# Word Phonology of English in System Networks

There are two types of phonology for the words of English:

a **phonaesthetic** form in which the sounds of a word are intended to match natural sounds in creation, eg *whoosh, moo, meow, boom,* or cultural associations, eg *flare, glare, blare; thump, lump, hump*;

and **arbitrary** forms where there is absolutely no association between sound and sense, eg *blow, cow, cat, loud distant noise*.

Whereas the former is very interesting, it involves only a tiny minority of words in English; a presentation of *phonaesthetic* forms will need to be done separately. The vast majority of words display the *arbitrary* relationship between sound and sense; this presentation is an attempt to display the system networks of this majority of words in English.
**Which English?** Each accent has its own phonology; this presentation is confined to Standard Southern England Pronunciation ('Received Pronunciation').
**All words?** Not quite. Just monomorphemic words that have no phonaesthetic function. So words like *take* (but not *taking*), *thank* (but not *thanks*), *rich* (but not *richer, richest, enrich, enrichment* etc). Affixes have their own phonology, which will need to be presented separately.
**System in word phonology** is not like system in lexicogrammar or intonation, a set of options from which a speaker chooses to create meaning; system in phonology at the level of word (and also at the level of groups/phrases) is rather the specifications of what the speakers of a language recognize as having been established in, or 'chosen' by, the language to represent its words.
A **full statement of the phonology of words** of any language would ideally include statements about

- the permissible number of syllables (syllabic count) in a word,
- the permissible degrees of suprasegmental marking,
- the permissible kinds of structure in a syllable,
- the inventory of phonemes at the nucleus of the syllable and at the margin (or margins, in the case of closed syllables),
- their allophonic distribution
- and their permissible phonotactic distribution.

**Readings**

Tench, P. (Ed.) (1992). *Studies in systemic phonology.* London: Pinter.

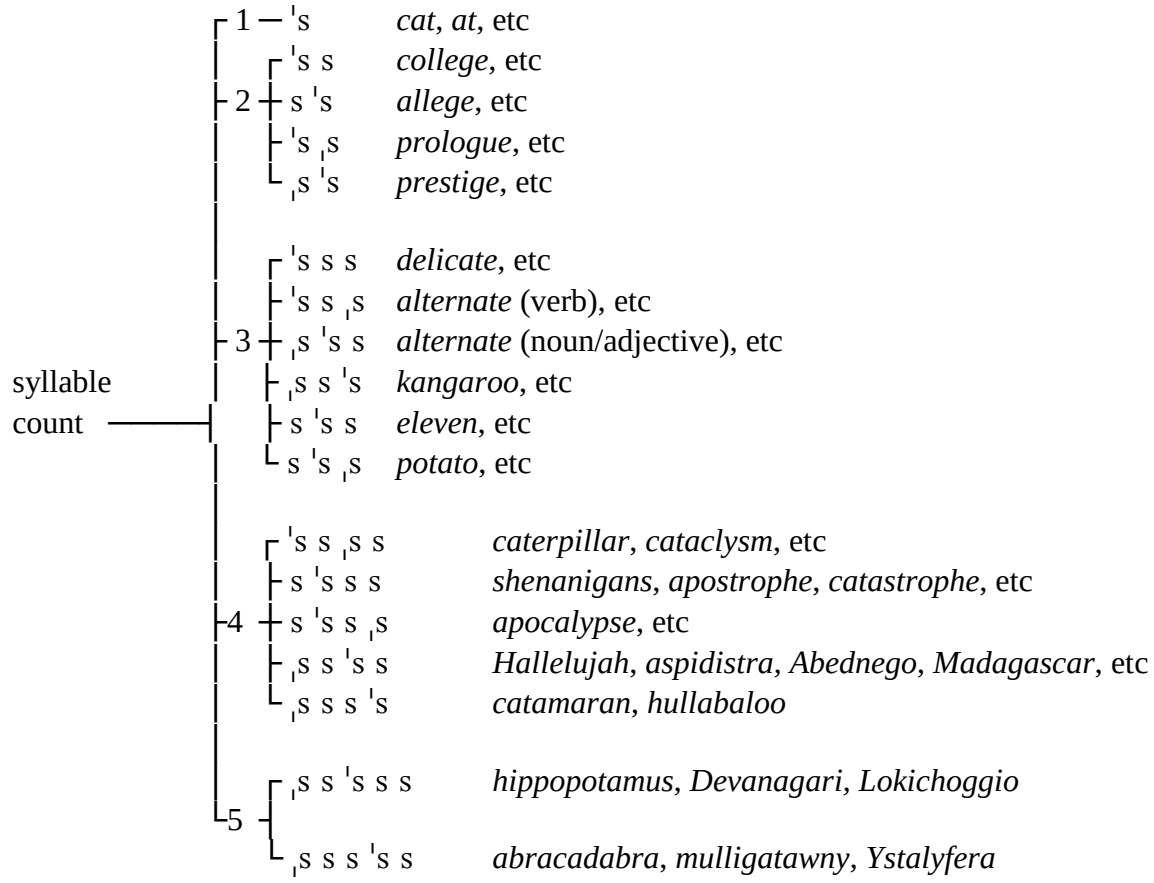
Bowcher, W. & Smith, B. (Eds.) (forthcoming) *Recent studies in systemic phonology.*

Tench, P (in prep) 'The Phoneme and Word Phonology in SFL', in Bartlett & O'Grady *The Routledge Handbook of Systemic Functional Grammar* (email for a copy tenchp@cf.ac.uk )

## What follows is an attempt to produce system networks for the phonology of English words

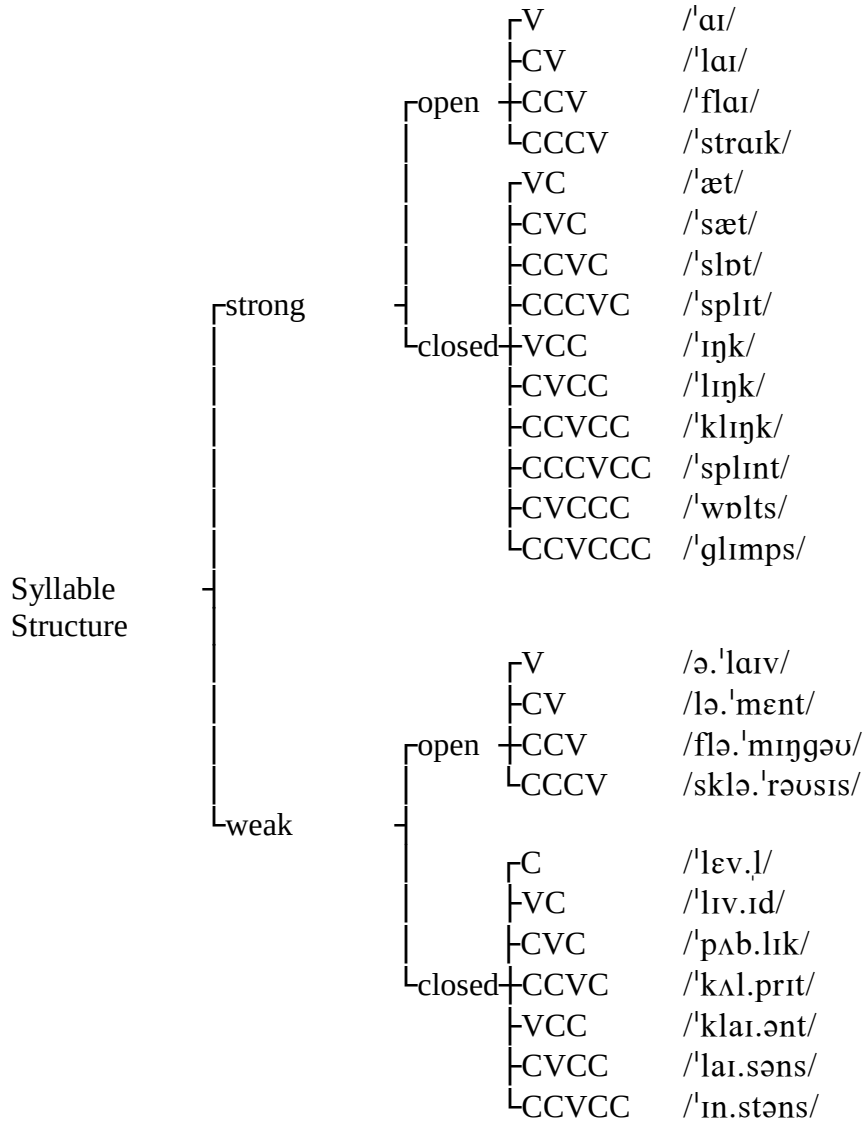
# Syllable Count and Suprasegmental Marking

Most English (monomorphemic) words contain either 1, 2 or 3 syllables; a few contain 4 syllables – they are mainly loan words and names or words of Greek origin, eg *catamaran, Madagascar, catastrophe, apocalypse.* Even fewer contain 5 syllables, all loan words and names, eg *abracadabra, hippopotamus, mulligatawny, Devanagari,Ystalyfera.*
There is always one syllable that is strong, ie with primary stress, a syllable made more prominent than all the others. There is also a potential additional 'secondary' degree of stressing. All other syllables are unstressed (weak). All the permissible options are represented in this network.



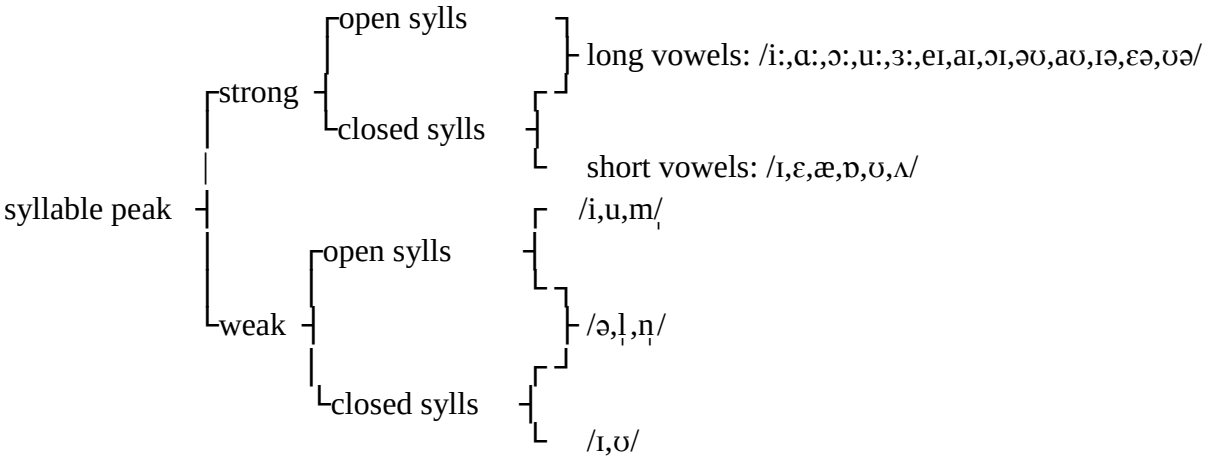
# Syllable structures

Strong, stressed, syllables in English always consist of at least a vowel, with up to 3 consonants preceding it and with up to 3 consonants following. (Polymorphemic words may have up to 4 in final position, eg *texts* /tɛksts/, *glimpsed* /glɪmpst/.)
Weak, unstressed, syllables have a slightly smaller set of possible structures, but it does include syllabic consonants /l̩, n̩, m̩/.



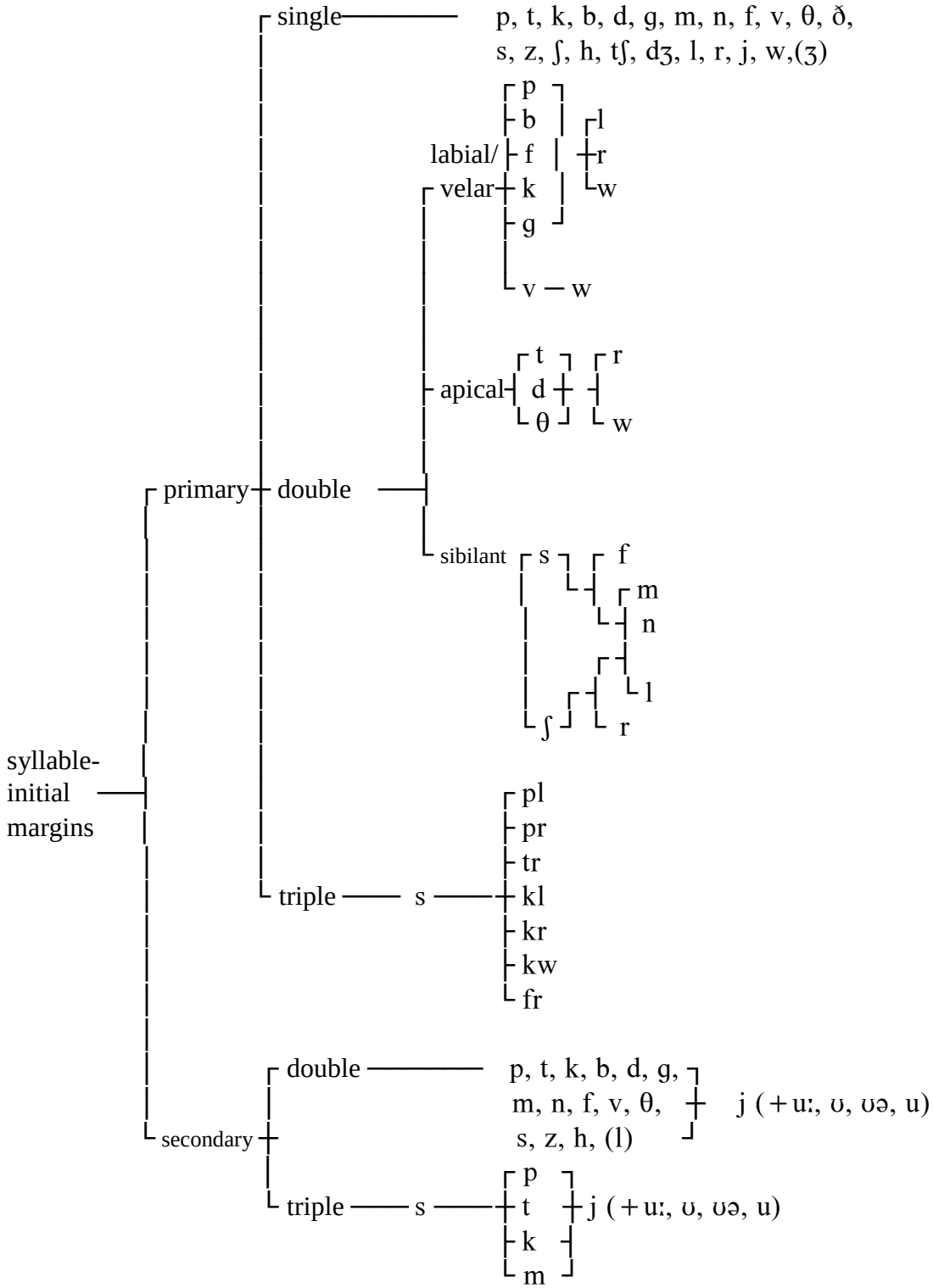
# Syllable Peaks

In strong syllables, there must a ‘strong’ vowel as syllable peak; however, short vowels must always be followed by a consonant (‘closed syllables’), whereas long vowels can occur in both ‘closed’ and ‘open’ syllables.
In weak syllables, there is a much smaller set of peaks, which may either be a ‘weak’ vowel or a syllabic consonant.
For examples, see the preceding network.



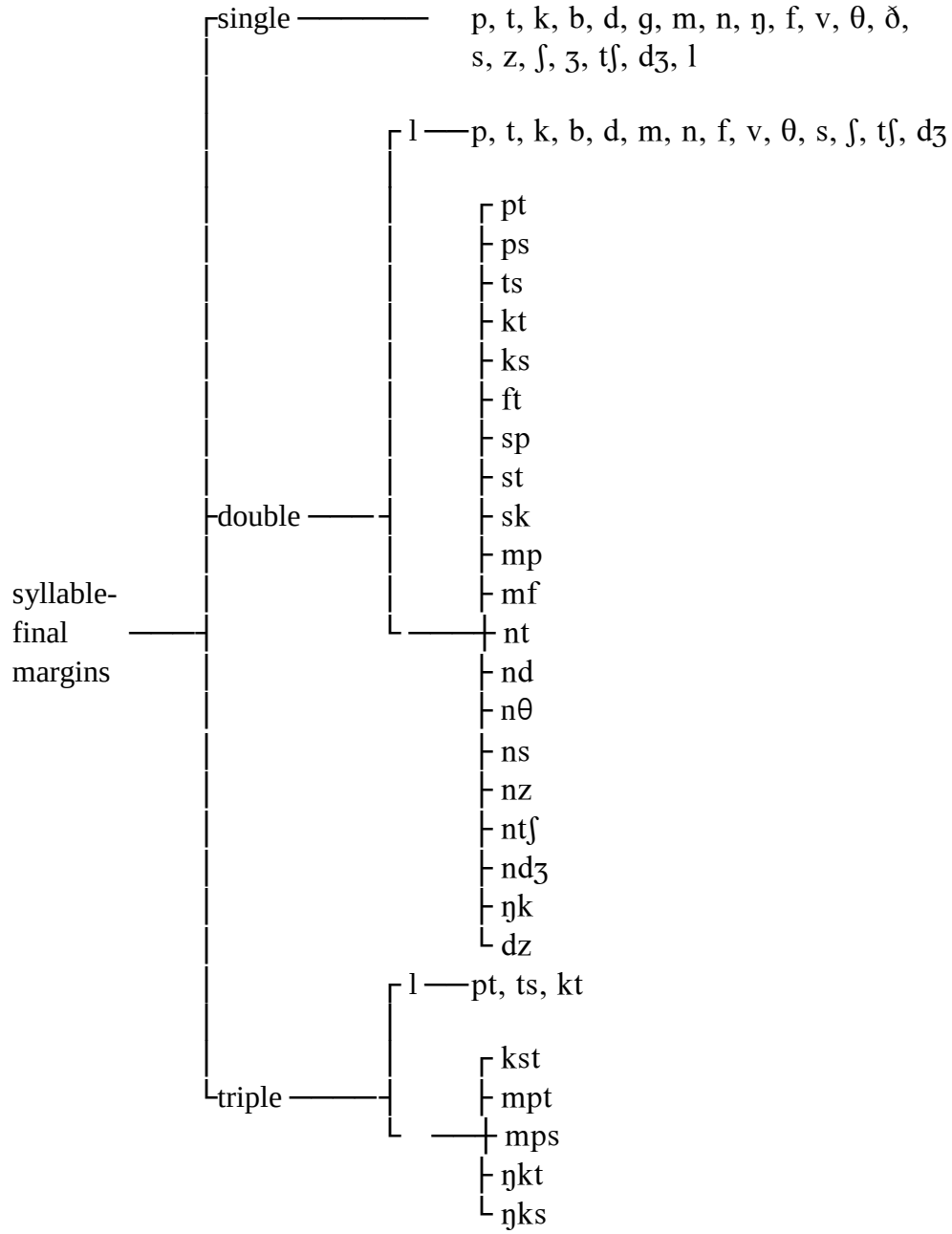
# Syllable Margins; initial position

Initial margins may consist of 1, 2 or 3 consonants; in the case of 3 consonants, the first must be /s/.
There is a primary set of initial margins which can precede any vowel; and also a secondary set that can only precede /j + uː, ʊ, ʊə, u/.



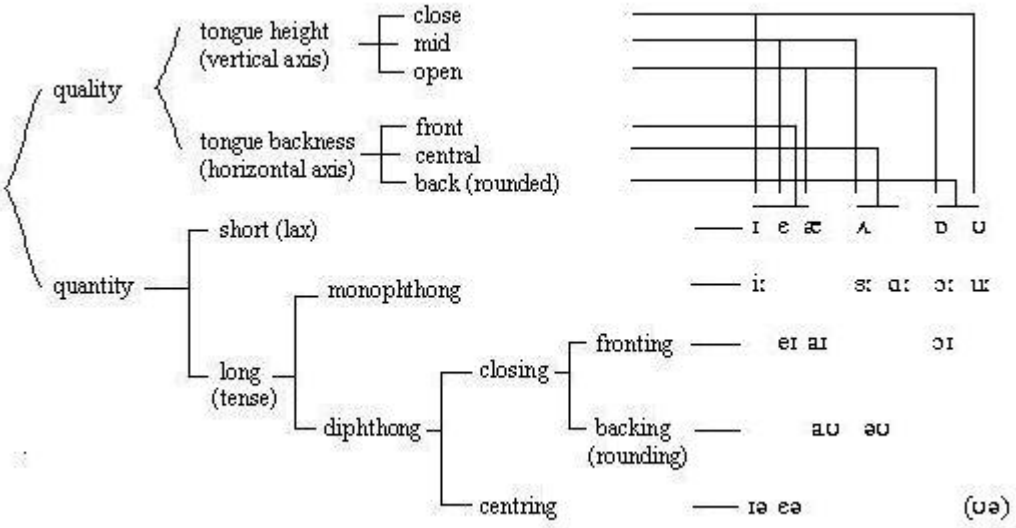
# Syllable Margins: final position

The syllable-final inventory differs from the syllable-initial by excluding /h, j, w/ and /r/ (in non-rhotic SESP) and including /ŋ/.
The system for double-consonant final clusters in *monomorphemic* words allows any of the final singletons to be preceded by /l/, except /g, ð, z, ʒ, ŋ/; also many combinations of plosive, fricative and nasal followed by plosives and fricatives. One combination, /dz/, only now occurs in the one word *adze*, which itself is almost obsolete. (It might also be noted here that epenthetic /t/ follows /n/ in *month* and *tense* for many speakers, thus making them triple-consonant clusters.)
The system for triple-consonant clusters allows for a small number of the double clusters to be preceded by /l/ or a nasal; also /kst/ as in *text.*



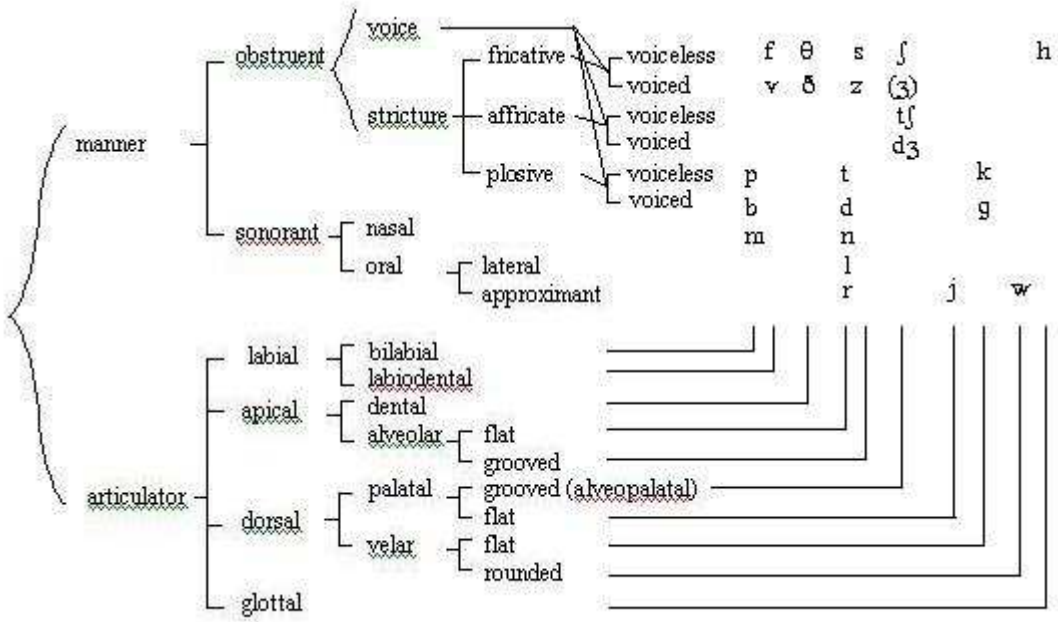
# Phoneme Inventories

A system network of the strong vowels of Southern England Standard Pronunciation




The network for weak vowels is very much simpler: that for closed syllables is shown below left, and that for open syllables below right:


A system network of the syllable-initial consonants of Southern England Standard Pronunciation




The brackets around /ʒ/ indicate its marginal status in the syllable-initial system; brackets would not be required in the network for the syllable-final system. The syllable-final system would lack /h, w, j, r/, but would gain /ŋ/.

## Allophonic Distribution

Two examples will have to suffice.

A system network for /p/ might be presented as follows, with square brackets [ ] containing an allophonic transcription:

| | | | |
|---|---|---|---|
| /p/ | → | .s_V → [p] | *spy* [spaɪ] (unaspirated) |
| | | _.f/v → [p̪] | *hopeful* [ˈhəʊp̪fəɬ] (backed to labiodental) |
| | | _C → [ʔpˀ] | *apt* [aʔpˀtʰ] (with glottal reinforcement and unreleased) |
| | | _# → [ʔpʰ] | *cap* [kʰaʔpʰ (with glottal reinforcement and released) |
| | | elsewhere → [pʰ] | *pie* [pʰaɪ] (aspirated) |

where → means 'realized as', . indicates a syllable boundary, _ the 'slot' occupied by the phoneme, and # a word boundary/silence.

Similarly, English /b/:

| | | | |
|---|---|---|---|
| /b/ | → | _C$^{vl}$ → [b̥] | *absent* [ab̥sənt$^{h}$] (devoiced before voicelessness/silence) |
| | | _.f/v → [b̪] | *obvious* [ˈɒb̪viəs] (backed to labiodental) |
| | | elsewhere → | *buy* [baɪ] (fully voiced) |

It would then be possible to present such networks for each consonant and vowel phoneme of English as part of a full presentation of English word phonology.

## Phonotactic charts

Full phonotactic charts appear in Gimson (1989: 241-256), but it should be noted that they do include inflected forms of words and hence are not strictly monomorphemic.

Gimson, A. C. (1989) *An introduction to the pronunciation of English.* 4th ed. London: Edward Arnold

Paul Tench
Retired Senior Lecturer
Centre for Language and Communication Research
Cardiff University

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