

The Sound Structure of English (McCully)

CHAPTER 6: Website

CHAPTER 6: SYLLABLES (2): CONSTITUENTS

COMMENT ON IN-CHAPTER EXERCISES

6.1, PAGE 75: Using C to stand for one consonant phoneme, and V to stand for one vowel phoneme, try the same procedure on the following syllables: *hint, print, pitch, ship*. (Hint: you'll need to make a simple phonemic transcription of these syllables first.)

This is answered fully in-text, but to give you more practice, here are some more alignments of segments and C/V:

Written form	Transcription	CV array
cat	/kæt/	CVC
stop	/stɒp/	CCVC
steep	/sti:p/	CCVVC

Of these, the only tricky form is *steep*, whose long /i:/ is aligned with VV. You'll find out why this is just a little later in this chapter....

6.1, PAGE 75: Look at the C's and V's that are aligned with the word *print*: CCVCC. There's nothing inherently wrong with such a representation. We've truly aligned one consonant phoneme with one C, and the vowel phoneme /ɪ/ with one V. But there's something that seems to be missing from such a representation. What is it?

This is answered fully in-text. The idea we're trying to explore is that as representations of syllables, strings of C and V, while accurate as far as they go, don't tell us much about the internal *constituency* of syllables.

6.1, PAGE 77: Can you work out what is the phonological factor that suggests nucleus and coda together form a rhyme constituent?

The answer lies in the fact that the internal structure of well-formed English syllables depends at least partly on sonority (a term whose problematic linguistic meaning is explored in chapter 6). Crudely, the most ‘consonant-like’ (least sonorous) segments are found at the margins of the syllable, while the most ‘vowel-like’ (most sonorous) are found towards the centre of the syllable. This means that if a syllable contains a nucleus and a coda then sonority will decrease from (the leftmost slot in) the nucleus to (the rightmost slot in) the coda. In that respect, nucleus+coda behave quite unlike onsets, where sonority generally increases from left-to-right.

6.1, PAGE 79: If the /n/ of eg. *print* doesn’t belong in the coda of the syllable, where else might it belong?

The only other place where we might plausibly put such an /n/ is into the second slot of the nucleus. The implications of this (controversial) idea are – somewhat cautiously - discussed in-text.

6.2, PAGE 83: Can you think of a range of examples where well-formed lexical monosyllables have *three* consonants in their onsets, and/or *three* consonants in their codas?

Some solutions are given in-text. The words we’re after are words such as

scream /skr/

spring /spr/

stride /str/

and

sixth /ksə/

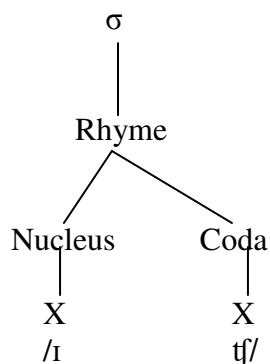
wasps /sps/

*

CHAPTER 6: SUGGESTED SOLUTIONS TO END-OF-CHAPTER EXERCISES

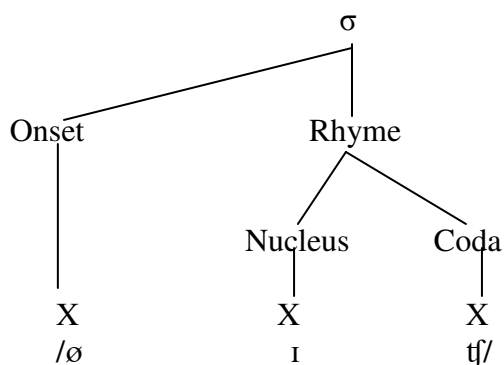
Exercise 6.A. Draw appropriate syllable trees for the following monosyllables (which are here given in their standard alphabetic forms):

a. itch



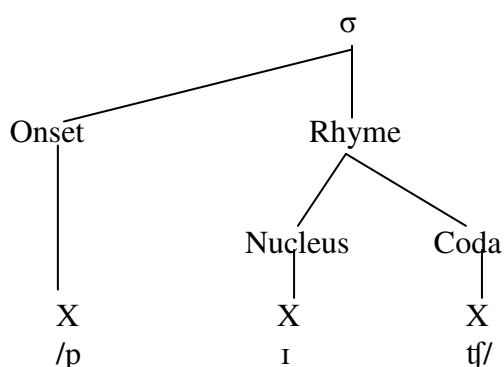
(straightforward representation; no onset)

...or...



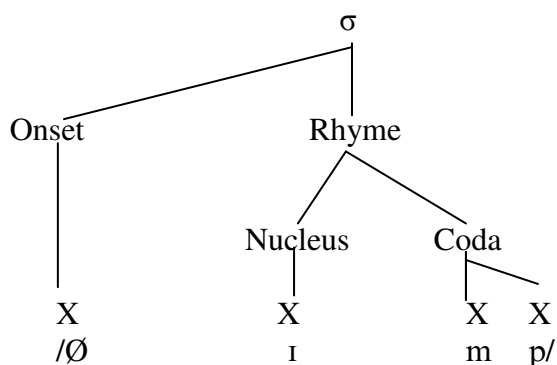
(theoretically more interesting, but rather controversial, version, showing onset realised as a zero segment)

b. pitch



c. imp

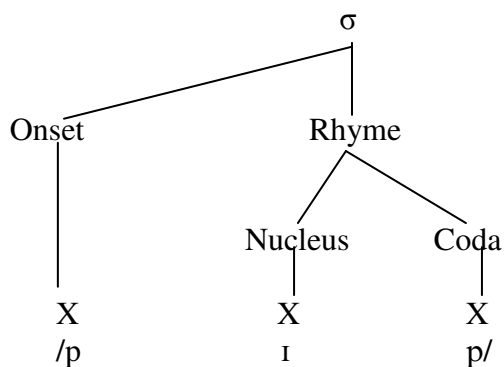
You have four possible representations to construct: (a) a version which shows the onset filled with a zero segment; (b) a version which shows no onset (ie. which claims that the syllable contains just a nucleus and a coda); (c) a version where the /m/ occupies the second position of the nucleus; (d) a version where both the /m/ and the /p/ lie in the coda.



d. pimp

Here, the onset is filled, but as with *imp*, the question is where the /m/ belongs – in the nucleus? Or in the coda?

e. pip



Exercise 6.B. This exercise anticipates work we're going to do in the next chapter. You are not expected to 'get this exercise right', but to think about how you might get it right. That is, the exercise is meant to be difficult!

Below you'll find two words, both of which have two syllables (ie. the words are *bisyllabic*). Both words are stressed on their initial syllables – something which may turn out to be important later. I have transcribed both of them for you. Study the word *pimping* first, and try to decide which of the two syllables the second /p/ belongs to – to the end of the first syllable? Or the beginning of the second? Most people have fairly clear intuitions about this.

Now study the word *pipping*. Again there are two (and only two) /p/ phonemes in the word, one beginning the entire word, and the other in the middle. (Note that the word could never be transcribed as */pɪppɪŋ/. It has to be /pɪpɪŋ/.) Your second task in this Exercise is to try and determine which syllable the medial /p/ might belong to, *and why*. This is tricky, and most people have much shakier intuitions here.

pimping	/pɪmpɪŋ/
pipping	/pɪpɪŋ/

Most people decide that the break in the word /pɪmpɪŋ/ comes after the /m/ and before the second /p/. If we use '.' to symbolise the syllable division, then the syllabification of *pimping* looks like this:

/pɪm.pɪŋ/

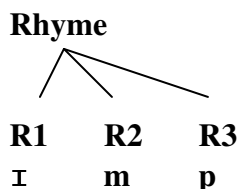
But to reach that syllabification we must first reject the possible syllabifications */pɪ.mɪpɪŋ/ and */pɪmp.ɪŋ/. On what grounds should those possible syllabifications be rejected?

Answer: when we syllabify words then wherever possible we should make maximal and well-formed onsets. If we opt for */pɪ.mɪpɪŋ/ then we have indeed made a maximal onset in the second syllable (/mp/), but that onset is ill-formed: syllables simply can't begin /mp/ in English! (Both sonority restrictions the fact that both /m/ and /p/ are bilabial rule out such possible onsets.) Again, if we opt for */pɪmp.ɪŋ/ then we've placed the second /p/ of the word into a coda, whereas we could well have made (and should have made) an onset, as in the correct syllabification /pɪm.pɪŋ/

Exercise 6.C. Construct appropriate syllable trees for the words *hymn* and *imp*. You should find that in the first word, /m/ belongs unambiguously to the coda of the syllable. In *imp*, though, the /m/ belongs to the nucleus (and this would be quite according to the principles we've discussed in-text, section 6.2). Do you find this analysis useful, and matching your hunches about 'where /m/ belongs'? Or is there another, equally explanatory way of handling the alignment of segments to the nucleus and codas in such words?

You should first revisit your answer to exercise 6.A. Now you might like to consider another – yes, yet another – analysis. The problem we're addressing here essentially

concerns short vowels, specifically, short vowels where these occur in lexical words and are followed by two consonants. Now despite the fact that we've found some evidence for suggesting that the nucleus and the coda are indeed constituents of the syllable, in at least one early analysis of syllable structure, that of Selkirk 1984, syllables were assumed just to have a rhyme, and moreover, a rhyme which could contain up to four segments:



At the same time, such multiply-branching rhymes were governed by strong sonority restrictions, such that R1 must contain a segment (vowel) which is in turn more sonorous than the segment occupying R2.

In this kind of analysis, which does away entirely with nuclei and codas, the question as to the place which the /m/ of *imp* occupies – nucleus or coda? – becomes entirely redundant. The research question which then needs to be answered is: does the rhyme of a syllable contain further constituents, or not? If it does – and the work we do in this textbook rather assumes it does - what *conclusive* evidence might there be that nuclei and codas are ‘real’?

Links to other sites

A BBC page -

<http://www.bbc.co.uk/skillswise/words/spelling/soundandspell/syllables/game.shtml>

- includes a game which asks participants to specify how many syllables words have. This might be useful to (in particular) non-native users or learners of English. Readers who consider this game below their dignity should complete it anyway – it’s fun!

Another syllable game, this one more sophisticated, can be found by clicking on <http://www.quia.com/pop/5909.html> Again this would be most suitable for non-native users/learners. (Mind you, I must admit I was smiling to myself as I completed the games on both websites. I particularly liked the glugging noises on the BBC site....)

As you browse the web for information on syllables (try search terms such as *syllable* or *syllable structure*) you’ll come across some websites which give definitions of syllables together with tests which purportedly allow you to find the number of syllables in a word. Here is one such test. Given what you’ve read in our own textbook so far, do you think this test (below) is accurate or useful? (I suspect you will find some inaccuracies, but if so, try to specify what those inaccuracies are.)

Counting Syllables

To find the number of syllables in a word, use the following steps:

1. Count the vowels in the word.
2. Subtract any silent vowels, (like the silent *e* at the end of a word, or the second vowel when two vowels are together in a syllable.)
3. Subtract one vowel from every diphthong (diphthongs only count as one vowel sound.)
4. The number of vowel sounds left is the same as the number of syllables.

The number of syllables that you hear when you pronounce a word is the same as the number of vowel sounds heard. For example:

- The word *came* has 2 vowels, but the *e* is silent, leaving one vowel sound and one syllable.
- The word *outside* has 4 vowels, but the *e* is silent and the *ou* is a diphthong which counts as only one sound, so this word has only two vowel sounds and therefore, two syllables.