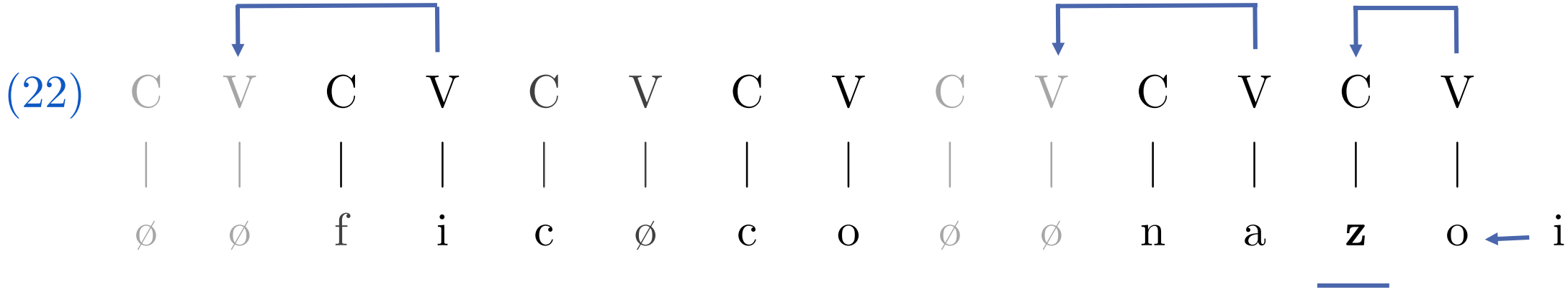
's' is a coda (weak postion) due to the phase-initial CV. Lenition occurs.

cf. Dutch C-final prefixes, which never resyllabify/are followed by FENs

Suffixes in compounds

As we saw in English, suffixes may merge into the domain to their right (there is no CV boundary) : [[ficca $_{nP}$][naso $_{nP}$]i $_{DP}$]

(for another alternative and more on hiatus resolution and prefix-suffix asymmetries see van Oostendorp 1999)



N.B. that the distinction between V-initial and C-initial affixes in Italian tracks the English data.

adjunction is the 'prosodic' universal

- If there is no PW then there is noting on which to build a PPh.
- Adjuncts behave as prosodically separate from their base. This is predicted by the mechanism of spell-out.
- Non-adjuncts have to be lexically specified to be (i) affixal or not, (2) able to incorporate inside the phonological domain of their base, or not.
- This specification appears to be able to be phonological or non-phonological.
  - Elements with floating initial or final segmental material incorporate for predictable reasons.
  - Elements without this phonological specification still need to be specified for affixhood (ex. English vs Ojibwe) (although ultimately it would be nice to have a completely phonological account of affixation, as +affix is not desirable as it is neither a morpho-syntactic nor a phonological feature)

there is no Match Clause

PART 3:

"the higher a constituent..

"in the prosodic hierarchy, the more general the nature of its definition becomes. **In addition to the basic syntactic factors** that play a role in the formation of intonational phrases, **there are also semantic factors** related to prominence **and performance factors** such as rate of speech and style **that may affect the number of intonation contours in an utterance**"

(also true of utterances themselves) (N&V : 187)

- Intonational contours are always final (end at a pause). This is cross-linguistic. Are intonational contours 'phonology'? What could explain such a universal nature only at the higher prosodic levels?

- If there is no PW, and no PPh, then Utt/IntP/Clause must have another explanation as well.

- 'Clause' is not a syntactic primitive.

Turn up the heat. I'm freezing vs Turn up the heat. I'm Francis (N&V: 238)

Distinctions in cross-clausal variability point to extraphonological factors determining what has traditionally been analyzed as restructuring. (Kilbourn-Ceron et al in press)

- The application of phonological operations becomes more variable the larger the domain, but only if the trigger is found in the following domain.
- The rate of t-flapping was dependent on the likelihood of planning the next word across a clause boundary.
- The rate of t-glottalization did not display this variability.

Directionality of production planning

- "that intonational criteria do not correlate with the domain of liaison Pak and Friesner (2006)—a paradox for the prosodic hierarchy theory, but not unexpected by the PPH."

(Kilbourn-Ceron et al. : 32)

- "Many languages show sandhi phenomena that are sensitive to whether or not the previous word ends in a vowel. A well-known Example is the spirantization of voiced stops in Spanish (Hualde, 2013), which has been described as occurring across word boundaries without regard to syntactic or phonological junctures."

(ibid : 33)

"Our account of syntactic and prosodic influences on flapping is **compatible with a statement of the flapping process without any reference to a prosodic domain**"

(ibid : 31)

Conclusions

- There is no syntactic object that can be correlated with what emerges as the Prosodic Word. Any cross-modular theories of PWd building such as Match or Align have nothing to Match or Align with.
- There are word-internal domains (compounds, prefixes, phases), that may or may not be signaled by a prosodic edge, but this cannot be tied to X^0/XP-hood.
- There is language-specific optionality in whether certain morphemes behave as part of a phonological domain or not (isolating... → ...polysynthesis)
- Phonological phrases are only cross-linguistically parsed as such when they are adjuncts. Within the 'spine' (major path of embedding) of the tree we see variability.
- Utterances display variability in the application of phonological rules that is not predicted by a PH account.
- We need to take non-diacritic accounts of phonological domain creation more seriously. Phases, adjunction, and empty syllabic space make predictions inside and outside the phonology that the PH does not.

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