Formalizing contrast and redundancy in phonological representations

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Saint Mary's University

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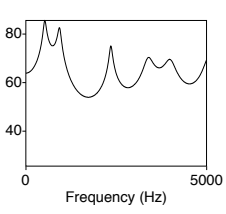
   - 

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- This isn't a bad thing.
- In particular, focusing on representations can tell us things about what operations can and can't do, independently of any specific theory of operations.

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- …or rules that insert, delete, or slice bananas.

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- A methodology: Try the most parsimonious representations first
- …because they should be the easiest to falsify.

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- Some of this information may be relevant to:
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  - identifying affect
- But if we start by assuming it's all also available to the grammar, what would ever tell us that some of it *isn't* there?

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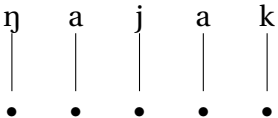

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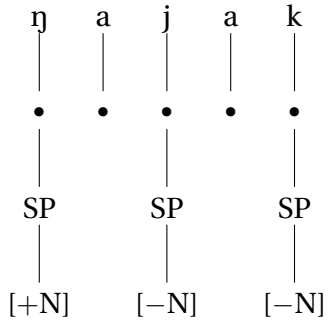

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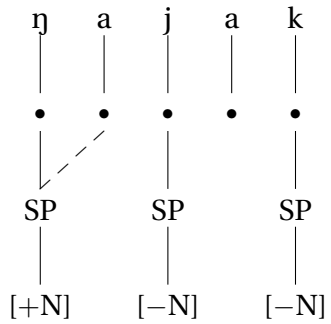

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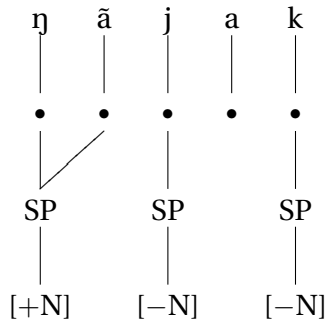

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- Vowels are targets of spreading.

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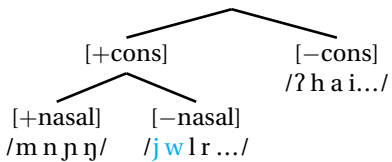

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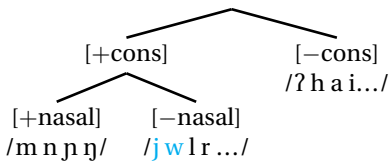

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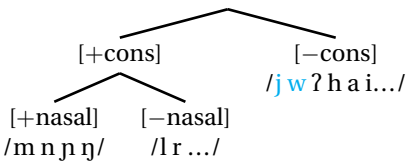

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- But in Tangale ATR harmony, /ɑ/ patterns with other [−ATR] vowels, even though it has no [+ATR] counterpart.
- This ignores the idea of contrastive scope—there’s no [+ATR] vowel in Tangale that is otherwise identical to /ɑ/, but /ɑ/ does contrast with [+ATR] vowels in general.

  (See Archangeli (1988) and Dresher (2009: ch. 2) on why pairwise comparison of segments is not the best way to identify contrastive features.)

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- (This is, oddly enough, pretty much the approach taken within a contrastive-specification framework by Avery 1996 and Hall 2004, though they use monovalent features.)

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- Likewise, we're missing a generalization if we fail to note when segments on which [F] is predictable act as if they lack [F].

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Subtractive: Redundant features are absent from some or all of the phonological computation (e.g., Archangeli 1988; Dresher 2009; Mackenzie 2013).

Additive: Both contrastive and redundant features are phonologically visible, and the computation can distinguish between them (e.g., Calabrese 1995; Halle, Vaux, and Wolf 2000; Nevins 2010).

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- …and can also transmit [−back] to a subsequent suffix:

  (11) [kɨtɑp-ʧæ-m-dæ] ‘in my booklet’

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- Low vowels in medial open syllables raise to [i]:

(12)	[bɑlɑ]	‘child’	[bɑl**i**-lɑr]	‘children’
(13)	[iʃæk]	‘donkey’	[iʃ**i**ɣ-i]	‘his/her/its donkey’

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- When they do, they become transparent to harmony:

(14) [næj-ʧi-dæ] ‘child-ʧæ-LOCATIVE’

(15) [kitɑp-ʧi-dɑ] ‘book-ʧæ-LOCATIVE’

Uyghur vowel harmony

- Low vowels in medial open syllables raise to [i]:

(12)	[bɑl**ɑ**]	'child'	[bɑl**i**-lɑr]	'children'
(13)	[iʃ**æ**k]	'donkey'	[iʃ**i**ɣ-i]	'his/her/its donkey'

- When they do, they become transparent to harmony:

(14)	[næj-ʧi-dæ]	'child-ʧæ-LOCATIVE'
(15)	[kitɑp-ʧi-dɑ]	'book-ʧæ-LOCATIVE'

- Contrast (15) with (11):

(11)	[kitɑp-ʧæ-m-dæ]	'in my booklet'

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OPEN-σ

RAISING

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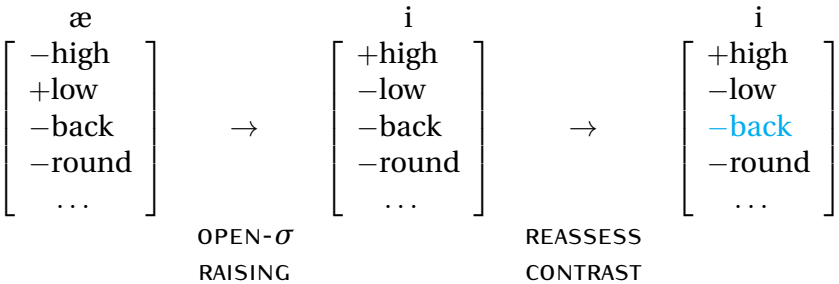

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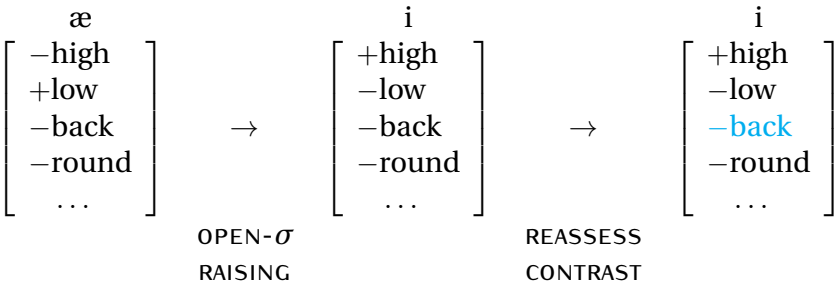

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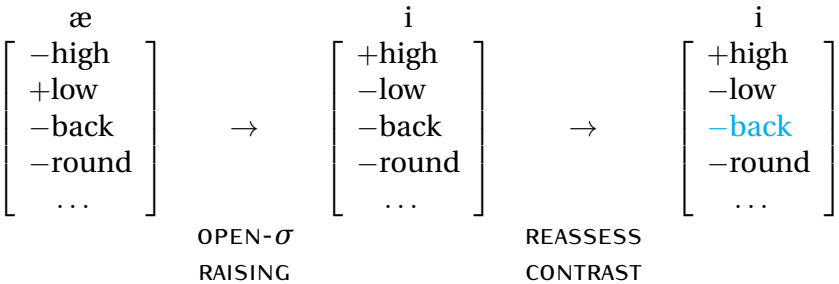

- The status of a feature can't be read from the representation.
- It must be assessed based on the inventory, or on the marking statements (Calabrese 1995) that constrain the inventory.

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- Is there a principled explanation for the fact that raising /æ/ to [i] makes its [−back] specification disappear?
- Yes—adapted from D'Arcy (2004), who uses a different set of features.

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THE CONTRASTIVE HIERARCHY

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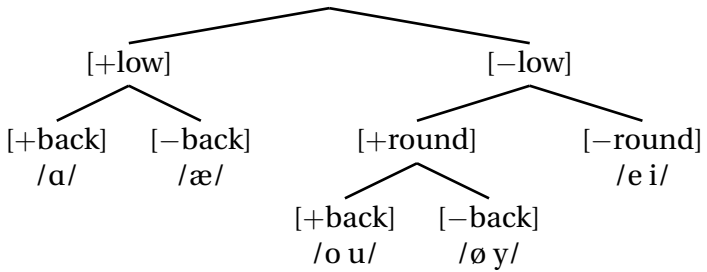

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- Rather than saying that raising imposes [−back], we can say that it deletes [±back].

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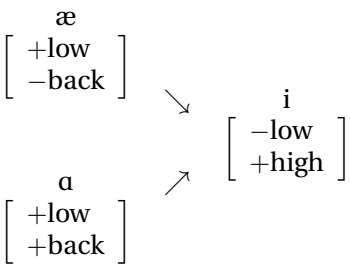

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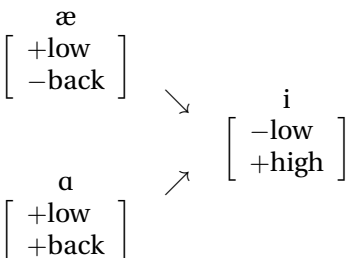

- (Underlying /i/ also has [−round], but we can assume that this is the default realization of vowels not specified for [±round].)

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- In the subtractive approach, redundant features just aren't there.
- The contrastive hierarchy allows for cross-linguistic variation in feature scope, but languages don't need to keep referring to their hierarchies to remember what's contrastive.

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- The subtractive approach doesn't need this
- We do need a (one-time) procedure to assign language-particular featural representations to underlying segments.
- And we need something like that in any case if we have anything other than full specification of a UG-provided set of features—e.g., if we want to say that /v/ is specified as [+voice] in some languages, but unspecified for voicing in Russian and Hungarian.

Conclusions

Köszönöm!

Bármi kérdés?

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