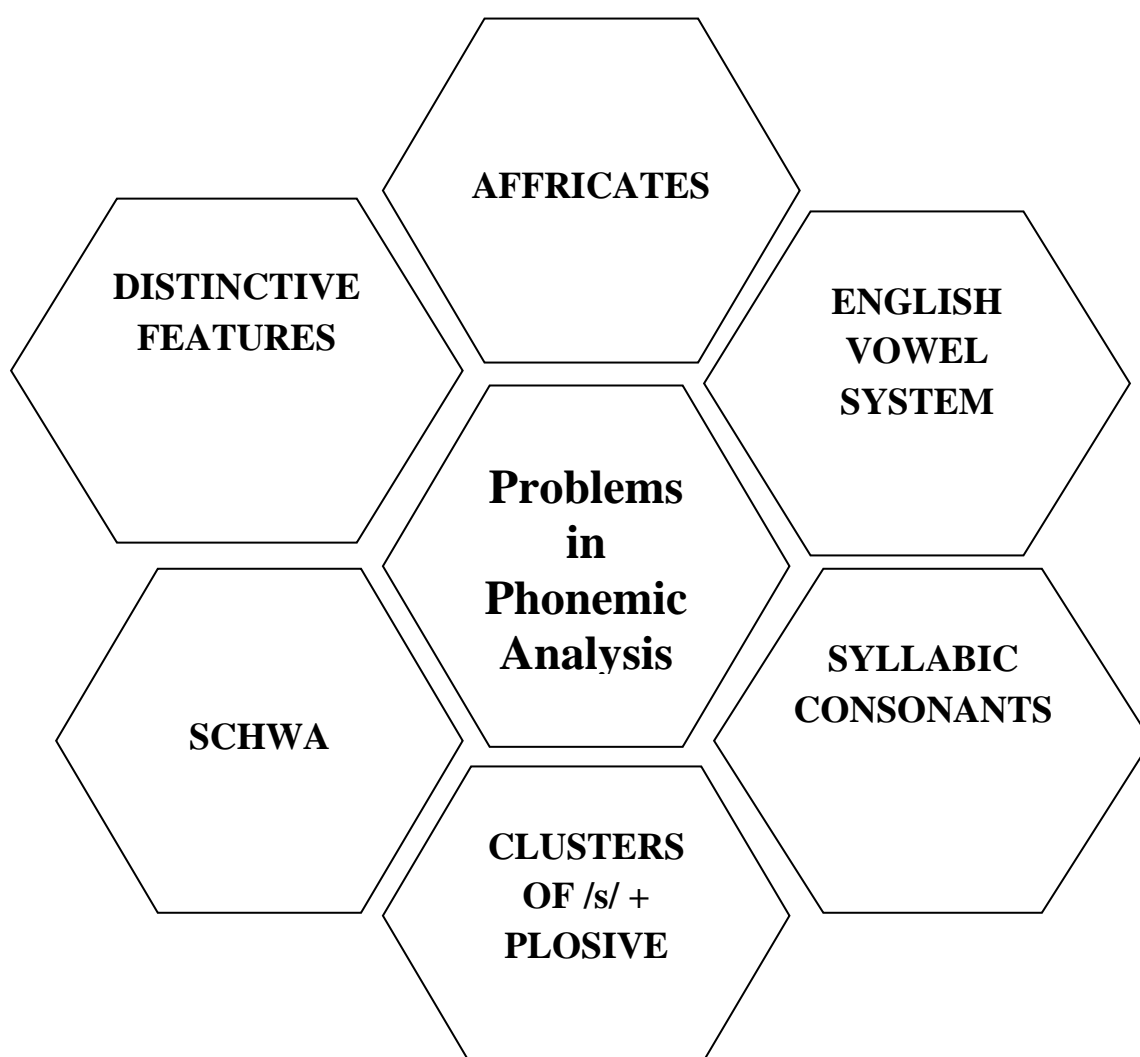


Problems in Phonemic Analysis

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Speech is composed of phonemes. Whenever a speech sound is produced, it is possible to identify which phoneme the sound in question belongs to. There are two main ideas of difficulty of learning about the phonology of English. The first is called the *problem of analysis*, the second area of difficulty is called *the problem of assignment*.

The problem of analysis is shown in the following diagram:



1- Affricates:

The affricates /tʃ/ and /dʒ/ are, phonetically, composed of a plosive followed by a fricative. It is possible to treat each affricate as a single consonant phoneme (**one-phoneme analysis**) of /tʃ/, /dʒ/ as a single consonant phoneme. As a **two-phoneme analysis**, it is possible to say that they are composed of two phonemes each -/t/ plus /ʃ/ and /d/ plus /ʒ/ respectively. If we adopted the two-phoneme analysis, the words 'church' and 'judge' would be composed of five phonemes each, like this: /t-ʃ-ə-r-t-ʃ/ , /d-ʒ-ə-d-ʒ/ instead of the three phoneme that result from the one-phoneme analysis: /tʃ-ɜ:-tʃ/ , /dʒ-ʌ -dʒ/.

In the second phoneme analysis, the total number of phonemes is smaller and should be preferred as more economical. Moreover, the native speakers may suggest that /tʃ/ and /dʒ/ are each "one sound".

2- The English vowel system:

The analysis of the English vowel contains a large number of phonemes, some phonologist proposed different analysis which contain less than ten vowel phonemes and treat all long vowels and diphthongs as composed of two phonemes each. The different ways of doing this: one way is to treat long vowels and diphthongs as composed of two vowel phonemes. If we start with a set of basic vowel phonemes ɪ, e, æ, ʌ, ɒ, ʊ, ə it would then be possible to make up long vowels by using vowels twice. Our usual transcription is given in brackets :

(i:) = ɪɪ (ɑ:) = æ æ (o:) = ɒɒ (u:) = ʊʊ (ɜ:) = əə

Another way of doing this kind of analysis is to treat long vowels and diphthongs as composed of a vowel plus a consonant. Long vowels and diphthongs are composed of a basic vowel phoneme followed by one of j, w, h; e.g. ej (eɪ) /aj/ (aɪ) /ɔj (aʊ) /əw/ (əʊ) /æw/ (aʊ) /ɪh/ (ɪə) /eh/ (eə) /ʊh/ (ʊə) ; ij (i:) æh (ɑ:) ɒh (ɔ:) əh (ɜ:) ʊw (u:). An important point about this analysis is that j, w, h do not otherwise occur finally in the syllable. In this analysis, the inequality of distribution is corrected.

Neutralisation: refers to cases where contrasts between phonemes which exist in other places in the language disappear in particular contexts. For example, although /ɪ/ and /i:/ are clearly distinct in most contexts, there are

other contexts where we find a sound which cannot clearly be said to belong to one or other of these two phonemes. The suggested solution to this is to use the symbol /i/.

Diphthongs: are made from a simple vowel phoneme followed by one of ɪ, ʊ, ə.

Triphthongs: are made from a basic vowel plus one of ɪ, ʊ followed by ə and are therefore composed of three phonemes.

Another way of doing this kind of analysis is to treat long vowels and diphthongs as composed of a vowel plus a consonant, this may seem a less obvious way of proceeding. The idea is that long vowels and diphthongs are composed of a basic vowel phoneme followed by one of j, w, h (in the case of RP), so, the transcription will be :

eɪ (eɪ) ɔɪ (ɔɪ)

æw (æw) əw (əw)

ɪh (ɪh) ʊh (ʊh) eh (e ə)

3- Syllabic consonants:

/p/, /t/, /k/ in syllable initial position are aspirated, but when preceded by /s/ they become unaspirated and could perhaps be transcribed as /b/, /d/, /g/ because contrast between these two groups of consonants become neutralised.

Words like 'spill', 'still', 'skill' are usually represented with the phonemes /p, t, k/ following the /s/. Generally, /b, d, g/ are un-aspirated while /p, t, k/ in syllable initial position are usually aspirated. However, in (sp, st, sk) we find an unaspirated plosive, and there could be a strong argument for transcribing them as (sb, sd, sg). The contrasts between /p/ and /b/, between /t/ and /d/ and between /k/ and /g/ are neutralized.

Allophone: is one of two or more variants of the same phoneme e.g. the aspirated \p\ of “pin” and the unaspirated \p\ of “spin” are allophones of the phoneme \p\.

4- Schwa (ə):

It has been suggested that there is not really a contrast between /ə/ and /ʌ/, since /ə/ only occurs in weak syllables and no minimal pairs can be found to show a contrast between both in unstressed syllables. So, there is a proposal that one

phoneme symbol (e.g. ə) be used for both (e.g. "upper" /əpə/). This new phoneme would have two allophones: one being [ə] and the other [ʌ]; the stress mark would indicate [ʌ] allophone, and with no stress [ə] would be used.

Other phonologists have suggested that /ə/ is an allophone of several other vowels; for example, compare the middle two syllables in the words 'economy' /I'kɒnəmi/ and 'economic' /i:kə'nɒmɪk/. The conclusion is that /ə/ is not a phoneme of English, but is an allophone of several different vowel phonemes when occur in an unstressed syllable. Since this leads to a rather complex and abstract phonemic analysis, it is not adopted.

5- Distinctive features:

Distinctive feature analysis is one of many different ways of treating the notion of phoneme. The phonemes are combinations of different features, the presence (+) and absence (-) of features could be treated as different phoneme.

For example, the English /d/ phoneme differs from the plosives /b/ and /g/ in its place of articulation (alveolar), from /t/ being voiced, from /s/ and /z/ in not being fricative, from /n/ in not being nasal, and so on. In distinctive feature analysis, the feature themselves thus become important components of the phonology.

Please, see the table in your text book on page 103