

Phonology knows about lexical categories

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1. Overview

- (1) Perennial question:
 - What kinds of information must the phonological grammar be sensitive to?
- (2) One point of controversy:
 - Are there processes/constraints/rules that are sensitive to lexical category (N, V, A)?
- (3) One attempt to avoid using categories in phonology:
 - Use the distinction between free and bound forms to account for category-specific effects

(4) Claim today:

- There exist cases of category-specific phonology that cannot be reduced to the free/bound distinction in this way

⇒ **Phonology does recognize lexical categories**

2. Background:

Category-specific effects in phonology

(5) Some languages with phonological differences in words of different lexical categories (Smith to appear)

<i>Language</i>	<i>Phenomenon</i>	<i>N/V pattern</i>
<u>Spanish, Hebrew</u> Japanese, Ancient Greek Mono, Proto-Bantu Hebrew, Mbabaram	<u>stress</u> accent tone prosodic shape	N allow more freedom than V
<u>Chuukese</u>	<u>prosodic shape</u>	N augmentation
Ewe Paamese	tone diachronic segment deletion	V allow more freedom than N (?)
Lenakel Lamang Arabic, Itelmen	stress tone prosodic shape	Distinct in N/V, but both predictable

3. Case study: Nivkh

— Free/bound accounts for N/V differences

(6) Nivkh: Analysis from Shiraishi (2004)

- Obstruent alternations are category-specific?
- Shiraishi reanalyzes these using the free/bound distinction

(7) Nivkh obstruent phoneme inventory

	<i>fortis</i>	<i>lenis</i>
<i>stops</i>	p ^h t ^h c ^h k ^h q ^h	p t c k q
<i>fricatives</i>	f ř s x χ	v r z ʏ ʙ

- (8) Stop/fricative contrast is neutralized...
- in non-phrase-initial position, if
 - in a morphologically derived environment

(9) Neutralization processes

- Spirantization: Obstruents —> fricatives
after vowel, glide, or stop
- Hardening: Obstruents — > stops
after nasal or fricative

(10) However...

- Hardening only affects verbs, not nouns

(11) Hardening affects verbs

[c ^h xəf q ^h a-]	(< /χa-/)	‘bear’ + ‘shoot’	‘to shoot a bear’
[cus t ^h a-]	(< /řa-/)	‘meat’ + ‘bake’	‘to bake meat’
[tux k ^h e-]	(< /ye-/)	‘axe’ + ‘take’	‘to take an axe’
[p ^h nənx t ^h əu-]	(< /rəu-/)	‘one’s sister’ + ‘teach’	‘to teach o.’s s.’

(12) Nouns resist hardening

[t ^h ulv v ^h o]	*[t ^h ulv b ^h o]	‘winter’ + ‘village’	‘winter village’
[c ^h ŋər v ^h ox]	*[c ^h ŋər b ^h ox]	‘grass’ + ‘hill’	‘hill covd. in grass’
[təf řə]	*[təf t ^h ə]	‘house’ + ‘door’	‘entrance door’
[t ^h enj v ^h aqi]	*[t ^h enj b ^h aqi]	‘coal’ + ‘box’	‘coal box’

(13) Shiraishi's approach (based on Kenstowicz 1996)

- Nouns in Nivkh are free forms
- Verbs in Nivkh are bound
- **Base identity** can be used to account for the apparently category-specific pattern

(14) Why this works

- Base identity =
phonology of morphologically free **base**
influences
phonology of **derived form**

(e.g., Kiparsky 1982, 2000; Kenstowicz 1996; Benua 2000)

(15) Base identity in Nivkh

- Nouns with initial fricatives have bases

/vo/ [vo] ‘village’

- Derived nouns maintain that fricative even in the hardening environment through base identity

[t^hulv vo] ⇐ [vo] ‘winter + village’

- Derived verbs have no base to be similar to —
so nothing prevents hardening

/χa-/ ‘to shoot’

[c^hxəf q^ha-] (no base *χa) ‘shoot + bear’

4. Case study: Spanish

— Free/bound distinction insufficient

(16) **Spanish** stress is lexically contrastive for nouns, but not for verbs (Harris 1983; Garrett 1996)

- Noun stress may be antepenultimate, penultimate, or final; minimal pairs exist
- Verb stress location is determined by the inflectional affix that the verb form bears

(17) Verbs: stress is determined by inflectional affix

[láβ-o] ‘wash-1SG.PRES.INDIC’ [laβ-é] ‘wash-1SG.PRET.INDIC’

[láβ-a] ‘wash-3SG.PRES.INDIC’ [laβ-ó] ‘wash-3SG.PRET.INDIC’

(18) Nouns: stress is lexically contrastive

- Adjectives follow this pattern as well

Examples of (near-)minimal noun pairs

Antepenultimate stress

[sáβana] ‘bed sheet’

[káskara] ‘shell, husk’

[tórtola] ‘dove’

[bíspera] ‘day before’

Penultimate stress

[saβána] ‘savannah’

[kaskáđa] ‘waterfall, cascade’

[tortúya] ‘turtle’

[espéra] ‘wait, delay’

- Penultimate stress is “default;” antepenultimate (and final) stress is marked

(19) Why free/bound distinction is insufficient

- Some N, A are bound roots (obligatory gender sfx)

<i>N:</i>	<i>masculine</i>	<i>feminine</i>	
	[náwfray-o]	[náwfray-a]	‘shipwrecked person’
	[bíyam-o]	[bíyam-a]	‘bigamist’

<i>A:</i>	<i>masculine</i>	<i>feminine</i>	
	[lóβrey-o]	[lóβrey-a]	‘murky, dismal’
	[supérflu-o]	[supérflu-a]	‘superfluous’
	[purpúre-o]	[purpúre-a]	‘purple’
	[simultáne-o]	[simultáne-a]	‘simultaneous’

- **Contrast in N/A even without a free base**

5. Case study: Hebrew

— Free/bound distinction insufficient

(20) Hebrew stress (Becker 2003)

- All verbs are templatic (=bound)
 - All verbs have ‘mobile’ (default) stress
- Nouns and adjectives may be atemplatic (=free)
 - Atemplatic N/A allow fixed (contrastive) stress
- Free/bound does correlate with fixed stress

(21) Why free/bound distinction is insufficient

- Atemplatic N fixed stress: Location contrastive
- Atemplatic A fixed stress: Always root-final
- **Both are free —> why are they different?**

6. Case study: Chuukese

— Free/bound distinction irrelevant

(22) **Chuukese** minimal-size restriction (Muller 1999; additional data from Goodenough & Sugita 1980)

- Both N and V undergo regular final mora (μ) loss
- Only N are subject to a 2μ min size requirement
 - Initial geminate bears μ ; final coda does not

(23) Verbs: No 2μ minimum

[fan] ‘go aground’ \neq [fa:n] ‘break open (as a boil)’

[mæ:r] ‘move, be shifted’ \neq [mæ:r] ‘grow (as a plant)’

(24) Nouns: Minimally 2μ

	<i>UR</i>	<i>Final μ loss</i>	
<i>CCVC already 2μ</i>	/kkeji/	[kkej]	‘laugh’
	/tʃtʃara/	[tʃtʃar]	‘starfish’
<i>*CVC must lengthen</i>	/fasa/	[fa:s]	‘nest’ *[fas]
	/fæne/	[fæ:n]	‘building’ *[fæn]

(25) Why free/bound distinction is irrelevant

- N and V *equally* free~bound —> **Why different?**
 - Both may appear unaffixed
 - Both subject to final μ loss

Conclusions

(26) Some cases of category-specific effects may be reanalyzed as free/bound effects

- Appealing analysis for Nivkh—category-specific effects tend *not* to involve segmental phonology

(27) However, reanalysis will not work for all cases

- See also discussion in Bobaljik (2008)

∴ Phonology must refer to lexical categories ∴

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