Robert Kennedy (2017). *Phonology: a coursebook*. Cambridge: Cambridge
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1 Introduction

Recent findings from the cognitive science of learning have demonstrated that
solid, lasting learning requires plenty of repetition and practice.* Simply
reading is a poor method of study. Rather, regular testing has been found to be
one of the most effective methods for lasting learning (Leeming 2002, Arnold &
McDermott 2010; see Roediger & Karpicke 2006 for a review). This kind of
low-stakes testing requires information recall and practice of new skills, and there-
fore reinforces learning. Rather than drilling through a block of problems of type
X, then a block of problems of type Y, and so on, the problems should be *inter-
leaved*, requiring students to determine the relevant skills required for each
problem, rather than permitting mechanical rote learning (Rohrer & Taylor
2007; see Cepeda *et al.* 2006 for a review).

   Robert Kennedy's *Phonology: a coursebook* appears to have been designed with
exactly these considerations in mind. This book is brimming with data and exam-
ples: each chapter is structured around a series of exercises with intervening
explanatory text in short, readable chunks. Additional exercises at the end of
each chapter provide further opportunities for students to practice and hone
their skills in analysis and argumentation. The writing is clear and exact,
without being too technical or too conversational. In short, this is a textbook
which will help students to really learn phonology.

   In this review, I provide an overview of the book and its salient features (§2),
describe each chapter of the book (§3) and conclude by evaluating the book as a
whole (§4).

2 General overview

The textbook is intended for students with little or no prior exposure to the study
of phonology, and is focused on the introduction of the 'basic methodology of
phonological analysis' (p. xi). The book assumes familiarity with basic phonetics,
and does not provide a glossary for terms like 'velar' or 'voiceless'. This structure
works well for phonology courses with a phonetics course as a prerequisite, but for
courses without a prerequisite or combined phonology/phonetics courses a sup-
plementary text would be necessary to cover material relating to basic phonetics.

   In contrast to the majority of contemporary phonology textbooks, Kennedy
introduces the concept of alternation before phonemic analysis. Indeed, the

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concepts of allophony and complementary distribution are not covered until Chapter 5. This is a fairly radical shift (after all, what is phonology without phonemic analysis?), but a justified one. The fundamentals of most phonological research – be it descriptive, theoretical or experimental – concern alternation. Indeed, allophonic variation is simply a special case of alternation. Having a firm grasp on alternation is essential to understanding phonology, and as such it makes sense for it to be included as the first major topic in such a course.

This foregrounding of alternation also necessitates that morphological analysis is introduced early on. Again, I see this as another strength. Phonology is an abstract topic that many students struggle with – it does not have a direct physical interpretation, like phonetics, nor can phonological processes be interpreted in terms of meaning, like syntax. Centring morphological analysis provides a connection to word meaning which readers can use as an anchor for their understanding of the more abstract notions of phonology. While not all readers will need this anchoring, those who do will surely appreciate it.

3 Chapter summary

The book has twelve chapters. Each chapter begins with a set of learning objectives, is structured as a series of examples and concludes with a list of key terms and review exercises. The main text of each chapter proceeds as follows: an example is introduced, usually with an exercise to prompt the reader to spot a pattern or to practise identifying some phenomenon. After the pattern is explained, a broader generalisation is made, and technical terms defined and introduced. A new example follows, building on the technical terms developed in the previous example. This pedagogical method is simple and effective, and follows best practices established in the educational psychology literature. This structure encourages active reading, does not get bogged down in abstraction and keeps the focus centred on the real linguistic data under discussion.

My only criticism of how this approach is used in the book is that the answer to each exercise immediately follows the question. For the more complex datasets, then, great discipline is required to work out one's own solution without peeking. For some questions, particularly those where the desired answer is a rule or diagram, it is practically impossible to avoid seeing the answer in one's peripheral vision when reading the question. This is a minor issue of typesetting and is easily fixed, but I do worry about how many potential readers will fully utilise the active reading method the book so clearly promotes.

Chapter 1, 'Introduction', is a brief review of basic principles of (phonetic) segmentation and an introduction to some of the book's recurring concepts: alternation, underlying forms and morphemes.

Chapter 2, 'Alternation', uses thirteen different datasets from ten languages to introduces some basic sound alternations (mostly assimilations), principles of morphological analysis and how to write rules. Four of these datasets involve English (one each on plurals and past tense formation, and two on flapping). For an early chapter in an introductory book, I think that this ratio of English to non-English examples is well balanced.

As the book progresses, the English examples thin out, which is appropriate for students developing their comfort in analysing data from languages they do not speak. Chapter 3, 'Alternation with zero', features nine datasets, only one of which is from English. This chapter introduces deletion and epenthesis

operations, and diagnostics for distinguishing between the two. The use of the symbol Ø in deletion and epenthesis rules is introduced here, although it was used in Chapter 2 (p. 23) without comment. This chapter also features some simple tables showing derivations. These derivations are necessarily very simple, as only a single rule is being applied, but nevertheless the interpretation of these tables is not necessarily clear to the naive reader.

Chapter 4 deals with 'Other kinds of alternation', including vowel harmony and other non-local processes. Nine different datasets are introduced. Abstractness is introduced to some degree in analyses of Hungarian and Woleaian. This chapter is an excellent presentation of the relevant phenomena, and really walks the reader through the construction of appropriate analyses. It is less effective in terms of definitions, which are sometimes vague or even technically false. For example, on p. 63 we read that 'since the vowel of the suffix changes as a function of the vowel of the root, we can call this an example of vowel harmony'. This definition ignores the necessary component of SIMILARITY or FEATURAL AGREEMENT that characterises harmony. This terminological vagueness in general is addressed in more detail in §4 below.

Chapter 5 covers 'Phonemic analysis', introducing minimal pairs, complementary distribution and allophony. After a very clear introductory section on minimal pairs, Kennedy presents an exercise involving data from Karo (Tupí, Brazil; Gabas 1999), which unfortunately is very confusing. There are typos in the dataset and in the questions themselves, but even after accounting for these errors, the exercise is still problematic. The exercise involves looking for minimal pairs among the obstruents, for example, [i'cɨ] 'water' and [i'tːɨ] 'deer' illustrate a contrast between [c] and [t]. (The gemination is ignored here, although it is crucial to the later questions.) There are also forms listed such as [cadn] 'fire' and [çadn] 'fire', which, as they mean the same thing, are not minimal pairs. The choice between [c] and [ç] is not explained; according to Gabas (1999: 12), they are in free variation, but students at this level are often not equipped with this concept. More confusingly, the homophonous form [cadn] 'to pluck' is also listed, without the [ç] variant. What should we conclude from this? There is no discussion of this data point. This is a rich dataset with great potential, and it is therefore unsatisfying that the exercise does not attempt a full analysis – it simply describes some patterns of complementary distribution.

My concerns were echoed by the students in my introductory phonology class, to whom I assigned this exercise as an in-class group activity. Despite the students already having been introduced to the concepts of complementary distribution and allophony, they found the exercise frustrating and confusing, positing undescribed dialectal or social variation for the [c] ~ [ç] variants, and were unclear on how to treat the geminate consonants (which are not mentioned in Kennedy's introduction to the dataset). Ultimately the students were keen to arrive at a complete analysis of all the obstruents, which is not pursued in Kennedy's exercise, but is nevertheless achievable with the data available. In all, this exercise is too complex and has too many 'moving parts' for an introduction to complementary distribution. I highlight my negative experience with this exercise partly to note that it is quite at odds with the rest of the exercises in this chapter (and indeed the book in general), which are clear and straightforward. Other exercises from the book which I assigned to my students were quite successful, so it is therefore disappointing that the first exercise introducing such a critical concept is deficient.

Chapter 6, 'Natural classes and distinctive features', formalises the informal notation system that Kennedy's rules have been relying on so far to arrive at a

theory of features. Compared to many other textbooks, this placement of features relatively late in the sequence of concepts is unusual, but like the late placement of phonemic analysis, I again feel that this is a justifiable choice. The feature theory adopted here is similar to that of *SPE,* but uses [±ATR] in place of [±tense] and employs unary place features. Nevertheless, some later chapters refer to [±tense].

Chapter 7, 'Rule ordering, opacity, and abstractness', is perhaps the weakest chapter of the book. It introduces counterfeeding via Serbo-Croatian and counterbleeding via Palauan, presents an extended case study of rule ordering in Isthmus Zapotec and discusses abstractness in analyses of Hungarian and Okpe. The decision to present examples of counterbleeding and counterfeeding without clear examples of bleeding and feeding is a puzzling one, as these concepts are often tricky for students to grasp. Likewise, the case study of Zapotec, while comprehensive, does not appear to facilitate any particular learning objective.

Chapters 8–11 are devoted to solidifying the knowledge and skills built in earlier chapters through introduction to specific phonological phenomena: syllables (Chapter 8), tone (Chapter 9), intonation and stress (Chapter 10) and prosodic morphology (Chapter 11). These chapters are clear introductions to topics which students often find difficult or overly abstract. The strength of the data-based exercises in aiding comprehension of complex topics really shines here.

The final chapter, 'Advanced theories', is an assortment of topics not covered elsewhere in the book. This chapter could have been called 'Optimality Theory', were it not for the opening section on feature geometry and place assimilation; the chapter otherwise covers the fundamentals of OT, including richness of the base, the emergence of the unmarked, stress, reduplication and conspiracies. The section introducing OT is exceptionally clear; rather than getting bogged down in details, it stays at a relatively general level, at first relying on a generic constraint called FAITHFULNESS to handle all input–output relations. This technique keeps the reader's attention on the fact that analyses in OT are fundamentally due to interactions between faithfulness and markedness constraints, while still allowing for explanatory tableaux to be constructed and evaluated.

4 Evaluation

The book achieves its goal of providing an introduction to the methodology of phonological analysis. By making alternations central and delaying phonemic analysis until later, Kennedy quietly rewrites the orthodox phonology curriculum into one more suited to the realities of phonological analysis. The internal organisation of chapters is also conducive to lasting learning, with the focus on practising skills and developing generalisations based on data analysis rather than abstract rationalising. The book is physically well laid out, with clear typesetting and no font issues. Diagrams are clear and there is enough space in the margins for writing substantial notes. There are a handful of typos; an errata list is included on the publisher's website and Kennedy's personal webpage.

My largest criticism of the book is perhaps in its lack of a 'big picture'. In focusing on the details of the methodology of how we do phonology, it skips over larger questions of *why* we do phonology. For example, the writing of *SPE*-style phonological rules is presented simply as a descriptive shorthand, rather than as rewrite rules as a part of a generative grammar. This kind of presentation makes it unclear what a rule actually *is*, and what kinds of rules are (notationally) possible or impossible. Whether this is a strength or a drawback of the book is likely to depend on

the course instructor. By not taking a stance on these theoretical issues, this book can serve as a valuable textbook for instructors with various epistemological stances. On the other hand, this approach leaves such theoretical discussion entirely to the instructor, requiring additional supplementary texts.

This focus on the how rather than the why appears to have led to some degree of terminological vagueness in the text. As mentioned above in the discussion of Chapter 4, no clear definition of vowel harmony is provided. Stray erasure is obliquely referred to (p. 332), but never defined. Some important details are left to be inferred rather than stated explicitly – for example, a rule is posited to delete all tones following an unassociated L (p. 243). This rule is the first time the reader is exposed to the idea that a tone can be UNASSOCIATED – that is, that association lines are not necessarily part of the underlying representation of a morpheme. This concept is not discussed. The absence of a glossary compounds this problem.[1]

The final component of the 'big picture' is how modern phonology has developed and is developing, both in terms of theory and data. The book does not mention experimental or elicitation methods, nor is there much discussion of interaction with other areas of linguistics besides morphology. I feel that this is a missed opportunity, as some of the most exciting areas of modern phonology are precisely at the intersection with historical linguistics, phonetics, psycholinguistics, syntax and others. Situating phonology within the broader context of language science as a whole is of course no small undertaking, and it is understandable that it falls outside the scope of the 'basic methodology of phonological analysis' that is the book's goal, but the 'big picture stuff' can be a valuable motivator for many students.

The back-cover blurb for the book notes that 'all data are translated into IPA', a helpful feature, as consistency in transcription is important for beginning students. However, the text deviates from pure IPA in several instances. Stress is sometimes transcribed with IPA, and sometimes with acutes. Glottalised vowels in Isthmus Zapotec (pp. 175–184) are transcribed with a hook above; this deviation from IPA is explained in the text. Baghdadi Arabic pharyngealised consonants are transcribed with an underdot (p. 142), but this notation is not explained. The Ganda data (pp. 106–107, 155) are presented in their original orthography (using *y* for /j/ and *j* for /ɟ/), although the exercises and answers that follow are written as if the data were in IPA. That is, if you do not know how to convert the data as written into IPA, then you will not be able to understand the answers provided.[2]

Aside from IPA conversion, there are occasional deviations from source transcriptions. In most cases, these deviations have little consequence for the relevant analysis or exercise. For example, the Mongolian data on p. 63 lists /zeeɮ-ɮe/ as the direct past form of 'decorate', whereas the source (Svantesson *et al.* 2005: 47) gives this form as /xeeɮ-ɮe/. As the exercise concerns vowel alternations in the suffixes, this typo is minor. However, sometimes these deviations have wider consequences. In the Cuzco Quechua data (pp. 149–151) attributed to Odden (2005),

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[1]   It should be noted, however, that the lack of a glossary encourages students away from memorisation-based strategies for studying and towards more active methods which promote deeper learning (see e.g. Entwistle & Ramsden 1983).

[2]   Kennedy does an admirable job in providing both standard American and British transcriptions for most English examples. There are some errors in the British English transcriptions, mostly relating to the THOUGHT–LOT distinction, but they do not impede understanding of the matter at hand.

the aspiration and palatalisation diacritics are written as simply /h/ and /j/ respectively. Thus Odden's /qʰeljᵃ/ 'lazy' is written as /qhelja/. The exercise examines dorsal stops and fricatives, and Kennedy concludes that the stops 'are always followed by vowels' (p. 150), which means that we must interpret the /h/ as representing aspiration, rather than as a segment on its own. However, these data are repeated in Chapter 8 (pp. 213–215), where the exercise relies on positing complex onsets for exactly those segments: 'among the complex onsets of Quechua, the only consonants ever seen in second position are [h] and [j]' (p. 214). These two exercises therefore require us to interpret the transcriptions in different ways, defeating the purpose of having all data in the same transcription scheme.

Occasionally, outdated language names are used. This is especially true of datasets drawn from older publications, where the preferred language name has since shifted from an exonym to an endonym. While this is a relatively minor criticism in the greater scheme of things, it is important that our scholarly practices as a field show the appropriate respect to the peoples and cultures whose languages we analyse. In particular, the term 'Araucanian' is used instead of Mapudungan, 'Minto' is used instead of Minto (or Lower) Tanana, and the Chumash languages Samala and Shmuwich are referred to as 'Ineseño' and 'Barbareño' respectively. The index entry for Chumash refers the reader to the separate entry for Barbareño Chumash with no mention of Ineseño Chumash, which is listed later as simply Ineseño. Further confusing this matter is the fact that the Shmuwich data does not appear to be from the cited source (Applegate's 1972 thesis on Samala). Chapter 3 presents an exercise from the 'Diegueño' language; this term has been used to refer to three distinct Delta-Californian Yuman languages: Ipai, Kumeyaay and Tipai. This dataset does not appear in the source cited (Halle & Clements 1983), and it is therefore unclear which language is being considered in this dataset.

In all, the book achieves its goal of providing an introduction to the basic methodology of phonological analysis. Its focus on alternation as the central concept of phonology is a great pedagogical insight, and its chapter structure is conducive to effective learning. Indeed, due to the great number of exercises in the book, it can be used as a source of practice exercises to supplement another text. The major weaknesses outlined in the preceding sections – occasional terminological vagueness, lack of a theoretical 'big picture' and some hit-or-miss exercises – may or may not be deal-breakers for individual instructors. Despite these criticisms, I believe that this book will become a valuable resource, and that its structure and clear pedagogical focus will have a lasting influence on the way that phonology is taught.

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