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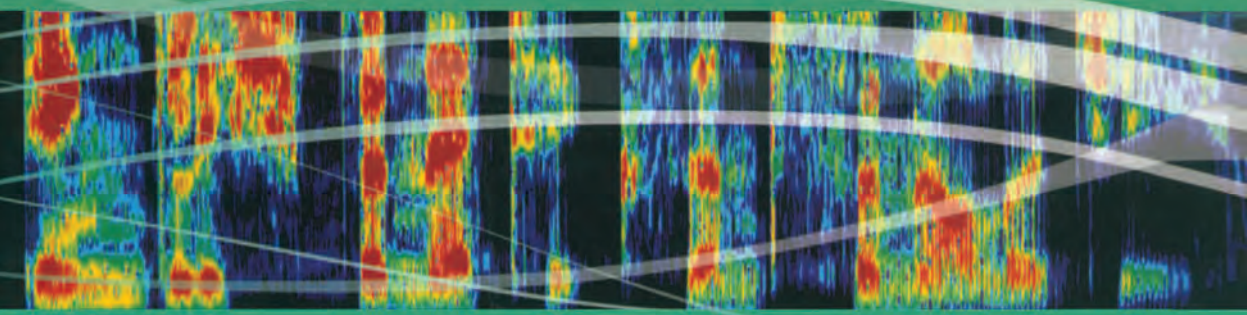
English Phonetics and Phonology

A practical course

Peter Roach



Fourth edition

Contents

Preface

In previous editions I have used the Preface as a place to thank all the people who have helped me with the book. My debt to them, which in some cases dates back more than twenty-five years, remains, and I have put copies of the Prefaces to the first three editions on the new website of the book so that those acknowledgements are not lost and forgotten. In this new edition, I would like firstly to thank Professor Nobuo Yuzawa of the Takasaki City University of Economics for his wise suggestions and his meticulous and expert scrutiny of the text, which have been invaluable to me. Any errors that remain are entirely my fault.

At Cambridge University Press, I would like to thank Jane Walsh, Jeanette Alfoldi, Liz Driscoll, Anna Linthe, Clive Rumble and Brendan Wightman.

As in all previous editions, I want to thank my wife Helen for all her help and support.

List of symbols

1 *Symbols for phonemes*

ɪ	as in 'pit' pɪt	iː	as in 'key' kiː
e	as in 'pet' pet	ɑː	as in 'car' kɑː
æ	as in 'pat' pæt	ɔː	as in 'core' kɔː
ʌ	as in 'putt' pʌt	uː	as in 'coo' kuː
ɒ	as in 'pot' pɒt	ɜː	as in 'cur' kɜː
ʊ	as in 'put' pʊt		
ə	as in 'about', upper' əbaʊt, ʌpə		
eɪ	as in 'bay' beɪ	əʊ	as in 'go' gəʊ
aɪ	as in 'buy' baɪ	aʊ	as in 'cow' kaʊ
ɔɪ	as in 'boy' bɔɪ		
ɪə	as in 'peer' pɪə		
eə	as in 'pear' peə		
ʊə	as in 'poor' pʊə		
p	as in 'pea' piː	b	as in 'bee' biː
t	as in 'toe' təʊ	d	as in 'doe' dəʊ
k	as in 'cap' kæp	g	as in 'gap' gæp
f	as in 'fat' fæt	v	as in 'vat' væt
θ	as in 'thing' θɪŋ	ð	as in 'this' ðɪs
s	as in 'sip' sɪp	z	as in 'zip' zɪp
ʃ	as in 'ship' ʃɪp	ʒ	as in 'measure' meʒə
h	as in 'hat' hæt		
m	as in 'map' mæp	l	as in 'led' led
n	as in 'nap' næp	r	as in 'red' red
ŋ	as in 'hang' hæŋ	j	as in 'yet' jet
		w	as in 'wet' wet
tʃ	as in 'chin' tʃɪn	dʒ	as in 'gin' dʒɪn

2 *Non-phonemic symbols*

ɪ as in 'react', 'happy' rɪækt, hæpɪ

ɪɪ as in 'to each' tɪɪ ɪɪtʃ

ʔ (glottal stop)

ʰ aspiration, as in 'pin' pʰɪn

̩ syllabic consonant, as in 'button' bʌtn̩

̆ shortened vowel, as in 'miss' mɪ̆s

. syllable division, as in 'differ' dɪf.ə

3 *Word stress*

ˈ primary stress, as in 'open' ˈəʊpən

ˌ secondary stress, as in 'half time' ˌhaɪf ˈtaɪm

4 *Intonation*

| tone-unit boundary

‖ pause

Tones:

↘	fall
↗	rise
∨	fall–rise
∧	rise–fall
¯	level

' stressed syllable in head, high pitch, as in 'please ↘do

, stressed syllable in head, low pitch, as in ˌplease ↘do

· stressed syllable in the tail, as in ↘my ·turn

↑ extra pitch height, as in ↑↘my ·turn

THE INTERNATIONAL PHONETIC ALPHABET (revised to 2005)

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

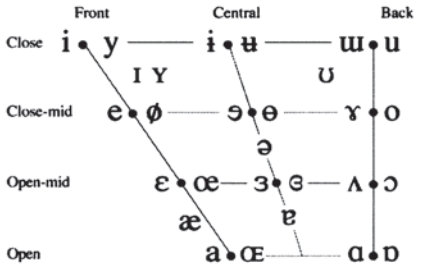
Clicks		Voiced implosives		Ejectives	
ʘ	Bilabial	ɓ	Bilabial	’	Examples:
|	Dental	ɗ	Dental/alveolar	pʼ	Bilabial
!	(Post)alveolar	ʄ	Palatal	tʼ	Dental/alveolar
ǂ	Palatoalveolar	ɠ	Velar	kʼ	Velar
‖	Alveolar lateral	ʛ	Uvular	sʼ	Alveolar fricative

OTHER SYMBOLS

ʍ	Voiceless labial-velar fricative	ɕ ʑ	Alveolo-palatal fricatives
w	Voiced labial-velar approximant	ɺ	Voiced alveolar lateral flap
ɥ	Voiced labial-palatal approximant	ʄ	Simultaneous ʃ and x
ʜ	Voiceless epiglottal fricative		
ʢ	Voiced epiglottal fricative		
ʡ	Epiglottal plosive		

Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary. k͡p t͡s

VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel.

SUPRASEGMENTALS

ˈ	Primary stress	ˌfoʊnəˈtɪʃən
ˌ	Secondary stress	
ː	Long	eː
ˑ	Half-long	eˑ
˘	Extra-short	ĕ
|	Minor (foot) group	
‖	Major (intonation) group	
.	Syllable break	ɹi.ækt
‿	Linking (absence of a break)	

TONES AND WORD ACCENTS

LEVEL			CONTOUR	
e̋ or ˥	Extra high		ě or ˧˥	Rising
é ˦	High		ê ˥˧	Falling
ē ˧	Mid		ě ˨˩˦	High rising
è ˨	Low		ě ˩˧	Low rising
ȅ ˩	Extra low		ȇ ˥˩	Rising-falling
↓	Downstep		↗	Global rise
↑	Upstep		↘	Global fall

DIACRITICS Diacritics may be placed above a symbol with a descender, e.g. ŋ̊

◌̥	Voiceless	n̥ d̥	◌̤	Breathy voiced	b̤ a̤	◌̪	Dental	t̪ d̪
◌̬	Voiced	s̬ t̬	◌̰	Creaky voiced	b̰ a̰	◌̺	Apical	t̺ d̺
◌ʰ	Aspirated	tʰ dʰ	◌̼	Linguolabial	t̼ d̼	◌̻	Laminal	t̻ d̻
◌̹	More rounded	ɔ̹	◌ʷ	Labialized	tʷ dʷ	◌̃	Nasalized	ẽ
◌̜	Less rounded	ɔ̜	◌ʲ	Palatalized	tʲ dʲ	◌ⁿ	Nasal release	dⁿ
◌̟	Advanced	u̟	◌ˠ	Velarized	tˠ dˠ	◌ˡ	Lateral release	dˡ
◌̠	Retracted	e̠	◌ˤ	Pharyngealized	tˤ dˤ	◌̚	No audible release	d̚
◌̈	Centralized	ë	◌̴	Velarized or pharyngealized	ɫ			
◌̽	Mid-centralized	e̽	◌̝	Raised	e̝	(ɹ̝ = voiced alveolar fricative)		
◌̩	Syllabic	n̩	◌̞	Lowered	e̞	(β̞ = voiced bilabial approximant)		
◌̯	Non-syllabic	e̯	◌̘	Advanced Tongue Root	e̘			
◌˞	Rhoticity	ɚ a˞	◌̙	Retracted Tongue Root	e̙			

1 Introduction

You probably want to know what the purpose of this course is, and what you can expect to learn from it. An important purpose of the course is to explain how English is pronounced in the accent normally chosen as the standard for people learning the English spoken in England. If this was the only thing the course did, a more suitable title would have been "English Pronunciation". However, at the comparatively advanced level at which this course is aimed, it is usual to present this information in the context of a general theory about speech sounds and how they are used in language; this theoretical context is called **phonetics and phonology**. Why is it necessary to learn this theoretical background? A similar question arises in connection with grammar: at lower levels of study one is concerned simply with setting out how to form grammatical sentences, but people who are going to work with the language at an advanced level as teachers or researchers need the deeper understanding provided by the study of grammatical theory and related areas of linguistics. The theoretical material in the present course is necessary for anyone who needs to understand the principles regulating the use of sounds in spoken English.

1.1 How the course is organised

You should keep in mind that this is a *course*. It is designed to be studied from beginning to end, with the relevant exercises being worked on for each chapter, and it is therefore quite different from a reference book. Most readers are expected to be either studying English at a university, or to be practising English language teachers. You may be working under the supervision of a teacher, or working through the course individually; you may be a native speaker of a language that is not English, or a native English-speaker.

Each chapter has additional sections:

- Notes on problems and further reading: this section gives you information on how to find out more about the subject matter of the chapter.
- Notes for teachers: this gives some ideas that might be helpful to teachers using the book to teach a class.
- Written exercises: these give you some practical work to do in the area covered by the chapter. Answers to the exercises are given on pages 200–9.
- Audio exercises: these are recorded on the CDs supplied with this book (also convertible to mp3 files), and there are places marked in the text when there is a relevant exercise.

- Additional exercises: you will find more written and audio exercises, with answers, on the book's website.

Only some of the exercises are suitable for native speakers of English. The exercises for Chapter 1 are mainly aimed at helping you to become familiar with the way the written and audio exercises work.

1.2 The *English Phonetics and Phonology* website

If you have access to the Internet, you can find more information on the website produced to go with this book. You can find it at www.cambridge.org/elt/peterroach. Everything on the website is additional material – there is nothing that is essential to using the book itself, so if you don't have access to the Internet you should not suffer a disadvantage.

The website contains the following things:

- Additional exercise material.
- Links to useful websites.
- A discussion site for exchanging opinions and questions about English phonetics and phonology in the context of the study of the book.
- Recordings of talks given by Peter Roach.
- Other material associated with the book.
- A Glossary giving brief explanations of the terms and concepts found in phonetics and phonology.

1.3 Phonemes and other aspects of pronunciation

The nature of phonetics and phonology will be explained as the course progresses, but one or two basic ideas need to be introduced at this stage. In any language we can identify a small number of regularly used sounds (vowels and consonants) that we call **phonemes**; for example, the vowels in the words 'pin' and 'pen' are different phonemes, and so are the consonants at the beginning of the words 'pet' and 'bet'. Because of the notoriously confusing nature of English spelling, it is particularly important to learn to think of English pronunciation in terms of phonemes rather than letters of the alphabet; one must be aware, for example, that the word 'enough' begins with the same vowel phoneme as that at the beginning of 'inept' and ends with the same consonant as 'stuff'. We often use special symbols to represent speech sounds; with the symbols chosen for this course, the word 'enough' would be written (**transcribed**) as /ɪˈnʌf/. The symbols are always printed in blue type in this book to distinguish them from letters of the alphabet. A list of the symbols is given on pp. x–xi, and the chart of the International Phonetic Association (IPA) on which the symbols are based is reproduced on p. xii.

The first part of the course is mainly concerned with identifying and describing the phonemes of English. Chapters 2 and 3 deal with vowels and Chapter 4 with some consonants. After this preliminary contact with the practical business of how some English sounds are

pronounced, Chapter 5 looks at the phoneme and at the use of symbols in a theoretical way, while the corresponding Audio Unit revises the material of Chapters 2–4. After the phonemes of English have been introduced, the rest of the course goes on to look at larger units of speech such as the **syllable** and at aspects of speech such as **stress** (which could be roughly described as the relative strength of a syllable) and **intonation** (the use of the pitch of the voice to convey meaning). As an example of stress, consider the difference between the pronunciation of 'contract' as a noun ('they signed a contract') and 'contract' as a verb ('it started to contract'). In the former the stress is on the first syllable, while in the latter it is on the second syllable. A possible example of intonation would be the different pitch movements on the word 'well' said as an exclamation and as a question: in the first case the pitch will usually fall from high to low, while in the second it will rise from low to high.

You will have to learn a number of technical terms in studying the course: you will find that when they are introduced in order to be defined or explained, they are printed in **bold type**. This has already been done in this Introduction in the case of, for example, **phoneme**, **phonetics** and **phonology***. Another convention to remember is that when words used as examples are given in spelling form, they are enclosed in single quotation marks – see for example 'pin', 'pen', etc. Double quotation marks are used where quotation marks would normally be used – that is, for quoting something that someone has said or might say. Words are sometimes printed in *italics* to mark them as specially important in a particular context.

1.4 Accents and dialects

Languages have different **accents**: they are pronounced differently by people from different geographical places, from different social classes, of different ages and different educational backgrounds. The word *accent* is often confused with **dialect**. We use the word *dialect* to refer to a variety of a language which is different from others not just in pronunciation but also in such matters as vocabulary, grammar and word order. Differences of accent, on the other hand, are pronunciation differences only.

The accent that we concentrate on and use as our model is the one that is most often recommended for foreign learners studying British English. It has for a long time been identified by the name **Received Pronunciation** (usually abbreviated to its initials, **RP**), but this name is old-fashioned and misleading: the use of the word "received" to mean "accepted" or "approved" is nowadays very rare, and the word if used in that sense seems to imply that other accents would *not* be acceptable or approved of. Since it is most familiar as the accent used by most announcers and newsreaders on BBC and British independent television broadcasting channels, a preferable name is **BBC pronunciation**. This should not be taken to mean that the BBC itself imposes an "official" accent – individual broadcasters all have their own personal characteristics, and an increasing number of broadcasters with Scottish, Welsh and Irish accents are employed. However, the accent described here is typical of broadcasters with an English accent, and there is a useful degree of consistency in the broadcast speech of these speakers.

* You will find these words in the Glossary on the website.

This course is not written for people who wish to study American pronunciation, though we look briefly at American pronunciation in Chapter 20. The pronunciation of English in North America is different from most accents found in Britain. There are exceptions to this – you can find accents in parts of Britain that sound American, and accents in North America that sound English. But the pronunciation that you are likely to hear from most Americans does sound noticeably different from BBC pronunciation.

In talking about accents of English, the foreigner should be careful about the difference between **England** and **Britain**; there are many different accents in England, but the range becomes very much wider if the accents of Scotland, Wales and Northern Ireland (Scotland and Wales are included in Britain, and together with Northern Ireland form the **United Kingdom**) are taken into account. Within the accents of England, the distinction that is most frequently made by the majority of English people is between **northern** and **southern**. This is a very rough division, and there can be endless argument over where the boundaries lie, but most people on hearing a pronunciation typical of someone from Lancashire, Yorkshire or other counties further north would identify it as "Northern". This course deals almost entirely with BBC pronunciation. There is no implication that other accents are inferior or less pleasant-sounding; the reason is simply that BBC is the accent that has usually been chosen by British teachers to teach to foreign learners, it is the accent that has been most fully described, and it has been used as the basis for textbooks and pronunciation dictionaries.

A term which is widely found nowadays is **Estuary English**, and many people have been given the impression that this is a new (or newly-discovered) accent of English. In reality there is no such accent, and the term should be used with care. The idea originates from the sociolinguistic observation that some people in public life who would previously have been expected to speak with a BBC (or RP) accent now find it acceptable to speak with some characteristics of the accents of the London area (the estuary referred to is the Thames estuary), such as glottal stops, which would in earlier times have caused comment or disapproval.

If you are a native speaker of English and your accent is different from BBC you should try, as you work through the course, to note what your main differences are for purposes of comparison. I am certainly not suggesting that you should try to change your pronunciation. If you are a learner of English you are recommended to concentrate on BBC pronunciation initially, though as you work through the course and become familiar with this you will probably find it an interesting exercise to listen analytically to other accents of English, to see if you can identify the ways in which they differ from BBC and even to learn to pronounce some different accents yourself.

Notes on problems and further reading

The recommendation to use the name *BBC pronunciation* rather than *RP* is not universally accepted. 'BBC pronunciation' is used in recent editions of the *Cambridge English Pronouncing Dictionary* (Jones, eds. Roach, Hartman and Setter, 2006), in Trudgill (1999)

and in Ladefoged (2004); for discussion, see the Introduction to the *Longman Pronunciation Dictionary* (Wells, 2008), and to the *Cambridge English Pronouncing Dictionary* (Jones, eds. Roach *et al.*, 2006). In Jones's original *English Pronouncing Dictionary* of 1917 the term used was *Public School Pronunciation* (PSP). Where I quote other writers who have used the term *RP* in discussion of standard accents, I have left the term unchanged. Other writers have suggested the name *GB* (*General British*) as a term preferable to RP: I do not feel this is satisfactory, since the accent being described belongs to England, and citizens of other parts of Britain are understandably reluctant to accept that this accent is the standard for countries such as Scotland and Wales. The BBC has an excellent Pronunciation Research Unit to advise broadcasters on the pronunciation of difficult words and names, but most people are not aware that it has no power to make broadcasters use particular pronunciations: BBC broadcasters only use it on a voluntary basis.

I feel that if we had a completely free choice of model accent for British English it would be possible to find more suitable ones: Scottish and Irish accents, for example, have a more straightforward relationship between spelling and sounds than does the BBC accent; they have simpler vowel systems, and would therefore be easier for most foreign learners to acquire. However, it seems that the majority of English teachers would be reluctant to learn to speak in the classroom with a non-English accent, so this is not a practical possibility.

For introductory reading on the choice of English accent, see Brown (1990: 12–13); Abercrombie (1991: 48–53); Cruttenden (2008: Chapter 7); Collins and Mees (2008: 2–6); Roach (2004, 2005). We will return to the subject of accents of English in Chapter 20.

Much of what has been written on the subject of "Estuary English" has been in minor or ephemeral publications. However, I would recommend looking at Collins and Mees (2008: 5–6, 206–8, 268–272); Cruttenden (2008: 87).

A problem area that has received a lot of attention is the choice of symbols for representing English phonemes. In the past, many different conventions have been proposed and students have often been confused by finding that the symbols used in one book are different from the ones they have learned in another. The symbols used in this book are in most respects those devised by A. C. Gimson for his *Introduction to the Pronunciation of English*, the latest version of which is the revision by Cruttenden (Cruttenden, 2008). These symbols are now used in almost all modern works on English pronunciation published in Britain, and can therefore be looked on as a *de facto* standard. Although good arguments can be made for some alternative symbols, the advantages of having a common set of symbols for pronunciation teaching materials and pronunciation entries in dictionaries are so great that it would be very regrettable to go back to the confusing diversity of earlier years. The subject of symbolisation is returned to in Section 5.2 of Chapter 5.

Notes for teachers

Pronunciation teaching has not always been popular with teachers and language-teaching theorists, and in the 1970s and 1980s it was fashionable to treat it as a rather outdated activity. It was claimed, for example, that it attempted to make learners try to sound like

native speakers of Received Pronunciation, that it discouraged them through difficult and repetitive exercises and that it failed to give importance to communication. A good example of this attitude is to be found in Brown and Yule (1983: 26–7). The criticism was misguided, I believe, and it is encouraging to see that in recent years there has been a significant growth of interest in pronunciation teaching and many new publications on the subject. There are very active groups of pronunciation teachers who meet at TESOL and IATEFL conferences, and exchange ideas via Internet discussions.

No pronunciation course that I know has ever said that learners must try to speak with a perfect RP accent. To claim this mixes up **models** with **goals**: the *model* chosen is BBC (RP), but the *goal* is normally to develop the learner's pronunciation sufficiently to permit effective communication with native speakers. Pronunciation exercises can be difficult, of course, but if we eliminate everything difficult from language teaching and learning, we may end up doing very little beyond getting students to play simple communication games. It is, incidentally, quite incorrect to suggest that the classic works on pronunciation and phonetics teaching concentrated on mechanically perfecting vowels and consonants: Jones (1956, first published 1909), for example, writes " 'Good' speech may be defined as a way of speaking which is clearly intelligible to all ordinary people. 'Bad' speech is a way of talking which is difficult for most people to understand ... A person may speak with sounds very different from those of his hearers and yet be clearly intelligible to all of them, as for instance when a Scotsman or an American addresses an English audience with clear articulation. Their speech cannot be described as other than 'good' " (pp. 4–5).

Much has been written recently about **English as an International Language**, with a view to defining what is used in common by the millions of people around the world who use English (Crystal, 2003; Jenkins, 2000). This is a different goal from that of this book, which concentrates on a specific accent. The discussion of the subject in Cruttenden (2008: Chapter 13) is recommended as a survey of the main issues, and the concept of an International English pronunciation is discussed there.

There are many different and well-tried methods of teaching and testing pronunciation, some of which are used in this book. I do not feel that it is suitable in this book to go into a detailed analysis of classroom methods, but there are several excellent treatments of the subject; see, for example, Dalton and Seidlhofer (1995); Celce-Murcia *et al.* (1996) and Hewings (2004).

Written exercises

The exercises for this chapter are simple ones aimed at making you familiar with the style of exercises that you will work on in the rest of the course. The answers to the exercises are given on page 200.

1 Give three different names that have been used for the accent usually used for teaching the pronunciation of British English.

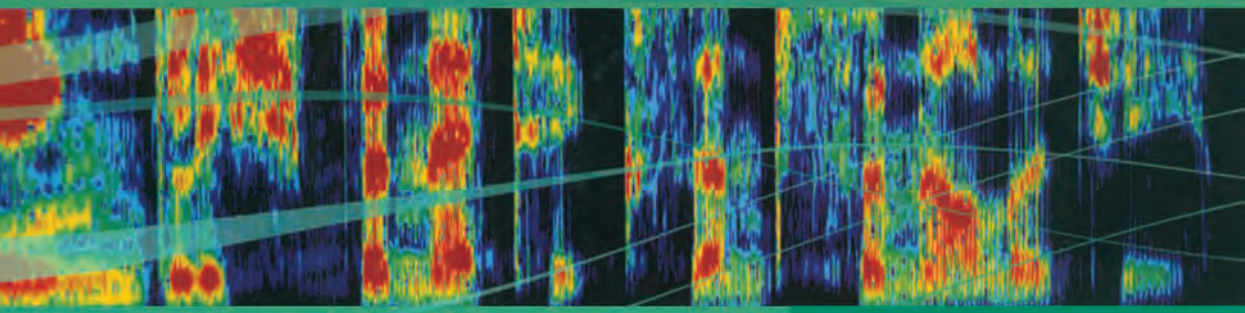
English Phonetics and Phonology

A practical course

English Phonetics and Phonology: A practical course by Peter Roach has been a leading coursebook on English pronunciation for twenty-five years. It presents the basic theoretical material needed to understand phonetics, phonology and the pronunciation of English in the form of a 20-unit course. Each unit ends with notes on issues that deserve further study and recommendations for further reading, as well as notes for teachers and written exercises. In addition, there are audio exercises for every chapter of the course on the two accompanying CDs. The new edition adds to this a website with additional written and spoken exercises, as well as a wealth of other material offering a wider perspective on the subject.

- Combines examination of theoretical matters with extensive practice material
- Designed as a 20-unit course which is suitable both for self-study or group work
- Includes notes for teachers working with a class and an answer key at the back of the book
- Is suitable for beginners who are expected to achieve a thorough working knowledge of English phonetics and phonology
- Includes updated references and bibliography, greater coverage of different varieties of English
- Visit www.cambridge.org/elt/peterroach for additional exercises and resources

Peter Roach has taught phonetics and English pronunciation in France and Spain and has been a visiting lecturer in many countries around the world. He is the principal editor of the *Cambridge English Pronouncing Dictionary*, 17th edition, and a member of the International Phonetic Association, the British Association of Academic Phoneticians and IATEFL. Before retiring in 2003 he was Professor of Phonetics and Head of the School of Linguistics and Applied Language Studies at the University of Reading. He is now Emeritus Professor of Phonetics at the University of Reading.



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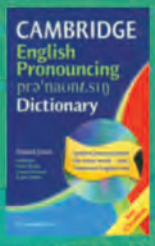

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