This book is intended for students of the German language who have little or no prior knowledge of linguistics. The introductory chapter attempts to define the German language and outlines the general aims of a contemporary theory of grammar. In the following five chapters (2–6) the language is described at the basic linguistic levels of syntax, morphology, phonetics, phonology and lexis. The final three chapters treat stylistics, the history of the language and certain sociolinguistic aspects. At the end of each chapter, apart from the first, there is small selection of exercises.

As my audience is chiefly phonetic, my critique will mainly be restricted to the phonetic and phonological aspects of the book. Nevertheless, a few general comments about other parts of the book are in order.

Since the blurb and the introductory pages indicate that this book is for beginners, I tried to approach it as a linguistically naive reader. However, I soon had to abandon this pretense: although I spent a few years teaching transformational grammar myself, I still found parts of some chapters hard going. Concepts such as grammatical knowledge, principles, parameters and structure-dependency are introduced very cursorily in the first few pages, as are notions such as ‘model’. If this had been my first contact with linguistics, I would have been scared stiff by the end of the Introduction. Chapter 2 was easier going although here, too, concepts are introduced without sufficient explanation. Notions such as structure-dependency, mentioned in the introduction, are likely to be no clearer to the beginner when explained in the following terms:

\[
\ldots \text{all languages, including German, exhibit structure dependency. This is another way of saying that the elements of any sentence are ordered in a particular structure which is hierarchical in nature rather than linear. (p. 22)}
\]

At the same time, arguments present in most introductory syntactic texts justifying the need for phrasal groupings above the level of the word are almost completely absent.

By contrast, the chapters on morphology and lexis, and the final three chapters are better pitched at the introductory level, although it is clear that little more than twenty pages on the history or the sociolinguistics of German can only scrape the surface. Both of these chapters would have benefited greatly from maps giving the reader a graphic impression of the main dialect boundaries.

Around a fifth (50 pages) of the text is devoted to phonetics and phonology, with the lion’s share going to phonology (34 pages). The chapter on phonetics describes phonation and articulation terms very briefly, and perhaps, as elsewhere, too briefly for the beginner. Figure 2 (p. 96) shows the schematized ovoid shape of the vowel space in the midsagittal plane. No tongue is present in the drawing and there is no way to know how its position relates to the outline of the ovoid. Figures 4–7 (pp. 97–100) illustrate positions of the Cardinal Vowels and the paths of some diphthongs. Considering the lack of space, these diagrams could have been used better. There is no diagram showing typical positions of German vowels. More seriously, the student gets the impression that the symbols used in the transcription of German words
and the cardinal vowel symbols are identical. A short discussion of diacritics used to modify quality (p. 99) does not alleviate this problem.

The phonetics chapter also contains a few errors. Front open rounded [œ] is excluded from all vowel diagrams. [œ] is inexplicably positioned well within the periphery of the vowel space. Finally, the authors claim that there are no official symbols for labiodental [p] or [b]. This is incorrect; ExtIPA (I.P.A. 1999) includes both.

Some of the phonetic description of German is also controversial if not inaccurate. The consonantal allophone of /r/ is given as [s]. This continues a rather unhelpful tradition found in many phonetic and phonological accounts (e.g. Ramers 1998, Ternes 1999). More common in Standard German is the uvular fricative or approximant [s], with the trill being employed in particular utterance and stylistic contexts.\footnote{A uvular trill was a characteristic of the late Bavarian president Franz-Josef Strauß.} However, in generative phonological accounts of German, use of the fricative as a derivational starting point is uncomfortable since it puts /r/ too far down the sonority hierarchy, a construct which the present authors also attach importance to in the phonology chapter. Likewise, it is also not clear why the authors choose to use [Â] rather than [v] (used in the majority of German texts) for the vocalic allophone of /r/. [Â] is phonetically too far back in the prescribed standard. Utterance-initial lenis plosives are treated as partly voiced (pp. 103f.). This is incorrect. Partial or full voicing during closure is only consistently present intervocally. Utterance-initial lenis plosives are completely unvoiced, with the voicing beginning anything up to 30 or 40 ms after release.

The phonology chapter again suffers from a too cursory treatment of certain concepts, which could just as well have been left out altogether. The discussion of biuniqueness and the mental lexicon (pp. 108f.) is just such an example, trying to do too much in too small a space. Likewise, the analysis of initial [ga] (e.g. ‘Geburt’) as being a case of automatic ñ-insertion (p. 114) or the extrasyllabic treatment of [h] need more explication. By contrast, we are almost half-way through the chapter, passing through the sonority hierarchy, before basic phonemic concepts, such as complementary distribution and allophone, are explained and exemplified.

The examples of assimilation in the section of connected speech on p. 135 are presumably constructed. Simpson (2001) has shown that assimilation may fail to happen in German in a number of expected environments, such as Prep+Noun. Likewise, German does not assimilate alveolars with following palatal onsets as shown in the ‘des Jungen’. Indeed, German speakers often find the assimilation of the final alveolar fricative in ‘this year’ in English amusing.

Some other minor points on this chapter. Germans do not like the much used ‘Kuhchen’ [ku:ç] example, feeling more comfortable with an umlaut form, [ky:ç]. They are more comfortable with the near-minimal pair ‘Frauchen’ [ˈfʁauçn] and ‘rauchen’ [ˈʁaʊxn], not least because ‘Frauchen’ (‘dog’s mistress’) is a form speakers use. Although it is legitimate to exclude long half-open [e:] in words such as ‘wählen’ for some varieties of German, it is at least prescribed for High German, and should be mentioned.

The discussion of /r/ allophony (pp. 126f.) in the phonology chapter exposes a more general deficit or bias of this book. When considering what the consonantal and vocalic allophones have in common phonetically, no mention is made of what is by far still the most insightful phonological treatment of many aspects of German and in particular German /r/ – Trubetzkoy (1939). There is a very definite bias towards English literature on German. No mention is made of any of the great 19th-century phoneticians, such as Bremer, Sievers or Viëtor. Neither is there any mention of standard reference works, such as Duden Aussprachewörterbuch or the invaluable dtv Atlas der deutschen Sprache, which provides a very concise and illustrative introduction to history of German and its dialectal structure. One German text referred to at a number of places (Kohler 1977) has long been superceded by a second edition (Kohler 1995).

In conclusion, I think that if this is used as a course book it needs a competent teacher. There are large chunks which I could not have got through as a linguistic beginner. One danger
is that if this were to be the only contact that a student learning German had with linguistics during his or her study then such a compact generative approach might be intimidating.

References


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In this adaptation for linguists of a computer science dissertation in artificial intelligence, de Boer attempts to explain universals of human vowel systems as the result of functional pressures and population dynamics. He argues that vowel inventories are optimized in human languages through self-organization, and he attempts to model this process computationally. De Boer argues that if vowel inventories can emerge through self-organization, we need not attribute the emergence of vowel system ‘universals’ either to the existence of pre-determined vowel categories (innate features) or to speakers’ abilities to evaluate their phonological systems globally.

Chapter 1 introduces the project: de Boer designed a computer program which models interactions within a population of vowel users, to test whether self-organization can account for cross-linguistic similarities in vowel inventories. Chapter 2 discusses regularities found amid the diversity of human sound systems. Basing his comments on the UCLA Phonological Segment Inventory Database (Maddieson 1984, Maddieson & Precoda 1990), de Boer notes some widely-recognized tendencies of sound systems (symmetry, implicational relationships, etc.), and considers some explanations of vowel system universals, especially Liljencrants & Lindblom’s (1972) predictions, which are based on minimal ‘energy’ (or maximal dispersion) of the entire vowel system. He notes that while many accounts attempt to explain what is optimal about favored elements or systems, they do not explain how systems become optimal, and he briefly discusses the modeling of optimization.

De Boer proposes that optimization occurs by self-organization and, in chapter 3, he describes this phenomenon and its application in language. Self-organization is ‘the emergence of order on a global scale in a system where there are only local interactions’
In self-organization, the macroscopic behavior of a language is seen as the emergent outcome of the microscopic interactions between its speakers. Both the dispersion of vowels within the inventories of individual speakers and the sharing of inventories within a community of speakers are aspects of self-organization. In de Boer's view, if vowel system universals can emerge from facts about the production, perception, and representation of vowels, then these universals do not support the idea of an innate grammar that creates vowel categories from distinctive features or that globally evaluates the dispersion of vowels within systems.

De Boer says that 'it is relatively easy to make theories but hard to test them' (p. 39), especially theories of language as a collective behavior. This view motivates the computer simulation, described in chapter 4, that is the center of his investigation. De Boer posits a set of agents that learn to imitate each others' vowels as successfully as possible. Each agent has an articulatory vowel synthesizer, a model of perception, and a memory for a set of vowels. Each vowel is stored as a prototypical articulatory target, in terms of position (front/back), height, and rounding. (Diphthongization and secondary features like nasality or voice quality are not considered.) The articulatory representation is converted to an acoustic representation consisting of the first four formant frequencies. To calculate distances between vowels, the acoustic space is reduced to two dimensions by calculation of an 'effective second formant' from the second, third and fourth formants.

De Boer's simulation models imitation, as this seems to be the simplest interaction that involves identifying, producing, and distinguishing sounds. In a single interaction, or 'game', an 'initiator' agent generates a virtual acoustic signal from one of its stored articulatory prototypes. Then an 'imitator' agent identifies this signal with the closest one of its own stored prototypes and generates a virtual acoustic signal from this. The 'initiator' then identifies this new signal with the closest one of its prototypes. If this is the intended (original) vowel, the imitation is successful; if not, the imitation fails. Noise is introduced in the generation of both acoustic signals.

Based on the number of successful (and unsuccessful) uses of each vowel, agents adjust or remove existing prototypes, add close imitations, or merge overlapping vowels, but they perform no explicit optimization of the entire system. Individual interactions among the agents use only local information about the perceived signal and the agent's own prototypes. Feedback and consequent system adjustments ensure a bias toward a system shared among agents; 'successful' vowels are adopted more easily and kept more often. The noise that is introduced in each production extends the possible realization of each vowel prototype; it biases the system toward dispersion, since vowels with overlapping ranges may be confused and thus less successful. Random vowels are infrequently added to the inventories of agents; this seems to be necessary to avoid inventories with only a single vowel.

In chapter 5, de Boer presents the results of the simulation. Starting with empty inventories and randomly introduced vowels, his populations did develop shared sets of vowels – clusters of prototype vowels of individual agents – which appeared to be reasonably natural. For example, a population of 20 agents, after 4,000 interactions, with 10% noise added as each vowel was generated, developed a system that seemed reasonably like /i, e, a, o, u/ (p. 56). Larger noise factors, representing greater inaccuracy (and thus greater dispersion), produced looser clusters and smaller systems. De Boer argues that the acoustic systems from his imitation games 'compare favorably with optimal systems and are much better than random ones' (p. 70) in terms of system 'energy' (Liljencrants & Lindblom 1972). De Boer also considers whether vowels form clusters in his three-dimensional articulatory space; the clusters in articulatory space are less compact than in acoustic space, and they are less compact in the rounding dimension than in the height and position dimensions. (Neither result is surprising, since the same acoustic effect can be achieved by different articulations, and the use of 'effective F2' (F2') obscures the difference between non-front unrounded vowels and front rounded vowels.) De Boer also considers how a changing population might affect systems; he finds that vowel systems generated in stable populations change when the
population changes, and that changing populations produce larger clusters and fewer vowels, and require more interactions for a system to evolve.

De Boer then compares his simulation results to human vowel systems, based on Crothers’ (1978) typology, which predicts which vowel systems will occur, given a particular number of vowels. Since a model that predicts systems ought also to predict the frequency distribution of the systems, de Boer also examines system frequency, referring to Schwartz, Boë, Vallée & Abry (1997). De Boer claims that the vowel systems that emerge in his simulation ‘correspond very well with the types of vowel systems that are most often found in human languages’ and that ‘there is even a good correspondence between the frequencies with which different types of vowel systems emerge from the simulation and the frequencies with which these systems actually occur in human languages’ (p. 104).

In chapter 6, de Boer relates his simulation to work on the modeling of evolution of other parts of language, like sets of lexical items, or communication systems with syntactic or semantic properties, and he concludes that experiments in modeling show that self-organization could play a role. Chapter 7 considers the implications of de Boer’s own study for other parts of language. In de Boer’s model, the universal tendencies of vowel systems emerge from articulatory and perceptual constraints on agents participating in repeated interactions. He concludes that such universals need not be attributed to innate dispositions (Universal Grammar) or to individual optimization, and that it is necessary to view sound systems as dynamic and social – not just abstract and individual. De Boer explores the extension of such evolution modeling to word order preferences, tonogenesis, and the use of voicing to distinguish series of consonants, and he suggests ways in which such tendencies may result from self-organization.

A computational model does require unrealistic simplifications, but de Boer argues that his model is sufficiently realistic to show that if the articulatory and perceptual properties of vowels affect individual interactions among speakers, and if these interactions in turn affect the speakers’ representations of the vowels, then after enough interactions, groups of speakers will develop shared sets of vowels. De Boer’s model of system emergence is attractive in that it does not require that humans have innate categories or an ability for whole-system evaluation. It postulates minimal, and realistic, speaker abilities.

De Boer claims that the systems that emerge in his model resemble, in content and in distribution, the vowel systems of the world’s languages. This claim is very hard to evaluate. The difficulty is partly the fault of the ‘universals’ de Boer has to consider, a problem of data which confronts all researchers in vowel universals. First, vowel phoneme labeling in language descriptions is not consistent. Phonemic labels are always in some sense abstract, but vowel representations are often remarkably ‘normalized’ – a vowel or system which seems unusual is sometimes symbolized to agree with the describer’s preconceptions about systems. Further, de Boer uses Crothers’ typology of vowel systems as his basis of comparison, and he adopts Crothers’ treatment of different vowel systems as ‘the same’. For example, Crothers regarded /i, a, u/, /i, o/, and /i, a, u/ as identical for typological purposes, without any real justification. If these systems were equivalent, we might expect speakers of a language with an /i, a, o/ system to accept [œ] (or even [ɨ]) as a variant of their /o/ but not as a variant of their /i/. No evidence is offered that this is true. But the relaxed identity criteria make de Boer’s three-vowel system results look more realistic than they would with a more rigorous standard.

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1 The UPSID coding of ‘e’ and ‘o’, for languages where tenseness (or height) is not specified, attempts to acknowledge this problem, at least for these two vowels. But phonemic representations are sometimes chosen on the basis of frequency of occurrence, or to make a system appear symmetrical.

2 For example, Yokuts long vowels are typically described as /æ, ə, ɔ/ – but Greg Lee, who did field work on the language some years ago, describes these vowels (p.c.) as lax and LOW, giving the long vowels [a, ə, d].
Another problem with the data on system universals is the use of ‘effective F2’ (F2 ’). In order to measure distances between vowels, both in evaluating the dispersion of a system and in comparing a stimulus with a representation in an imitation game, vowels are reduced to a two-dimensional vowel space. This conflates front rounded vowels with central or back unrounded vowels. Such vowels are, of course, distinguished in languages like Turkish; and one or the other series may characterize a language or language group (e.g. many mainland Southeast Asian languages have back unrounded vowels but few, if any, have front rounded vowels). The point is that these vowels series are interchangeable only in typologists’ oversimplifications. And it is not clear that real labiopalatal and central vowels are as easily confused as ‘effective F2’ might imply. Further, the two series pattern very differently with respect to their origins and the changes they undergo. For example, historically or in synchronic variation, /ø/ typically arises by assimilation of a labial vowel to a palatal (front) element or vice versa (e.g. from assimilation within [eũ] or [œũ], or by similar assimilation across syllables) – we do not find /ø/ spontaneously arising from /œ/, as de Boer’s simulation might suggest. Neither do central and labiopalatal vowels develop in the same directions, historically. In using F2’, de Boer follows the pattern set by Liljencrants & Lindblom, Crothers, and others – but facts about vowel histories and vowel variation, and the role of features, which are based on articulations as well as acoustic effects, should not be off-handedly dismissed in an explanation of vowel evolution.

One cannot blame de Boer for such problems. Some degree of indeterminacy in phonemic description may be unavoidable, and a two-dimensional vowel space is accepted by a variety of linguists. But the problems in his standard make it hard to accept the claim that his emergent patterns match real universal patterns.

And a worse problem arises in the match de Boer claims to find between accepted ‘system universals’ and his emergent systems. The match depends crucially on his labeling of the vowels in the systems his simulations produce. De Boer provides no principles for assigning a symbol to a cluster of points within the acoustic space, and the labeling of the vowel clusters in his system charts is not consistent, especially considering that, unlike humans, all his agents have exactly the same ‘vowel space’. For example, de Boer compares the three-vowel systems that emerge in his simulation to the widely-attested /i, a, u/ system and to the less common, but attested /i, œ, a/ (his Figure 5.21). But in de Boer’s /i, a, u/ system, many of the /i/s have lower F2’ than most of the /a/s. Calling these vowels /i/ rather than /i/ seems arbitrary. One could argue that de Boer’s most common emergent system is /e, a, œ/, which does not match the attested /i, a, u/. Other diagrams in Figures 5.22 (four-vowel systems) through 5.24 (six-vowel systems) show examples of such skewed labeling. Table 1, for example, shows some examples of F1 and F2’ ranges from de Boer’s Figure 5.24, which illustrate the inconsistency. In diagram 5.24 A, the vowel cluster labeled /a/ has similar values to the /a/ of diagram 5.24 C, and the area for /a/ in diagram A does not even overlap with the /a/ of diagram C. This /a/ in diagram 5.24 C, in turn, overlaps rather significantly with the /e/ of diagram 5.24 B. In view of this sort of loose and apparently arbitrary labeling, de Boer’s comparison of his simulation results to those of Crothers (1978) and Schwartz et al. (1997) is unconvincing.

De Boer himself also notes a consistent difficulty – that the /i/ in the emergent vowel systems is usually no more front than /e/ or /œ/; a real /i/ seems not to be learnable in the
simulation. But of course, /i/ is in fact extremely widespread in real systems (second only to /ɑ/), and it is usually learned early.

Because de Boer wants to establish that an innate set of features is not needed to account for vowel patterns, he ignores vowel features in modeling the evolution of systems. Of course, there is, in the historical literature, considerable evidence for the function of features in phonological processing and change, and de Boer himself observes that binary features can be used to describe his emergent systems (p. 105). This suggests that features themselves might be seen as emergent, but de Boer does not explore the implications of this for a model of vowel evolution. Further, de Boer’s model does not acknowledge or account for widely-observed patterns of vowel change (e.g. Donegan 1986, Labov 1994) – for example, real systems do not collapse to a single series (much less to a single vowel!) unless labiality and palatality have been reinterpreted as consonant ‘colors’. It is unfortunate that a model of the origins of vowel systems should ignore what is known about their development.

The Origin of Vowel Systems is the first volume in a series on the evolution of language. De Boer addresses evolution in questioning the necessity of an innate – and thus evolved – phonological grammar (with innate features and global evaluation abilities). He asks, instead, if vowel system universals may arise in a community of agents, as responses to the demands of a simple interactive task within the phonetic abilities of the agents. His simulation does show vowel systems emerging by self-organization, and each system is, crucially, both a set of representations within an individual and an instrument of interaction. But there are serious limitations to the conclusions that can be drawn from this model.

First, the similarity of de Boer’s results to real vowel systems – or even to the ‘system universals’ de Boer depends on – seems exaggerated. Second, de Boer’s model derives vowel systems from established phonetic abilities, but the task his agents perform is orders of magnitude simpler than the phonetic tasks involved in recognition and reproduction even of simple words produced by different speakers. Third, de Boer’s agents do not themselves evolve; the phonetic capacities of all agents are like those of a single modern human. In reality, human phonetic abilities have presumably evolved, and they may have evolved in ways that affect and are affected by language.

Of course, de Boer’s principal interest is in establishing that self-organization can create systems – not that this happened in language in the way it happens in his model. And the innate abilities that de Boer is questioning here are specifically grammatical, not phonetic. But while one may sympathize with many aspects of the study, there are real problems: the distance between the interactions of the model and those of real language use, the absence of connection between the model and actual processes of vowel system acquisition or change, and the looseness of the comparisons between real and generated systems. The proposal, the simulation, and the results are presented very clearly and attractively, and it is interesting to see an argument that vowel system universals can arise without Universal Grammar. But the weaknesses are likely to prevent the conversion of believers in UG to a more functionalist perspective.

References


The fifth edition of Crystal’s *A Dictionary of Linguistics and Phonetics* has been significantly revised and updated: the author is obviously concerned that it moves with the times. The very fact of its appearing in five editions proves the viability of this reference work: since 1980, when it was first published (as *A First Dictionary of Linguistics and Phonetics*), several generations of users have benefitted from it.

One could almost say that linguistics is more of an art than a science: ask any two linguists to define a term and you will get three different opinions. A reference book of this type is, hence, all the more needed for students in today’s expanding field of linguistics. It is also invaluable for scholars in related areas of study: it is hardly possible to imagine a sphere of human activity to which linguistics would be totally irrelevant. This dictionary is, thus, targeted at a wide range of users.

This 508-page volume covers over 5,000 linguistic terms in over 3,000 entries. It includes a table of contents, a list of abbreviations, a list of symbols and a chart of the International Phonetic Alphabet.

The current edition covers both core and peripheral linguistic terminology as it has developed to date. A term’s standard usage is presented first, but numerous specific meanings as they are used in language teaching and learning, speech therapy, psychology and psycholinguistics, sociology and sociolinguistics, computing, logic, anthropology, literary criticism, and philosophy in general are also explained.

There are elements of encyclopaedic information: the historical context of the term’s initial usage and/or the relationship between the given term and a set of similar ones from associated fields is often included. Generally, in discussing a term, Crystal relies on standard expositions or on specialist work, but in some cases a personal interpretation is introduced.

I will briefly describe an entry in order to give a general idea of its structure and contents. A headword, clearly identified by boldface typography, is followed by its word-class identifier given in parentheses: this has specifically been done for non-native speakers of English, who will also benefit from the usage illustrations. Next comes the term’s direct definition and/or a cross-reference, of which there are plenty: structured as a hypertext, the book is clearly not intended to be read linearly but it is to be referred to as needed by the user. This user-oriented approach has already revealed itself in the choice of headwords and provision of useful supplementary materials, as stated above; it is reflected here again in the entry’s structure and typography: boldface for the headword and other derived locutions in inverted commas, capitals for a cross-reference, italics for a verbal illustration, etc. The general layout
makes the book easy to use – not only the typography but also the graphs that are sparingly and thoughtfully incorporated into the text.

A result of David Crystal’s thorough research and thoughtful planning and of his concern with his audience, this book is an absolute must for any student of the humanities regardless of age and specialism. I would also recommend this edition to anyone who aspires to the title ‘educated’ as a permanent resident of the reference bookshelf: one cannot go wrong with this. Personally, I am a proud owner of a copy, which will be used by many a student until the sixth edition becomes available.


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English language teachers such as myself have long been frustrated by the absence of a focus on spontaneous (‘real’, ‘natural’, ‘casual’) speech in phonology textbooks of the kind used in teacher-training courses. The phonology that occurs in such books has its basis in the descriptions of how isolated sounds/words are articulated by the organs of speech (‘put your tongue on the alveolar ridge and . . .’) – it deals in abstractions (phonemes) and citation forms – words bounded by pauses spoken with maximal number of degrees of stress, with falling tone. These are rare forms in casual speech. This approach can be described as ‘citation form phonology’ because, although assimilation and elision have a place in such descriptions, it is on the basis that central to all investigative procedures is the stable sound shape of a word. The problem is that such phonology is very much based on intuitive views about how speech ‘ought to be’ rather than on descriptions of how speech actually is. These views of ought-to-be speech have been translated successfully into pronunciation materials, and dictionary pronunciation keys, but we have reached the limits of their usefulness, and increasingly the socio-political pressures within ELT are taking the field away from ought-to-be speech – ELT has decided that it doesn’t need accurate pronunciation any more.

Phonology still has a role – there is a crying need for a phonology for listening which makes accessible the ‘the extremely messy products’ (Lass 1984: 298) of casual speech. For decades, ELT and the teaching of other languages has had a poor record in teaching listening – the acquisition of listening skills lags behind those of speaking, reading and writing. Students who are reasonably proficient with reading, writing, and speaking are often dumbfounded on their initial encounter with casual speech. Within ELT, the teaching of listening is characterised by the methodology of testing and the avoidance of difficulty. The reason for the avoidance is that neither teachers nor teacher trainers are educated in the facts of the stream of speech. The view is that casual speech can only be learned by the osmosis of immersion: in the words of Rost (1990: 57), ‘It is doubtful that “fast speech rules” can be learned deductively and consciously applied in real time whenever one encounters an unfamiliar blur of sound. Rather, we should expect that learners will acquire gradually a phonological sensitivity to the new language in contexts of actual use and gradually adopt language-specific principles in decoding speech.’

There have been contributions to a phonology for listening in the past, most noticeably Brown (1990) – particularly her chapter 4, ‘Patterns of simplification in informal speech’ (but less so her chapter 5, ‘The function of intonation’, where she resorts to the world of
‘ought-to-be’). Linda Shockey’s (LS) book is another major contribution to this field, though, for reasons I will explain below, I wish it were more major.

*Sound Patterns of Spoken English (SPSE)* is a five-chapter publication with supporting web pages. It is not a first textbook in phonology, it relies on prior knowledge, and is thus not for the first-time reader in this field.

In chapter 1, ‘Setting the stage’, LS discusses the relationship between phonology and phonetics. As an ELT consumer of phonetics and phonology, I normally find such discussions enervating – they seem dominated by fence-building statements such as ‘Only when phonology frees itself from phonetic reductionism will it attain scientific status’ (Foley 1977). Fortunately, LS adopts a wholly acceptable position in that the question ‘Am I doing phonetics or phonology?’ doesn’t have to be answered. Her stance is that *SPSE* ‘deals with systematic behaviour by native speakers . . . using fluent speech in everyday communicative situations’ (p. 11) in a work which ‘looks at reductions very much in terms of the stream of speech in which they occur’ (p. 3). And one of the things I like best about this book is that it provides answers to two questions which are very important in the phonology for listening: How can we generalise about the relationship between the citation form and casual speech forms of words? and How can we make pedagogically useful generalisations of ‘fast speech rules’ about which Rost is so pessimistic?

There are two other items of interest in chapter 1. First, LS queries the notion that it is speed (fast speech) that is the cause of the phenomena that she deals with – preferring the term casual (‘unselfconscious’) speech – she notes that they occur in slow speech. It is only from the standpoint that speech is a line of stable soundshapes, that allows the labelling (thus demonisation) of the ‘not-as-it-ought-to-be’ as ‘fast speech’.

In chapter 2, *Processes in conversational English*, LS presents a ‘Vulnerability Hierarchy’ (VH), both in table form (p. 15) and in the form of a slightly more detailed paragraphed discussion. VH is a useful way of conceptualising the different influences on speech which are ‘most explanatory of casual speech reduction’ (p. 14). These include the categories FREQUENCY, DISCOURSE, RATE, FUNCTION IN THE LARGER LINGUISTIC UNIT, PHONETIC/ PHONOLOGICAL and MORPHOLOGICAL. Thus, for the category FREQUENCY, at the top of the hierarchy, the assertion is that ‘low reduction’ occurs with infrequent items and high reduction occurs with frequent items; at the bottom of the hierarchy, for the category MORPHOLOGICAL, present participles are ‘high reduction’ and gerunds ‘low reduction’ (e.g. ‘seeing’). My problems with the VH is that it consists of heterogeneous items, and so the relationship between rank on the hierarchy and the low reduction/high reduction scale is not clear. VH is, however, useful for organising the ideas and research presented here, and it looks a useful source of hypotheses.

The chapter reveals the need for a theory of discourse to help mechanise the discussion and to avoid over-simplifications. For example, LS states ‘There is . . . a strong tendency for the beginnings of utterances to be spoken faster and, impressionistically speaking less carefully than the ends’ (p. 16). What is lacking here is the concept of what an ‘utterance’ is – is it a tone unit (Brazil 1997), a tone group (Halliday 1967) or is it a turn at speech (Sinclair & Coulthard 1975) which might consist of several speech units? The following extract from Cauldwell (2002) illustrates the point:

The nine speech units below show a gradual acceleration in speech rate (measured in words per minute, given in the three digit numbers at the end of each speech unit) from below 100 wpm in the first three units, to over 100 in the middle three, to over 300 wpm in the last two:

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107 // ↑THIS IS // 092
108 // a MANUAL // 055
109 // FOR // 093
110 // BOTH // 125
111 // READING // 138
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But within 115, the words ‘well well it’s more of a manual for’ are spoken at a much higher speech rate than ‘writing in fact’. So what LS asserts about the larger utterance (the nine speech units) is not true. In fact the opposite is true, there is an acceleration through the nine units. But what she asserts about an utterance at the level of the individual speech unit is true. It seems to me that throughout (and this is true not just of LS’s work, but of much work in this field) the discussion would be much enhanced if it were couched in a theory of spoken discourse (such as Discourse Intonation, Brazil 1997) which provides a framework for presenting speech, both reduced and non-reduced, which is not dependent on ‘ought-to-be’ assumptions.

There follows perhaps the most useful part of SPSE, which though not amenable to reading through at one sitting, is a very useful survey of the different types of casual speech reduction, item by item. I am used to dealing with speech which is exhibiting all of these reduction phenomena pretty much simultaneously, but I did not have the ear to identify, nor the metalanguage to describe these phenomena. I learned a lot from working through the thirty-four pages of this chapter and will continue to go back to it for reminders, with examples, as to what palatalisation, nasal relocation, and tapping are. Useful also in this chapter is the citing of examples from six varieties of British English, and LS’s own knowledge of American English.

Another likeable part of this chapter is the gentle questioning of the concept of ‘weak forms’, which for me is a very disabling concept, in the sense that it posits a class of items that are most often weak, and it assumes that there is another class of items which are rarely weak. These categories are set in stone, and the big problem for teaching listening is that any word of any class can be uttered ‘weakly’ or ‘strongly’ according to the choices made by the speaker – and it would be the task of a phonology for listening to account for how and why this happens.

What I find most frustrating about this chapter is that it is worth a book in its own right. The 34 pages could easily become 240 pages of book-length teacher training material. Although SPSE is not aimed at the beginning reader, it takes too much for granted. There is no table of phonetic symbols, presumably on the assumption that the reader will have a book on the shelf with such a table in. This is characteristic, but when I am reading a book, I want to have the tables to hand, not in another book. Symptomatic also of its reliance on other publications is the short section on h-dropping (p. 44) in which the last paragraph says this ‘has been covered relatively well . . . by the standard texts . . . so it needn’t be pursued further here.’ Well, if I am typical of the intended readership of this book, then even though I may have read some of the literature on h-dropping, I could do with a reminder of what scholars have said about it, and in particular I am interested how the accent-characteristic h-dropping interacts with the h-dropping of casual speech of any accent.

Chapter 3, ‘Attempts at phonological explanation’, presents a survey of attempts in a number of different traditions to account for the variations of casual speech. Given the overall brevity of the book, this chapter is very much a quick-stop tour of the literature: there are sections on Natural Phonology and Optimality Theory. For me, this is the least interesting part of the book, but it has a very interesting final section (pp. 67ff.) because the focus shifts to perception, and the focus is on ‘trace/event’ theory. This section I would recommend to everybody to read: in it, I can see the beginnings of an academic phonology for listening which could be really useful in teaching and teacher training. What I like about it is that it proposes a theory of perception that is not dependent on the idealised abstraction of the phoneme.
As with chapter 3, chapter 4, ‘Experimental studies in fast speech’, is something of a literature review. It first focuses on production and then on perception, with the latter having by far the greatest interest, not least because it contains a detailed description of LS’s own work on speech perception, her own gating experiments, which demonstrate that perception of speech is almost certainly not word-by-word, but in larger units. Again, the latter half of this chapter would be essential reading for teacher-training courses.

In chapter 5, ‘Applications’, LS looks at the implications of research into casual speech processes for phonology, first and second language acquisition, and for speech synthesis and recognition.

Overall, this is a very important book, with insightful sections and useful, easy to refer to lists of the most commonly researched casual speech processes. I really wish it were longer.

LS does herself a disservice by writing such a short book, when the topic is crying out for extended treatment to help teacher trainers and teachers cope with the variability of casual speech. For me, the programme for this larger book is set out in the last paragraph of chapter 3: ‘many of the conditioning factors for phonological reduction lie in factors outside phonology, and the interaction of these factors (morphology, syntax, semantics, pragmatics, discourse structure) with phonology must be a concern of anyone interested in explanatory adequacy. While these interactions (especially that with morphology) have not been ignored, neither have they been fully explored’ (p.71). SPSE is by no means a full exploration, but to a considerable extent, it has mapped out the initial stages of the journey. May the longer, fuller treatment come soon – ELT listening methodology needs it as soon as possible.

Errata
p. 8, l. 12 from bottom: process > processes
p. 18, l. 4 from bottom: period > comma
p. 32: list of examples should come after the sentence ending ‘unstressed position’ (l. 3 from top)
p. 46, l. 2 from bottom: approximate > approximant
p. 47, l. 7 from top: called > call

References