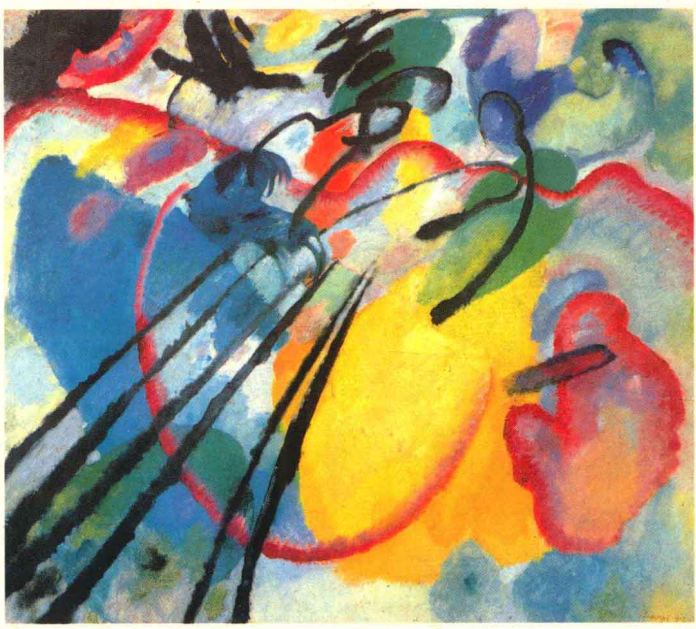
Phonology

Phonology



Andrew Spencer

Phonology

Theory and Description

Andrew Spencer

Department of Language and
Linguistics
University of Essex

BLACKWELL
Publishers

First published 1996
2 4 6 8 10 9 7 5 3 1

Blackwell Publishers Ltd
108 Cowley Road
Oxford OX4 1JF
UK

Blackwell Publishers Inc.
238 Main Street
Cambridge, Massachusetts 02142
USA

British Library Cataloguing in Publication Data

A CIP catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
Spencer, Andrew.
Phonology: theory and description / Andrew Spencer.
p. cm. — (Introducing linguistics; 1)
Includes bibliographical references and indexes.
ISBN 0-631-19232-8 (hardbound: alk. paper). — ISBN 0-631-19233-6 (pbk.: alk paper)
1. Grammar, Comparative and general—Phonology. 2. English language—Phonology. I. Title. II. Series.
P217.S64 1996
414—dc20 95-12748

Commissioning Editor: Steve Smith
Editorial Coordinator: Alison Dunnett
Desk Editor: Jack Messenger
Production Controller: Lisa Eaton
Text Designer: Lisa Eaton

Typeset in 10½ on 12 pt Plantin
by Graphicraft Typesetters Ltd, Hong Kong
Printed in Great Britain by T.J. Press Ltd, Padstow, Cornwall

This book is printed on acid-free paper.

Для одной хитрой рыжей морды

Preface (Mainly for the Teacher)

This book arose out of a need to teach introductory phonology to students who did not need to know a great deal about the theoretical aspects of the subject, but did need to get some experience of what phonologists do and why they do it. The course therefore stresses analytical techniques rather than theory construction or the evaluation of competing theoretical models. In practice this means taking a somewhat eclectic view of theory, and subordinating doctrinal issues to the more practical goal of learning how to see patterns in phonologies and understanding how phonological systems work.

However, it is all but impossible to teach a subject like phonology without reference to a host of other languages. Nor is it desirable that any student, with whatever practical objectives, should be given the impression that phonology can be conducted in a typological vacuum. There are topics that can (in principle and with many intellectual convolutions) be taught on the basis of English, but which only require a short paragraph and a couple of examples from a different language. Some phenomena, like vowel harmony, simply can't be sensibly illustrated on the basis of English alone. It should be part of any anglicist's training to appreciate to some extent at least, where English stands with respect to the rest of the linguistic world.

For these reasons, I have organized this book in two strands, the first a concise and selective survey of general phonological theory, the second a

more detailed description of certain aspects of phonology. The descriptive function, however, is subservient to the broader aim of showing the student how phonology is done (by phonologists, not anglicists). This means that I have left out a number of 'interesting' phenomena, of the kind that an anglicist might wish to know, on the grounds that they are not needed to make a particular point. However, one of the aims is that the text should provide the wherewithal for a properly informed exploration of the more exhaustive descriptive literature. At the same time, it is intended as an introduction to the basics of phonology and can therefore be used as a precursor to the subject before tackling more detailed and exhaustive expositions such as Kenstowicz (1994).

The resulting compromise isn't perfect. There are important aspects of theory left untouched. One set of omissions is tone and intonation. I have bypassed these topics because I don't know enough about them, and because it seems to me that they are best dealt with in a separate, more specialist course. My limited experience teaching such things suggests that students find even the intonation of their own language very difficult without careful practical eartraining, and the study of tone systems of wholly unfamiliar languages is simply unrealistic in undergraduate programmes other than those specializing entirely in linguistics or in tone languages (especially where the teacher lacks expertise in the area).

A theoretical domain which I have left largely untouched is lexical phonology (and especially, Lexical Phonology). There are plenty of lexical processes discussed in the text (e.g. English lexical stress for one) but I have not presented an introduction to current theoretical models. This is a serious breach with prior pedagogic tradition and demands commentary. I strongly feel that contemporary theories of morphophonemics are *too difficult* for the novice. First, it is difficult to understand the machinery of most varieties of lexical phonology without a reasonably sophisticated understanding of at least the basics of morphology, and this goes beyond the remit of an introductory course. Second, to appreciate fully the argumentation of any variety of Lexical Phonology, it is necessary to motivate a sizeable fragment of grammar which invariably leads to fairly 'abstract' underlying forms (e.g. the English vowel inventory of SPE or Halle and Mohanan 1985) and a complex battery of rules (e.g. those surrounding the alleged Great Vowel Shift of synchronic English). Weaker students are apt to be put off by all this, since they can't see the purpose of it. The better students may well be confronted with a culture clash – in their syntax classes they are quite likely to be taught that the goal of linguistic theory is to solve the logical problem of language acquisition by eliminating the rule component of the grammar. The next day, they have to navigate their way through a maze of ordered, morphologically conditioned, none too phonetically natural rules in order to generate a finite set of items (plus, if they're lucky, a set of suggestions on how to avoid generating the exceptions).

For these reasons, I have bitten the bullet and left out the lexicon. To be

sure, there are plenty of lexical rules and alternations left to illustrate what is an indispensable part of the cultural baggage of the phonologist. However, I have limited myself to drawing what I take to be the mainstream distinction between lexical and postlexical processes and making limited reference to it (notably in the section on underspecification and structure preservation).

This decision explains why an entire chapter is devoted to (of all things) *postlexical* processes in English. These are the processes which are relatively natural, phonetically, and which illustrate the interaction between segmental processes and prosodic categories fairly readily. One price to be paid for this is that the non-native speaker is put at a slight advantage with respect to native speakers (note the position of the negative morpheme!). Non-native anglicists are likely to be much more aware of postlexical distinctions than the naive native speaker, partly because they have been taught them, partly because they can hear them more easily, and partly because it is usually of great interest to the non-native student of English to know the facts of the matter. On the other hand, anglophone students of modern languages need to know what underlies their pronunciation of English if they are to acquire a decent pronunciation of the target language. (I know that conscious knowledge of sound patterns is neither necessary nor sufficient for acquiring the phonology of L2, but it usually helps.) This is particularly true of accent and rhythm: it is no more possible to get the segmental phonology of a language right with the wrong rhythmic organization than it is possible to play a violin sonata in tune without first getting the rhythm right. The importance of this far from self-evident link between rhythmic organization and the rest of phonology in part underlies my insistence on introducing ideas such as rhythmic alternations in English, and the conditioning of segmental processes by prosodic domains.

I have not actually assumed prior knowledge of basic articulatory phonetics and the IPA, but I presume that the typical student will have already been exposed to such things in a first year introduction to general linguistics. The first chapter is therefore partly review of previously studied material and partly consolidation, but also scene setting. In particular, I mesh the phonologist's labial-coronal-dorsal typology onto the IPA account of places of articulation, so don't skip the chapter completely!

Chapter 2 puts the reader in touch with elementary notions of phonology. I have added a very sketchy typological survey, on the grounds that students are too often launched in medias res without really knowing what phonological processes look like in the broader scheme of things. Many of the themes introduced in that section are taken up later, and it is a prerequisite for chapters 5 and 6. I feel it is important for students to have a view of processes and of the skeletonic structure of phonological representations before getting to grips with the minutiae of distinctive features and rule writing. The third chapter presents a fairly traditional view of syllable structure. The next chapter, essentially on features, presents the classical arguments from

classification and sets the scene for feature geometry in the chapter that follows. I have introduced a limited conception of underspecification, first, because I am not convinced by Radical Underspecification (and especially Coronal Transparency), second, because the expositional payoff given by Radical Underspecification in a modest introduction of this sort is minimal, and third, all bets will be off anyway with the advent of Optimality Theory. Chapter 5 is where processes are introduced, yoked to feature geometry. Never mind the fact that we 'know' now that this early species of geometry is 'wrong' – I believe that it is much more important to anchor feature geometry, with its imposing tree structures and not necessarily perspicuous notational conventions, in something relatively familiar, i.e. the IPA description. The scant virtues of being thoroughly up-to-date are outweighed by the greater vice of being off-putting. The prosodic domains grounding of processes is admittedly rather skimpy (you can't expect a beginner to do syntax in phonology classes), but I feel the area is sufficiently important to be worth teaching (one of the virtues of ditching generative morphophonemics is that it frees up time for such luxuries).

Chapter 6 can be seen as the culmination of the segmental part of the book. I have taken the liberty of completely reinterpreting that old warhorse, Aspiration (which is now Deaspiration), but don't lose heart – I've salvaged what I can of a mainstream account as a prelude to my own analysis and this will do service for the more faint hearted, for whom my rule inversion will prove too radical. But try my version – it's far simpler and illustrates how to write phonological rules much better than any of the standard analyses. Otherwise, this chapter is a fairly mainstream contemporary interpretation of standard analyses. I've been surprised at just how vague and incomplete the literature on English is in places. There's ample scope for more advanced students/classes to take up some of these phenomena and conduct project work on prosodic domain conditioning, dialect differences, effects of speech rate and so on.

The final two chapters are on stress, accent and rhythm. A shorter course could content itself with just, say, chapter 7 and brief discussion of some of the issues in chapter 8. There is probably sufficient material in chapter 8 (and sufficiently many unanswered questions!) to support fairly lengthy discussion of these issues in a more leisurely course. In keeping with the emphasis on analytical techniques rather than theory construction, I have (somewhat reluctantly) resisted the temptation to present the Halle/Vergnaud approach to parametrization. It's sufficient at this level that students be capable of understanding how to analyse stress systems and become familiar with the mechanics. At the very end, in the section of chapter 8 dealing with eurhythmy, I have permitted myself the luxury of presenting several competing analyses of one set of phenomena, though without drawing firm conclusions. This final section can be treated as a prelude to a more advanced course where evaluation of theoretical models is the principal objective.

At every stage the theoretical model has been chosen with pedagogy in

mind rather than theoretical purism. This means that I have, on occasions, presented analyses which I do not necessarily believe in. For example, I am personally inclined towards a moraic view of the world, but it seems to me that the syllable building approach taken here is easier for the beginner to understand. And conversion from rhymes to moras is conceptually simpler than vice versa. A brief foray into moras is there for reference, but a detailed exposition should be left for specialist advanced courses.

The exercises in any linguistics textbook should be regarded as integral to the text. Just occasionally, a new theoretical point is smuggled into an exercise. They are there for several purposes – for the solitary reader to monitor progress, for the hard pressed instructor who doesn't have the opportunity to construct a suite of exercises of their own, and as a fallback for the instructor with their own exercises but who might welcome one or two new ones. However, this is not a programmed instruction package – you don't have to get the answers to all the questions to chapter 4 right before being allowed to proceed to chapter 5 (though this would undoubtedly help). Some of the exercises presuppose that the student speak either (1) English or (2) some other language. If the reader doesn't fall into both categories simultaneously this simply means that not all the exercises are suitable for all readers. However, non-native speakers can very profitably attempt questions about the nitty-gritty of English by quizzing native speakers. This in itself is very instructive and (compared to a lot of the hoops we compel our students to jump through) is usually *fun*. So please encourage non-native speakers to do exercises on English.

Preface (Mainly for the Student)

This is an introduction to how to do phonology. Phonology is the study of the sounds used in languages: the way they pattern with respect to each other, the way they are used to make up words and phrases, and the changes they undergo. By working through this course you should acquire enough knowledge of phonological theory to enable you to understand much of what phonologists do. At the same time you should be able to use that knowledge to gain a better understanding of your native language, of other languages you might be studying and especially of English.

A decent appreciation of the sound structures of English is important whether you are studying English as your native language or as a foreign language, but it is also important if you are a speaker of English studying other languages. This is because many of the problems which face a language learner in acquiring a good accent are caused by interference from the native language. If you know how English works you've obviously got a better chance of avoiding such pitfalls. This is especially true of those aspects of sound structure that are not reflected in the writing system, and which are usually rather hard for native speakers to hear.

The book contains a good deal of discussion of English phonology and some chapters are devoted entirely to English. This is essentially for practical reasons: many students of linguistics need to know about English.

However, English is a convenient language to use if only because I can guarantee that all readers of the book know the language. Nonetheless, in order to understand the way even simple phonological theory works it is useful and sometimes necessary to look at other languages. Moreover, even if your primary concern is with the structure of English, it's important to have some sort of feel for the way other languages work. In addition, looking at data or exercises from other languages allows you to test out your practical analytic abilities without the benefit of knowing the 'answer' beforehand. The examples from languages other than English, however, are always relevant to English in the sense that they illustrate a phenomenon which is of importance to the structure of English. So, if you're a student or speaker of English and you feel that you're being asked to delve into intricacies of an exotic language which has nothing to do with English, it's possible that you're missing at least part of the point.

Although I discuss a variety of theoretical issues in this book, my principal concern is not with the construction of phonological theories themselves. The theory is there to give us tools with which to analyse phonological structures and patterns. For this reason, I have usually chosen just one theoretical approach out of many and shown how that approach solves certain problems and allows us to understand particular phenomena. This doesn't mean that you should regard that approach as the last word (there's no such thing in science!). If you go on to study phonology at a more advanced level you'll encounter other ways of doing things. However, from this course you'll get a feel for how phonology works and how to organize phonological data in such a way as to get an explanation of why things are the way they are.

The exercises are an important part of any textbook. Some of the ones in this book are to help you monitor your progress and essentially ask you to apply what you've just learnt to a new body of data. Some of them go further and ask you to think about the issues in greater depth. Other exercises introduce you to interesting aspects of the phonology of English. Some of the exercises can have more than one function. As with any textbook, you should also invent your own simple feedback exercises. At the end of a section take the crucial examples discussed in the text and try to analyse them without referring to the book. (Don't be surprised at how difficult this seems at first!)

The essence of doing linguistics is seeing patterns in something we take for granted, language. This is a very unnatural thing to – language didn't evolve for the benefit of linguists – and the techniques can be a bit unnerving at first. But once you've got over the initial sense of strangeness you'll find yourself able to see (and hear) fascinating things which were completely hidden before. I'd like to think that this book will help open up some of that hidden world, and that you'll enjoy exploring it.

Acknowledgements

Several cohorts of students cheerfully submitted themselves to earlier drafts of this text. They helped introduce innumerable improvements and I thank them collectively. Iggy Roca commented on some very embryonic incarnations. I am particularly indebted to reviewers, one anonymous, the other Elizabeth Hume, who provided detailed comments and criticisms. In addition to spotting various typos and other aberrations, they encouraged me to alter the content and organization in a number of important ways. I am grateful to the University of Essex for its enlightened policy on study leave, without which this book would still be a collection of stapled photocopies.

Figures 1.2, 1.3(a) and 1.3(b) are taken from *A Course in Phonetics*, 3rd edn, by Peter Ladefoged and are reproduced by permission of the publisher, Harcourt Brace & Company.

Abbreviations and Symbols

(For abbreviations of distinctive features see chapter 4, appendix 4.3.)

AdjP	adjective phrase
ATR	Advanced Tongue Root (see chapter 4, appendix 4.3)
Aux	auxiliary (verb)
C	consonant
CG	Clitic Group
Co	coda
ESR	English Stress Rule
G	glide
Gen	Genitive (case)
I	Intonational Phrase
IPA	International Phonetic Alphabet
L	liquid
N	nasal; noun
N/A	not applicable
Nom.	Nominative (case)
NP	noun phrase
NSP	Nominal Strident Palatalization (Polish)
NSR	Nuclear Stress Rule

Nu	nucleus
Num	number
NumP	number phrase
O	onset
OCP	Obligatory Contour Principle
P	preposition; plosive
pl	plural
PP	prepositional phrase
Pwd	Phonological (Prosodic) Word
R	rhyme
RP	Received Pronunciation
RS	Raddoppiamento Sintattico (Italian)
sg	singular
SPE	*The Sound Pattern of English* (Chomsky and Halle 1968)
SR	surface representation; Strong Retraction
SSA	Stray Syllable Adjunction
SSG	Sonority Sequencing Generalization
U	Utterance Phrase
UR	underlying representation
V	vowel; verb
Vel Pal	Velar Palatalization (Slavic)
VP	verb phrase
σ	syllable
ϕ	Phonological Phrase

Contents