

The inadequacy of evidence for sonority-driven stress

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*Workshop on
Universality and Variability in
Segment-Prosody Interactions*

Workshop Goals

- To gain more insight into the interdependence of the segmental and prosodic levels from a cross-linguistic perspective
- What patterns of segmental and supra-segmental interactions are found cross-linguistically?
- How does metrical structure influence segments, phonotactics, and phonological processes?

Sonority-driven stress in Chukchi

- Stress the rightmost syllable of the root

winrét-əkə

'help-3sg'

jará-ŋə

'house-abs sg'

reqoká-lgən

'sand'

- But avoid stressing a schwa

pátgərg-ən

'hole'

rócgəp-ək

'enervate'

- And avoid high vowels [i u] when more sonorous vowels [e o a] are available

wéni-wen

'bell'

céri-cer

'dirt'

kéli-kel

'paper'

Sonority-driven stress leads to ...

- How does metrical structure influence segments, phonotactics, and phonological processes?
- How do segments influence metrical structure?

What we know

- 19 years of work on sonority-driven stress
- Kenstowicz (1994/1997) (ROA 33)
- de Lacy (2002, 2004, 2006, 2007)
- McGarrity (2003)
- Crowhurst & Michael (2005)

Claims made

- Sonority can be a factor in influencing metrical structure – both foot heads and non-heads
- Cannot be reduced to moraic content
- $a > e/o > i/u > \text{ə} > \text{ɪ}$
- Language-specific category collapse is possible
- It's ubiquitous

Is it all about schwa?

- Some cases are avoidance of stressed schwa
 - Alyutor, Indonesian, Karo Batak, Yil, Yimas
- Others avoid stressed ɪ , or both ɪ and ə
 - Pichis Asheninca, Kobon; Au, Nganasan
- Others involve multiple levels of avoidance
 - Kara, Kobon $a > \text{others}$
 - Gujarati $a > \text{e/o/i/u} > \text{ə}$
 - Komi, Moksha $a/\text{e/o} > \text{i/y/u} > \text{ə}$
 - Lushootseed $a > \text{i/u} > \text{ə}$
 - Nganasan $a/\text{e/o} > \text{i/y/u/ə/ɪ}$
 - Takia $a > \text{e/o} > \text{i/u}$

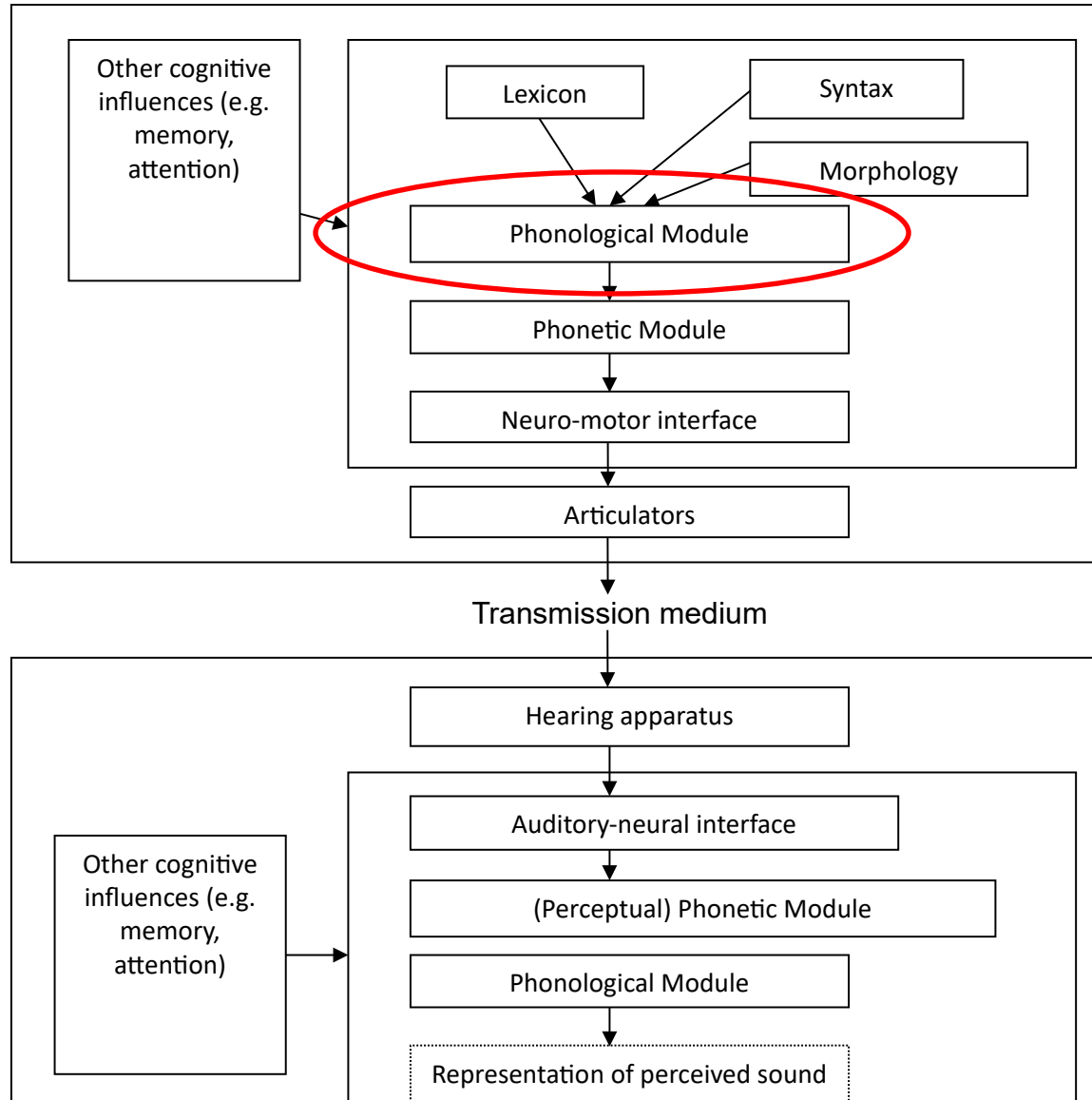
Throughout the world ... (~ 25 cases)



Evidence and Theory

- Given a theoretical statement T, what is evidence for T?
- What is the theory?
- Generative Phonology
 - (Chomsky & Halle 1968 and others since then)
- What does Generative Phonology say is evidence for it?

Why studying the PhM is difficult



Chukchi



Chukchi

- One of the first cases of sonority-driven stress discussed: Kenstowicz (1994/1997)
- Multiple sonority levels are active:
 - Perhaps: $a > e, o > i, u > \emptyset$
 - But argued to be at least: $a, e, o > i, u > \emptyset$
- One of the *best documented* cases:
 - Bogoras (1922), Skorik (1961, 1983), Krause (1979), Volodin & Skorik (1997), Dunn (1999)

Kenstowicz (1994/1997)'s Chukchi

- Default stress

- Rightmost root syllable

winrét-əkə

'help-3sg'

jará-ŋə

'house-abs sg'

reqoká-lgən

'sand'

- But not word-final

tití-ŋə cf títi-t

'needle'

wárat cf warát-te

'people'

Kenstowicz' Chukchi: Schwa avoidance

- Avoid stressing a schwa

pátgərg-ən 'hole'

rócgəp-ək 'enervate'

- Even if it means stressing the word-final syllable

ətlá 'mother'

lələ-t eyes

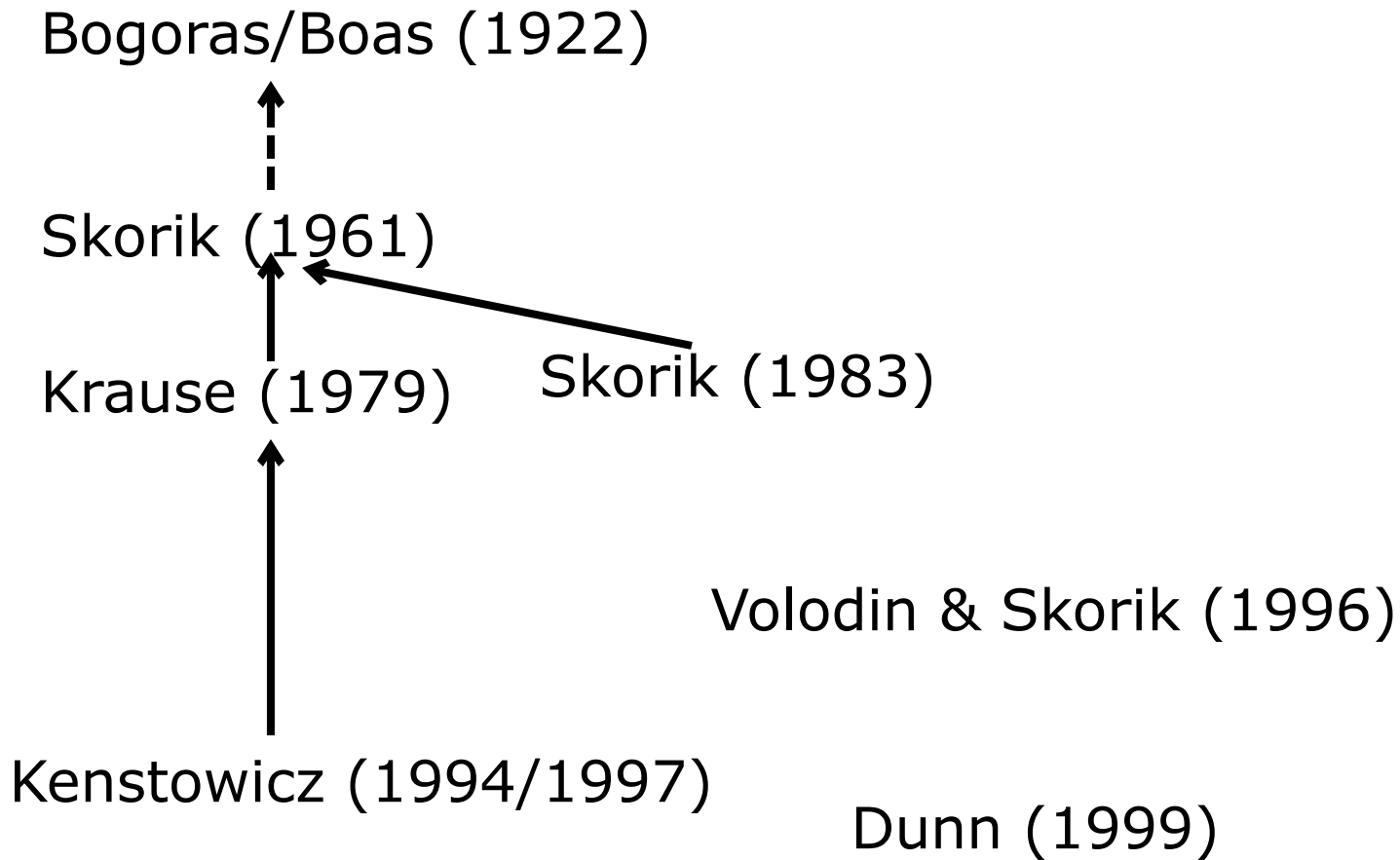
Kenstowicz' Chukchi: í/ú avoidance

- Expected penultimate stress:
 - nuténut 'land'
 - piŋépiŋ 'snowfall'
 - jilʔé-jil 'squirrel'
- But antepenult when the penult is i/u and antepenult is e/o (and a?)
 - wéni-wen 'bell'
 - céri-cer 'dirt'
 - kéli-kel paper

Analytically

- Avoid stressed schwa
- Avoid PrWd-final stress
- Avoid stressed high vowels
- Align the PrWd head with the rightmost root syllable
- *Hd/ə » NONFINALITY » *HD/{ə,i,u} » ALIGN-R(ROOT,'σ)

Well-sourced



What is the object of study?

- Generative phonology
 - is about an object in the natural world: the Phonological Module (PhM)
- If E is evidence for the PhM, then some PhM in the world generates E
- What else could speech data be about?
- Behavior ~ normative behavior
 - 'A language'
- Was the Chukchi data above generated by a PhM that exists (or did exist)?

Skorik (1961)

- “Further identification of the Chukchi language’s dialects and a full description of them is an urgent task, but this will only be possible if there is a detailed description of the phonetics and grammar of the literary language, which is based on the eastern dialect. The present work is such a description.” (Skorik 1961:13; my translation)

Dunn (1999) on Skorik

- “Schoolteachers, who had all attended the same teachers’ college in St Petersburg, had received heavy exposure to Skorik’s Chukchi grammar, and accepted it as **the prestige standard**, although admitting privately that **nobody they knew spoke like that**... People are quite happy to conclude that all Chukchi speakers use their native language incorrectly if popular usage does not agree with Skorik’s grammar. While methodologically suspect, the greatest tragedy of this is that it frequently renders language teaching to non- and partial speakers completely **ineffective—the language they are taught does not correspond to that used in the community**.” (Dunn 1999:16)

Dunn (1999:1)

- "This 'standard language' is an **artificial language** based on conservative northern Chukchi, and which underwent various forms of engineering during the Soviet period."
- "Although the grammar includes copious numbers of example sentences, their naturalness as examples of Chukchi is questionable. ... suggesting strongly that they are either all translations of Russian, or worse, that **they are simply made up** ... Unless evidence is forthcoming that Skorik's data represents a true, spoken variety [of] Chukchi it would be wise to **approach his materials with skepticism**." (Dunn 1999)

Is Skorik (1961) unusual?

- Large studies of phonological stress use grammars
 - Hayes (1995), Gordon (1999)
- Gordon's (1999: appendix 1) list of 392 stress systems
 - mean publication date for earliest sources is 1972 and the median is 1975, so Skorik is slightly older than the average, but not too far
- Goals of grammar-writers
 - To create a statement of normative behavior
 - For religious, political, commercial, or other reasons ("it's a job", "save the languages")
- How many descriptions aim to describe the capabilities of a PhM?

Dunn (1999)

- “this is the first attempt at a comprehensive grammar of Chukchi which [is] ... based on unelicited spoken language produced by near monolinguals.” (Dunn 1999:1)
- But still about normative behavior
 - Amalgamated the speech of many people
 - Produced a synthesis that he called 'the Chukchi (Telqep dialect) language'
 - What happened when people disagreed? Democracy?
 - If 10 people said [ətlá] 'mother' and 4 said [étla], which one is the Chukchi form? Which one made it into the grammar?

Suppose ...

'Chukchi' speakers	Stress where?	Avoid schwa?	Avoid final stress?
<i>Kromo</i>	Penult	Yes	No
<i>Təwiwi</i>	Penult	No	Yes
<i>Rərowtat</i>	Antepenult	Yes	Yes

Democracy:

- "Chukchi" stresses the penult, avoids schwa, and avoids final stress
- But there is no PhM that generates this pattern
 - Perhaps this pattern is impossible

PhM or person?

- Multilinguals have several PhMs
 - Speech must be controlled for PhM
- “Full speakers [of Chukchi] **generally** keep the two languages apart, but in certain circumstances speakers **switch** between Chukchi and Russian within a single sentence.” (Dunn 1999:14)
- “In Tawajwaam the language of day-to-day communication is Russian. People of about 30 years and older speaker Chukchi, and the elderly are monolingual. The bilinguals use a certain amount of code-switching” (p.16).

Speech Style

- Everyone(?) has multiple speech styles
- “This work focuses on a subset of speech genres ... (i) conversation, (ii) elicited monologues, and (iii) folktales.” (p.17-18).
- “The examples of conversation were limited to incidental conversation and semi-interview situations with one (younger, usually less fluent) native speaker talking with a knowledgeable older speaker about a topic selected by me and the interviewer.”

Eliciting my data

	butter	metre	hospital
Informal	bʌrə	mí:rə	hóspərəʊ
Acrolect	bʌrə	mí:tə	hóspətɪ

Elicitation possibilities, no control for speech style

{mí:rə, hóspərəʊ} = PhM

{mí:rə, hóspətɪ} = Not a PhM

{mí:tə, hóspərəʊ} = Not a PhM

{mí:tə, hóspətɪ} = PhM

Q: In the journal *Phonology*, how many articles state that they controlled for speech style, and explained how they did it?

A: I found one: Broselow et al. (1997)

Meadow Mari pooling

- Stress the rightmost non-schwa, avoiding word-final e/o/ø too; else the leftmost syllable
 - Co.'Co
 - 'Co.Cə
 - 'Co.Ce
 - 'Cə.Ce
 - 'Cə.Cə
- Lehiste et al. (2005)'s phonetic study identified vowel duration as marking stress
 - They then checked to see if their subjects' duration matched the traditional stress descriptions

Actual PhMs $\neq$ "Mari"

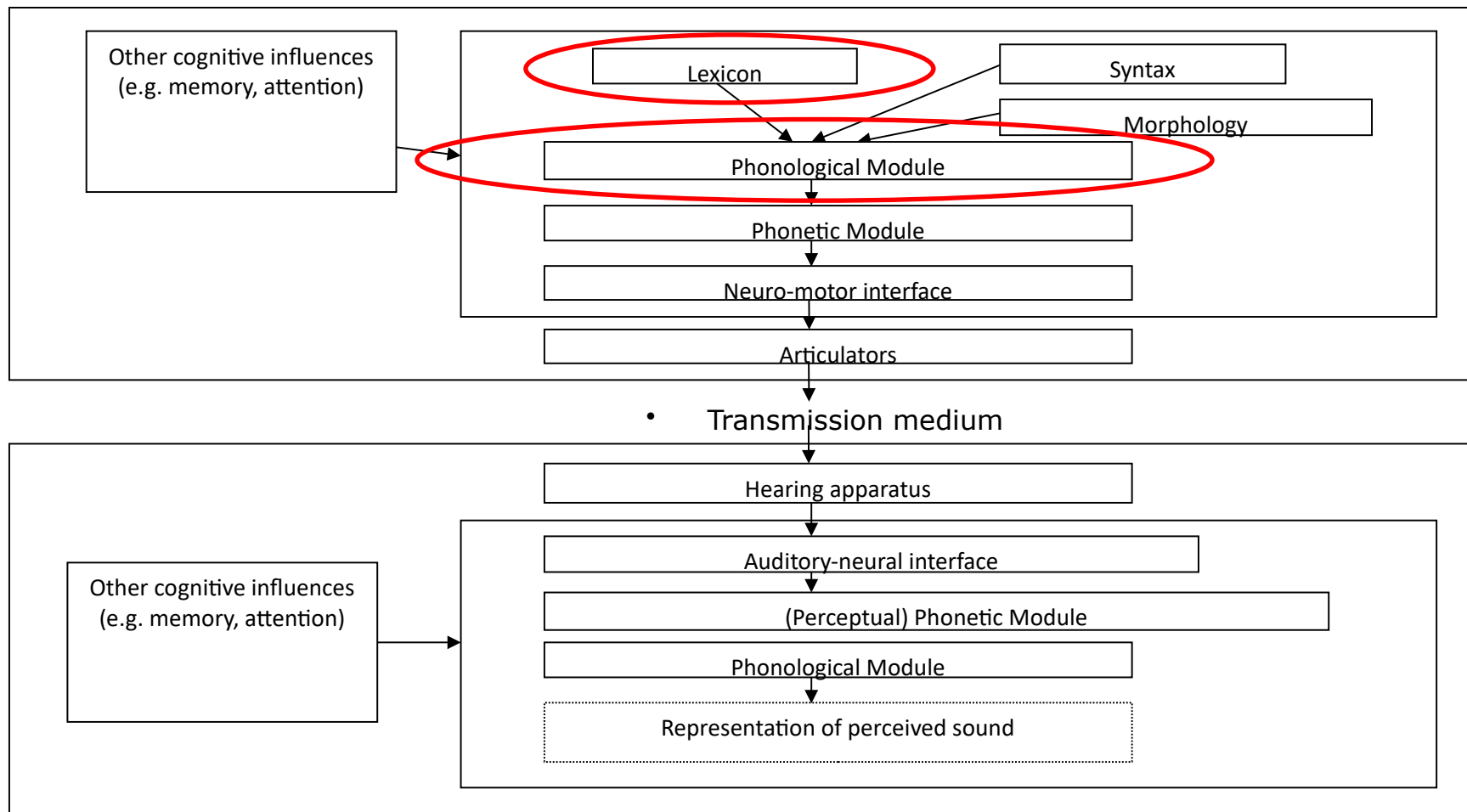
	LV	ST	VN	VA	EI	AA	NK	JT	Pooled
šəŋa	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
kəne	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	2	2	2	2	<u>1/2</u>
čəke	<u>1</u>	<u>1</u>	2	<u>1</u>	2	2	2	<u>1</u>	<u>1/2</u>
kəša	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
kugu	1	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
ida	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
vita	1	<u>2</u>	1	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
šunna	1	1	1	<u>2</u>	<u>2</u>	1	<u>2</u>	1	1
ijda	1	<u>2</u>	1	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
purde	<u>1</u>	2	2	<u>1</u>	2	2	2	2	2
kidda	1	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
pörtda	1	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
akla	1	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
ludde	<u>1</u>	2	2	2	2	2	2	2	2
luaš	<u>2</u>	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
jereš	<u>2</u>	1	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

Is there a PhM that generates "Mari" stress?

And which PhM are you using now?

- For perception, the situation is much trickier
- When we ask "Is this form acceptable to you?" which PhM is being used?
- van Zanten et al. (2004) in a perceptual experiment about Indonesian stress (which avoids stressed schwa):
 - "We presented the listeners with a great variety of pitch movements as regards shapes and locations. All these stimuli were acceptable to the listeners. One listener actually remarked that he could hear that the stimuli were different, but that he, as an Indonesian, was used to different pronunciations, and that all stimuli were quite acceptable to him." (p.10)

Lexicon vs. PhM: stress source ambiguity



Lexicon vs. PhM

- Is [nuténut] stressed on the penult because

Lexicon: /nuténut/ → [nuténut]

or PhM: /nutenut/ → Transformation: [nuténut]

- Stress avoids high vowels for mid vowels ...

wéni-wen **'bell'**

céri-cer **'dirt'**

kéli-kel **'paper'**

nuténut 'land'

piŋépiŋ 'snowfall'

jilʔé-jil 'squirrel'

Are three forms enough?

wéni-wen 'bell'

céri-cer

kéli-kel

nuténut

piŋépiŋ

jilʔé-jil

'dirt'

'paper'

'land'

'snowfall'

'squirrel'

nútenut

{no form}

jílʔe-jil

mére-mer 'tears'

Bogoras (1922)

Sensitivity to schwa?

- ætlá "mother"
- Krause (1979:127)
 - /ætlaʔ/ → [ætlá] cf. [ætlaʔ-t] (plural)
 - /wəlpə/ → [wólpə] cf. [wəlpá-t] (plural)
- So: /ætlaʔ/ → [ætlá]
- /wólpə/ → [wólpə]
- “As such, the proposed rule of **stressed schwa retraction** [i.e. avoidance of stressed schwa] **may prove to be trivial** in the derivations of forms such as [tátlən-ək], because the surface stress could have been **as easily underlyingly assigned as retracted**.” (Krause 1979:127)

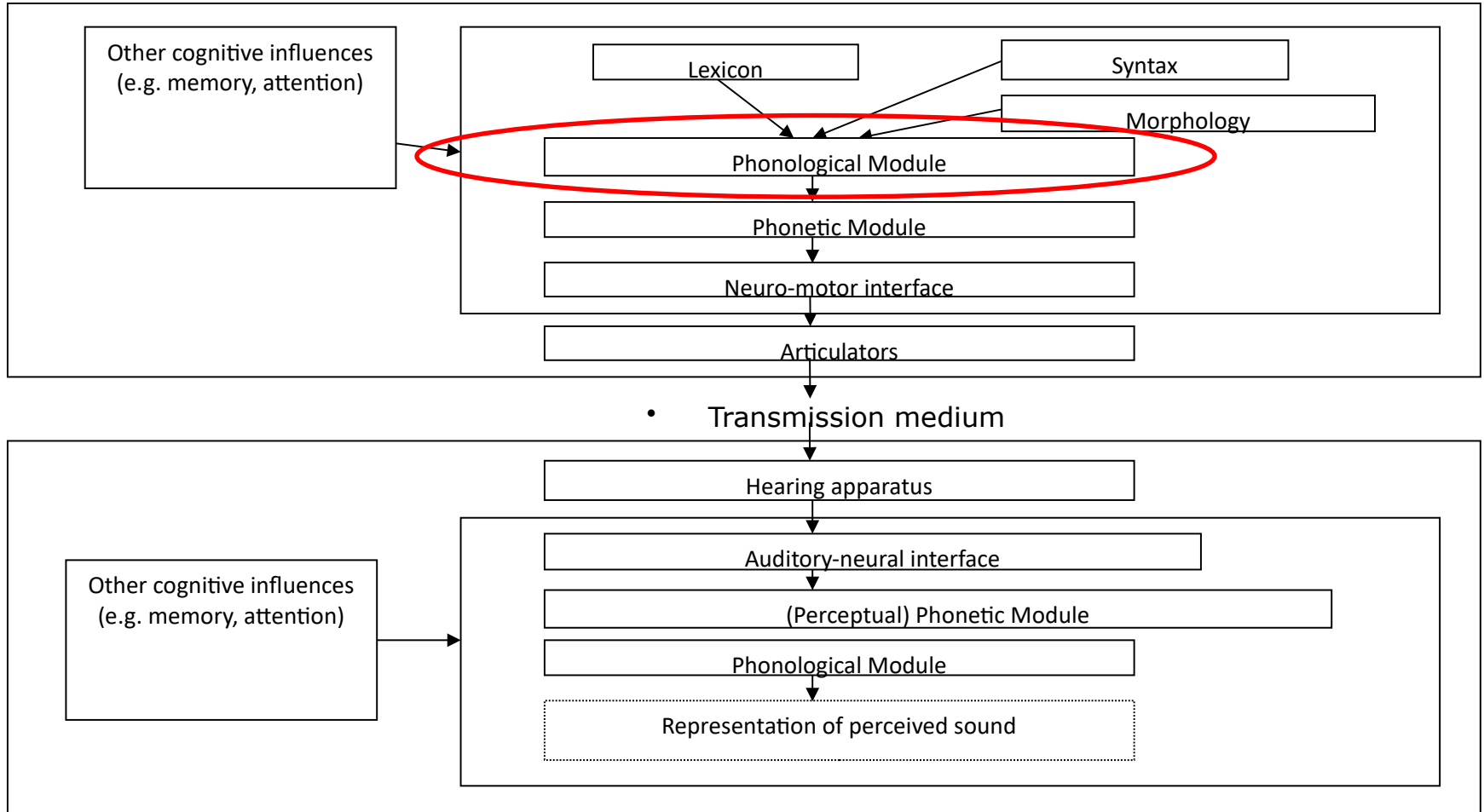
Krause (1979) comments

- “Problems such as this pervade any investigation of stress without a native informant” (p.124)
- “[because of using written materials only] certain phonological phenomena such as potentially stress related topics did suffer (due to the scarcity of accentual marks) and must be left to future investigation.”
- Loanwords: ziráf ‘giraffe’, četwéry ‘Thursday’

Lexicon Summary

- Generative Phonological theories allow stress to be specified in the lexicon, and to be assigned by the PhM
- There is an ambiguity of source
- Therefore, techniques of disambiguation must be applied
- Apparently not done adequately for 'Chukchi'

PhM vs. Post-PhM: stress ambiguity



The PhM itself

- [ətlá] 'mother'
 - asserts something about perceived speech:
 - That the hearer perceives some prominence on the second syllable
 - Where did the prominence come from?
 - The speaker's PhM?
 - The speaker's Phonetic module?
 - The speaker's articulators?
 - The hearer's perceptual system?
- The model predicts multiple sources of ambiguity

Technique for disambiguation

- “segmental rules, intonational patterns, and phonotactic constraints agree with each other in diagnosing a particular stress pattern.”
 - (Hayes 1995:9)
- Are there PhM processes that diagnose stress in Chukchi?
 - No apparent stress-conditioned allophony
- Vowel reduction?

VR in Chukchi (?)

- Root /e a/ → [ə] if *word-final*
 - /umqe/ → [umqə] cf [umqe-t] (plural)
 - /ətlaʔ/ → [ətla] 'mother', *[ətlə]; cf [ətlʔat] (plural)
- Protection by a metrical head: Therefore, heads avoid schwa
- Problem #1: Dunn (1990:107)
 - In describing this process, gives [ətlə]
- Problem #2: Skorik (1961) says that forms with glottal stop are special for vowel reduction, perhaps:
 - /ətlaʔ/ → reduction: DNA: [ətlaʔ] → Glottal deletion: [ətla]
- Problem #3: Root vowels are only final in the absolutive singular form
 - Perhaps 'reduction' is a quirk of the absolutive singular (Dunn 1999)

Sensitivity to underlying status?

- All Generative theories give metrical process sensitivity to underlying status
 - e.g. stress applies *before* epenthesis
 - constraints (HEAD-DEP) avoid stress on heads
- [ə] is almost always predictable in Chukchi
 - In some Generative theories this means that it is not present underlyingly
 - So, simply avoiding stress on epenthetic vowels will make stress 'sonority-sensitive'
 - And there is *no need* for a rule/constraint that directly mediates heads and sonority
- However, some [ə]s aren't predictable
- And some theories don't allow predictability to determine underlying presence ('Richness of the Base')

Yimas

- Yimas avoids stress on the central vowel [ɨ]
 - [kúlanəŋ] 'walk'
 - [pɨkám] 'skin of back'
- But [ɨ] is arguably epenthetic
- and sometimes the epenthetic vowel is *not* [ɨ], but stress still avoids it
 - /tpik/ → [tɨpúk]
 - cf. /muraŋ/ → [múraŋ] 'paddle'

Striking diagnostic differences

- In Meadow Mari, PhM processes suggest iambs (Vaysman 2002)

– Adjectival [-IV] [(tam-lé)]

[tam-le] 'sweet'

[lum-lo] 'snowy' [(ʃoʃə)-lə]

cf [ʃoʃə-lə] 'spring adj'

[mardez-lə] 'windy'

cf [yremə-le] 'street' [(joŋé)(ləʃ-ló)]

[joŋələʃ-lo] 'wrong'

- But impressionistic stress has no relation to this foot structure:

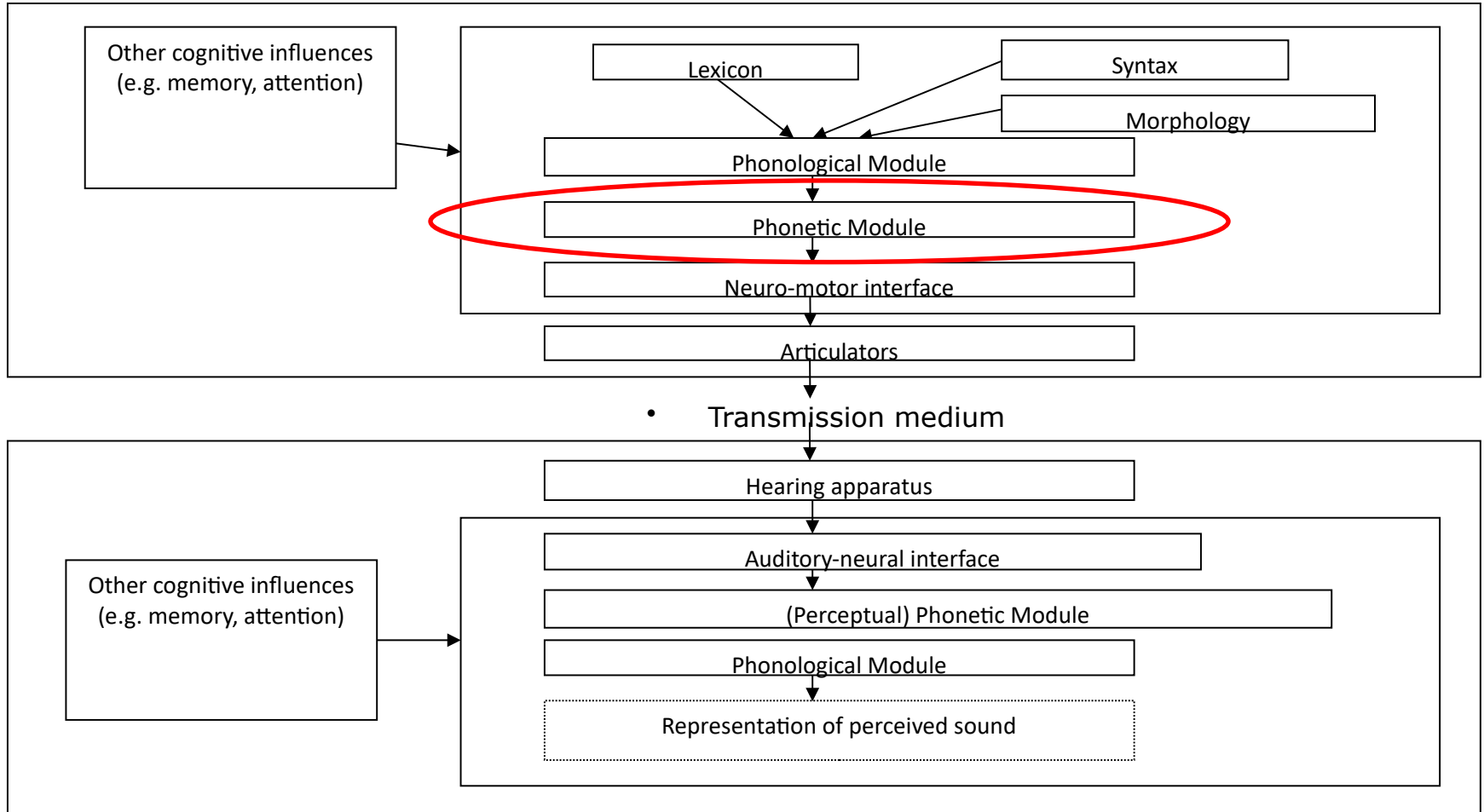
[týrə-lə] cf. [olá-lə]

[jóŋələʃ-lo] cf. [pelédəʃ-le] cf [ojləmáʃ-lo] (p.82)

Intuitions and the PhM

- Hayes (1995:9)
 - “if a large group of native speakers who understand the task can agree on a linguistic observation (such as a grammaticality judgment, or the presence of a particular ambiguity, or a stress contour), then we are justified in taking that agreement as a datum.”
- A datum of what?
 - The PhM?
 - The phonetic module?
 - Inherent articulatory effects?
 - Inherent perceptual effects?
 - Individual-level perceptual distortion?

Phonetic module distortion



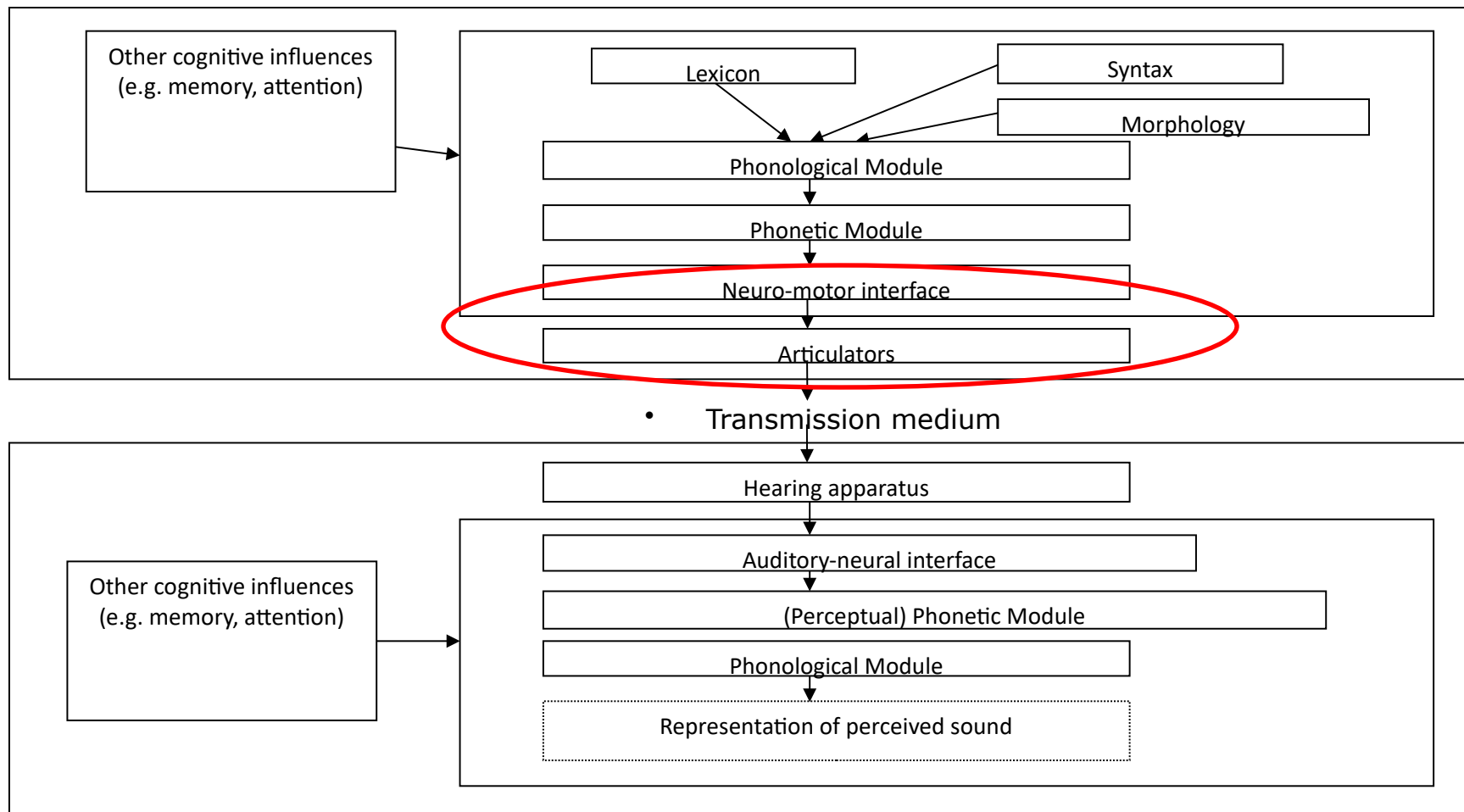
The phonetics of stress

- The Phonetic module can realize metrical heads in a variety of ways
 - Increased duration
 - Nothing
- The Phonetic module is therefore potentially neutralizing for phonological heads, and so predicted to be a source of ambiguity
- For Chukchi, describers *must* be locating heads on the basis of perceived phonetic prominence, because there's no *phonological* diagnostic for stress.

Chukchi head realization

- Skorik (1961): one syllable per word stands out 'forcefully' –intensity and duration (силовое).
 - “Stress is one of the most challenging and least understood issues in the phonetics of the Chukchi language.” (p.67§59)
- Volodin & Skorik (1996)
 - Not intensity and duration; but not clear what it is
- Dunn (1999:47)
 - “Chukchi does not have phonetic stress.”
 - “Word stress can be very difficult to hear, and is mostly perceptible when the word is at the prosodic peak of the phrase.”

Source distortion: inherent and impairment



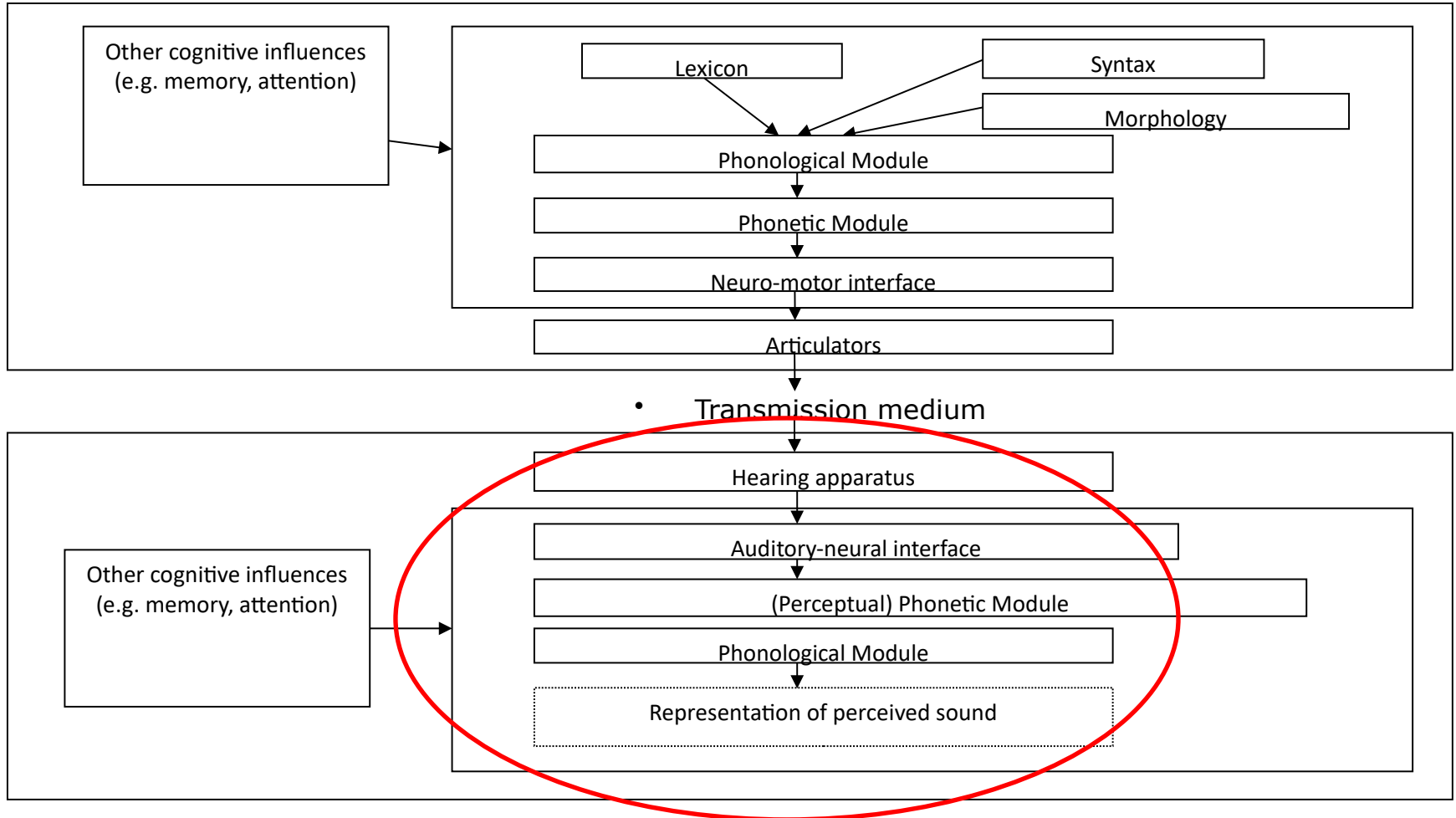
Distortion from impairment

- Aspects of the neuro-motor interface and articulators can lead to neutralization of stress-related phonetic signals
- Neuro-motor impairment can alter articulator timing, and duration
 - Captain of the Exxon Valdez
- Articulator impairment can alter voicing and vocal cord control
 - Creaky voice leads to difficult-to-perceive pitch

Chukchi subject impairments?

- No information, except for Dunn (1999):
- “all the elderly Chukchi speaker I knew had hearing problems; hearing loss seemed very common throughout the Chukchi community” (Dunn 1999:17)
- “I was able to obtain excellent narrative data from the monolinguals [PdeL: the older speakers], however, I was unable to achieve much with them in the way of ‘traditional elicitation’, in the sense of grammaticality judgements, guided discourse and description tasks, and so on”

Perceptual apparatus distortion



What were Skorik/Dunn/etc perceiving?

- We don't know
 - "Word stress can be very difficult to hear" (Dunn 1999)
 - Volodin & Skorik (1996): It's not what Skorik (1961) was perceiving
- What is the effect of subjective opinions, sourced from variable subject cognitive modules and production apparatus, and different hearer perceptual biases, and different hearer higher cognitive processes?
 - Expectation: Disagreement

Source impressions of Chukchi stress

	<i>Default</i>	<i>Lexical?</i>	<i>Avoid é</i>	<i>Avoid _#</i>	<i>Avoid i/u</i>	<i>Avoid onsetless σ</i>	<i>Stress Glottals</i>
Skorik 1961	Root-final	No	Yes	Yes	No?	No	No
Skorik 1983	Agree	No	No mention	Yes	No	No	No
Krause 1979	Agree	Partly	Limited	Yes	No	No	No
K 1997	Agree	No	Yes	Yes	Yes	No	No
VS 1997	Word-initial?	?	No	No	No	No	Yes
Dunn 1999	Word-initial	No	Yes	No?	No	Yes	No

- It is perhaps more fruitful to think about *why there is any agreement*:

Disagreement is a common theme

Halh (Khalkha Mongolian)

	Weight-sensitive?	Primary	Secondary
Most native scholars	N	Initial	
Poppe (1931) ...	N	Initial	Final
Austin (1951) ...*	Y	Leftmost else leftmost	
Poppe (1970) ... **	Y	Penult else leftmost else leftmost	
Bobrovnikov (1849)	N	Final	
Kowalewski (1835)	Y	Heavy else final	
Köke (2003)	Y	Initial else peninitial	

Svantesson et al (2005:97ff)

- “The reason for this situation is apparently that **different criteria and different phonetic correlates have been used for defining stress.**”
- “The different phonetic properties which signal a stressed syllable in other languages ... have different functions in Mongolian and do not converge to form a unified phenomenon of word stress in this language” (p. 96)

Indonesian

- Main stress is:
 - Penult Alieva et al 1991, Teeuw 1978
 - Final Samsuri 1971
 - No stress Halim 1974
 - On a penult heavy syllable, else lexical (van Zanten & van Heuven 1997)
- Schwa is
 - unstressable: usually
 - stressable: Laksman (1994)
- “The confusing picture that emerges after a thorough survey of the literature is one in which stress may occur almost anywhere in the Indonesian word.” (Goedemans & van Zanten p. 35)

The larger typology

- For all the cases of sonority-driven stress I have, whenever there is independent replication of a description, there is disagreement
- *Au*
 - Scorza (1973)
 - Disyllables = lexical stress
 - Trisyllables = first syllable
 - Quadrisyllables = penult
 - Scorza (1985) *almost certainly using the same data*
 - Stress is on the first syllable of the word, except
 - it avoids the central vowels *ɪ* and *ə*

Why perceive a relationship between sonority and stress?

- Stress is often realized as duration
 - (e.g. Meadow Mari)
- $[a] > [e\ o] > [i\ u] > [\text{ə}] > [\text{ɪ}]$
 - also describes inherent duration differences
- In the absence of expected cues, does the perceptual system of the hearer turn to more minor cues, such as inherent vowel duration?
- What happens when there is *no* difference in duration?

Chuvash schwa and stress

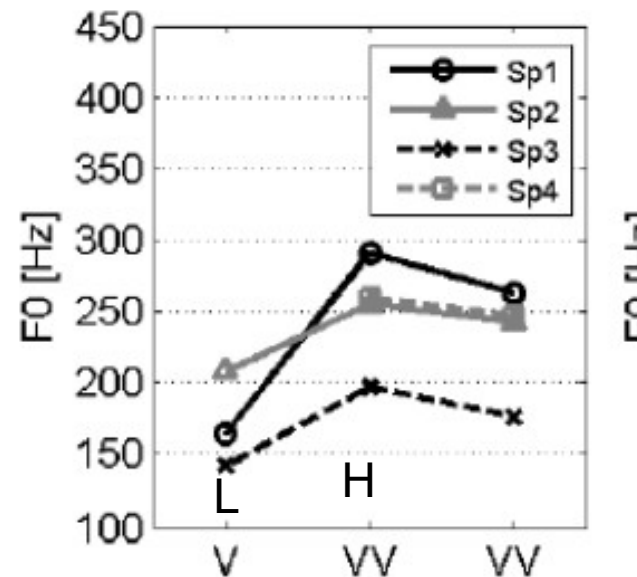
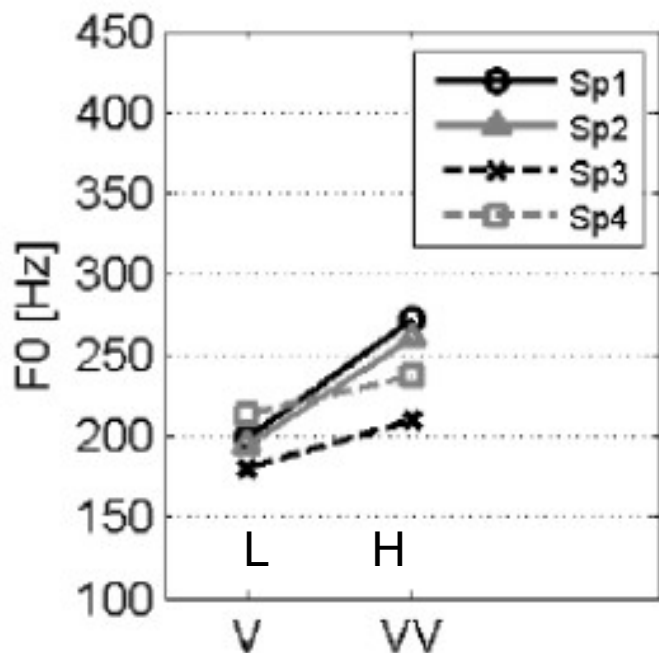
- Stress the non-schwa
- In words with all schwas, stress the leftmost schwa
- Dobrovolsky (1999)
 - In words with only schwas, there is no difference in duration between them
- "... the alleged default stress is the intonation downturn that in Chuvash typically occurs on the first vowel or sonorant consonant following the first vowel of the examined forms."
- This is a common theme: avoid stress on schwa, and in words with all schwas (or all vowels the same), "there is no stress"

Misperception/misattribution of pitch

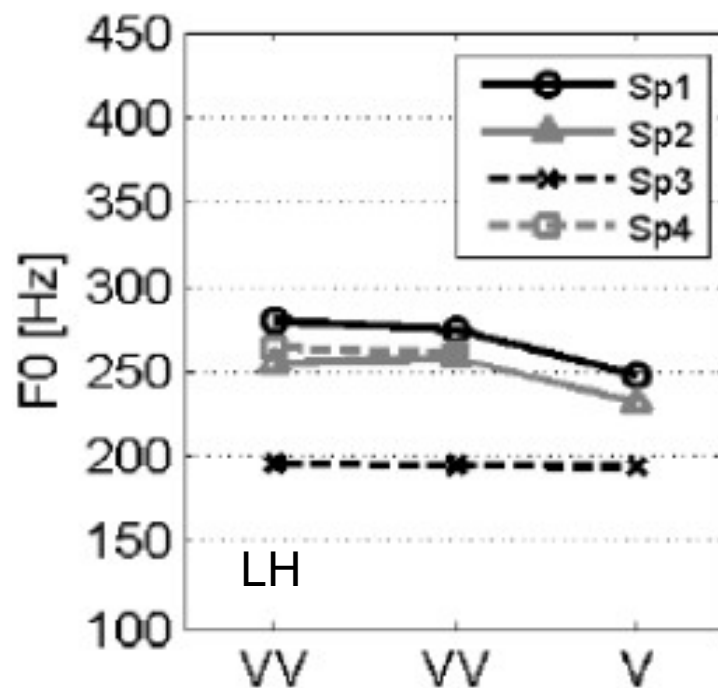
- For English speakers, there's a relationship between pitch accent and metrical heads
 - Leads to misinterpretation of pitch prominence as metrical heads
- Schwa is not the best for pitch
 - It is *short*, so aligning F0 targets can be hard
 - Olsberg et al (2007):
 - “removing spectral information affected not only subjects’ ability to judge the number of syllables in a sentence, but also their ability to identify the tones.”
 - Is pitch movement simply hard to perceive over [ə]

Halh (Khalkha Mongolian)

- Misperception of H tone as stress
- Conjecture: Every word has a %LH tune

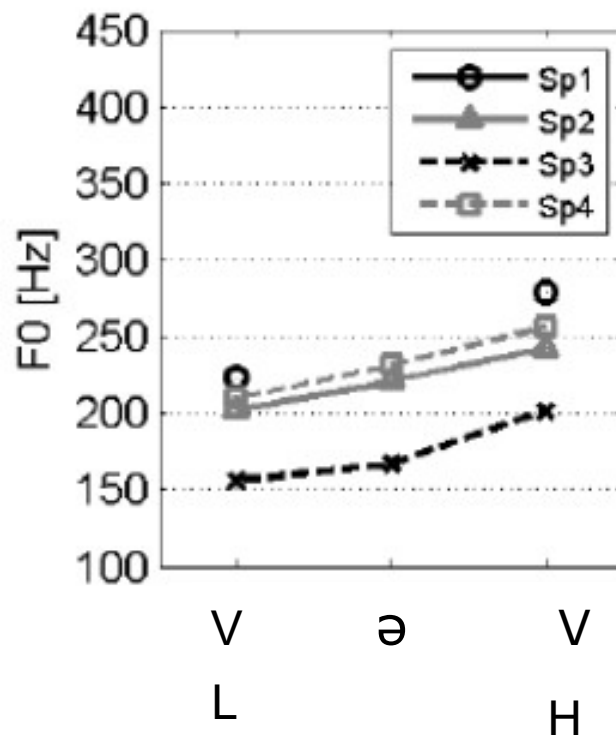


Halh (Khalkha Mongolian)



Halh (Khalkha Mongolian)

- Reduced vowels are *very short*
 - So the H target is realized *later*



Is Chukchi evidence?

- Have we seen any evidence that there is (or was) some PhM that generated the stress outputs asserted by the various descriptions?
- By examining the theory, we identified points of potential ambiguity in the source of the perceived realization of PhM metrical heads
 - For every point of ambiguity, the theory requires a disambiguation
 - which mandates a methodology, implemented by techniques – many of which already exist and are well known

Is there any evidence for s-d stress?

- Not "Is there sonority-driven stress?"
- But rather:
 - Is there any case cited in the literature where the methodological concerns of Generative phonology are addressed?
- None so far, but I'm still going through them in detail
 - However, so far ...

Characteristics of s-d stress evidence

- No/little subject information
- Little phonetic information; very little objective phonetic work; almost always impressionistic
- Generalizations (and negative implications) are often not adequately supported by data
- Very few sources refer to stress-sensitive phonological processes
- When there is replication, there is almost always disagreement

Why this is (partly) my fault

- There might be phonologists who believe that there is such a thing as sonority-driven stress because of my work
- If you believed me, that was your mistake
 - You should have demanded adequate evidence
- But let's blame me for argument's sake
- Can I pass the blame on to anyone else?

No.

- The sources I used did not *claim* to be about the PhM
- Castrén did not know about Generative phonology in 1854, so cannot be blamed for his generalizations about Nganasan
 - I *interpreted* Castrén's claims as being about the PhM
 - That was my intellectual leap – an unjustified assumption
- The responsibility always lies with those who repurpose a description for a novel use

Beyond sonority-driven stress

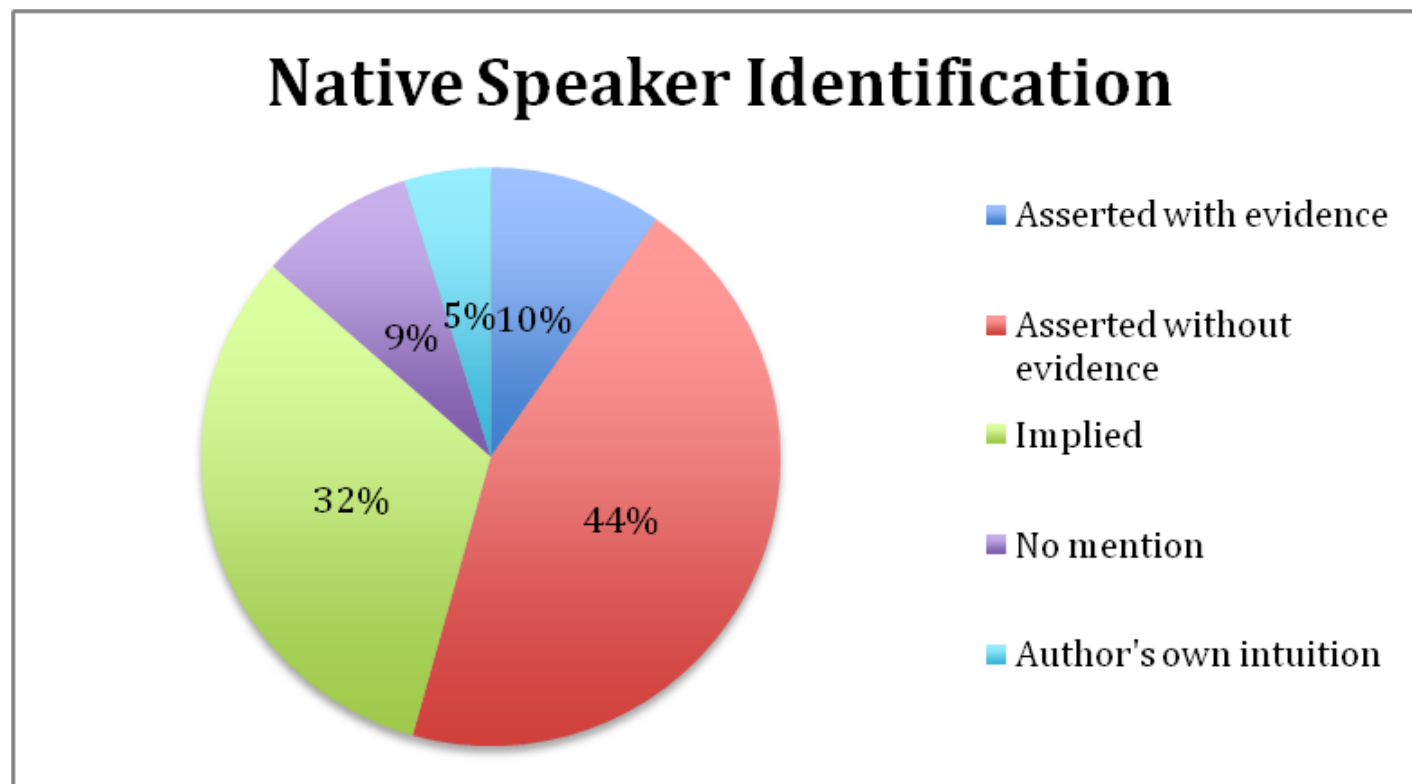
- Are there QI iambs?
- Is there onset-driven stress?
- Default to opposite stress?
- Default to same side stress?
- Iambs?
- Which consonants can be epenthesized?

In the journal *Phonology*

- 25% of the datasets are primary
 - Work where the author has done some elicitation/experiment
- 75% are secondary
 - They report published descriptions
- Reporting subject properties is very rare for secondary datasets

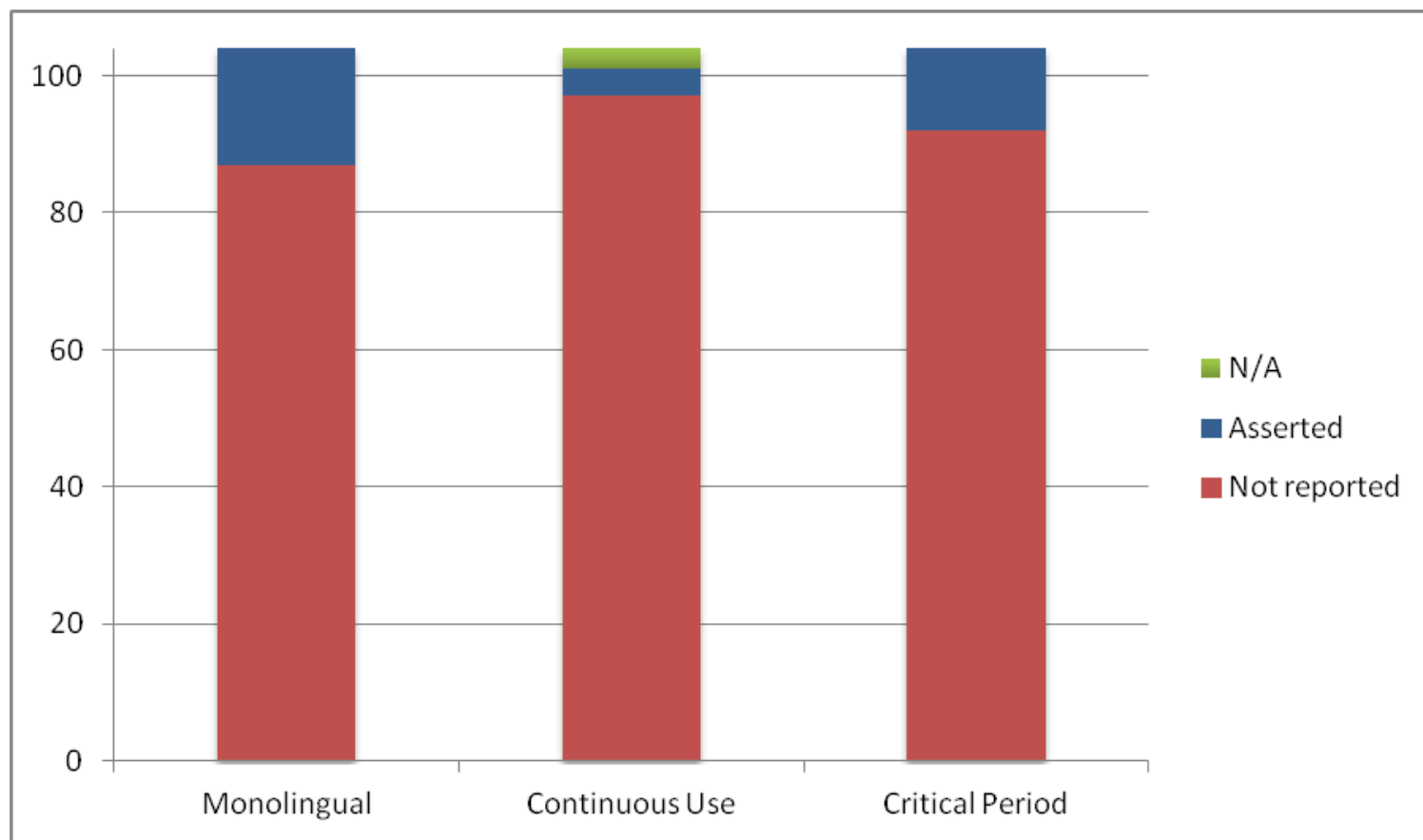
Phonology: Native speaker id/Primary

- Fremed (2013); de Lacy (in prep.)



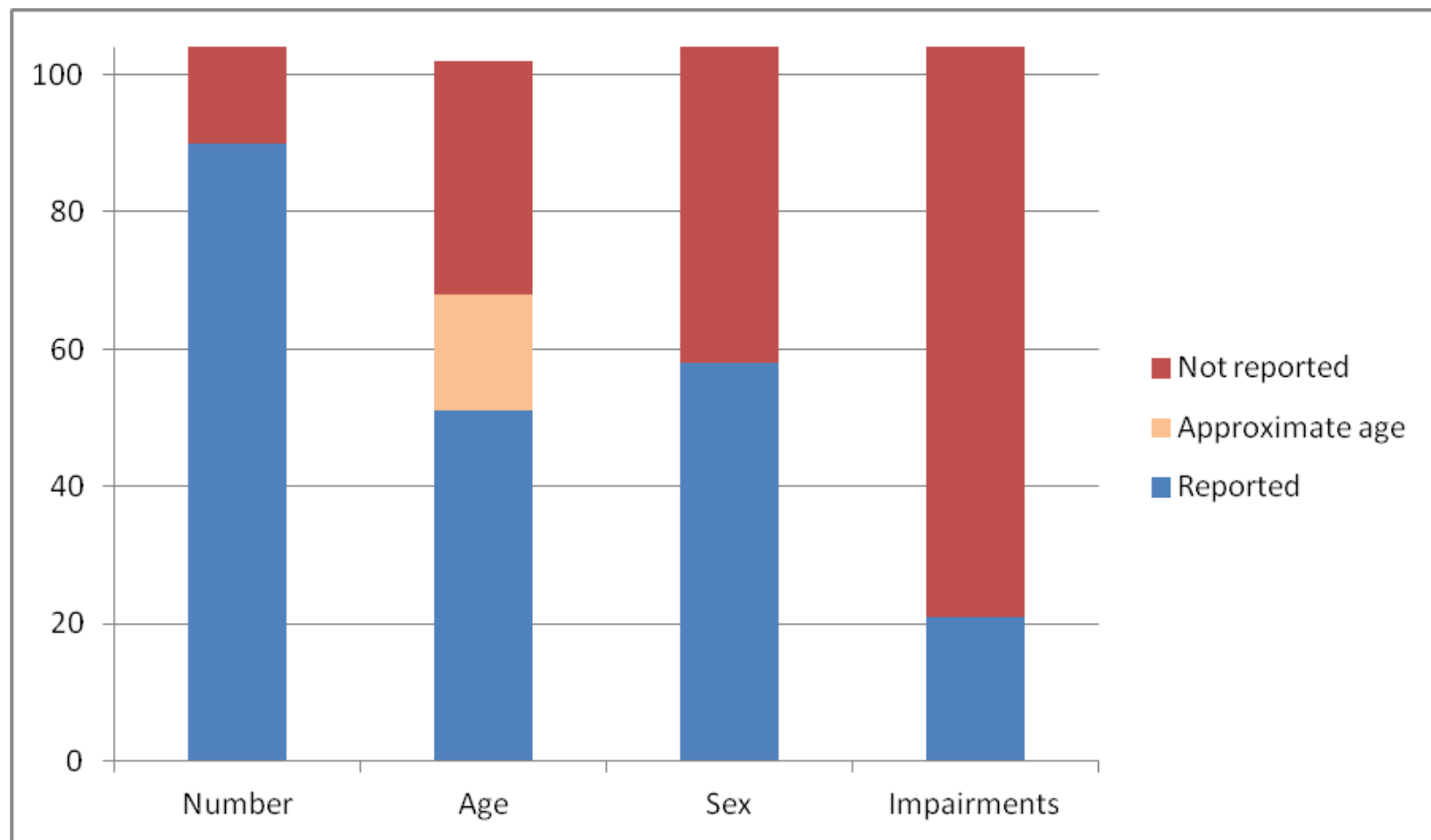
Native speaker identification in Primary datasets in *Phonology* 1999-2102

Phonology: 'Native speaker' criteria



Crucial 'native speaker' properties in *Phonology* for Primary datasets 71

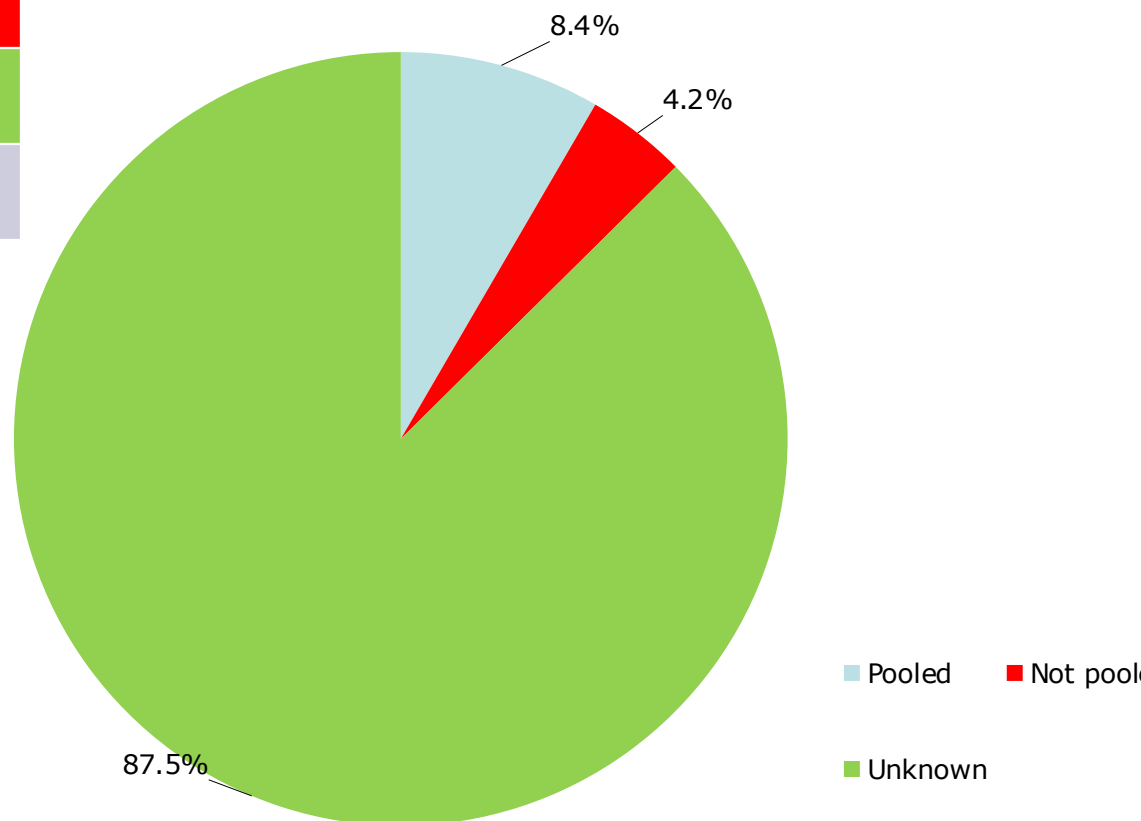
Properties of Primary dataset subjects



Pooling in *Phonology*

Pooled	30 (8.4%)
Not pooled	15 (4.2%)
Not reported	314 (87.5%)
Total	359

Pooling by Dataset (n=359)



Reporting: Cognitive or Physical Impairment

	Not reported	Asked	Did not ask
All (359)	97.8%	2%	0.2%
Primary (60)	92.4%	6.8%	0.8%
Secondary (268)	100%	0%	0%

Has the field changed?

- Yes: there's more in-lab experimentation
- Is this better?
- The problems I've talked about today are due to
 - acceptance of other field's techniques (e.g. anthropology, descriptive taxonomy, psychology, sociology)
 - without considering whether those techniques are justified in Generative phonology
- Are we just importing bad techniques from other fields for in-lab experiments, too?

The arms race

- There is always an arms race between theory and evidence
 - Theories develop and make empirical predictions
 - Evidence then needs to catch up
 - Unexpected data is discovered
 - Theories then need to change
- We have many interesting theories right now
 - We need to understand how to find evidence for them