PHONOLOGY II

English Consonantal Allophones

Phonology

- **While phonetically accurate representation of pronunciation is useful to phonology, the focus of phonology is not transcription of words, but rather the mental rules which govern pronunciation of words in a given language.**

Cont.

- However, certain facts simply cannot be predicted.
- For example: sick [sik] vs. sip [sip]
- Hence, the one fundamental component of a language is lexicon , a list of words, which must provide any information which **cannot** be **predicted** by rules of the language

Cont.

- However, much about pronunciation of words can be predicted.
- For example: tick [t^{h} ik] and stick [st k]
- This shows that this fact can be predicted by rules, and we now can consider how this can be done.

English Consonantal Allophones

- While the physical difference between [t^h] and [$t^\bullet$] in English is just as real as the difference between [t] and [d], there is a fundamental linguistic difference between these two relationships.

Cont.

- The selection of t versus d may constitute the sole difference between many different words in English : such words, where two words are differentiated exclusively by a choice between one of two segments, are referred to as minimal pairs.

- Examples: [d] [t]

[d]	[t]
do	two
had	hat
bend	bent
said	set

Cont.

- **The difference between [t] and [d] is contrastive (also termed distinctive)in English, since this difference –voicing- forms the basic sole difference for distinguishing different words (and thus,[t] and [d] contrast).**

Cont.

- The choice of a voiceless aspirated stop such as [t^h] versus a voiceless unaspirated stop such as [t°], on the other hand, never defines the sole basis for differentiating words in English.

Cont.

- In English [t^h] and [$t^\cdot$] are predictable variants of a single abstract segment, a phoneme, which we represent as /t/.
- Predictable variants are termed allophones- the sounds are in complementary distribution because the context where one variant appears is the complement of the context where the other sound appears.

Aspiration

- We will turn our attention to rules of pronunciation in English, starting with aspiration, to see what some of these regularities are.

Aspiration

- In the word pie , after the release of the lip closure, there is a moment of aspiration, a period of voicelessness after the stop articulation and before the start of the voicing for the vowel.
- There is a burst of air that comes out during the period of voicelessness after the release of the stop.

Cont.

- In narrow transcription, aspiration may be indicated a small raised h, [^{h}].
- Accordingly, the consonantal stops in words such as pie, tie, kye are aspirated.

Aspirated Stops

- Pool tooth coup
- Pit tin kill
- Apply atomic account
- Play clay

Unaspirated Stops

- Spool stool school
- Spit stick skid
- Sap sat sack
- Spray stray screw

Cont.

- The selection of aspirated vs. unaspirated voiceless stop is determined by the context in which the stop appears.

1. Aspirated stops appear at the beginning of a word, whereas unaspirated stops appear after [s].
2. Aspirated stops appear before a vowel, whereas unaspirated stops appear at the end of a word.

In short, aspirated stops appear at the beginning of the syllable and unaspirated stops appear elsewhere.

Flapping

- We now turn to another rule. A phonetic characteristic of many North American dialects of English is “flapping”, where /t/ and/d/ become the flap[D] in certain contexts, for example in [waDr].

flapping

- The contexts where the flap appears in English are quite restricted.
- Now consider the following words:

water waiter atom, Adam

We may state that the rule of flapping as follows:

"an alveolar stop becomes a flap when it is followed by an unstressed syllable and preceded by a vowel or a glide.

Some rules for English consonant allophones

1) Consonants are longer when at the end of a phrase, as in words such as

   don nod

2) Voiceless stops (i.e., /p,t,k/ are aspirated when they are syllable initial, as in words such as pip test kick

3) Voiceless stops /p,t,k/ are unaspirated after/s/ in words such as spew

Some rules for English consonant allophones

4. The approximates /w,r,j,l/ are at least partially voiceless when they occur after initial /p,t,k/ as in:

play twin cue [pl̥ei tw̥in kj̥u]

Some concern vowel length:

1)Other things being equal, a given vowel is the longest in an open syllable, next longest in a syllable closed by a voiced consonant, the shortest in a syllable closed by a voiceless consonant.

For example: sea, seed, seat,

sigh, side, site

2) Other things being equal, vowels are longer in stressed syllable.

For example: below , bellow

3) other things being equal, vowels are longest in monosyllabic words, next longest in words with two syllables, and the shortest in words with more than two syllables.

for example: speed, speedy, speedily

4) Vowels are nasalized in syllables closed by a nasal consonant.

For example: man, seen

Some rules for English vowel allophones

5) Vowels are retracted before syllable final.

For example: heed, heel

paid, pail [˕]