

**Abstractness in Representations****Odden Chapter 9**

We've used two levels of description, first phonetic and phonemic, then SR and UR. Traditional phonemic level allows limited abstractness, while the underlying representations of Generative Phonology can be as abstract as we like, so long as we generate the correct surface forms.

The main arguments that we need some underlying representation have been:

- 1) **predictability**
- 2) **identity of morphemes** despite variation on surface
- 3) **inertness** of redundant features (we have not dealt with this much)
- 4) environments for stating **proper generalizations/regularity of rule applications**

Why **limit** abstractness?

- a) to limit the theory; to make the theory predict only the types of languages that are actually attested
- b) to reflect human cognition/learning (insofar as we understand it)

We assume no more abstractness than “necessary”:

**URs = SRs except that:**

- 1) **we do not include redundant, predictable information in URs** (this is a shared assumption with phonemics; leave out allophonic variation and explain it as part of the grammar, not the lexicon; even this can lead to problems, as in the flap in 'water'. Some generativists have gone wild with the idea of “redundant” too, and underspecification)
- 2) when a morpheme has different SRs, we need the UR of the morpheme to differ from at least some SRs; **alternations in a morpheme's surface form** may reveal the need for some abstractness in the morpheme's UR
- 3) when we can argue for a distinct UR based on **patterns/generalizations** (here's the messy part – what counts as a good argument?)

Possible restrictions on abstractness:

- 1) **all alternants are listed in the lexicon**
- 2) the UR of a morpheme must appear **as part of one of the forms on the SR**
- 3) UR contains **segments which each appear phonetically** in at least 1 alternant

What does this rule out? **Absolute neutralization:**

**A segment in the UR never surfaces in any of the surface realizations.**

**Why would we do such a thing?**

Yawelmani Yokuts (an AmerInd language, Newman 1944)

<b>Vowel system on the surface:</b>	Short		Long	
	i	u	e:	o:
	(e)	o		a:
		a		

<u>non-future</u>	<u>gerundive</u>	<u>dubitative</u>	<u>participative</u>
xat-hin	xat-mi	xat-al	xat-sa
bok-hin	bok-mi	koʔ-ol	bok-xo
xil-hin	xil-mi	xil-al	guy-xa
dub-hin	dub-mu	dub-al	dub-xa

**Vowel harmony:** feature round spreads when two vowels have the same value  $\pm$ high

<u>non-future</u>	<u>dubitative</u>	<u>imperative</u>	<u>future</u>
won-hin	wo:n-ol	won-ko	wo:n-en
dos-hin	do:s-ol	dos-ko	do:s-en

**Vowel shortening:** long Vs become short in closed syllables (syllables that end with a C)

<u>non-future</u>	<u>gerundive</u>	<u>dubitative</u>	<u>future</u>
paʔit-hin	paʔit-mi	paʔt-al	paʔt-en
lihim-hin	lihim-mi	lihm-al	lihm-en
logiw-hin	logiw-mi	logw-ol	logw-en
ʔugun-hin	ʔugun-mu	ʔugn-al	ʔugn-en

**Epenthesis:** a [+high] V is inserted after the first C of a three consonant cluster

<b>Ordering relationships among these rules:</b>	<u>dubitative</u>	<u>gerundive</u>
epenthesis and harmony?	ʔugn-al	ʔugun-mu
	logw-ol	logiw-mi
epenthesis and shortening?	moyn-ol	mo:yin-mi
	salk-al	sa:lik-hin

**More Vowel Harmony Data:** Some roots are exceptions in two ways

CVVC	CVVCC	vs.	CVVC	CVVCC
do:s-ol	sonl-ol		co:m-al	woʔy-al
dos-hin	so:nil-hin		com-hun	wo:ʔuy-hun

**Class of roots shaped CVCV:C:** CaCa:C, CiCe:C, CoCo:C, and CuCo:C

Here we can account for the “exceptional” roots and the CVCV:C roots by proposing abstract underlying segments which are realized by other segments on the surface. This absolute neutralization still abides by a weak limitation on abstractness:

- 4) **Each distinctive feature in the UR must emerge in at least one phonetic realization of the morpheme.**

**Motivations/Arguments for abstract neutralization****Symmetry of inventory**

Yawelmani, Sanskrit

why isn't this a strong argument for the English vowel case in Odden (p. 270ff)?

**Regularity of phonological rule application**

Used in almost every example

Why isn't this a strong argument for the Hungarian vowel harmony exceptions?  
or for the English vowel case?**Historical Evidence/Language Change****Rule Loss or Reversal**

in Yiddish

in Kimatuumbi

**Additional Rules:**

in Tera, palatalization

**Language Games**

in Bedouin Arabic

**If you plan to specialize in phonology, I recommend reading:** Ohala, John J. (1986) A Consumer's guide to evidence in phonology, *Phonology Yearbook 3*: 3-26.**Opposing Viewpoint: Natural Generative Phonology (Hooper 1976)**

Phonology deals only with processes that are

- 1) transparent
- 2) phonetically motivated
- 3) regular and productive

So called "P rules"

**Hooper's True Generalization Condition**

No phonological generalization is a true one unless it is true at the level of surface phonetic representation.

A real phonological rule expresses **transparent** surface generalizations. So $X \rightarrow Y / W \_ Z$  means that

- 1) there are no strings of the form WXZ in the phonetics
- 2) and there must be strings of the form WYZ in the grammar

What is the cost of making all rules transparent? what do we give up?

Rules which refer to morphological factors are MP rules. Other regularities should be handled by the morphological component in the lexicon. Lexical Via Rules connect one form to another in the lexicon; a **Via Rule** is not productive (e.g., [aj]  $\neq$  [I] for pairs divine/divinity). This approach develops into Bybee's *Phonology and Language Use* (2001) (note Hooper = Bybee).