

# Chapter 9

## Levels of representation



## Introduction

- We already know about underlying (phonological) and surface (phonetic) level, phonological rules, and rule ordering
- If you look up the pronunciation of a word in a dictionary, you will find it is normally given in “phonemic” transcription
  - ignoring phonetic detail [pʰɪn]
  - cf. morphology: only lexemes, not inflected forms
- Not necessarily the underlying representation, e.g. looked /lʊkt/ not /lʊkd/ : level in between?

## Different kinds of rules

- **Voicing alternation** in plural: related to morphology
  - in cat/z/ ‘cats’ but not in cat-/z/oo
- **Aspiration** in English: “low-level” phonetic rule
  - automatic, applies always
- Different *kinds* of rules:
  - Voicing alternation=“lexical” [more phonological]
  - Aspiration=“postlexical” [more phonetic]

## Kinds of rules

- Theory about **where in the grammar** phonological rules apply
  - some rules apply in connection to morphology, e.g. when morphemes are added to a stem (“morphological component”, “lexicon”) = **lexical**
  - other rules apply “at the end”, when words are put into a sentence (in the syntactic component) = **postlexical**
  - rule ordering: postlexical rules always apply after lexical rules

## Architecture of the grammar

underlying forms: / ..... /

lexical rules: |

postlexical rules: |

phonetic forms: [ ..... ]

## Two types of rules

<i>Lexical rules</i>	<i>Postlexical rules</i>
a. May refer to morphological labels	Cannot refer to morphological labels
b. May have exceptions	Cannot have exceptions
c. Structure-preserving	Need not be structure-preserving
d. Accessible to native-speaker intuition	Not easily accessible to native-speaker intuition
e. Cannot apply across word boundaries	May apply across word boundaries
f. Must precede all postlexical rules	Must follow all lexical rules

## Morphology

- Some (lexical) rules apply only to nouns or to verbs, or only when a particular morpheme is added
  - cf. nation + al  
nation + hood
  - +al triggers changes (vowel shortening) in the stem, +hood does not
  - rule: V → short / \_\_\_ al
  - must be a **lexical** rule

7

## Exceptions

- Trisyllabic shortening (*lexical rule*)

Tense	Lax
div[ai]ne	div[ɪ]nity
v[ei]n	v[æ]nity
ser[i:]ne	ser[ɛ]nity

- Exceptions: obese – obesity  
nice – nicety
- Variation: private – privacy

8

## Structure preservation

- Lexical rules **can only create phonemes of the language**
- E.g. English aspiration: creates aspirated plosives, which are not phonemic in English
  - so this must be a *postlexical* rule
  - so it cannot have exceptions
  - so it must be blind to morphology

9

## Native speaker intuitions

- Speakers are not aware of application of postlexical rules
  - e.g. aspiration in English /p/
    - [p] in pill = [p] in spill = [p] in lip
  - “automatic” rules
  - not necessary to include in the dictionary

10

## Word boundaries

- Lexical rules (by definition) apply to words, so cannot apply across word boundaries (when words are put together into a sentence)
  - e.g. voicing in Dutch — s ] [ d —  
z
  - must be postlexical
  - so has the same set of predictions (no exceptions, etc.)

11

## Phonology and morphology

- Some morphological rules make use of phonological information
- E.g. English comparative or superlative formation:

a.	white	(waɪt) <sub>F</sub>	(waɪtər) <sub>F</sub>
	noble	(nəʊbl) <sub>F</sub>	(nəʊblər) <sub>F</sub>
	silly	(sɪli) <sub>F</sub>	(sɪliər) <sub>F</sub>
b.	beautiful	(bju:tɪfl) <sub>F</sub>	*(bju:təflər) <sub>F</sub>
	manifest	(mænə) <sub>F</sub> (fest) <sub>F</sub>	*(mænə) <sub>F</sub> (fester) <sub>F</sub>
	serene	sə(rɪ:n) <sub>F</sub>	*sə(rɪ:nər) <sub>F</sub>

## Recent research

- Two ways of forming English comparatives and superlatives:
  - -er / -est "synthetic"
  - more / most "analytic"

(Zhu Haibin 2013 SISU MA Thesis)
- Apparently, shift taking place from synthetic to analytic
  - makes sense
  - lots of interesting forms, e.g. 'drunk'

13

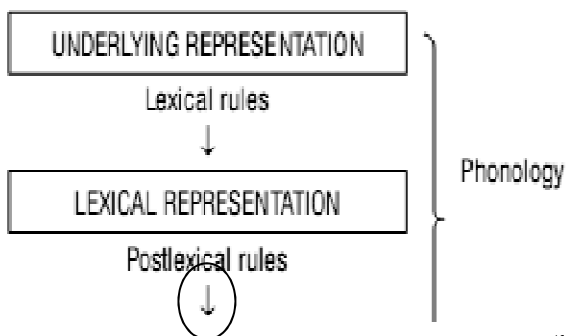
## Zhu Haibin quote

- *"Curiouser and curiouser!" cried Alice (she was so much surprised, that for the moment she quite forgot how to speak good English).*

*Alice's Adventures in Wonderland,*  
by Lewis Carroll

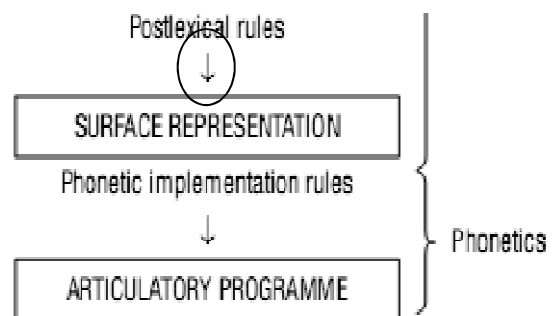
14

## Model of phonology



16

## To the phonetics



17

## Phonetic implementation

- Languages and speakers differ in their pronunciation of the "same" syllable
  - very "low-level" effects
  - still important for social status (sociolinguistics) or "foreign accent" (L2-learning)
- Different models of phonetic implementation
  - Interpolation models (e.g. tone)
  - Gesture-based models

18

## Conclusion

- Different kinds of rules
  - some phonological, some phonetic
- Important distinction: lexical vs. postlexical
  - morphology is crucial
  - tells us something about the organisation of the grammar as a whole
- Returning to 'dictionary' notation: /lʊkt/: this is the output of lexical rules (voice assimilation for the past tense), but no postlexical rules have applied

19

## Homework

- Read chapter carefully; prepare any questions
- Don't forget Word-of-the-Day
  - on-line:  
<http://elearning.shisu.edu.cn/mod/glossary/view.php?id=1927>
- Exercises: Qs 85 and 86
- Mid-term deadline: April 28.
- Thank you

20