have argued lie behind disordered speech. This is mainly done through reviewing the phonetics and phonology and how these are considered differently in clinical and descriptive linguistics. The authors review the problems with this division in clinical practice and provide some answers to the same. For practising clinicians this may mean updating and reviewing their understanding and analysis of speech errors. The authors state that a useful theoretical framework for clinical phonological analysis should enable us to group together errors to show their commonality, provide an explanation of the error, enable us to measure errors in terms of severity or normative development and provide guidance in planning therapeutic intervention. Many of the theories they review do accomplish this. They omit the crucial fact that for a busy clinician, the analysis also has to be swift and systematic and clinically useful. Many clients also do not present with clearly identifiable patterns and do not have a consistent error pattern, which complicates this process.

Overall, the chapters are relatively short (10–15 pages on average), which allows the reader to dip in and out of the different theories quickly, and the practical exercises and application to clinical data as reviewed in all chapters can help a busy clinician to determine whether this approach might be of use to them or otherwise. This is a useful reference book for practising clinicians who may need to be reminded of alternative ways of analysing speech data when dealing with clients who present with severe speech disorders or those with disorders that are difficult to analyse and remediate. It is not sufficiently practical to be useful to a busy clinician as an 'online' reference, which although not the explicit/stated aim of the book, might deter practitioners. Nevertheless, for students and teachers of clinical phonology and researchers in the area, it is a very useful book, which provides an excellent review of the various theoretical frameworks to the analysis of speech disorders.

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CHARLES V. J. RUSS, *The sounds of German.* Cambridge: Cambridge University Press, 2010. Pp. xxii +269. ISBN: 978-0-521-69462-9 (pbk)

doi:10.1017/S0025100312000072

Reviewed by **Jürgen Trouvain**Saarland University, Germany
trouvain@coli.uni-saarland.de

The book is published in the Cambridge University Press series 'The Sounds of ...' and joins the descriptions of Chinese, French, Japanese and Spanish. It claims to provide 'a clear introduction to the sounds of German, designed particularly for English-speaking students of the language' (p. i). Here, the first question arises: If for students of German, why is the book not written in German? We assume it is because this book is intended for beginners.

The 269 pages are divided into 12 chapters plus references and index. Each chapter ends with questions, and most chapters start with a brief introduction, and also give references for further reading. The book is accompanied by an audio CD with two kinds of audio

illustrations. The first eight audio files, covering eight chapters, contain selected words (and a few sentences) read as a list by a German native speaker. However, the list does not appear in the book, which makes it almost impossible for the reader/listener to connect an audio example with its written form, and vice versa. The last four audio files are recordings of the author reading passages of Old High German and Middle High German texts. This is an innovative approach, although again no mention of these recordings is made in the book.

One reader-friendly feature is that technical terms are introduced with their German equivalents in the table of contents as well as in the text, for instance '2.3 The larynx (der Kehlkopf)' or '2.6.8 The glottal stop (der Glottisschlag, -ë)'. However, it is not clear why technical terms sometimes occur with their German equivalents and sometimes without. There are also some irritating inaccuracies, such as the incorrect gender in 'der Grenzsignal' (p. 29; it should be das Grenzsignal).

The book focuses on historical aspects of the German sound system. This is briefly touched upon in Chapter 1, which also provides an introduction to regional pronunciation standards with the geographical distribution of the German language, the IPA symbols, the study of the sounds of languages, and aspects of writing. Particularly interesting here is the description of the standardisation of German pronunciation and how pronunciation dictionaries like Duden-Aussprachewörterbuch (Mangold 2005) and Großes Wörterbuch der deutschen Aussprache (Krech et al. 1982) evolved. A discussion of the newest work in this field by Krech et al. (2009) could not be included because it was not yet in general distribution.

The second chapter introduces descriptive phonetics of speech production. Astonishingly, waveforms instead of spectrograms are used to illustrate the difference between two vowel qualities, [a] and [i] in Figure 2.6. It would have been better to avoid or delay the inclusion of acoustic aspects of sounds, which are very unlikely to be helpful for the beginner learners.

Chapters 3 and 4 are devoted, respectively, to the vowels and consonants of Standard German. On 56 pages each vowel is briefly described in a profile involving its (i) articulation, (ii) spelling, (iii) distribution, (iv) similarity to English sounds, and (v) major variants. Illustrations of the articulatory settings for various sounds with sagittal views are also not always precise and sometimes inaccurate. For example, the tongue shape for [1] (Figure 3.4) is substantially different from that for [Y] (Figure 3.5). Rather mystifying is that the prominent epiglottis changes its shape in almost all of the 40 sagittal illustrations. Although the sounds are presented as phonemes, square brackets are used in transcriptions. The reader is faced with the well-known problem of how different authors characterise the a-vowels in German. The author distinguishes between the qualities of the short and the long a-vowel as in *Ratten* with [a] and raten with [a:]. Quite apart from the old-fashioned view of separating the two a-sounds by quality there is a serious problem with the symbol [a]. In Figure 3.1 (p. 33) [a] stands for the fourth cardinal vowel (i.e. a FRONT vowel); one page later (p. 34) the author refers to '[t]he open vowel [a], CV 5' (i.e. a BACK vowel), and then states eight lines later on the same page that 'The open vowel [a] is a CENTRAL vowel' (my emphases). In the phonological analysis of Chapter 5, the long a-vowel becomes /a:/ (p. 91). In Section 6.4.2 it is represented as /a:/ on p. 123 (Figure 6.1) and as /a:/ one page later. In Chapter 9 both open vowel phonemes are [+back] (p. 176, Figure 9.2). The confusion could not be greater, having [a] as front, central and back vowel at the same time, and also declaring it to be phonemically distinct from a further a-sound. For a discussion of the problem of using the symbol [a] for various qualities of open vowels and various levels of description see Barry & Trouvain (2008) and the subsequent replies.

The author assumes, wrongly, that the lowered schwa [v] of the ending -er occurs only in colloquial speech (p. 35), and not in more formal speech registers. Such statements seem to be triggered by studying pronunciation dictionaries rather than listening to native speakers themselves. The diphthongs are symbolised with [ai], [au] and [oi] (not the usual but probably infrequent [oy]). The author includes the quite singular diphthong [ui] from the interjection pfui as part of the vowel inventory whereas the diphthongs [e1] and [e0] adapted from English loanwords such as Mail, Trailer and Show, Snowboard are missing. This is a pity because these loan diphthongs would have been ideal in pedagogical terms for illustrating the contrast between German and English pronunciation.

The fifth chapter deals with sounds in contrast, and contains long lists of words of various phonemic oppositions in different contexts. Surprisingly, all short vowels from the previous chapters [I \circ U \circ Y] now appear as lower-case symbols with a different type of bracketing: /i o U \circ Y/. Chapter 6 focuses on 'Sounds and spelling', explaining the special representations in the orthography for each phoneme.

Chapter 7 treats the distribution of vowels and consonants in terms of consonant clusters, phonotactic restrictions and syllable structuring. The following chapter deals with foreign sounds and how borrowing has influenced the German sound inventory, including a superficial mention of influences of English. Chapter 9, on alternations, presents a generative approach to phonological analysis, with examples of diachronic and morphological processes.

The presentation of suprasegmental features and syllables in Chapter 10 is rather short (just 12 pages) and includes the complex topic of word stress in German. This might have been the right place to discuss alternations due to connected speech processes and weak forms. However, in this book, the focus of variation in the German sound system lies on the geographical and the diachronic distribution. Thus, the 45 pages of the last two chapters of the book concentrate on pluricentric and regional variation and sound changes, respectively. Unfortunately, the illustrations are here once again inaccurate, confusing Germany with German-speaking countries (Figure 11.1, p. 204). Although in the text Austria and Switzerland are explicitly considered and South Tyrol at least mentioned, Luxembourg and Liechtenstein and the German-speaking part of Belgium are ignored.

There are many points of criticism of which only a selection has been addressed here. English-speaking students of German philology with a focus on history will probably benefit from *The Sounds of German*, ideally in a revised version. But I would not recommend it as a GENERAL introduction to German phonetics and phonology on the segmental level.

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doi:10.1017/S0025100312000084

Reviewed by **Richard Cauldwell** Speech in Action, UK richardcauldwell@me.com

This publication is a doctoral dissertation which investigates the reactions of different groups of native speakers to Dutch-accented speech. The initial goal is to establish two separate hierarchies of items for a pronunciation syllabus for Dutch learners of English: one for those