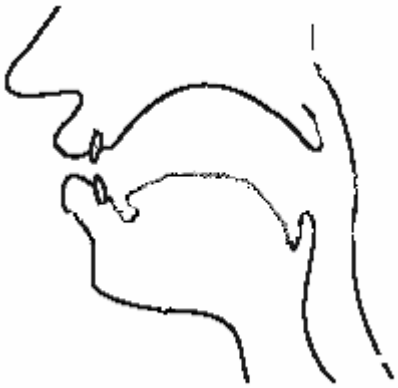
The Sound Structure of English: An Introduction

/ðə saʊnd strʌktʃə əv ɪŋglɪʃ/

Chris McCully

The Website

[Various people have worked on this website, and that help ought to be publicly acknowledged: Wander Lowie (Rijksuniversiteit, Groningen) helped me put the pages up on the web. Monika Schmid (Rijksuniversiteit, Groningen) acted as a reader over my shoulder. To both – thank you.]



Welcome to the web pages which accompany the hard text of *The Sound Structure of English: an Introduction* (CUP, 2008). Here you'll find…

- Further commentary on the in-chapter exercises
- Suggested solutions to the end-of-chapter exercises
- Links to sound-files and other materials and sites

A note on phonetic fonts

The IPA symbols on this site should display correctly in your browser. If they do not, please click on the following link:

http://www.phon.ucl.ac.uk/home/wells/fonts.htm

This will take you to a site (UCL) from which you can download the IPA in a number of different styles (Doulos, Sophia etc.). The downloads are free.

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CHAPTER 1: INTRODUCTION

COMMENT ON IN-CHAPTER EXERCISES

1.1, PAGE 2: can you construct other, possibly unusual, combinations of letters which 'spell' English words, eg. <ghoti> = 'fish', <aughturnun> = 'afternoon' (<aught> from <dr*aught*>, <ur> from <aub*ur*n>, <un> from <l*un*-atic>)?

Some specimen words might be <ghread>, 'Fred' (<gh> from <enough>, <ea> from <bread>); <choch>, 'kick' (<ch> from <Christmas>, <o> from <women>); <chroo>, 'shrew' (<ch> from <louche>, <oo> from <moon>.

1.2, PAGE 4: how many other pairs of homophones can you find in your own variety of spoken English?

Some examples from my own variety of English are

buy	**+**	**by**
feet	**+**	**feat**
know	**+**	**no**
guest	**+**	**guessed**

You will be able to find many others in your own variety!

1.3, PAGE 6: by observing your own variety of spoken English, how much data could you amass to support the claim that your use of that spoken system was largely *systematic*?

Some observations, again drawn from my own use of English:

- **In stressed monosyllables (words full of meaningful content consisting of one and only one syllable) there seems to be a principle at work which means that such words consist minimally of some perceptibly short vowel followed by one or more consonants (*id, ant*) or of some longer vowel followed by zero or more consonants (*eye*, *isle*)**
- **I 'know' that well-formed syllables may begin with up to two consonants *provided that* those clusters are**

gl

pl

pr

br

sn

sm

bl….

and some others. On the other hand, I 'know' that these consonants have to follow some ordering restrictions, because syllables simply NEVER begin with consonant clusters such as *lp, *lg, *rp etc.

- **In words such as <captain>, <hamper> I seem to *systematically* insert the syllable division as follows: <cap.tain>, <ham.per>**

1.4, PAGE 8: what *accent* of English do you think you use? Would your immediate circle of friends and family agree that you use that form of accent? (Try asking them.) What *dialectal features* can you find in your own variety of English?

Some dialectal features of my own variety (Standard Northern English – I was born in Bradford, Yorkshire in 1958) include the following:

(i) **<one> is pronounced to rhyme with <gone>, not (as would be the case in Southern Standard or in RP) <bun>**

(ii) **No post-vocalic 'r' (ie. no 'r' occurring after vowels in words such as <car>, <harm>)**

(iii) **Sporadic pronunciation of word-final <y> (in words such as <happy>) as lengthened/tensed 'i' – this possibly reflecting exposure to Tyneside English many years ago**

(iv) **Some lexical features typical of this dialect: tea is said to be 'mashing' (not eg. 'drawing', 'steeping' or 'brewing'). On the other hand, 'Do you want a brew?' would be standard for me, cf. 'Would you like a cup of tea?' Other lexical/syntactic features:**

(v) **Negation. My variety = 'you didn't ought to go' cf. southern English/elsewhere 'you ought not to go'.**

Note: to hear different accents of English, please click on the following links:

http://www.bbc.co.uk/voices/

The BBC 'Voices' project includes recordings of many different accents of (British) English. http://www.bbc.co.uk/voices/recordings/index.shtml takes you to an interactive map on which you can click on regions and cities within the UK.

Another wonderful resource is

http://accent.gmu.edu/resources.php

which is the accent archive of George Mason University (US). This wonderful site is not confined to English, though it includes archive materials from many regional varieties of English. The site can be browsed by language/speaker or by exploring the different regions of the world (by clicking on an atlas).

Other in-text exercises contained in chapter 1 are answered in the text of the book.

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CHAPTER 1: SUGGESTED SOLUTIONS TO END-OF-CHAPTER EXERCISES

Without further ado, let's proceed to the end-of-chapter exercises you'll have found in Chapter 1 of the book. In what follows, sections of text repeated from the hard copy will be found in RED FONT. New material – including suggested answers - is given in **bold black font**.

Exercise 1.A. In the text you will have found two diagrams and will have been asked to study them. Here is the exercise which follows**:**

For the practical exercise, what I'd like you to do is to think of English consonants. At this point I'm going to assume simply that you have some intuitive idea about what consonants are. You need again to be careful to distinguish between consonants proper to the sound-structure of English, and written shapes. For example, there are certain speech-sounds which are written as 'consonants', but which are sometimes graphic representations of *vowels*:

Graphic shape	*Problem shape*	*Speech sound*
<sky>	**<y>**	**<y> represents a vowel**
<you>	**<y>**	**Represents a consonant**
<now>	**<w>**	**Represents (part of) a vowel**
<walk>	**<w>**	**Represents a consonant**

With this caution in mind, think of *at least six* speech-sounds which you judge to be unambiguously part of the consonant system of your own variety of English. Note down the words in which these consonants occur, and note also how these consonant shapes are *distributed* (do they, for example, typically occur at the beginnings of words and syllables, or at the ends, or both?).

You might have constructed a list like this:

'The "p" of *pit*: occurs at the beginning of a word/syllable; can also occur at the end, as in the syllable *nip*. The "t" of *tip*: occurs at the beginning of the word/syllable; can also occur at the end, as in the syllable *pit*. The "k" of *kin*: occurs at the beginning of the word/syllable; also occurs syllable-finally, as in *nick*. The "n" of *kin*: occurs syllable-finally; can also occur syllable-initially, again as in *nick*....'

Try to find at least six of these consonants.

Since the previous paragraph introduces FOUR consonants ('p', 't', 'k' and 'n') let's add two more: 's' and 'm':

's' occurs at the beginning of words and syllables (*sin*, *unsung*) as well as at the end of words/syllables (*hiss*, *fuss*). Note in this last instance that what is written as a double <s> occurs in the signal of speech in English as ONE 's' sound.

'm' occurs at the beginning of words/syllables (*mint*, *remind*) as well as at the end of words/syllables (*dime*, *hymn*, *dim*). Notice in these last examples that the written <e> which occurs at the end of *dime* isn't pronounced; nor is the final written <n> of *hymn* pronounced. The fact that these letter shapes occur at all concerns spelling conventions: we could make a good guess that 'silent final <e>' was introduced into the written system of English at some point to indicate – somewhat sporadically and inconsistently, as it turns out – the length or complexity of a previous vowel; and we could make a further good guess that the *etymology* (word-history) of *hymn* would include the fact that this word was borrowed into English from a foreign language, in which language the <n> just *may* have been pronounced. As it happens, our word *hymn* is analysed in the *New Oxford Dictionary of English* as occurring in Old English, but it entered Old English via Latin from Greek *humnos* 'ode or song in praise of a god or hero'.

Let's get back to the remainder of the end-of-chapter exercise. You're asked to try to work out *where* in the oral cavity the six consonants you've selected are pronounced.

'p' seems to be pronounced using the lips; the tongue is in a neutral position (ie. neither markedly raised nor lowered, nor touching any other articulators)

't' seems to be pronounced by allowing the tip of the tongue to rest briefly on the bony ridge found immediately behind the upper teeth (the *alveolar ridge*)

'k' seems to be pronounced by arching the tongue in such as way that the (rear of the) tongue-blade briefly touches the soft palate (the *velum*)

'n' seems to be pronounced by allowing the tongue to rest briefly on the alveolar ridge; at the same time, the soft palate is lowered so that there is air-escape through the nose (via the *nasal cavity*)

's' again seems to be pronounced in the alveolar region, but 's' is unlike eg. 't' in that in production of 's' the tongue makes no contact with the alveolar ridge, but instead is raised towards it (without touching it!). The result is that the air-stream is forced through a millimetric gap; friction is caused; and the sound 's' is produced and perceived as 'hissy'.

'm' seems to be pronounced using the lips; unlike the similar case of 'p', with production of 'm' the soft palate is lowered and the air-stream is directed through the nasal cavity.

Exercise 1.B. Here you're introduced to an analogy that was famously drawn between the principles of language and the rules of chess. The exercise continues:

Think about the sound-structure of English (note: sound-*structure*, not simply 'the sounds of English'; *phonology*, not simply *phonetics*). In what ways could you analogise the principles that lie behind the sound-structure of English with a game of chess? If you don't know the rules of chess, try to analogise the rules

that lie behind the behaviour of English speech-sounds with the rules of any other game.

In chess, the 'meaning' of the chess pieces is determined not by their physical appearance, but by the rules of the game: a queen, for example, can be three inches tall, two centimetres tall; wide-bodied; slim; made of copper, or plastic…. But in fact what gives the queen in chess its identity is *the ways in which the rules of the game allow it to move*. That is, what a queen can do is determined by its place in the underlying structure – the rules – which comprise chess. Similarly, speech-sounds function not only as physical sounds but (and from a phonological point of view, just as importantly) as parts of the underlying structure of the English language.

All of us know these underlying principles intuitively. We know, for instance, that some principle is at work in English which means that 'b' can be followed by 'r' or 'l' in the beginnings of words (*brick*, *block*), but equally we know that 'r' can NEVER be followed by 'b' in that word-initial position (there are no words like **rbock*).

Exercise 1.C. You're presented with a list of words. The exercise continues as follows:

For each word, judge whether (a) it's well-formed but happens – accidentally, one might say - not to occur in English, or (b) whether it violates well-formedness principles. Try to say *why* you have judged each word as (a) or (b). (That's the tricky part of the exercise.) Here's the word-list:

bron - well-formed, but non-occurring

nreb - ill-formed (where 'n' occurs initially in a word it appears never to be followed by another consonant)

flig - well-formed, but non-occurring

lgop - ill-formed ('l' can apparently never be followed by another consonant in the beginning of a word; note, though, that 'g' could easily be followed by 'l')

prug - well-formed, but non-occurring

nbat - ill-formed (see note on *nreb* above)

fnak - ?ill-formed in English. In other languages it's entirely conceivable that words could begin 'fn', so 'fn' doesn't in principle seem 'difficult to say'. Note also that eg. 'sn' is perfectly acceptable in English (*snow*, *snack*)

tikn - ?ill-formed. The problem is formed by word-final 'kn'. If both 'k' and 'n' represent speech-sounds then 'n' would arguably have to be pronounced as a syllable in its own right. (In this context, ask yourself about words such as *chasm,* where a nasal consonant ('m') is sometimes pronounced as a syllable in its own right, and sometimes not.

besr - ill-formed. 'r' can never apparently follow 's' wprd-finally

hift - well-formed (cf. *hip, waft*) but non-occurring

stlif - ill-formed. If 'st' occurs word-initially then those two consonants MUST be followed by 'r' (*strip*, *string*)

fusps - well-formed (cf. cusps) but non-occurring

grtup - **ill-formed (where 'gr' occur word-initially then they MUST be followed by some sort of vowel (grub, grid) and NEVER by another consonant**

bgr - **ill-formed: it's difficult to see where the vowel in this potential word might fall – if on the 'r', then 'bg' would have to be analysed as word-initial, and 'g' can NEVER follow 'b' word-initially.**

stib - **well-formed (cf. stick, crib) but non-occurring**

stw - **?ill-formed in English, though if 'w' represents some sort of vowel shape then it's conceivable that such a potential word just mugt be well-formed (cf. here sty)**

woh - **ill-formed. 'h' never occurs AS A SPEECH SOUND at the end of words and syllables, though it occurs freely at the beginning of words and syllables (hiss, hotel, house)**

stripm - **?ill-formed. 'str' is okay, but the problem comes with 'pm'. It would be too easy to say that 'm' may never follow 'p', since there are dialectal pronunciations of words such as captain (as 'cap'm') which seem to suggest that 'm' can follow 'p' within words provided that 'm' forms a syllable in its own right.**

puj - **ill-formed. Where the speech-sound symbolised by 'j' occurs then it occurs at the beginning of words and syllables (yes, yacht). Tricky, this, because you've not yet been introduced to the speech-sound represented by 'j'. See the Chapter on consonants.**

tlw - **ill-formed. Where 't' is followed by another consonant in the beginnings of syllables and words then that consonant MUST be 'r' (try, trick) or 'w' (twice). (You might also like to suggest a reason why this might be so. Further hint: think 'place of articulation'. Second hint: 'alveolar ridge'.)**

frk - **probably ill-formed in English, though if 'r' represents some sort of vowel then it's conceivable that such words occur in other languages. Note too that 'r' can function as a syallble in its own right in some varieties of English (ie. it can behave rather like a vowel), as in GA butter. In this last example, in casual (normal) speech no vowel is present before the 'r', yet the word still has two syllables, which must mean that 'r' is functioning as a syllable in its own right.**

Links to other websites

One of the most useful sites I have found includes the pages originally constructed by the great phonetician and linguist, the late Peter Ladefoged. By accessing http://www.phonetics.ucla.edu/index.html you will be able to click on materials relating to Ladefoged's *Course in Phonetics* (5th edition), browse an index of sounds, watch the movement of the articulators (via X-ray images) as phrases are pronounced, consult the International Phonetics Association chart of symbols, and consult maps of the world's languages. Highly recommended.

Introduced above are two other sites which will feature in these 'Links' pages almost throughout:

http://accent.gmu.edu/resources.php
www.bbc.co.uk/voices