PHONOLOGY : THE SOUND PATTERNS OF LANGUAGE

Segment Insertion and Deletion Rules

- Phonological rules may also add or delete entire segments
  - Adding a segment is known as **epenthesis**
    - The rules for forming plurals, possessives, and third person singular verb agreement in English all involve an epenthesis rule:

      Insert a [ə] before the plural morpheme /z/ when a regular noun ends in a sibilant, giving [əz]

      $$\varnothing \rightarrow \text{ə} \;/\; [+\text{sibilant}] \_\_\_ [+\text{sibilant}]$$

Segment Insertion and Deletion Rules

- Segment deletion is more common than insertion
  - The word *memory* is often pronounced as if it were spelled *memry*
  - The deletion of [g]:

A		B	
sign	[sāɪn]	signature	[sɪgnətʃər]
design	[dəzāɪn]	designation	[dɛzɪgneʃən]
paradigm	[p^{h}ærədāɪm]	paradigmatic	[p^{h}ærədɪgmærək]

From One to Many and from Many to One

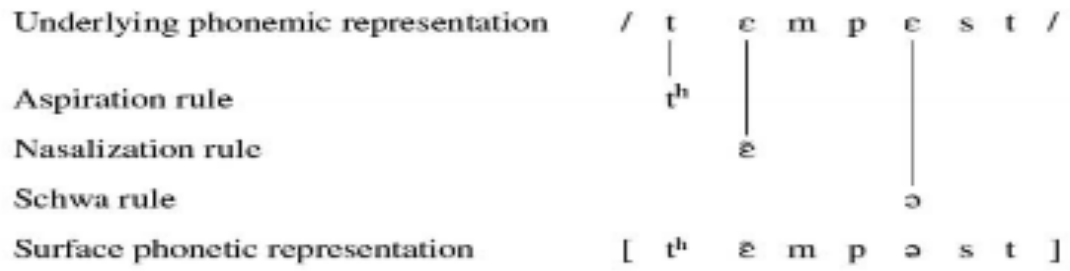
- In English unstressed vowels are reduced to [ə]

	A		B	
/i/	compete	[i]	competition	[ə]
/ɪ/	medicinal	[ɪ]	medicine	[ə]
/e/	maintain	[e]	maintenance	[ə]
/ɛ/	telegraph	[ɛ]	telegraphy	[ə]
/æ/	analysis	[æ]	analytic	[ə]
/a/	solid	[a]	solidity	[ə]
/o/	phone	[o]	phonetic	[ə]
/ʊ/	Talmudic	[ʊ]	Talmud	[ə]

- German has both voiced and voiceless obstruents as phonemes, but when they occur at the end of words, they become voiceless

The Function of Phonological Rules

- Phonological rules provide the phonetic information necessary for the pronunciation of utterances
  - **Derivation**: the way the phonological rules apply to the underlying phonemic representation to create the phonetic representation:



SLİPS OF THE TONGUE:EVIDENCE FOR PHONOLOGICAL RULES

A slip of the tongue is a mistake in speeking, usually trivial, sometimes amusing.Also called lapsus linguage or tongue-slip.Something that you say by accident when you intended to say something else.

- Eg : I called her new boyfriend by her previous boyfriend’s name.
- It was just a slip of the tongue

Phonological Analysis

- In order to determine the phonemes and allophones in a language other than English, you should answer the following questions while you examine data:
  - 1. Are there any minimal pairs in the data in which these sounds contrast?
  - 2. Are any noncontrastive sounds in complementary distribution?
  - 3. If noncontrasting phones are found, what are the underlying phonemes and their allophones?
  - 4. What are the phonological rules by which the allophones can be derived?

Phonological Analysis

- In the Greek data below, our task is to determine whether the following sounds are allophones of separate phonemes or allophones of the same phoneme:
  - [x] voiceless velar fricative
  - [k] voiceless velar stop
  - [c] voiceless palatal stop
  - [ç] voiceless palatal fricative

1. [kano]	"do"	9. [çeri]	"hand"
2. [xano]	"lose"	10. [kori]	"daughter"
3. [çino]	"pour"	11. [xori]	"dances"
4. [cino]	"move"	12. [xrima]	"money"
5. [kali]	"charms"	13. [krima]	"shame"
6. [xali]	"plight"	14. [xufta]	"handful"
7. [çeli]	"eel"	15. [kufeta]	"bonbons"
8. [ceri]	"candle"	16. [oçi]	"no"

Phonological Analysis

- 1. Are there any minimal pairs in which the sounds [x], [k], [c], and [ç] contrast?

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- From these minimal pairs, we can tell that [k] and [x] contrast and that [c] and [ç] also contrast, but we have no evidence that [k] and [c] contrast, and we also don't yet know about [x] and [ç]

Phonological Analysis

- 2. Are any noncontrastive sounds in complementary distribution?
  - One way to determine this is to list each phone with the environment in which it occurs:
    - [k]: before [a], [o], [u], [ɾ]
    - [x]: before [a], [o], [u], [ɾ]
    - [c]: before [i], [e]
    - [ç] before [i], [e]
  - We can conclude that the stops [k] and [c] are allophones of one phoneme, and the fricatives [x] and [ç] are allophones of one phoneme

Phonological Analysis

- 3. Which of the phone pairs is more basic, and therefore the underlying phoneme?
  - In many languages of the world, velar sounds become palatal before front vowels
    - This is an assimilation rule since palatals are pronounced further forward in the mouth as are front vowels
  - Therefore we select /k/ to be a phoneme with allophones [k] and [c], and /x/ as a phoneme with allophones [x] and [ç]

Phonological Analysis

- **4**. We can now state the rule by which the palatals can be derived from the velars:

  Palatalize velar consonants before front vowels

  – Using feature notation we can state the rule as:

  [+velar] → [+palatal] / ____ [–back]

  – Since only consonants can be velar and only vowels have the feature [-back], we don't have to include information about the features [consonantal] or [syllabic] in order to make our rule as simple as possible

Which of the following English datasets represents allophones of /t/ in *free variation*?

A) [baɪt̚] ‘bite’ and [baɪt] ‘bite’

B) [baɪt] ‘bite’ and [baʊt] ‘bought’

C) [tʰap] ‘top’ and [stap] ‘stop’

D) [tʰaɪɹ] ‘tire’ and [daɪɹ] ‘dire’

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If we can write a rule to correctly predict which of two sounds will occur in what environment in a language, that means those two sounds are in which type of distribution?

- A) free variation
- B) contrastive distribution
- C) complementary distribution
- D) distinctive feature

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A) allophones of the same phoneme in free variation

B) allophones of two separate phonemes

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D) phones with unknown phonemic status

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Which of the following sets of sounds represents the natural class of voiceless alveolar consonants in English?

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B) [t, s]

C) [t, d]

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- B) deletion
- C) epenthesis
- D) derivation

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DİNLEDİĞİNİZ İÇİN TEŞEKKÜRLER ☺

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