Chris McCully. *The sound structure of English: An introduction*. (Cambridge Introductions to the English Language.) Cambridge, New York: Cambridge University Press, 2009. (viii, 233)

This text is designed to be used in a course introducing the phonetics and phonology of English where the overall curriculum design points toward Theory and OT. This is a text, in other words, directed not toward a descriptive phonology, but a theoretical construct. We find a focus on the distribution of sounds in the speech chain and syllable theory, and an introduction to the concept of allophony with a few examples, but very little of the many phonological processes that students of phonetics and phonology in the descriptive tradition are expected to know, and which are vital to understanding the developments and data in comparative and internal reconstruction work described in courses in historical linguistics. And the little that is offered comes at the very end of the text, in the context of features and natural classes.

It is universally recognized that active learning techniques that encourage students to do something with the information promote student learning in general and are vital in language related studies; toward this end the author supplies many useful exercises. The discussion of the articulatory facts of individual phonemes makes useful suggestions for students to put their tongues here and there and to feel this and that articulator surface, things that we do in the classroom with varying degrees of student compliance.

The first chapter opens with sections on the distinction between written and spoken English and the primacy of speech. This demonstrates that the audience for the text is beginning students, who have no or minimal background in linguistics. From that standpoint, useful distinctions are made between consonants in the writing system, i.e. graphemes, and consonants in the speech chain (1 – 3). A few symbolic conventions, slashes and brackets, and angled brackets are explained, and students are off to the races.

The gradient ramps up sharply at 1.3, where the notion of predictability and systematicity are introduced in half a page, followed by an exercise calling for students to observe their own variety of English and answer the question, "how much data could you amass to support the claim that your use of that spoken system was largely *systematic*?" (6). I suspect the usual answer, from students who only a class meeting or two previously had been introduced to the aforementioned notion that language means what comes out of our mouths, would be "not much." In 1.4 the text seeks to distinguish between dialect and accent, appealing to substitution frames. No matter how many brief explanations and analogies are offered, these first six pages of reading represent a great deal of abstract conceptualizing for beginning students to wrap their wits around.

Phonemes are introduced based on the notion of *contrast*, which leads to some discussion of minimal pairs (Ch. 2). In Chapter 3 the concept *allophones* is introduced, with examples limited to realizations of /t/. The focus of the discussion here is the distribution of sounds (Ch. 4, 5), which in turn leads to an introduction to syllable structure that consumes much of the remaining space in the text. Even for one who had not read the dust jacket notes, it becomes clear quite early that the goal for the text is OT, which is discussed in the eleven pages of 11.5.

Vowels are presented using minimal pairs, beginning with "short vowels" (Ch 8). But it is not clear if /e/ is the same as /ɛ/ in this text. The vowel system is further confused by Cardinal Vowel charts appearing interspersed with charts representing realization of /ɪ/ and /ɛ/ in 14 identified dialects. These "vowel tours" offer interesting information, but seem to conflate phonemes and their phonetic realizations for beginning students (e.g., 136; so in the application question at 144 that asks students for evidence to support the view that the "underlying representation" of *fire* in non-rhotic varieties could be "analysed as /faɪr/ rather than faɪə/"). In

this text does *underlying* refer to the putative standard phonemes relative to their realization in various dialects (as in <pen> [pɛn] sounds like [pɪn] in some Southern American varieties)? To sounds that were present in the language before being lost (e.g., /r/ in –r dialects, as the example above suggests)? Or does it refer to items that are "functional, units of the sound structure of language" (22)? Does the author want us to learn that some of these varieties have phonemes that differ from others, but are otherwise of the same system? It is just not clear where this goes.

But even more uncertain is what a short vowel and what a long vowel are in this text. The vowel in *bed* is said to be short. The vowel in *bread* and *friend* is also said to be short (125). Long vowels are marked with a colon, e.g., the vowel in *heed* is *i*: (138). But the vowel in *beet* is also represented *i*: (132). If long means length in duration, then the transcription above represents something that is not the case. Certainly the *ɛ* in *bread* is longer in duration than the *i* in *beet* in any variety of English with which I am familiar. As the late phonetician Peter Ladefoged specifically observes, vowels in English are long before voiced consonants (see any edition of his *A Course in Phonetics*). The usage of 'short' here accompanied by these transcriptions presents an ambiguity that is hard to get past. Based on the evidence and descriptions offered, it seems that what are called short and long vowels in this text are defined as such prescriptively, according to the phonological system of Old English and the resultant spelling system.

Chapters 5 and 6 develop theories of syllable structure with onset, nucleus, and coda, with X-tiers (81), leading to the introduction of the rule that a syllable may not have more than two Xs in the nucleus, with the aforementioned "long vowels," including diphthongs, providing both Xs (98). This works out neatly in examples like *print*, where *n* is interpreted as nucleus (79) if we ignore the vowel lengthening rule, and in *heed* (98). But how does it work out in *strengths* (also ignoring the rule)? Is *ŋ* nucleus or coda? If nucleus, as in *print* (ibid.), then we have /i:/, and

thus three Xs. But theory says only two. Is ŋ coda then? That way we have only two nuclear Xs, but too many Xs in the coda. In that case, students are told, the rule is to apply only to stems (96). But elsewhere we see the *s* of tenths [tɛnΘs] and other plurals represented as codas with their allotted X (182). And what about onset? Now we have three Xs there, which violates the rule "up to two Xs in the onset" (89). As the author indicates, "/s/ is a real problem for theories of English syllable structure" (93). Why, one should ask, are beginning students to be exposed to a course based on a theory?

This latter problem is disposed of with resort to an "*auxiliary template*" to treat so-called sCclusters with three consonants, whereby /s/ and the consonant it follows are to be seen as a single consonant (191). This represents too much preoccupation with theoretical questions at the expense of basic facts and principles of phonology that students need to take to higher level course work.

The treatment of glottal stop in the text leaves out much that would be useful. Nowhere is it indicated that in English (as in numerous other world languages, including Northern Chinese) non-phonemic glottal stop marks onset of putative vowel-initial syllables, whereas in Arabic, glottal stop is phonemically distinct. This situation in English could be contrasted with Spanish, where glottal stop does not occur in that position, which is interest to us in North America. Glottal stop is also implicated in social variation in Great Britain, which facts may lead the author to conclude that "while the glottal stop may be a *possible* — even likely — *realization* of /t/ in many varieties of English, because the environments in which it occurs aren't predictable, then it is not an allophone" (58).

This conclusion is the result of sighting from the wrong end of the rifle. While it is true that the articulatory phenomenon of glottal stop occurs in several environments in English, it is

nonetheless true that glottal stop occurs as a realization of /t/ in specific, predictable environments, before nasals, e.g., *button*, *badminton*. In a number of dialects its other distributions are likewise predictable. Thus glottal stop has every bit the claim to status as allophone that is recognized for unreleased *t*, as in *nit* (56). While both allophones may be replaced in careful speech by aspirated *t*, the relevant fact is that hearers cognize /t/ in these situations. This is the whole point of the relation between phonemes and the allophones that are comprised in their realization, and to miss this point is to teach students to get it wrong. This is another case where language facts suffer in order to pursue a theoretical conception.

The book is intended to focus on English; one must consider, however, the desirability of confining the introductory course in phonetics and phonology to a few facts of English oriented around a theory that is currently popular within a limited subdiscipline of linguistic study. Given the history of the rapidly changing theoretical landscape, that may not be the most practical basket in which to place all one's introductory eggs. And the theoretical problems and solutions involved seem a great deal to swallow for students who only a couple of month earlier were asked to digest for the first time the difference between writing and speech.

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