Colin J. Ewen, Harry van der Hulst

**The Phonological Structure
of Words: An Introduction**

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This book consists of four chapters, dealing in turn with segments, features, syllables, and rhythmic feet within words. As it includes a substantial discussion on features and segments, the scope is rather broader than that suggested by the title, and as it provides a wide-ranging overview of various models of phonology, including distinctive features, autosegmental theory, government phonology and metrical theory, in some ways the book actually represents a general introduction to phonology rather than just the structure of words. However, as the coverage does not extend to broader domains of phonology, such as intonation, maybe the focus of the title is actually reasonably apt, and the book does indeed constitute a highly successful introductory text on word-level phonological representations.

Although an eclectic range of phonological theories is covered, these are limited to segment-based models, and this might be seen as a limitation. For example, the spreading of nasalisation from one segment to its neighbour is discussed in some detail within the framework of autosegmental phonology (pp. 43–44), but this approach cannot easily deal with the partial nasalisation of a vowel, so the situation where one variety of a language involves a greater degree of anticipatory nasalisation than another could not be handled very well. In contrast, a comprehensive introduction to phonological theory might consider how this kind of process would be handled in Firthian prosodic phonology and also in gestural theory. However, as this book does not purport to offer a full guide to all aspects of phonology, the absence of consideration of some models is of minor importance when so much else is discussed

with such meticulous care and delightful clarity.

Occasionally rather more attention is given to less mainstream models than might be expected in an introductory textbook, particularly in chapter 2 where over 24 pages are accorded to a discussion of single-valued feature theory and the attempt to describe vowels in terms of a few basic unary features, especially those represented by the three quantal vowels i, u and a. In contrast, for example, one other recent introductory book on phonology allots just two pages to this theory [Roca and Johnson, 1999, pp. 219–220]. However, as with all theories that are covered, great effort has obviously been expended on providing a gradual and careful overview of the model, even though, on the basis of the presentation here, some of its simple elegance is lost when an additional ATR feature is needed in order to represent a broad range of vowels in languages such as Yoruba, especially when this ATR feature ends up sharing a tier with the a feature after a process of tier conflation (p. 99). But even if the intricacies of this single-valued feature theory are slightly at odds with the rather more basic material presented for other phonological models, one should not object too much if the authors choose to expound a theory that tallies with their own research interests in greater detail than might be expected, for all scholars should be accorded some leeway in discussing material that is of special interest to them. And indeed, the inclusion of this outline of single-value feature theory does contribute substantially to the special flavour of this book without seriously compromising its introductory tone.

In keeping with the impressive effort throughout to ensure that the material is ‘accessible to as wide a readership as possible’ (p. xii), much of the analysis is based on English. Frequent reference is also made to the structure of Dutch, though the consequent inference that Dutch is a language ‘likely to be reasonably familiar to many readers’ (p. xii) suggests a hint of Euro-centrism – is it neces-

sarily true that more readers will be familiar with Dutch than, say, Japanese or Mandarin? In addition to the regular use of examples from English and Dutch, data are also introduced from a wide range of languages, some of them quite exotic, so the spreading of nasality is illustrated by stops in Apinayé (p. 34), vowel harmony is demonstrated by Turkish (pp. 46–48), Tiberian Hebrew is used to show compensatory lengthening (pp. 169–170), and data from Cayuga (p. 228) are presented as an instance of an iambic rhythmic pattern. However, this use of examples from an extensive range of sources never becomes overwhelming, and the data from all the languages serve quite effectively to provide excellent illustrations of the issues being discussed.

In order to maintain the straightforward flow of the presentation appropriate for an introductory text, the complexities of some phonetic issues are sometimes not fully discussed. For instance, it is stated that '[+voice] sounds are those produced with vibration of the vocal cords' (p. 12), but this is not of course strictly true for English plosives, where initial and final /b, d, g/ generally have no vocal cord vibration even though they are usually classified as [+voice]. Similar simplification of potentially contentious issues is evident when problems in the phonetic interpretation of sonority are alluded to in a brief footnote (p. 120) with no further elaboration, and also when there is an assumption that the maximal onset principle always applies in the syllabification of words without consideration of alternatives, even though in reality such straightforward syllabification cannot always be presumed. For example, the [t] in *mutter* is shown as constituting the onset of the second syllable (p. 125), even though both Jones et al. [1997, p. 333] and Wells [2000, p. 500] list this word with the [t] belonging in the first syllable. One possibility for dealing with instances like this is for the medial consonant to be analysed as belonging to both syllables by a process of ambisyllabicity, but consideration of this concept is found in just a single footnote (p. 127). Although one might object to discussion of such an important concept being relegated to a footnote, this treatment certainly does ensure that an impressively clear flow for the text is maintained, and it

must be acknowledged that an introductory book cannot delve into the intricacies of every single problematic issue of phonetic detail or phonological representation. In fact, overall a highly commendable balance has been achieved between a careful consideration of phonological problems and the clear presentation of various issues necessary for an introductory text.

One assumption that is not entirely convincing on the basis of the data presented in this book is the strict application of binary branching for syllable structure and also for the representation of rhythmic feet. Some languages, such as Cayuvava, appear to have dactylic feet (with a S W W structure), and in order to analyse the structure of words in languages such as this in binary terms, it is necessary to adopt a variety of devices, including the existence of unparsed syllables (p. 232) and degenerate feet (p. 220). Furthermore, in quite a few languages, such as Macedonian, the unmarked accent falls on the antepenultimate syllable (p. 217), a pattern which is also common in plenty of English words such as *albatross* and *America*. The most obvious solution for all these cases is to allow the existence of ternary feet, but though this possibility is discussed briefly (pp. 230–232), its adoption is not seriously considered. Now, there is of course plenty of solid evidence in support of binary patterns for the representation of all aspects of language, particularly involving the setting of grammatical parameters such as the head parameter and the wh-parameter and issues involving the ease of language acquisition by infants [Radford, 1997], but as these lie outside the realm of phonology, naturally they are not discussed in this book. However, it is a little unfortunate that, on the evidence presented here, strict adherence to binary structures sometimes seems to complicate things unnecessarily when a simpler analysis might be available.

One other instance where, on the evidence presented in the book, there appears to be an unnecessary extra level of complication concerns word accent in Dutch, which is reported to have a basic penultimate accent with some exceptions, as words such as *libido* have antepenultimate accent while others such as *violet* have final accent (p. 241). The solution pro-

posed here is that extrametricality applies in the antepenultimate cases, while *violet* is marked lexically, but it is not entirely clear why lexical marking cannot be assumed to apply in all instances of irregular accent placement in Dutch given that it is sometimes needed.

Although there are a few cases such as these where the analysis presented is not completely convincing, the role of an introductory textbook is maybe not to provide a totally watertight case for all the suggested solutions. Instead the aim should be to present a range of theories as clearly as possible and thereby enable the interested reader to pursue further details elsewhere. And this book achieves that magnificently. Even if the reader might occasionally question whether all the phonological devices that are introduced are really necessary, the text certainly does achieve an impressive clarity in the presentation, and there are comprehensive references for anyone who wants to find out more about some of the issues.

The style generally adopted in the elaboration of the various models of phonology is to start with a simple solution and then subsequently build on it, quite often abandoning some aspects of it after discussion of the weaknesses. This gradual approach is attractive and generally quite effective, but it does sometimes result in the reader being led up a garden path, and occasional flaws in the logic of the argument are apparent well before they are resolved a page or two later. For example, it is suggested that rhyme formation is needed as the first stage in achieving syllabification (p. 142), but many readers will straightaway object that the onset needs to be dealt with before the rhyme can be broken down into

nucleus and coda, and this is only discussed on the next page when it is acknowledged that the suggested process 'is incorrect in one respect' (p. 143). In another similar logical garden path, it is proposed that, in the immediate constituent analysis of word structure, syllables might be broken up into units of equal weight, or moras (p. 150). Clearly, this does not make any sense, as the onset is an immediate constituent of a syllable but it plays no part in the moraic structure. This is eventually discussed two pages later, where it is proposed that onsets can be regarded as extramoraic, but it is sometimes a trifle frustrating that one is left in the lurch for so long, wondering if one has missed something when faced with such an obvious flaw in the analysis.

However, it would be inappropriate to dwell too much on any such minor deficiencies, for this book has obviously been written with meticulous attention to detail and an impressive clarity throughout. In conclusion, therefore, the text constitutes an excellent, well-written, thoughtful introduction to the various means of representing the phonological nature of segments and the structure of words.

References

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D. Deterding, Singapore