A Course in English Phonetics for Spanish Speakers

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Foreword

It gives me great pleasure to commend A COURSE IN ENGLISH PHONETICS FOR SPANISH SPEAKERS to all learners of English who have Spanish as their mother tongue and especially to those who have occasion to teach English pronunciation to such students. Its authors were supremely well qualified for the task of writing such a book. What they have produced is quite remarkable for its comprehensiveness and outstanding in its generous and ingenious provision of admirably executed tables and diagrams etc. It will be found to be very fully self-contained, but for any reader who may care to pursue the matters it discusses, the bibliographical information it supplies is full and scrupulous. This work is not only unrivalled as a textbook for the Spanish speaker but one of the best books written on the phonetics of English as a foreign language in any context.

J. Windsor Lewis

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Preface

This book aims at covering the English Phonetics syllabus which is generally taught in the first two or three years of University and Training College courses for EFL teachers, translators, interpreters, and anybody who aims at acquiring a near-native English pronunciation. It deals specifically with the problems faced by the Spanish speaker of either Latin America or Spain in learning the sound system of English. It also provides information on the sound systems of English and Spanish, indispensable to any teacher involved in EFL teaching in Spanish-speaking countries.

We are well aware that in writing this book we are venturing into an already well-provided field, since there already exist excellent introductions to Linguistics, books on General and English Phonetics, practice books containing pronunciation drills and exercises, and articles in journals on almost every possible aspect of language teaching. It is, however, seldom practical or possible to get university students to read up on such topics from their original sources, since many of the better reference books were not written with the EFL learner in mind, and are consequently too difficult for the uninitiated, first or second year student to tackle. We have, therefore, attempted to present a complete, basic course, in the hopes of realistically filling the needs of the Spanish and Latin American teacher and student, and at the same time preparing the ground for more advanced and extensive reading.

The theoretical framework of this book is based on the work of Prof. A. C. Gimson, Mr J. Windsor Lewis, and many others, to whom we are entirely indebted for the description of English Phonetics. The comparison with Spanish is based mainly on our own observation and experience, and all errors and weaknesses in this respect are our entire responsibility.

We wish to acknowledge the help that innumerable colleagues and students have unwittingly given us over the years. Special thanks are due to J. Windsor Lewis and Marion Shirt (University of Leeds), David Powell (Universidad Nacional de Tucumán), and George Lewis (Universidad Nacional de La Plata), for laboriously reading and commenting on the entire manuscript; Gillian Brown (University of Edinburgh) and Hersilia Alvarez (Universidad de Concepción) for their advice on chapters eight and eleven respectively, and Oriel Villagarcía (Buenos Aires) for his invaluable moral support.

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List of phonetic symbols with keywords

Vowels

i Cardinal Vowel No. 1; English vowel No. 1 (*seat*); Spanish vowel No. 1; second element of Spanish diphthongs (*hay, ley, doy*)

ɪ retracted half-close unrounded English vowel (No. 2, *sit*); first element of English diphthong (*near*); second element of English diphthongs (*late, five, noise*)

e Cardinal Vowel No. 2; English vowel No. 3 (*set*); first element of English diphthongs (*late, fair*); Spanish vowel No. 2

ɛ Cardinal Vowel No. 3

æ front between open and half-open unrounded English vowel (No. 4, *sat*)

a Cardinal Vowel No. 4; first element of English diphthongs (*five, now*); Spanish vowel No. 3

ɑ Cardinal Vowel No. 5; English vowel No. 5 (*cart*)

ɒ back between open and half-open rounded English vowel (No. 6, *got*)

ɔ Cardinal Vowel No. 6; English vowel No. 7 (*port*); first element of English diphthong (*noise*)

o Cardinal Vowel No. 7; Spanish vowel No. 4; first element of Spanish diphthong (*hoy*)

ʊ advanced half-close rounded English vowel (No. 8, *put*); first element of English diphthong (*pure*); second element of English diphthongs (*low, now*)

u Cardinal Vowel No. 8; English vowel No. 9 (*too*); Spanish vowel No. 5; second element of Spanish diphthongs (*reuma, pauta*)

ʌ retracted between open and half-open unrounded English vowel (No. 10, *cut*)

ɜ mid central unrounded, relatively long English vowel (No. 11, *first*)

ə mid central unrounded, short English vowel (No. 12, *ago*); first element of English diphthong (*no*); second element of English diphthongs (*near, fair, pure*)

Consonants

b voiced-lenis bilabial plosive (Eng. *boy*; Sp. *ambos*)

β voiced-lenis bilabial fricative (Sp. *saber*)

β̞ bilabial approximant (Sp. *saber*)

d voiced-lenis alveolar plosive (Eng. *day*)

d̪ voiced-lenis dental plosive (Eng. *width*; Sp. *mundo*)

d̠ɹ voiced-lenis post-alveolar affricate (Eng. *dry*)

dʒ voiced-lenis palato-alveolar affricate (Eng. *judge*; Sp. *cónyuge*)

ð voiced-lenis dental fricative (Eng. *they*; Sp. *cada*)

ð̞ dental approximant (Sp. *cada*)

f voiceless-fortis labio-dental fricative (Eng. *few*; Sp. *faro*)

g voiced-lenis velar plosive (Eng. *good*; Sp. *tango*)

ɣ voiced-lenis velar fricative (Sp. *lago*)

h voiceless (-fortis) glottal fricative (Eng. *house*; Sp. *jarro, esto*)

ɦ voiced (-lenis) glottal fricative (Eng. *ahead*; Sp. *caja*)

j voiced palatal semi-vowel (Eng. *yes*; Sp. *cielo*)

j̟ʒ voiced-lenis palatal fricative (Sp. *ayer, calle*)

k voiceless-fortis velar plosive (Eng. *cut*; Sp. *cal*)

ʎ voiced palatal lateral (Sp. *calle*)

l voiced alveolar lateral (Eng. *love*; Sp. *letal*)

ɫ voiced velarized alveolar lateral (Eng. *skilful*)

l̥ voiceless alveolar lateral (Eng. *please*; Sp. *hazlo*)

l̪ voiced dental lateral (Sp. *alto*)

ɫ̪ voiced velarized dental lateral (Eng. *wealth*)

m voiced bilabial nasal (Eng. *man*; Sp. *más*)

m̥ voiceless bilabial nasal (Eng. *upmost*; Sp. *asma*)

mɱ voiced labio-dental nasal (Eng. *comfort*; Sp. *enfriar*)

n voiced alveolar nasal (Eng. *new*; Sp. *no*)

n̥ voiceless alveolar nasal (Sp. *asno*)

n̪ voiced dental nasal (Eng. *tenth*; Sp. *antes*)

n̠ voiced post-alveolar nasal (Eng. *Henry*)

ŋ voiced velar nasal (Eng. *sing*; Sp. *mango*)

ɲ voiced palatal nasal (Sp. *paño*)

p voiceless-fortis bilabial plosive (Eng. *upper*; Sp. *papá*)

r voiced alveolar roll (Sp. *cerro*)

r̥ voiceless alveolar roll (Sp. *Israel*)

ɹ voiced post-alveolar fricative (Eng. *drill*)

ɹ̥ voiceless post-alveolar fricative (Eng. *price*)

ɹ̠ post-alveolar approximant (Eng. *arrive*)

ɻ voiced apico-alveolar fricative (Sp. *perro*)

ɾ voiced alveolar tap (Eng. *three*; Sp. *pero*)

s voiceless-fortis alveolar fricative (Eng. *so*; Sp. *sí*)

ʃ voiceless-fortis palato-alveolar fricative (Eng. *she*)

t voiceless-fortis alveolar plosive (Eng. *study*)

t̪ voiceless-fortis dental plosive (Eng. *eighth*; Sp. *todo*)

t͡ɹ̥ voiceless-fortis post-alveolar affricate (Eng. *tree*)

t͡ʃ voiceless-fortis palato-alveolar affricate (Eng. *church*; Sp. *ocho*)

v voiced-lenis labio-dental fricative (Eng. *voice*; Sp. *vida*)

w voiced velarized bilabial semi-vowel (Eng. *well*; Sp. *hueso*)

z voiced-lenis alveolar fricative (Eng. *easy*; Sp. *rasgo*)

ʒ voiced-lenis palato-alveolar fricative (Eng. *vision*; Sp. *ayer*)

x voiceless-fortis velar fricative (Sp. *ajo*)

θ voiceless-fortis dental fricative (Eng. *think*; Sp. *hacer*)

ʔ glottal plosive (stop)

Diacritics

◌̞ more open articulation (Eng. [ə̞, ɹ̞]; Sp. [ð̞])

◌̪ dental articulation (Eng. and Sp. [n̪])

◌̠ retracted articulation (Eng. and Sp. [k̠])

◌̟ advanced articulation (Eng. and Sp. [k̟])

◌̴ velarized articulation (Eng. [ɬ̴])

◌̥ devoicing (Eng. and Sp. [l̥])

◌̩ syllabicity (Eng. [l̩])

ː full length (Eng. [ɑː, lː])

ˑ half length (Eng. [ɑˑ, lˑ])

Teaching notes

Qualifications of the teacher

This course is meant to be followed under the instruction of a teacher, who must possess certain vital qualifications to ensure its success. Firstly, the teacher's English pronunciation must be good enough to serve as a model to students during this important stage of their training. If the teacher's pronunciation is not RP, he should be thoroughly aware of the points of difference. Secondly, he should have a sound theoretical knowledge of the phonetic and phonological facts of English and Spanish, and a practical knowledge of the handling of phonemic and allophonic transcription. Thirdly, he should be proficient in the diagnosis of pronunciation errors and in the techniques of correction. Lastly, his ear should be finely trained in recognizing subtle distinctions of speech sounds.

Aims and levels

Although no previous knowledge of Phonetics and Linguistics is taken for granted on the part of the students, their proficiency in English is bound to vary greatly. Some universities demand a previous knowledge of English, ranging from an intermediate to a First Certificate level before embarking on such a course. Others accept secondary school level, and yet others prefer students to begin with no previous knowledge of English, in which case they do not usually begin a Phonetics course until the second year of their course. This previous knowledge is bound to influence their progress one way or another. A sound basic knowledge and frequent exposure to good English will be an advantage. An ill-taught basic knowledge with deeply ingrained pronunciation errors will have an adverse effect; preferable to this is no knowledge at all.

We do not intend to enter here into a discussion on the desirability that students living so far from English-speaking countries should acquire a near-native pronunciation. A course at this level will be used principally for future teachers who will themselves have to act as models of pronunciation. Their responsibility in this matter cannot be too strongly emphasized, and when training them we should aim at the highest standard possible. They are unlikely to achieve a native pronunciation, but if we were to set our mark lower, our students' standard would also be lower in proportion.

The aims of this course can therefore be summarized as follows: (i) to provide a basic theoretical framework that will give the students an understanding of the phonetic and phonological features of English and Spanish, and at the same time prepare the ground for more extensive and detailed reading in this field; (ii) to give practice in listening, discrimination and production of isolated words and connected speech, as well as of the rhythmic characteristics of English, in

marks, which encourage students to think of pairs such as English vowels 1 and 2 as the 'long' and the 'short' *i*.

We would advocate a consistent use of the diacritic [ˌ] indicating syllabicity, even in phonemic transcriptions. We consider that since syllabic consonants do not occur in Spanish, the consistent use of the diacritic [ˌ] is a valuable visual aid, despite the fact that diacritics are normally only used in narrow transcriptions. Finally, we would like to point out that our transcription type is up to date as far as the latest IPA alphabet modifications are concerned (1979).

The teaching of theory

It has been observed earlier that the fact that students are generally required to follow a course of this type in the initial stages of language learning is likely to be an added difficulty. This is particularly true of the reading and understanding of theory, despite the fact that difficult and obscure constructions have been avoided and English–Spanish cognates have been used as frequently as possible.

Here again the role of the teacher will be vital in helping students to master the theoretical explanations. If the students' knowledge of English is not up to following explanations with ease, we suggest that the initial lecture on each topic should be delivered in Spanish. New terms and definitions should be explained in Spanish and English, and later read in English from the text. Testing may be done objectively, in order to avoid the difficulty of the students' expressing themselves in writing. This procedure has been tried out for four consecutive years with students who began the course with only a basic knowledge of English (pre-intermediate level) with successful results.

1 The linguistic sciences

1 Language

When people speak they make use of a series of conventional sounds which they combine according to certain rules into an established system. In other words, they employ a sort of linguistic code. In order to understand each other, people must share the same code or language. This aspect of language is purely abstract. But when a message is actually transmitted it takes a substantial form. In the case of spoken language the substance used is phonic substance, or human vocal sounds. In the case of written language the substance used is graphic substance, or marks on a piece of paper. There are other ways of conveying a message, but we shall concern ourselves with the first one – spoken language.

Language has been defined as 'human vocal noise (or the graphic representation of this noise in writing) used systematically and conventionally by a community [mainly] for purposes of communication'.[1]

2 The linguistic sciences

The two sciences concerned with language are Linguistics and Phonetics. Let us first consider their origins.[2] Although people have been interested in language since the times of the Greek and Roman Empires, early linguists were mainly concerned with the origins of language. During the nineteenth century linguists directed their attention to Historical Linguistics, the science that traces the history of languages and their development throughout the ages. It was not until the late nineteenth century that European linguists began to concentrate on languages in their present state, or Descriptive Linguistics, which is the science as we know it today. The name of Ferdinand de Saussure[3] is linked with this change of direction.

Meanwhile in America a very practical need arose, which caused Linguistics to fix its objectives. The Amerindian languages, which had no writing systems, were fast disappearing, and Linguistics was the science that provided the techniques to describe and record them before their final extinction. Franz Boas, Edward Sapir and Leonard Bloomfield[4] were the pioneers of this movement, which is closely connected with anthropology.

Phonetics, on the other hand, had a different origin. In the sixteenth century people in England became interested in reforming their spelling system, which had become very complex. Phonetics arose as the science that studied the relationship between spelling and sound. But only at the end of the nineteenth

century was work produced that is still of practical value today. In 1886 the International Phonetic Association (IPA)[5] was founded. This association devised a phonetic alphabet, or set of symbols, that would serve to represent the sounds of any language. This alphabet is now widely used in textbooks and pronouncing dictionaries.[6] Closely connected with this early work are the names of Henry Sweet and Daniel Jones.[7]

3 Phonetics and Linguistics

Up till now we have referred to Linguistics and Phonetics separately, yet obviously they are closely related. Where do they stand in relation to each other? This is a very controversial subject. Linguists have had to cut up language in order to analyse it, and the different ways of doing so have given rise to various schools of thought, thus producing a diversity of theory and practice. Some linguistic concepts are not yet agreed on in spite of decades of usage, and many are referred to differently and indiscriminately. Some linguists consider Phonetics to be a pre-requisite for Linguistics and therefore not part of it; others include Phonetics under Linguistics. There are many ways of looking at the problem, and our solution will depend mainly on what we are going to use these sciences for. Our present objective is the teaching of a foreign language, and the most useful view for this purpose is to regard Phonetics and Linguistics as the two Linguistic Sciences.[8] Both of them study language, but from a different angle. Phonetics is interested in sounds and how they are organized and transmitted, whereas Linguistics is concerned with how language is structured grammatically and semantically.

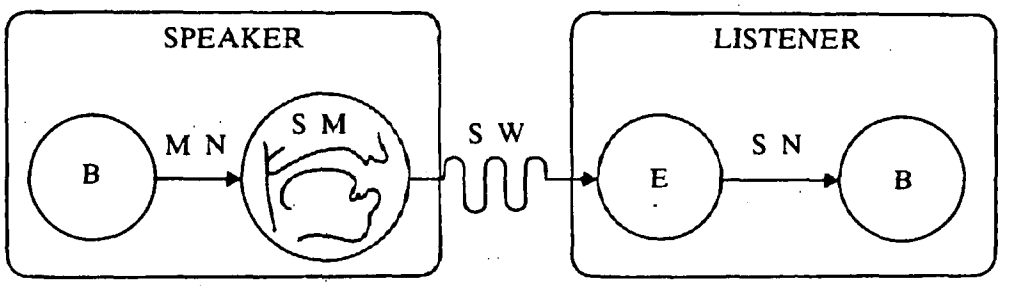
4 The speech chain[9]

We mentioned above that language could be transmitted by means of two different kinds of substance. The simplest and most common of the two is the spoken one, and the manifestation of this form of language is 'speech'.

The speech communication process is a complex series of events which take place at different levels and stages. It is a chain between the speaker's brain and the listener's brain. The following diagram will illustrate the matter and at the same time determine the areas of phonetics.

The whole process begins when a speaker has a message to transmit to a listener. This means activity in the speaker's brain, i.e. activity at a psychological level, which allows him to arrange his thoughts into linguistic form. He does this by choosing both the correct words and sentences in accordance with the grammatical rules, and the correct sounds in accordance with the phonological rules of the language (linguistic stage). Thus the message is encoded.

The next type of activity occurs at a physiological level, which implies the action of nerves and muscles. The motor nerves that link the speaker's brain with his speech mechanism activate the corresponding muscles. The movements of the tongue, lips, vocal folds, etc., constitute the articulatory stage of the chain, and the area of phonetics that deals with it is *articulatory phonetics*. The movement of the articulators produces disturbances in the air pressure called sound waves,



activity	psychological	physiological	physical	physiological	psychological
stage	linguistic	articulatory	acoustic	perceptual	linguistic
area of phonetics		articulatory	acoustic	auditory	

Fig 1 The Speech Chain: B – brain; MN – motor nerves; SM – speech mechanism; SW – sound wave; E – ear; SN – sensory nerves.

which are physical manifestations. This is the acoustic stage of the chain, during which the sound waves travel towards the listener's ear. The study of speech sound waves corresponds to *acoustic phonetics.*

The first kind of activity on the listener's part occurs at a physiological level. The sound waves activate the listener's ear-drum, and his sensory nerves carry the message, in the form of nerve impulses, to the brain. The hearing process is the domain of *auditory phonetics.* The last stage of the chain is again a linguistic one, during which the hearer's brain decodes the message in order to make it recognizable, which means psychological activity.

5 Definition of Phonetics

So far we have referred to both *Phonetics* and *phonetics*, and this has not been arbitrary. It is a graphic way of representing the domain of this science. The Linguistic Sciences include both Phonetics and Linguistics. Phonetics is the study of phonic substance and its function in spoken language.[10] In theory it is useful

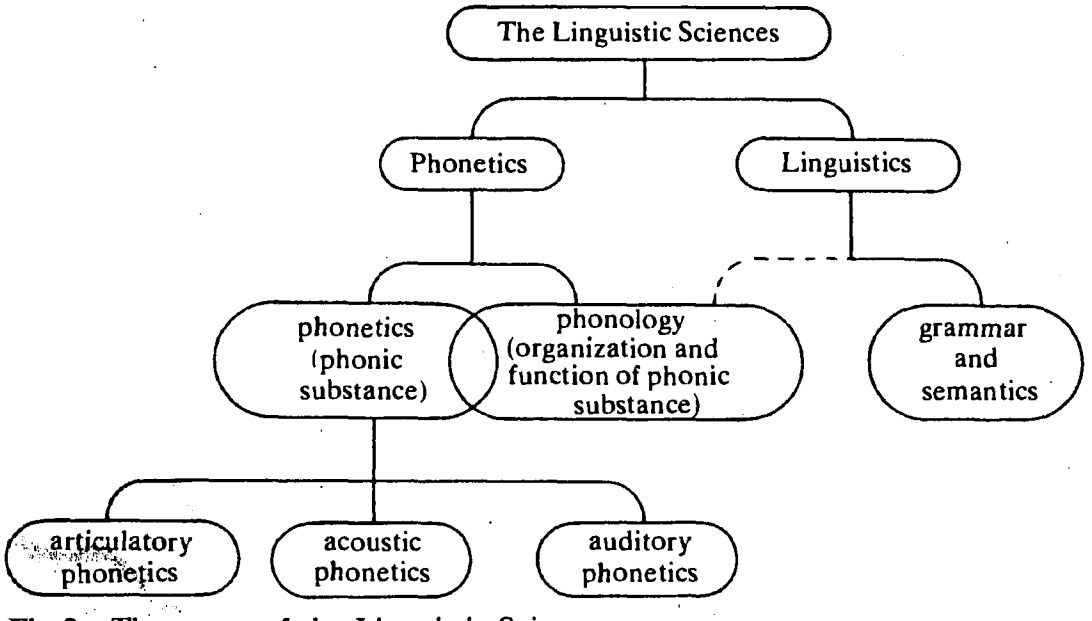


Fig 2 The scope of the Linguistic Sciences.

to differentiate between phonetics, which studies phonic substance, and phonology, which studies the selection and organization of phonic substance into a given form or pattern. Phonology is therefore the link between Phonetics and Linguistics; it belongs to both domains since it deals with both aspects of spoken language, the abstract one (encoding/decoding) and the material one (human vocal sounds). This idea is summarized in Fig 2.

In the next two chapters we shall be dealing with phonetics, finding out how speech sounds are produced. Later, in chapter 4, we shall see how English and Spanish select certain sounds and organize them into systems; thus we shall be dealing with phonology.

Notes

1 From D. Crystal (1968), esp. pp. 29–34. See also D. Crystal (1971).

2 For more extensive historical surveys see R. H. Robins (1967), F. P. Dinneen (1967), A. H. Sommerstein (1977), and E. Fisher-Jörgensen (1975).

3 Ferdinand de Saussure (1857–1913). Swiss linguist who completely redefined the aims of Linguistics by (i) distinguishing the diachronic (historical) from the synchronic (a particular state) study of language; (ii) distinguishing *langue* (linguistic competence) from *parole* (actual phenomena or data), and (iii) studying *langue* as a system of interrelated elements (lexical, grammatical and phonological).

4 Franz Boas (1858–1942), Edward Sapir (1884–1939), and Leonard Bloomfield (1887–1949) laid the foundations of American Linguistics, bringing it into close practical collaboration with anthropology, as a result of their interest in Amerindian languages. Boas and Sapir connected language with the culture of its speakers. Bloomfield, a rigorous behaviourist, dominated the American scene for twenty years after the publication of his *Language* in 1933.

5 The IPA, of international membership, was inaugurated in France. Its main objective was the devising of a phonetic alphabet applicable to all languages. The *Journal of the IPA* (*JIPA*), formerly *Le Maître Phonétique*, is published twice a year at the seat of the association in London. For a complete account see International Phonetic Association (1949).

6 A modification of the IPA alphabet devised by the *Revista de Filología Española* (II, 1915) is used in Spain. A similar situation exists in the USA. Although American linguists claim to be independent of the IPA they have adopted most of its symbols and in general follow its principles.

7 Henry Sweet (1845–1912) was one of the founding members of the IPA. Many of his observations are still valid today. He considered Phonetics to be the indispensable foundation of all study of language. See E. J. A. Henderson (1971). Daniel Jones (1881–1967), the most influential English phonetician so far, organized the Department of Phonetics, University College, London, at the beginning of the century and directed it until his retirement in 1949. His *Outline of English Phonetics* was considered for over forty years the standard work of English Phonetics, until the appearance of A. C. Gimson's *Introduction to the Pronunciation of English* in 1962. For expansion on the British School of Phonetics, see D. Jones (1948) and A. C. Gimson (1980), ch. 6.

8 This view is a simplification of the theory originally put forward by M. A. K. Halliday, A. McIntosh and P. D. Strevens (1964), esp. ch. 1 and 3. A similar view is presented by D. Abercrombie (1967), ch. 1. The basic concept is widely held in Britain today.

9 For a more complete survey, including the acoustic aspect, see P. B. Denes & E. N. Pinson (1963), and D. B. Fry (1979). The notion of the speech chain is particularly important, since apart from providing a basic outline of the communication process, it establishes the criteria of analysis of the various segmental and prosodic features. This relatively new approach is to be found in Phonetics publications as from the sixties. Until then these criteria had not been clearly separated and consequently definitions had often been obscure.

10 Traditionally, Phonetics has been defined as the study of speech sounds (or phonic substance), thus ignoring their organization into particular languages. For instance, see B. Malmberg (1954).

2 Articulatory phonetics

The speech mechanism

1

In this chapter we are going to work on the second stage of the speech chain – in the area of articulatory phonetics. The first point to consider is the functioning of what we shall call the speech mechanism. This is not used exclusively for the production of speech sounds, but also for breathing and eating. Speech is only a secondary activity and it is closely connected with breathing.[1]

2

Fig 3 shows that the entire speech apparatus is made up of a series of organs and cavities that form a passage from the lungs to the lips and nostrils. The section of this passage extending from the larynx upwards is called the *vocal tract.* When we inhale, the air enters through the nose and/or mouth, then passes

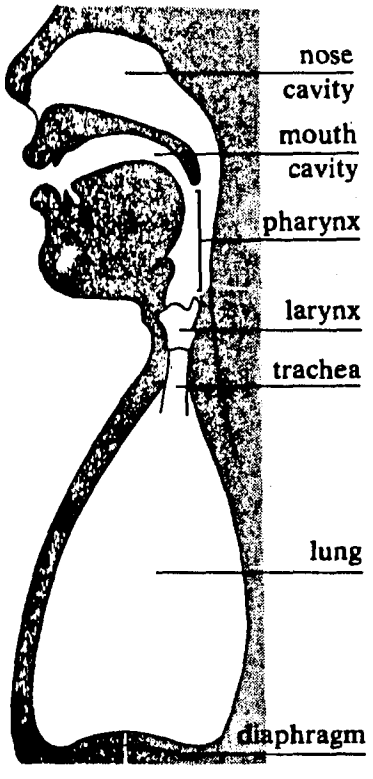


Fig 3 The speech apparatus.

through the pharynx, the larynx and the trachea, into the lungs. As in English and Spanish we normally use the outgoing stream of air to produce our speech sounds, we shall consider the whole speech mechanism from bottom to top following the passage of air as we exhale. The following are the elements that we must consider:

(i) Lungs
(ii) Larynx
(iii) Cavities or Resonators:
  (a) Pharynx
  (b) Nose (nasal) cavity
  (c) Mouth (oral) cavity
(iv) Articulators:
  (a) Palate
  (b) Tongue
  (c) Teeth
  (d) Lips

3 The lungs

These have the consistency of two large sponges which are made to expand to take in air (inhalation), and contract to let it out (exhalation). They are situated within the rib cage or thorax. Below the lungs, and separating them from the stomach, is a flat muscle called the *diaphragm*. The lungs themselves are incapable of any active movement, and expansion or contraction must be carried out by the muscles that join them to the rib cage and/or by lowering the diaphragm. The function of the lungs is that of a motor or activator that sets the passage of air into the movements of inhalation and exhalation. When we speak, exhaling is controlled; therefore, it normally takes longer than inhaling.[2]

4 The larynx

The larynx, a rigid structure, is situated at the top of the trachea and below the pharynx. Externally we can locate it with our fingers: the thyroid cartilage that encloses the front part is the prominence known as Adam's apple.

The important point about the larynx in speech is that it contains the first valve or trap that can interfere with the passage of the air-stream – the *vocal folds*. These are two bands of muscle lying across the centre of the larynx. At the front they are fixed side by side to the inside of the thyroid cartilage; at the back they are attached to the two arytenoid cartilages, which thanks to muscular action can bring the vocal folds close together or draw them apart, and make them either tense or lax.

The *epiglottis*, an elastic piece of cartilage, has no function in speech, but acts as a valve. It is raised during speech and lowered during swallowing, thus preventing food from going into the lungs. (See Fig 4.)

For normal breathing the vocal folds are open forming a V-shape, the back ends forming the two points of the V. The space between is called the *glottis*.

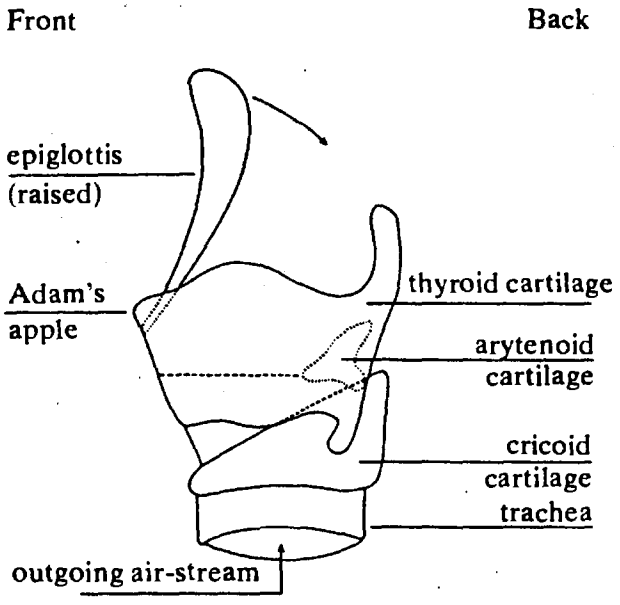


Fig 4 The larynx.

The vocal folds can also be brought tightly together, so that no air can pass through. When we cough we close our vocal folds completely; pressure is built up below them and released suddenly. When the vocal folds come into light contact the air passing through them causes them to vibrate. The sound produced by this vibration is what we call *voice*. We must not, however, think of the note produced by the vocal folds in vibration as voice as we hear it when a person speaks. If it were possible to isolate this note, it would be scarcely audible. It is only by passing through the cavities or resonators that this note becomes voice as we know it. All sounds produced without vibration of the vocal folds are called *voiceless* sounds – they are produced with only *breath*; those produced with vibration are called *voiced* sounds. (See Fig 5.)[3] The tenser the vocal folds, the faster they will vibrate, and the higher the *pitch* of the sound will be.

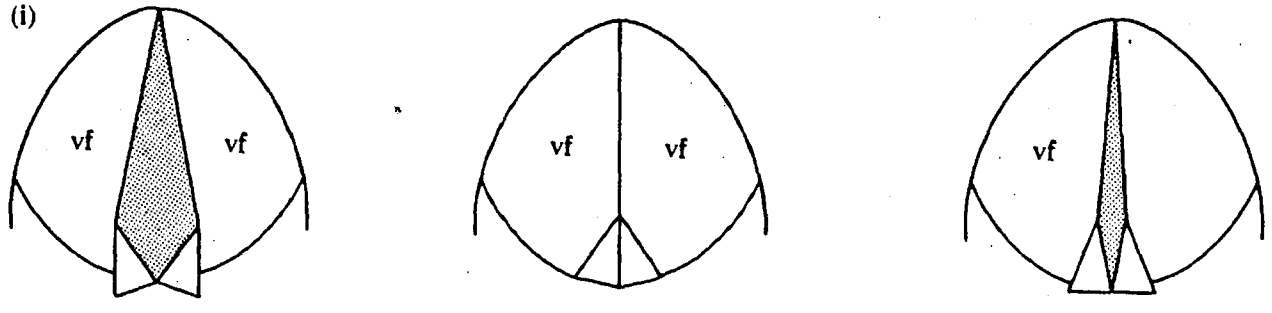


Fig 5 The vocal folds (vf): (i) wide apart (as in normal breathing); (ii) closely together; (iii) in light contact (as for producing voice).

Differences in pitch also depend on sex. The vocal folds of the adult male are usually longer and thicker than in the female, and therefore vibrate at lower rates, generally causing men's voices to have a lower pitch than women's voices.

5 The cavities or resonators

Any hollow space containing air can act as a resonator, i.e. it can change the quality of an existing sound. If, for example, we hit three identical bottles containing different levels of water, we would obtain three different notes. Each note would be the result of a different volume of air vibrating inside each bottle. The human speech mechanism has three resonators – the *pharynx*, which can change its shape slightly; the *nasal cavity*, which is constant in shape and size, and the *oral cavity*, which is extremely variable.

The pharynx is the passage situated at the top of the larynx, communicating with the oral and nasal cavities. Its front wall is formed by the root of the tongue. The nasal cavity extends from the pharynx to the nostrils, and is separated from the oral cavity by the palate. The entrance to the nasal cavity is controlled by the velum. The oral cavity is by far the most important resonator, due to the great mobility of its organs and consequent changes of size and shape. The base of the oral cavity is occupied by the tongue, and the front bounded by the lips.

6 The articulators

These are all situated in or surrounding the oral cavity. (See Fig 6.) They are the *tongue*, *palate*, *teeth* and *lips*.

Articulators are called active when they are capable of movement, passive when they are incapable of movement. The vocal folds can also act as articulators, as they are capable of producing two consonant sounds – a plosive (the glottal stop) and two fricatives [h, ɦ] (see chapter 3, section 5).

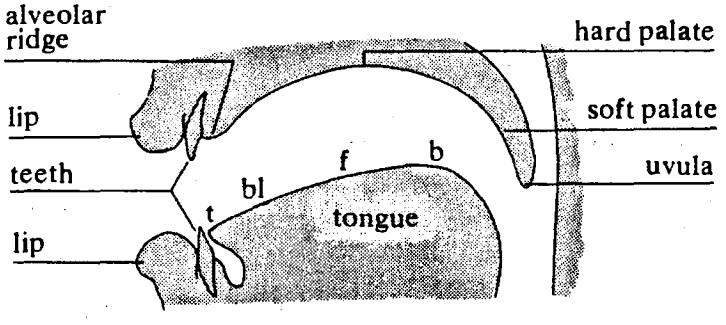


Fig 6 The articulators; tongue: t–tip; bl–blade; f–front; b–back.

The palate is a concave structure, separating the mouth from the nasal cavity. Although the palate is not physically separated into parts, it is useful to divide it when describing speech sounds into (i) *alveolar ridge*, the prominence just behind the upper teeth; (ii) *hard palate*, the bony, immovable part that lies over the centre of the mouth, and (iii) *soft palate* or *velum*, the moveable part at the back, which can be raised or lowered. The tip of the velum is called the *uvula*. When the velum is raised and pressed against the back wall of the pharynx, it closes the entrance to the nasal cavity, and the air escapes through the mouth. When it is lowered it does not completely close the passage into the oral cavity. If the air is to escape through the nose the closure must be completed at some other point.

The tongue is the most agile speech organ, as it is principally made of muscle. It is useful to think of the tongue as being divided in different parts, each of which coincides with a different part of the palate when in rest position: (i) the tip, the extreme end; (ii) the blade, lying immediately under the alveolar ridge; (iii) the front, lying under the hard palate, and (iv) the back, lying under the velum. The blade and tip can be moved independently of the rest. The whole tongue moves backwards and forwards, and up and down. It can interfere with the air-stream by coming into light contact with the palate causing friction, or it can make complete contact with the palate producing a stop.

The upper teeth are used in speech to interfere with or stop the air-flow with the help of the tongue or the lower lip. The lips constitute the very mobile outer edges of the mouth, and can adopt different shapes.

7

So far we have analysed each of the component parts of the speech mechanism. Later on we shall see in more detail how the air-stream can be interfered with in the mouth in different ways, to produce the sounds used in English and Spanish. Meanwhile, it is important for us to think of the lungs as activators, setting the air-stream in motion; the air-stream, as the raw material out of which sounds are made; the vocal folds, as vibrators which when in action turn the air-stream into voice, and when wide apart let it through as breath; the cavities, as resonators which vary in shape, thus varying the quality of speech sounds; the articulators, as the elements which vary the shape of the resonators and further interfere with the passage of air.

Notes

1 For a more detailed account of the speech mechanism see B. Sonneson, 'The Functional Anatomy of the Speech Organs', in B. Malmberg (ed.) (1968).

2 More detail on how the lungs and the respiratory muscles are used in speech can be found in 'Stress and Respiratory Activity', by P. Ladefoged (1967).

3 Other shapes, such as those for whisper, voiced glottal fricative [ɦ], etc. are also possible. (See J. D. O'Connor, 1973, ch. 2.)

3 Articulatory and auditory phonetics

Description and classification of speech sounds[1]

1

Ever since the times of the Greek grammarians linguists have distinguished between 'vowel' and 'consonant'. Before accepting these two categories we must, however, clear up a couple of points of ambiguity. The terms vowel and consonant can refer to both sound and letter; but when dealing with Phonetics we must make it clear which of the two we mean. Both English and Spanish use the same five vowel letters (a, e, i, o, u), but whereas Spanish uses them to represent five vowel sounds, English uses them to represent many more. The same occurs, to a lesser degree, with consonant sounds and letters. Since Spanish is a language in which orthography approximates closely to the sounds represented by it, we call it a 'phonetic language'. In English, on the other hand, the relationship between sound and letter is extremely complex. The other ambiguous point concerns the function of speech sounds in the syllable, and will be dealt with at the end of this chapter.

All speech sounds can be described articulatorily, auditorily and acoustically. For our purposes, i.e. teaching pronunciation, we shall use only articulatory and auditory criteria, sometimes preferring one to the other. This is due to the fact that some sounds are easier to learn articulatorily and others auditorily. In the case of vowel sounds an articulatory description would tell us which part of our tongue to raise and how high to raise it. These instructions, however, are very difficult to follow in practice, as we cannot feel whether we are doing it correctly. So vowel sounds are generally learnt auditorily, by listening and imitation. Consonant sounds, on the contrary, are produced with some kind of light or close contact between the articulators and can therefore be taught in both articulatory and auditory terms.

2 Description of vowel sounds

Vowel sounds are produced in most cases without any kind of contact between the articulators. They can be made different from each other mainly by raising a certain part of the tongue to different levels, by modifying the shape of the lips and by raising and lowering the velum. Variations of this kind produced by

changing the shape of the mouth resonator are referred to as differences in vowel *quality.*

X-ray photographs of tongue positions for different vowels show, on the one hand, that the part of the tongue raised may be any point between the front and the back. They also show that the highest part of the tongue always occupies points within an oval shaped area called the *vowel area.* (See Fig 7a.)[2] For purposes of classification it is convenient to describe the raising of three basic parts of the tongue – front, centre (mid position between front and back), and back.

The vowel sounds of English and Spanish have two characteristics in common. In the first place, they are normally voiced sounds, i.e. they are produced with vibration of the vocal folds; in the second place, they are usually oral sounds, i.e. when the vibrating column of air reaches the top of the pharynx it generally escapes through the mouth only. Occasionally there are *devoiced* and *nasalized* vowel sounds in English and Spanish, but this is not a common characteristic.

3 The Cardinal Vowels[3]

In 1917 Daniel Jones took the vowel area as the basis for establishing a *vowel diagram* and devised a system of Cardinal Vowels (CVs), which are still widely used in phonetic research today. For practical reasons the vowel diagram used nowadays is the result of a series of modifications of the original vowel area. (See Fig 7c.)

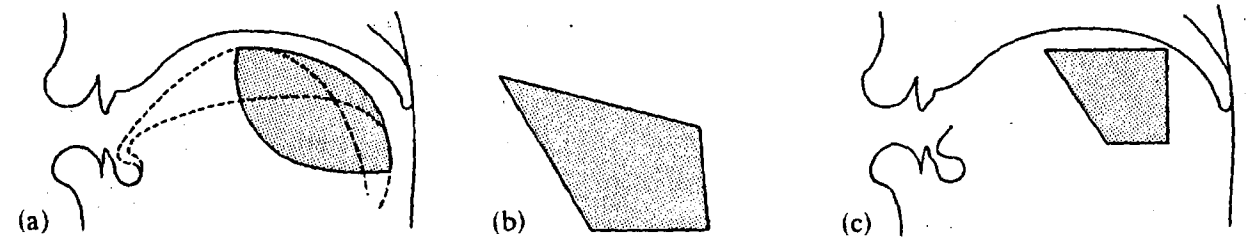


Fig 7 The vowel area and its subsequent simplifications leading to the vowel diagram.

The system is based on two articulatorily selected vowel sounds. The first is produced by raising the tongue as close as possible to the palate without causing friction. The result is the sound [i], which is called Cardinal Vowel No. 1 (CV 1). The second is produced by placing the tongue as low and as far back as possible. The result is the sound [ɑ], which is called CV 5. It is possible to produce sounds between these two points. CVs 2, 3 and 4 [e, ɛ, a] respectively, are produced at auditorily equidistant points between [i] and [ɑ] by gradually lowering the front of the tongue. CVs 6, 7 and 8 [ɔ, o, u] respectively, are produced at auditorily equidistant points between [ɑ] and [i] by gradually raising the back of the tongue. The result is a system of eight Cardinal Vowels, which do not belong to any particular language, but which can be used as reference points. The vowel sounds of any language can be identified by comparing them with this system. The advantage of using Cardinal Vowels is that their quality is invariable and permits

accurate comparison. The only way to learn to pronounce them is by oral instruction.

The Cardinal Vowels are on the limits of the vowel diagram, i.e. they occupy peripheral, extreme positions. (See Fig 8.) If the tongue exceeds this limit, friction will be heard. CVs 1, 2, 3, 4, and 5 are pronounced with spread or open lips, and the last three with lip rounding.[4]

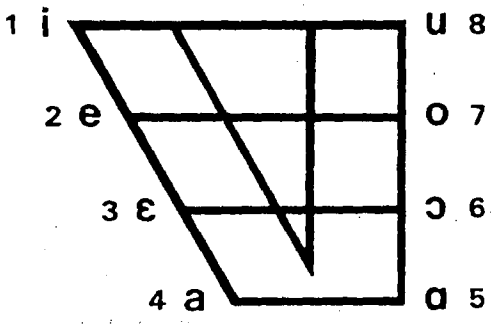


Fig 8 The Primary Cardinal Vowels displayed on the vowel diagram.

4 Classification of vowel sounds

Fig 9 shows the classification labels for the articulation of vowel sounds.[5] The labels, corresponding to tongue positions, may be placed on two axes – a horizontal one indicating part of the tongue which is raised, and a vertical one indicating height to which the tongue is raised. For example, the vowel sound [e] in Eng. *set* is articulatorily classified as 'mid front', because the front of the tongue rises to the mid position; [u] as in Eng. *boot* is classified as 'close back', because the back of the tongue rises to the close position, and [ɜ], as in Eng. *Bert*, as 'mid central', because the central part of the tongue rises to the mid position. Vowels occupying intermediate positions between front and central are *retracted* (e.g. the vowel sounds [ɪ] in Eng. *pity*); those between central and back are *advanced* (e.g. [ʊ] in Eng. *look*).

For a more complete classification a final articulatory feature may be added – lip position. In the case of English and Spanish two general labels are enough: rounded and unrounded in various degrees. Front vowel sounds in these two

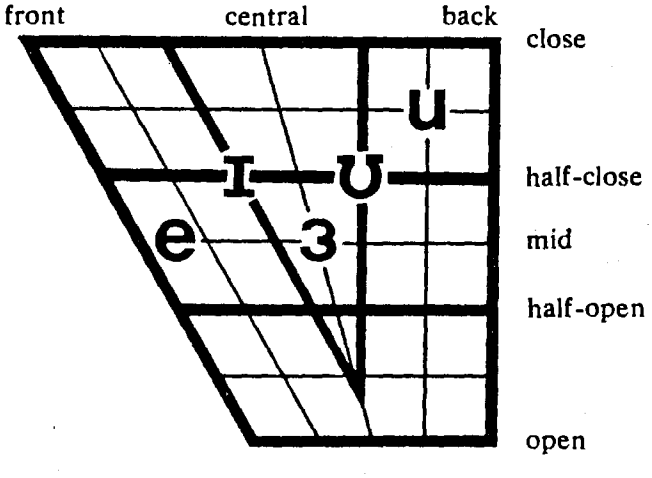


Fig 9 Classification labels applied to five examples of English vowels.

languages are unrounded; back ones are rounded, except the one in Eng. *arm*.

Vowel quality can also be described in auditory terms, with reference to the Cardinal Vowels. For example, the vowel sound in Sp. *sí* is near CV 1, and the one in Sp. *tú* near CV 8.

A final classification of vowel sounds states whether their quality is relatively sustained (i.e. the tongue remains in a more or less steady position), or whether there is a considerable glide from one vowel sound to another within the same syllable. In the first case we refer to *pure* (or relatively pure) vowel sounds; in the second to *diphthongs*. These can be shown on the diagram with beams which go from the first element (starting point) in the direction of the second element. (See Figs 13 to 17.)

5 Description and classification of consonant sounds

It has been stated that consonant sounds can be described and classified according to both articulatory and auditory criteria. An auditory description makes use of labels which describe the kind of auditory impression perceived by the hearer. Terms such as 'roll', 'fricative', 'sibilant', etc. refer to sounds as they are heard, rather than as they are produced. Sometimes, though, auditory terms such as these are used to classify sounds articulatorily, as will be seen later.

A fairly complete articulatory description of the consonant sounds of English and Spanish would have to refer to the various stages of their production, some of which have already been stated: all normal English and Spanish sounds are produced with an outgoing stream of air coming from the lungs; therefore, the label *pulmonic egressive* will not be included in our classification. There remain, though, a number of points to be answered.

(i) Are the vocal folds in action or not?
(ii) How strong are the breath force and muscular effort involved in the articulation?
(iii) Is the velum up or down?
(iv) Where does the interference of the air-flow occur?
(v) What kind of interference is it?

When we have provided answers for these questions we shall be able to describe all English and Spanish consonant sounds.

(i) Vocal fold activity determines whether consonant sounds are voiced or voiceless. Voiced consonant sounds are produced with the vocal folds in light contact, vibrating, and voiceless ones with vocal folds wide apart, so that only breath goes through. We can actually feel the vibrations of voice by either placing our fingers on our larynx, or by covering our ears with our hands while producing voiced sounds. For example, all the sounds in the names *Uruguay* and *Alabama* are normally voiced no matter whether pronounced by an English or a Spanish speaker; in *Texas* all the consonant sounds are voiceless.

(ii) Vibration of the vocal folds may not, however, be the only difference between voiced and voiceless consonant sounds. The latter are generally pro-

duced with more breath force and muscular effort than voiced consonant sounds. Consonant sounds produced with greater force are called *fortis*, and those produced with less force are called *lenis*. This opposition has proved useful for classification purposes because it refers to constant features. The opposition voiced/voiceless, on the contrary, is variable, since the so-called voiced consonant sounds may lose their voice either partially or completely, thus becoming *devoiced*. To sum up, both voiced and devoiced consonant sounds are lenis; voiceless ones are fortis.

(iii) The position of the velum causes consonant sounds to be mainly *oral* (when it is raised) or *nasal* (when it is lowered.) For example, all the consonant sounds in Eng. *naming* and Sp. *mañana* are nasal.

(iv) We explained in the previous chapter that the articulators were called active if they were capable of movement, and passive if they were incapable of it. If we locate each active articulator in combination with its corresponding passive one, and see where the stricture[6] is produced, we shall obtain a classification according to 'place of articulation'.

1 The first pair of articulators going from bottom to top is the vocal folds. These are different from all other pairs of articulators in that they are both active. Since the space between is called glottis, the consonantal sounds produced here are called *glottal*. For example [ʔ], used in English and Spanish, and [h], used in English and in some varieties of Spanish (e.g. Colombian) – Eng. [hi], Sp. [ˈkaha]. Sometimes a voiced [ɦ] is used between vowel sounds, e.g. Eng. [əˈɦed], Sp. [ˈkaɦa]. Spellings: *he, ahead*; *caja*. In all other cases there is an active and a passive articulator. Notice that when the tongue is the active articulator we identify the sound with the name of the passive one.

2 Back of tongue and velum produce *velar* sounds, e.g. [k, g, ŋ, x, ɣ] as in Eng. [kʌm, ˈfɪŋgə] and Sp. [ˈlaɣo, koŋˈgoxa]. Spellings: *come, finger*; *lago, congoja*.

3 Front of tongue and hard palate produce *palatal* sounds, e.g. [ʝ, ɲ, ʎ] as in Sp. [ˈkaʝe (or) ˈkaʎe, ˈpaɲo]. Spellings: *calle, paño*.

4 Blade (or tip and blade) and alveolar ridge, accompanied by a raising of the front of the tongue towards the hard palate produce *palato-alveolar* sounds, e.g. [ʃ, ʒ, tʃ, dʒ] as in Eng. [ˈtʃɑdʒɪŋ, ʃi, ˈvɪʒn̩] and Sp. [ˈkaʒe, ˈkondʒuxe, ˈtʃiko]. Spellings: *charging, she, vision*; *calle, cónyuge, chico*.

5 Tip of tongue and back part of alveolar ridge produce *post-alveolar* sounds, e.g. [ɹ, t̠ʃ̠, d̠ɹ, n̠], as in Eng. [pɹəˈt̠ʃ̠ud, ˈlɔn̠d̠ɹɪ]. Spellings: *protrude, laundry*.

6 Blade (or tip and blade) and alveolar ridge produce *alveolar* sounds, e.g. [t, d, n̪, n, r, ɾ̪, ɾ, s, z, l̪, l, ɬ], as in Eng. [ˈsɜtn̩lɪ, ˈneɪzɬ, ˈkl̪ɑʊdɪ], and Sp. [ˈsin̪ne (or) ˈsizne, ˈraɾo (or) ˈɾ̪aɾo, ˈil̪la (or) ˈizla (or) ˈisla]. Spellings: *certainly, nasal, cloudy*; *cisne, raro, isla*.

7 Tip of tongue and upper teeth produce *dental* sounds, e.g. [t̪, d̪, n̪, ɬ̪, θ, ð], as in Eng. [eɪt̪θ, ˈæd̪ ðəm, naɪn̪θ, heɬ̪θ] and Sp. [kan̪ˈd̪aðo, ˈal̪θa, ˈal̪t̪o]. Spellings: *eighth, add them, ninth, health*; *candado, alza, alto*.

8 Lower lip and upper teeth produce *labio-dental* sounds, e.g. [ɱ, f, v], as in Eng. [ˈeɱvɪ, ˈkʌɱfət] and Sp. [koɱˈfuso]. Spellings: *envy, comfort*; *confuso*.

9 Lower lip and upper lip produce *bilabial* sounds, e.g. [p, b, m̥, m, β], as in Eng. [ˈʌpm̥əʊst, ˈtɪmbə] and Sp. [ˈplam̥ma (or) ˈplazma, (or) ˈplasma, beˈβe]. Spellings: *upmost, timber; plasma, bebé.*[7]

Most of these articulations are carried out alone; a few of them are accompanied by what is called a *secondary* articulation, which involves the simultaneous approximation of another pair of articulators. The secondary articulation is more open and less important than the *primary* one, e.g. the English palato-alveolar sounds described in number 4: in [ʃ] the approximation of the front of the tongue towards the hard palate constitutes a secondary articulation because it is more open than the simultaneous close approximation formed by the blade of the tongue and the alveolar ridge. Another example is English [t̠], in which the main articulation is a complete closure performed by the tongue-tip and the alveolar ridge, and the secondary articulation is a more open approximation made by raising the back of the tongue towards the velum. Fig 10 shows these articulations.

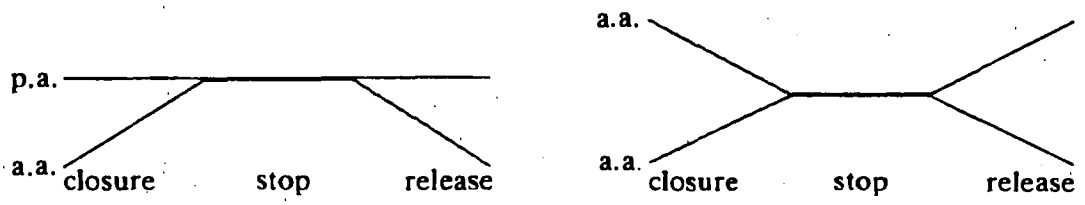
Fig 10 1 – primary articulation; 2 – secondary articulation.

A third case of secondary articulation in English occurs with the sounds [ʃ, ʒ, ɹ], which are normally articulated with lip protrusion. Secondary articulations are generally named with a term ending in '-ization'. Thus, we speak of palatalization (as in [ʃ]), velarization (as in [t̠]), and labialization (as in [ɹ]).

(v) Another way of classifying consonant sounds is according to the type of stricture made between each pair of articulators, i.e. according to the manner of articulation.

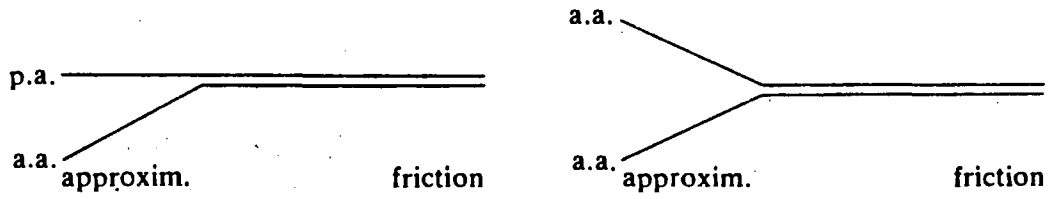
1 *Plosives*

When an active articulator comes into firm contact with a passive one, forming a stricture of complete closure, the air-stream is built up behind this closure. The articulators separate suddenly producing an explosive sound called plosion. This occurs when we pronounce a [p] sound either in English or Spanish: the two lips come together, air pressure is built up behind them and suddenly released. The sound produced in this way is called a *plosive.* Other plosives are [t, k, b, d, g, ʔ]. A diagram of the articulation of a plosive would show three stages: closure, stop and release. The top line always represents the passive articulator; the lower one, the active articulator, except in the case of [ʔ], where both articulators (the vocal folds) are active.[8]



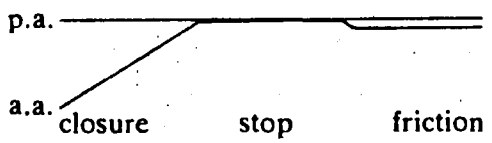
2 *Fricatives*

When an active articulator comes into light contact with a passive one, forming a stricture of close approximation, the air has to force its way out, making a noise called friction. Such is the case of the [f] sound in English and Spanish. Sounds produced in this way are called *fricatives*. A diagram of the articulation of a fricative would show two stages: approximation and friction. Other examples are [x, ʝ, ʃ, s, θ, v, β], etc. In the case of [h, ɦ] two active articulators (the vocal folds) form the stricture.



3 *Affricates*

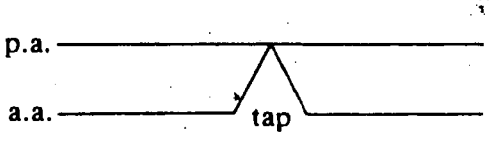
These are formed by a succession of a plosive and a fricative. The active articulator forms a stricture of complete closure with the passive one, but instead of opening suddenly as for a plosive, they come apart slowly into the fricative position; e.g. [tʃ, dʒ, t̪ɹ̝̊, d̪ɹ̝]. A diagram would look like this:



Since the stop stage is present in both plosives and affricates, 'stop' is also used as a general term to designate these two categories.

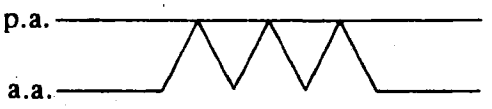
4 *Taps*

An active articulator taps once against a passive one. An example is [ɾ] in Sp. *faro*, in which the tongue-tip taps once against the alveolar ridge. A diagram would show the two articulators separated, a tap, and then the articulators separate again:



5 *Rolls*

A roll is produced by the vibration of an active articulator against a passive one. It is really a rapid succession of taps, and technically it is a stricture of intermittent closure. In many types of Spanish the spelling *rr* is pronounced as a roll [r]. A diagram would look like this:



6 *Laterals*

The active articulator (tongue) comes into firm contact with the passive one (generally the alveolar ridge or palate), and the air escapes down one or both sides of the contact. This is due to the fact that one or both sides of the tongue are separated from the side(s) of the palate, e.g. [l, ʎ]. A diagram would show the tongue – as seen from the front – separated from both sides of the mouth:

7 *Nasals*

All the sounds we have mentioned so far are produced with the velum raised, blocking the escape of air through the nasal cavity. In a nasal sound the velum must be lowered, and there must be a stricture of complete closure somewhere in the mouth, so that the air escapes through the nose. For example, in the consonant sounds of the word *morning* the closure is made by the two lips for [m], by the tongue-tip and the alveolar ridge for [n], and by the back of the tongue and the velum for [ŋ].

8 *Approximants and semi-vowels*[9]

These sounds are produced with an approximation of the articulators which is too open to cause any friction. Since all fricatives except [h] have corresponding approximants, these can be represented by the diacritic [̞], indicating 'open', placed under the fricative symbol, e.g. [ɹ̞, ð̞, β̞] as in Eng. [ɹ̞ed] and Sp. [e'β̞a ð̞e]. Spellings: *red*; *evade*.

We shall concentrate on two semi-vowels: [j, w], as in Eng. [jes, wik] and Sp. [mjel, 'weso]. Spellings: *yes, week*; *miel, hueso*.

6 Vowel and consonant: definitions

Now that we have seen how the speech mechanism works to produce vowel and consonant sounds, we are in a position to attempt an articulatory definition of each of these terms. A vowel sound is a sound in the production of which the air-stream comes out through the mouth (or mouth and nose), centrally over the tongue, and meets a stricture of open approximation. This definition covers all vowel sounds (voiced, voiceless and nasalized), approximants and semi-vowels. All other sounds are consonant sounds, i.e. those in forming which the air-stream meets either a stricture of complete oral closure (e.g. plosives, affricates and nasals), or one of intermittent closure (e.g. rolls), or one of partial oral closure (e.g. laterals), or a stricture of close approximation (e.g. fricatives).

A complete analysis, however, cannot account for vowels and consonants in articulatory (phonetic) terms only; we must also consider their function in the syllable. The vowel sounds we have just defined are generally 'syllabic' in both English and Spanish – i.e. they function as the central elements of syllables, either alone or accompanied by consonant sounds; e.g. [aɪ] in Eng. *I, ice, nice*; or [a] in Sp. *a, la, clan*. Consonant sounds on the contrary, tend to be 'non-syllabic'

or 'marginal' in the syllable. The term 'vowel', therefore, has traditionally designated a sound (i) produced with open approximation of the articulators, and (ii) with syllabic function; 'consonant', a sound with (i) some type of interference of the air-stream, and (ii) non-syllabic function.

But how can we refer to the sounds [j] in *yes*, or [ɻ] in *raw*? How should we consider [n] in *button*, or [l] in *settle*? Although the first two fit into the articulatory definition of vowel, here they are both functioning as marginal elements; the last two are consonants from the articulatory point of view, yet here they are syllabic – functioning as central elements. This dual, ambiguous role of the terms 'vowel' and 'consonant' has been unsatisfactorily solved with the coinage of such terms as 'semi-vowel' and 'semi-consonant'. We must, therefore, make clear whether we are referring to sounds as they are articulated, or as they function in the syllable.[10] Both approximants and semi-vowels are vowels, phonetically speaking, but are listed together with consonants because of their consonantal function.

7 The phonetic consonant chart of English and Spanish

By combining the classifications (i) to (v) already mentioned it is possible to place all the described consonant sounds on a chart. Here we shall follow some conventions: the labels which describe place of articulation are located on a horizontal axis, and those which describe manner are placed on a vertical axis.

Manner of Articulation \ *Place of Articulation*	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palato-alveolar	Palatal	Velar	Glottal
Plosive	p b		t̪ d̪	t d				k g	ʔ
Affricate					t̠ɹ d̠ɹ	tʃ dʒ			
Nasal	m̥ m	ɱ	n̪	n̥ n	n̠		ɲ	ŋ	
Roll				r̥ r					
Tap				ɾ̥ ɾ					
Lateral			l̪	l̥ l ɬ			ʎ	(ɬ)	
Fricative	β	f v	θ ð	s̥ z̥ s̬ z̬	ɹ̥ ɹ	ʃ ʒ	ʝ	x ɣ	h ɦ
Approximant	β̞		ð̞		ɹ̬				
Semivowel	w						j	(w)	

Table 1 Phonetic table of the main English and Spanish consonantal articulations.

On the other hand, the voiced-lenis sound is placed on the right of each box; the voiceless-fortis on the left. Symbols in round brackets are secondary articulations.

Consonant sounds are therefore briefly described by three-term labels, according to vocal fold activity/breath force, and place and manner of articulation; e.g. [p] is 'voiceless-fortis bilabial plosive'.

Notes

1 Description and classification are not synonyms. A description of sounds should include a detailed picture of all their features; a classification refers only to the features by which sounds differ. But for EFL purposes classification labels are often sufficient for descriptive purposes; therefore, our descriptions and classifications of sounds will generally be identical.

2 A strong criticism of tongue-position descriptions based on X-ray photographs can be found in P. Ladefoged (1975). We have maintained the harmless, traditional view of tongue positions because of its practical applicability for the present purposes.

3 The original theory of the Cardinal Vowel system is to be found in D. Jones (1956, ch. VIII). Useful comments on the same, in D. Abercrombie (1967, ch. 10).

4 This system of eight primary Cardinal Vowels is extended into a set of secondary vowels, obtained by keeping the tongue positions the same, but reversing the lip positions. They are numbered 9 to 18, but are not necessary reference points when describing the vowel system of English or Spanish. All Cardinal Vowels were recorded by D. Jones in 1955, and the recordings are available from the Linguaphone Institute, London.

5 This subdivided diagram was devised by J. Windsor Lewis (1969, 1975).

6 The term 'stricture' was introduced by K. Pike (1943), who defined it as 'the partial or complete closure of an air passage'. It is a useful term in that it may be taken as a basis to describe all types of sounds, ranging from those produced with complete closure (e.g. plosives) to wide open stricture (e.g. open vowels). A helpful aid that shows where contact between the articulators takes place is the palatogram, examples of which can be found in D. Jones (1956), and T. Navarro Tomás (1932).

7 Examples have been given of pronunciations from different varieties of Spanish, which have not always been indicated. For a detailed description of Spanish pronunciation, see the standard work by T. Navarro Tomás (1932).

8 These diagrams are slightly adapted from D. Abercrombie (1967) and M. Shirt (Leeds University, unpublished). We shall continue to use them whenever we wish to illustrate the dynamic nature of speech, thus helping future teachers to have a clear view of articulatory movements. (See P. Tench (1978).)

9 The term 'approximant', coined by P. Ladefoged, is preferable to the traditional, rather negative 'frictionless continuant'. He described it as 'approximation of two articulators without producing a turbulent air-stream' (1971).

10 The best solution so far has been proposed by K. Pike (1943). He coined the terms *vocoid* and *contoid* to refer exclusively to the phonetic, articulatory level, thus improving on the unsatisfactory, ambiguous definitions put forward by authors such as D. Jones (1956: 23), who mixed the articulatory, auditory and contextual criteria to determine whether sounds were 'consonants' or 'vowels'. Our definitions of 'vowel sound' and 'consonant sound' (chapter 3, section 6) correspond, strictly speaking, to those of vocoid and contoid. Following this notion, Cardinal Vowels should really be called Cardinal Vocoids.

If we apply the phonetic terms vocoid/contoid together with the functional terms syllabic/non-syllabic we shall obtain labels such as these: [i] in *tea* is a syllabic vocoid; [j] in *yes* and [ɹ̥] in *raw* are non-syllabic vocoids (traditionally, 'semi-vowel' and 'frictionless continuant', respectively); [n̩] in *button* is a syllabic contoid, and [p] in *pet* is a non-syllabic contoid.

The complete discussion of this subject can be found in K. Pike (1943), esp. ch. V.

4 Phonology

The function of speech sounds

1

In chapter 3 we have seen how the main speech sounds of English and Spanish are produced. But the facial diagrams showing the articulations of [ʃ] and [t̠], for example (Fig 10), represent isolated, static sounds, and the labels given classify them accordingly. Since speech is a constantly changing flow of sounds which are always influencing one another, these diagrams show only one instant of the complete moving picture.

An accurate articulatory description would indicate some other interesting facts about these sounds. One of the things we would discover would be, for example, that the n-sounds in the English words *another* and *tenth* are articulated differently; the same difference occurs between the n-sounds in Sp. *uno* and *antes*. In the n-sounds of *another* and *uno* the tip of the tongue touches the alveolar ridge; in *tenth* and *antes* it touches the teeth. An economical way of showing that these two n-sounds are different is by placing a small mark called a 'diacritic' under the symbol representing the dental n-sounds; cf. alveolar [n]~dental [n̪]. Similarly, simple listening is enough to tell us that the first l-sound in *little* is different from the second one. We show this by placing the diacritic [˗] through the second l-sound to indicate that it is velarized or dark, in contrast with the first one, which is clear; cf. clear [l]~dark [t̠]. Quite often the two d-sounds in Sp. *dedo* are pronounced differently – the first as a dental plosive [d̪], and the second as a dental fricative [ð̪].

Yet unconsciously, the phonetically untrained speaker would say that there is only one n-sound in English and Spanish, one l-sound in English and one d-sound in Spanish. This can only be explained if we study not simply how sounds are produced (phonetics), but also how they function in a given language (phonology).

2 Allophone and phoneme

Table 1 represents the main consonantal articulations occurring in English and Spanish. It is a phonetic table, i.e. not all the sounds symbolized there are contrastive units in those languages, since when substituted for each other not all of them produce changes of meaning. For example, let us consider the four

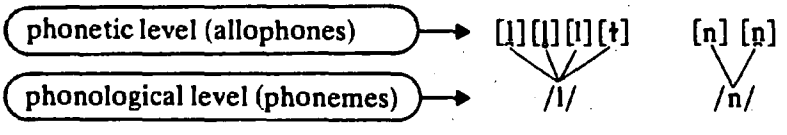
lateral articulations symbolized [l̪, l̥, l, ɫ]. None of these sounds can function contrastively in English because they can never occur in the same phonetic environment: every time we articulate [l̪] a dental sound must follow it (e.g. *health* [he l̪θ]); [l̥] occurs only if a fortis plosive precedes it (e.g. *class* [k l̥ɑs]); we produce a clear [l] before vowel sounds (e.g. *leaf* [lif]), and a dark (velarized) variety [ɫ] before consonant sounds and pauses (e.g. *milk*, *wheel* [miɫk, wiɫ]). Yet these four sounds share basic phonetic characteristics, and the English native speaker 'feels' that they function as one and the same entity. In more technical terms we may say that they constitute the same phonological unit in English; they are just realizations or *allophones* of the same abstract sound unit called *phoneme.*

Phoneme, therefore, can be defined as 'the smallest contrastive phonological unit which can produce a difference of meaning'.[1] We can identify phonemes by finding words which differ by the smallest element possible – i.e. one sound; e.g. Eng. *kit*, *cat*, *cart*, *cot*, *caught*, and Sp. *paso*, *peso*, *piso*, *puso*. English /ɪ, æ, ɑ, ɒ, ɔ/ and Spanish /a, e, i, u/ are examples of phonemes in these languages, because when substituted for each other they produce different words. Allophones can be defined as 'the variants of each phoneme'.

3 Phonetics and phonology

Whereas phonetics deals with allophones, phonology deals with the phonemes of a language.[2] In other words, phonology studies the selection and organization of phonic substance into a given form or pattern. Although it is important to differentiate between phonetics and phonology on theoretical grounds, we must combine them for our practical purposes: on the one hand, it is essential to know which sounds produce differences in meaning between words (phonological study), and on the other, to establish how the various phonemes are actually realized (phonetic study). The first type of study will give us the priorities of pronunciation, i.e. those features which are meaningfully essential; the second type will allow our English to sound really English. In simpler terms, the wrong choice of phonemes may lead to a different meaning; the wrong use of allophones will only lead to a foreign accent – or another dialect.

How can we show in writing that we are speaking of phonemes or allophones? Conventionally, the same basic symbols are used, but while allophones are written in square brackets, phonemes are put in slant lines, e.g.



In the notation [k l̥ɑs] (*class*), [l̥] represents a lateral consonant sound which has lost some of its voice. Furthermore, phonetic features can co-occur. For example, in *health* there is a velarized dental allophone [ɫ̪], because two conditions are given – the lateral is followed by /θ/, which is both dental and consonantal; the last sound in *little* is realized as a devoiced velarized alveolar lateral [ɫ̥]. If the wrong lateral allophone were used instead of the right one,

e.g. a clear, voiced [l] where [ɬ] should be used, the utterance would be understood by an English ear, but it would sound definitely un-English.

4 Complementary distribution and free variation

Allophones which can never occur in the place of another are said to be in *complementary distribution* – they are mutually exclusive, because wherever one occurs no other can, e.g. the four lateral allophones in the above examples are said to be in complementary distribution since none of them can occur in place of another. The two nasal allophones mentioned in chapter 4, section 1 are also in complementary distribution for the same reason.

Not all allophones, though, are conditioned by the context; sometimes their use depends just on habit or preference. Such is the case of the English fortis-plosives before a pause. In *all right* the final /t/ may be realized either with release (exploded), or without it (unexploded), or accompanied by a simultaneous glottal stop, among other possibilities. No matter which one is used the meaning will not change, nor will it sound foreign. The same occurs in Spanish words ending in spelling *r*; e.g. in *mar* the last segment may be realized either as a roll, or a tap, or a fricative (all voiced or voiceless), without altering the meaning of the word. When the allophones of a phoneme occur in the same environment without being in contrast they are said to be in *free variation*.

5

Our next step will be to list the phonemes of English and then study their main allophones in detail. But before doing so we must decide on two essential matters. Although the capacity to produce human vocal noises (phonetics) is general to all human beings, their organization into phonemes (phonology) is particular to each language, and sometimes to varieties of the same language. On the other hand, there is more than one way of cutting up language in order to obtain its inventory of phonemes, and several different phonemic solutions may be equally valid.[3]

Which variety of English are we going to adopt and analyse? Once we have chosen our model, which is the best analysis to use with speakers whose mother tongue is Spanish? In other words, into how many minimal contrastive units (phonemes) are we going to organize the sounds of English?

6 Received pronunciation

In most languages there are different accents, depending on which region the speaker comes from, whether he is an educated person or not, what age he is, and sometimes even what social class he belongs to. If the language is spoken not only in a 'mother country', but also in ex-colonies, this will probably mean more differences. Such is the case of Spain and most countries of Latin America, and England with respect to her ex-colonies.

Although none of these accents is intrinsically superior to any other, when learning a foreign language we must make a choice, keeping in mind certain points. First, the accent must be widely intelligible to all the communities where the language is spoken. Secondly, it should be socially acceptable. In the case of English, there are two varieties that fill these requisites, and they are commonly known as General American and Received Pronunciation (RP).[4] General American is that variety of English spoken by educated speakers in the USA, which has no regional characteristics.

RP, the accent described in this book, has rather complex origins. Before the nineteenth century this accent was spoken by educated speakers of South Eastern England and the London region. In the nineteenth century it was associated with the Public Schools, and became a mark of good education and social prestige. Until World War II it was the only accent used by BBC news readers; more recently some slightly regional accents have begun to be used. During the last twenty years, with the tendency towards a levelling of classes in Great Britain, widespread radio and television services, and greater travelling facilities, RP has ceased to be the exclusive social and educational marker that it used to be. It can no longer be directly associated with South Eastern England, or the Public Schools, or the BBC, although these were its origins.[5]

The adoption of RP for teaching purposes has the following advantages:

(i) It is the accent most widely understood in all English-speaking communities.
(ii) It represents no regional characteristics.
(iii) It enjoys social prestige, although some young people in England reject it because of its associations with the 'Establishment'.
(iv) It is the variety of English which has most frequently been described in textbooks and taught to foreigners for many decades.

Within RP three generational varieties can be identified.[6] Conservative RP is the type used by the older generation, General RP is spoken by the middle generation, and Advanced RP by the younger generation. Of the three we shall describe General RP, since it includes none of the pronunciations that are falling into disuse, nor any of the ultra-modern forms that may pass with fashion. It is essential to limit our scope in this way, because pronunciation is subject to change. For example, the phoneme /ɔə/, used in Conservative RP, is rapidly becoming out of date, and consequently is not included in our inventory.[7]

If we were to choose a regional variety of English our phoneme inventory would again be different. In Scottish English, for example, the words *full* and *fool* are pronounced the same, and words such as *mass* and *pass* have the same vowel phoneme.[8] Similarly, the consonantal inventory of Latin American Spanish does not list /θ/, whereas the Spain (Castilian) Spanish one generally does.

Finally, for teaching purposes – especially in the case of Spanish learners – it is convenient to treat /tr, dr/ as single phonemes, mainly for phonetic considerations: first, because their realizations are completely unfamiliar for Spanish speakers, and secondly because their component elements are realized differently when separate, i.e. the alveolar plosives /t, d/ plus the post-alveolar approximant /r/ give rise to the post-alveolar affricates /tr, dr/.

7 The phonemes of English and Spanish[9]

The English vowel phonemes												
i	ɪ	e	æ	ɑ	ɒ	ɔ	ʊ	u	ʌ	ɜ	ə	
1	2	3	4	5	6	7	8	9	10	11	12	
eɪ	əʊ	aɪ	aʊ	ɔɪ	ɪə	eə	ʊə					
13	14	15	16	17	18	19	20					
The Spanish vowel phonemes												
i	e	a	o	u								
1	2	3	4	5								
ei	ai	oi	ui	iu	eu	au	ia	ua	ie	ue	io	uo
6	7	8	9	10	11	12	13	14	15	16	17	18

Table 2 The English and Spanish vowel phonemes.

		Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palato-alveolar	Palatal	Velar	Glottal
Plosive	E	p b			t d				k g	
	S	p b		t d					k g	
Affricate	E					tr dr	tʃ dʒ			
	S						tʃ			
Nasal	E	m			n				ŋ	
	S	m			n			ɲ		
Roll	E									
	S				r					
Flap	E									
	S				ɾ					
Lateral	E				l					
	S				l			ʎ		
Fricative	E		f v	θ ð	s z		ʃ ʒ			h
	S		f	θ	s			ʝ	x	
Approximant	E					r				
	S									
Semivowel	E	w						j		
	S									

Table 3 The English and Spanish consonant phonemes.

Notes

1 There exist several views of the phoneme, ranging from the abstract ones to the physical ones. Our definition is eminently practical and is widely accepted nowadays by specialists in language teaching. For a brief survey of the different schools of phonemic theory see E. C. Fudge (1970).

2 The significant function of phonemes has made phonology also known as 'functional' or 'linguistic' phonetics. Linguists have referred to phonetics and phonology in a variety of ways, ranging from the non-technical ones by K. L. Pike (1947: 57) – 'Phonetics gathers raw material. [Phonology] cooks it' – to those geared to language teaching, e.g. by D. A. Wilkins (1972: 66) – 'Phonetics provides the language teacher with precise descriptions of the articulations of the target language. Phonology helps the teacher establish the priorities of pronunciation teaching by enabling him to identify the most important features to be acquired.'

3 This course is based on a phonological model – the phonemic one – which is both the simplest and most traditional analysis. It has proved to be effective for language teaching purposes mainly because it provides simple and clear descriptions. Its principal disadvantage lies in its use of segmentation of continuous speech into units, each unit representing an ideal, static articulatory posture. This is a partial view of a process which in fact involves many coordinated articulatory movements.

Some linguists have analysed phonemes further into significant units called *distinctive features*. Since this analysis is based on the type of difference between phonemes, it can provide an economical account of the classification of phonemes, and formulation of phonological rules.

The other two best known phonological models – *prosodic analysis* and *generative phonology* – are not based on segmentation. The former analyses stretches of utterance longer than the phoneme (syllables, words, etc.); the latter makes a useful distinction between 'competence' (the speaker-hearer's knowledge about his language) and 'performance' (the actual use of language in a particular situation). A critical and concise discussion of this problem can be found in G. Brown (1974).

4 Also known as Educated English, Southern English, London English, Southern British, British Standard, Standard English, King's/Queen's English, BBC English, Southern British Standard, etc. For an account of the differences between RP and GA see J. Windsor Lewis (1971).

5 Although it is generally agreed that RP has for the last twenty years been widening its spectrum to include some new pronunciations which are not regionally neutral, there is no consensus of opinion as to how far this movement has gone. Both J. L. Trim (1961) and J. Windsor Lewis (1972) have suggested that the term 'RP' be reserved for 'socially conspicuous' forms of RP such as would be associated with upper classes, public schools, etc., and that a new term ('English Standard Pronunciation' for Trim, and 'General British' for Windsor Lewis) be used to refer to that 'sociologically neutral' variety of English that is most suitable for EFL teaching purposes. In connection with the evolution of RP it is interesting to compare the views held by D. Jones (1956, 1963), D. Abercrombie (1951, 1953), A. C. Gimson (1980 and previous editions, and the introduction to *EPD*, 14th edn.), and J. Windsor Lewis (1972, and forthcoming a).

6 See A. C. Gimson (1980: 91).

7 As teachers of English pronunciation working in countries so far away from Britain, it is indispensable that we should try to keep pace with current changes in pronunciation, using all the available means. For instance, we should try to listen to up-to-date recorded material and the BBC World Service, not necessarily aiming at adopting the most modern forms, but certainly at understanding them. The generational model to be taught should be constantly checked with modern pronouncing

dictionaries. In this respect it is interesting to compare D. Jones's *EPD* up to 12th edn., the 13th and 14th edns. revised by A. C. Gimson, J. Windsor Lewis's *CPD*, the 1974 edn. of *OALD*, and the *LDCE* (1978). See also chapter 8.

8 For a concise survey (and recording) of the ten main regional and social varieties of British English, see A. Hughes & P. Trudgill (1979).

9 It is not always easy to establish the phonemic status of certain sounds. This is particularly true of diphthongs and affricates, each of which may be considered as either one or two phonemes. On the phonemic status of /tr, dr/ see A. C. Gimson (1980: 172f). For different approaches in the case of Spanish diphthongs, see T. Navarro Tomás (1932, 1968), and E. Alarcos Llorach (1950). Since Sp. /ou, iai, iei, uai, uei/ are of rare occurrence, they have been omitted from the list. Furthermore, not all varieties of Spanish include /θ, ʎ/ in the consonantal inventory.

5 Transcription

1

From chapter 3 onwards we have been using symbols to represent speech sounds. In the case of English, the use of a system of written symbols to record spoken language unambiguously is essential, because English is not a phonetic language, i.e. there are only twenty-six letters in the alphabet to represent forty-six phonemes. Moreover, although English pronunciation has suffered many changes throughout the ages, English spelling has become standardized, and we are now in a situation where the relationship between the two is not always consistent. Furthermore, transcription not only shows the pronunciation of words in isolation, or in their 'lexical' form, as they appear in pronouncing dictionaries, but it can also show the modifications that words suffer when used in connected speech.

2

The symbols we have been using form part of a transcription system based on the alphabet devised by the IPA. These symbols may be organized into various types of transcription (see Table 4), none of which is intrinsically better than any other. Each one reflects either a different phonemic analysis, or a different visual representation of the same analysis, thus making each one suitable for a different purpose.

3 Allophonic and phonemic transcription

We have been using transcription in two different ways, depending on whether we were referring to allophones or phonemes. To have a clear understanding of this double use of transcription, we must go back to our definition of Phonetics – 'the study of phonic substance and its function in spoken language'. In this definition we imply that there are two equally important aspects to the science of Phonetics. The first refers to substance, or 'vocal noise' – the raw material out of which speech sounds are made. This aspect is studied by phonetics. The second refers to the way in which this vocal noise can be organized in order to make it meaningful and systematic for communication purposes. This second aspect is studied by phonology. Later on, when explaining the concepts of allophone and phoneme, we pointed out that allophones, which belong to the field of phonetics, are always represented by symbols enclosed in square brackets

[ ], while phonemes, which belong to the field of phonology, are always represented by symbols between slant lines / /. They are both, however, represented by the same symbols. (Cardinal vowels must be written in square brackets, because they refer only to substance, i.e. sounds which are not organized into any particular language.)

It is obvious then, that no matter which type of transcription we adopt, we can use it at two different levels, for two different purposes. The first is an *allophonic* or *narrow* transcription, where details of articulation are accounted for visually. For example, the word *drawled* would be transcribed as [d̥ɹɔːɬd̥], a series of additional diacritics being used to give extra information about each sound with a great deal of precision. The second is a *phonemic* or *broad* transcription, where details such as devoicing, secondary articulations, variations of vowel length, etc. are not accounted for. The word *drawled* would be transcribed simply /drɔld/. Summing up, an allophonic transcription records the actual realizations of each phoneme; it consists of a set of symbols and diacritics. A phonemic transcription records only the order in which segments occur; it consists of a set of symbols and a series of rules, or conventions, which we must know in order to be able to give each symbol its correct value.

4

When would we use allophonic transcription, and when would we use phonemic? When studying a new, unknown language whose inventory of phonemes has not yet been established; when comparing two different languages, or two accents, we would use allophonic transcription. For teaching purposes a phonemic transcription is generally enough, so long as we are aware of the implicit conventions explaining those details which in an allophonic transcription are explained by extra symbols and diacritics. A phonemic transcription being more economical, it is also the one used in pronouncing dictionaries. In the case of teachers of English as a foreign language, a mastery of allophonic transcription is indispensable because it provides the best technique to refer to mispronunciations in writing; e.g. *again* pronounced [eˋɣen] instead of [əˋgen], or *tree* pronounced [t̻ɹi], instead of [t̻i̥ː], etc. (See chapter 7, section 8.)

5

It was mentioned above that there are various types of transcription available. In all cases the differences in these types are found in the symbols used to represent vowel sounds, the symbols for consonant sounds being alike in all types. There exists at present a great deal of controversy as to which of these types is best suited to language teaching purposes. We shall analyse four which are very commonly used today – D. Jones's, A. C. Gimson's, and J. Windsor Lewis's type, all of which can be compared by examining Table 4:

Devised by		*Jones*	*Gimson*	*Gimson*	*Windsor Lewis*
Used in		*EPD-* (12*th edn.*)	*EPD-* (13*th edn.*)	*EPD-* (14*th edn.*)	*CPD*
		OEP	*IPE*	*LDCE*	
				OALD	
Key word	*No.*				
beat	1	iː	iː	iː	i
bit	2	i	ɪ	ɪ	ɪ
get	3	e	e	e	e
bag	4	æ	æ	æ	æ
calm	5	ɑː	ɑː	ɑː	ɑ
long	6	ɔ	ɒ	ɒ	o
saw	7	ɔː	ɔː	ɔː	ɔ
put	8	u	ʊ	ʊ	ʊ
moon	9	uː	uː	uː	u
cup	10	ʌ	ʌ	ʌ	ʌ
bird	11	əː	ɜː	ɜː	ɜ
*a*bout	12	ə	ə	ə	ə
day	13	ei	eɪ	eɪ	eɪ
go	14	ou	əʊ	əʊ	əʊ
high	15	ai	aɪ	aɪ	ɑɪ
how	16	au	ɑʊ	aʊ	ɑʊ
boy	17	ɔi	ɔɪ	ɔɪ	ɔɪ
here	18	iə	ɪə	ɪə	ɪə
there	19	ɛə	ɛə	eə	eə
tour	20	uə	ʊə	ʊə	ʊə

Table 4 Comparative table of transcription types for RP.

Daniel Jones's type is the one used in his *Outline of English Phonetics* (*OEP*) and in his *English Pronouncing Dictionary* (*EPD*), up to 12th edn. Jones's phonemic analysis accounted for only eight pure vowel phonemes[1]: he considered that vowels No. 1 and 2, 6 and 7, 8 and 9, 11 and 12 belonged to single phonemes, thus suggesting that the main difference between the members of each pair was that of quantity. He therefore used the same symbol for each pair, but a diacritic [ː] to indicate that one of the members was longer than the other. Besides, his symbol for diphthong No. 14 was /ou/, because this phoneme was actually realized with a centralised back first element two generations ago. At present it is the conservative RP variant of /əʊ/, where [ə] symbolizes more accurately the mid-central starting point of the diphthong in General RP.

A. C. Gimson's phonemic analysis accounts for twelve pure vowel phonemes, each of which is represented by a differently shaped symbol, with the addition of length marks to vowels No. 1, 5, 7, 9 and 11. This suggests that differences of vowel quantity and quality are of equal significance. It is the type used by Gimson in his *Introduction to the Pronunciation of English*, and in a slightly simplified form, in the 14th edn. of *EPD* (1977), the *Longman Dictionary of Contemporary English* (*LDCE*, 1978), and the revised 3rd edn. of the *Oxford Advanced Learner's Dictionary of Current English* (*OALD*, 1980).

J. Windsor Lewis's type, which also accounts for twelve pure vowel phonemes, uses a different symbol for each phoneme, but does not add length marks to vowels which can be lengthened. Thus he underlines the quality distinction of English vowel sounds, quantity being explained by the conventions behind the system. This transcription is the one used in *A Concise Pronouncing Dictionary of British and American English* (*CPD*, 1972).

In the present case we have used a type which is a compromise between Gimson's simplified and Windsor Lewis's systems, i.e. *EPD* 14th edn. without length marks. The reasons for this choice are:

(i) The Spanish learner is unaccustomed to making the fine distinctions of vowel quality necessary to produce the twelve English pure vowel phonemes. Therefore, a differently shaped symbol for each vowel is very convenient.

(ii) Distinctions of vowel quantity can easily be learned from conventions with greater exactness. The use of length marks would seem to indicate that vowels No. 1, 5, 7, 9 and 11 are always long. Such is not the case, as these vowel sounds can become even shorter than the so-called 'short' ones when followed by any of the eight 'shortening' fortis consonant sounds /p, t, k, f, θ, s, ʃ, tʃ/.[2]

6 Transcription samples

The following is a collection of samples of phonemic transcription types[3]:

(i) Daniel Jones's type:
/ˈɔːl ˈtiːtʃəz ʃud biː ˈeibl̩ tə ˈmiːt ˈsəːtn̩ ˈbeisik riˋkwaiəmənts. | ðɛər ˈoun prənʌnsiˈeiʃn̩ ʃud biː ˈklous tə ðə ˈmɔdl̩ ˋtʃouzn̩/

(ii) A. C. Gimson's simplified type:
/ðeɪ ʃʊd ˈhæv ə ˈsaʊnd ˈnɒlɪdʒ əv ðə fəʊnəˈlɒdʒɪkl̩ ən fəˈnetɪk kærəktəˈrɪstɪks bəʊθ əv ˈɪŋglɪʃ ən əv ðə ˋlɜːnəz læŋgwɪdʒ/

(iii) J. Windsor Lewis's type:
/ðeɪ ʃʊd əv hæd ˈtreɪnɪŋ ɪn ðə dʊɪəgˈnəʊsɪs əv ˈerəz ən ɪn ðə tekˈniks əv kəˏrekʃn̩ | ɪn rɪˈspekt əv ˈɑɪsələt ˈsɑʊndz ən əv ðə ˈfitʃəz əv kəˈnektɪd ˋspitʃ/

Notes

1 See D. Jones (1956: 63).

2 The highly controversial subject of transcription types has been profusely analysed throughout successive numbers of the *JIPA* between 1972 and 1976. See also D. Abercrombie's (1964c) introductory essay on types and uses of transcription, and D. Finch & H. Ortiz Lira's (1977b) analysis aimed at Spanish speakers. For a comparison with American phoneticians, see P. Ladefoged (1975, esp. ch. 2 and 4).

3 The text is part of the summary of 'The Teaching of Pronunciation', a paper given by A. C. Gimson at the 6th Annual Conference of IATEFL, London, January 1973.

6 The English vowels

1

One of the basic requirements of the foreign teacher of English is to become as near-native a speaker and listener of the English language as possible, so that he may convey and interpret phonetic information correctly and easily. His task must begin with a close examination of the English vowel and consonant systems, both at the phonemic and allophonic levels, to be followed by a detailed confrontation with his mother-tongue. This will explain the nature of all the problems concerning English sounds as faced by the Spanish learner, and will be the subject of the next two chapters.

2 The quality–quantity complex

In chapter 4 the inventory of English vowel phonemes was established, and a different symbol was assigned to each one, thus indicating that the learner must produce nineteen different vowel qualities (/ɜ/ and /ə/ have the same quality), in order to achieve a minimum degree of intelligibility. Future teachers cannot, however, be content with a phonemic level of performance; they must aim at producing allophonic differences, which will include, in the first place, very important variations in quantity, and in the second place, minor quality variations. Such variations would be shown in an allophonic transcription.

The English inventory includes six short vowels (all pure), thirteen relatively long (five pure vowels and the eight diphthongs), and one borderline case – /æ/ – sometimes long in certain contexts:

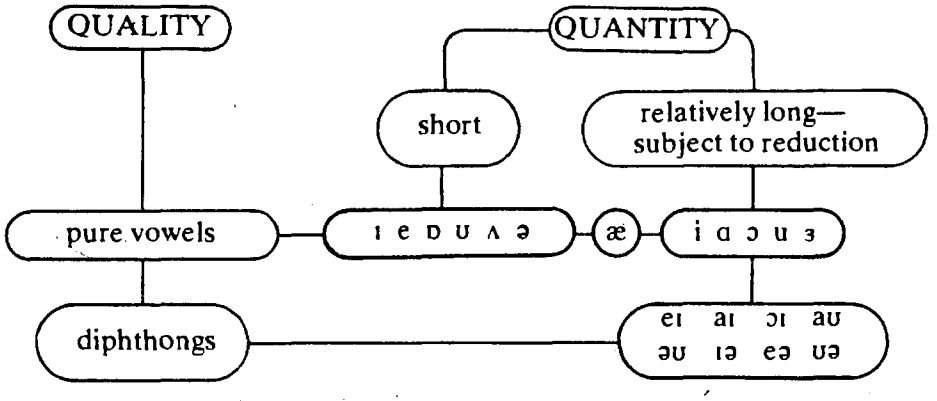


Table 5 The English vowel inventory.

The categories 'long', 'short' and 'pure' must be taken as generalizations found convenient for practical purposes. Instrumentally, and sometimes even percep-

tually, many more variations are recognizable; for instance, depending on the phonetic environment the relatively long vowels have several degrees of length, and the so-called short vowels can become even longer than the former. Similarly, the category 'pure' also includes those vowels which are articulated with a slight gliding movement of the tongue.

Although vowel quality oppositions play the most important role in distinguishing meaning (e.g. *beat* /bit/ ~ *bit* /bɪt/), allophonic variations of quantity may also contribute greatly to it; e.g. word-final plosives, fricatives and affricates, and consequently whole words, are identified to a great extent by the length of the preceding vowel, as in *sight/side* [saˑɪt ~ saːɪd], *leaf/leave* [liˑf ~ liːv], *search/surge* [sɜˑtʃ ~ sɜːdʒ], etc. Both open syllables and those closed by voiced-lenis consonants are considerably longer than syllables of identical vowel quality closed by voiceless-fortis consonants – sometimes twice or nearly three times as long. To sum up, the pair *beat/bit* is distinguished for practical purposes by vowel quality; the pair *beat/bead* mainly by vowel quantity, and *bit/bead* by the vowel quality–quantity complex.

3

For teaching purposes it is convenient to distinguish only three degrees of vowel length. In an allophonic transcription full length is marked [ː], and half length [ˑ]; short vowels are left unmarked. In general, the thirteen relatively long vowels retain their full length when accented either in open syllables (e.g. *see* [siː], *today* [tə'deːɪ]), or when followed by lenis consonants (e.g. *learned* [lɜːnd], *alive* [ə'laːɪv]). English vowel No. 4 /æ/ is often fully long before /b, d, g, dʒ, m, n/.

These vowels will be half long when unaccented (e.g. *seminar* ['semɪnɑˑ], *idea* [aˑɪ'dɪːə]), or when accented and followed by fortis consonants (e.g. *insert* [ɪn'sɜˑt], *lake* [leˑɪk]), or when accented and followed by an unaccented syllable in the same word (e.g. *harder* ['hɑˑdə], *labour* ['leˑɪbə]).[1]

4 Diagrams of the English and Spanish pure vowels

D. Jones's vowel diagram was simplified for EFL purposes in 1969 by J. Windsor Lewis, who added a network of smaller divisions (shown in lighter lines). He displayed unrounded vowels within a square indicator, and rounded ones within a circle, placed either within a box, occupying two half-boxes, or at the intersection of lines. Although less exact, this simplification makes it easier to compare diagrams. The use of large indicators, rather than small dots as used by all other authors, serves to show that each vowel phoneme has a certain range of quality variation. This is even true of the speech of each individual speaker, who normally employs a number of quality allophonic variants, some of which will be seen later.

It is also interesting to compare these diagrams with those of earlier works, e.g. I. Ward (1939) and D. Jones (1950, 1956), to observe the changes undergone by certain vowel qualities over a period of two generations.

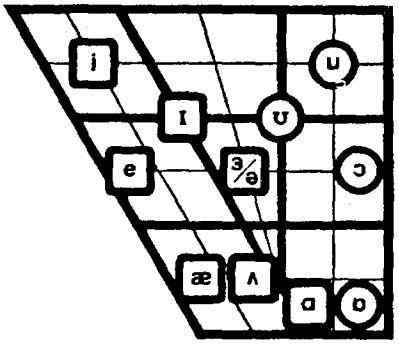


Fig 11 The RP pure vowels.

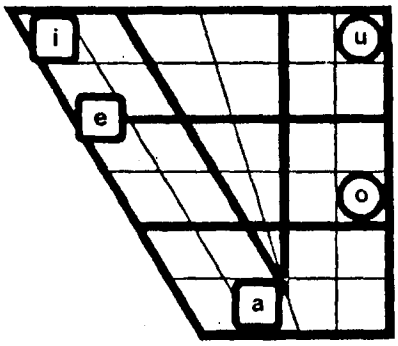


Fig 12 The Spanish pure vowels.

(For classification labels see Fig 9.)

5 The English pure vowels in detail

We shall now give a short articulatory label to each English vowel phoneme, and a list of main allophones:

1 /i/

Front, between close and half-close. The most common realization, though, is a slight diphthong [ıi], especially in accented, open syllables. Furthermore, it is subject to quantity variations, e.g. [i:] as in *tea, leave*; [i·] as in *seat, reader, litre.*

2 /ɪ/

Retracted, half-close. Generally short. Slightly opener in final open syllables (i.e. [ɪ̞]) as in *very*, but may be nearer to /i/ when another vowel follows, as in *very often.*

3 /e/

Front, mid. Usually short.

4 /æ/

Front, between half-open and open. Normally short, but long (i.e. [æ:]) in *lab, bad, man*, etc.

5 /ɑ/

Back, open, unrounded. Although relatively long, it undergoes variations of length: fully long [ɑ:] as in *star, starve*; reduced [ɑ·] as in *part, after, skylark.*

6 /ɒ/

Back, open, slightly rounded. Normally short.

7 /ɔ/

Back, mid, rounded. Usually long, but subject to reduction: fully long [ɔ:] as in *door, lord*; reduced [ɔ·] as in *caught, border, seaport.*

8 /ʊ/

Advanced, half-close. Slight lip-rounding. Generally short.

9 /u/

Back, between close and half-close. Lips rounded. Usually realized as a slight diphthong [ʊu], especially in accented, open syllables. More central (i.e. [ü]) after /j/, as in *you.* Generally long, but subject to length variations: fully long [u:] as in *blue, fool*; reduced [u·] as in *boot, loser, grapefruit.*

10 /ʌ/

Central, between half-open and open. Normally short.

11 /ɜ/

Mid, central. Lips unrounded. Generally long, but subject to reduction: fully long [ɜː] as in *fur, world*; reduced [ɜ˙] as in *first, Thursday, outburst.* This latter variant is still slightly longer than /ə/.

12 /ə/

Mid, central. Lips unrounded. More open (i.e. [ə̟]) in final, open syllables, e.g. *doctor.*

6 Classification of the English and Spanish diphthongs

Diphthongs can be classified articulatorily and auditorily:

(i) According to the distance the tongue travels they can be articulatorily labelled 'wide' – when the glide is long – and 'narrow' – when the glide is short.

(ii) Depending on the direction of the movement the tongue makes in producing diphthongs, the English set can be articulatorily classified into 'closing' and 'centring', and the Spanish set into 'closing' and 'opening'. Closing diphthongs involve a glide towards a closer tongue position; centring diphthongs a glide towards a central position, and opening diphthongs a glide towards a more open position.

(iii) According to the prominence of the elements, diphthongs can be auditorily classified into 'falling' (when the first element is more prominent than the second), and 'rising' (when the second is more prominent than the first). In English, all diphthongs are generally falling; in Spanish, all falling diphthongs are closing, and most rising ones are opening.

7 Diagrams of the English and Spanish diphthongs

The vowel indicator shapes will here show lip position of the starting element only:

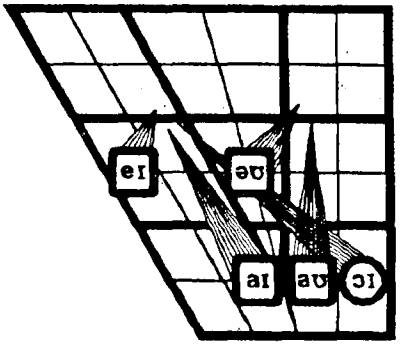


Fig 13 The English closing diphthongs.

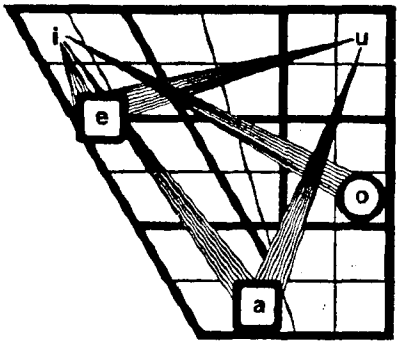


Fig 14 The Spanish closing diphthongs.

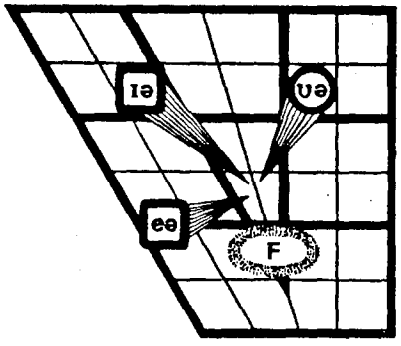


Fig 15 The English centring diphthongs. 'F' shows usual finishing area in final positions.

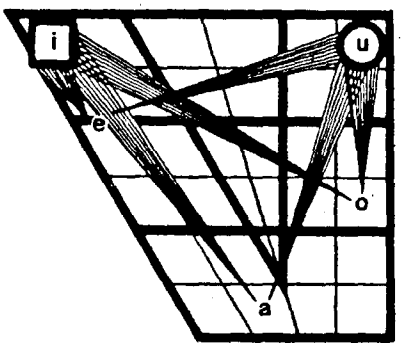


Fig 16 The Spanish opening diphthongs. Only /iu/ and /ui/ have been omitted.

8 The English diphthongs in detail

The quantity variations of the English falling diphthongs mainly affect their first element. (Such is not the case when /ɪə, ʊə/ are labelled 'rising', as in *brilliant, casual.*) Length variations in diphthongs are governed by the same rules as length variations affecting the relatively long pure vowels. As to lip-posture, the elements in the diphthong tend to retain the positions they present as pure vowels, unless otherwise indicated. The following is a list of brief articulatory labels and allophones:

13 /eɪ/

Narrow, front-closing. Glide starting at RP /e/, moving in the direction of RP /ɪ/. Fully long [eːɪ] as in *pay, age*; reduced [eˑɪ] as in *paint, rainy, activate.*

14 /əʊ/

Narrow, back-closing. Glide starting at RP /ə/, moving in the direction of RP /ʊ/. Fully long [əːʊ] as in *low, goal*; reduced [əˑʊ] as in *goat, golden, envelope.*

15 /aɪ/

Wide, front-closing. Glide starting from open retracted position, moving in the direction of RP /ɪ/. Fully long [aːɪ] as in *eye, kind*; reduced [aˑɪ] as in *advice, either, airtight.*

16 /aʊ/

Wide, back-closing. Glide starting approximately at RP /ɑ/, moving in the direction of RP /ʊ/. The starting point may, however, be the same as for /aɪ/. Fully long [aːʊ] as in *vow, town*; reduced [aˑʊ] as in *count, powder, outhouse.*

17 /ɔɪ/

Wide, front-closing. Glide starting between half-open and open, moving in the direction of RP /ɪ/. It begins slightly rounded. Fully long [ɔːɪ] as in *toy, toil*; reduced [ɔˑɪ] as in *voice, toilet, oyster, invoice.*

18 /ɪə/

Centring. Glide starting approximately at RP /ɪ/, moving to mid-central in non-final position, and to the more open variety of RP /ə/ (i.e. [ɪ̜]) in final position, e.g. *idea.* Fully long [ɪːə] as in *clear, museum*; reduced [ɪˑə] as in *fierce, era, theatre.*

19 /eə/

Centring. Glide starting from half-open, moving to mid-central in non-final position, and to the more open variety of RP /ə/ (i.e. [eə̯]) in final position, e.g. *fair*. Otherwise, realized as a long variety of Cardinal 3. Fully long [eːə] as in *rare, theirs*; reduced [eˑə] as in *scarce, vary, scarcely*.

20 /ʊə/

Centring. Glide starting approximately at RP /ʊ/, moving to mid-central in non-final position, and to the more open variety of RP /ə/ (i.e. [ʊə̯]) in final position, e.g. *tour*. Fully long [ʊːə] as in *poor, gourd*; reduced [ʊˑə] as in *during*.

9 The English diphthongs +/ə/

A third vocalic element /ə/ can be added to all diphthongs except the centring ones, e.g. /eɪə/ as in *payer*, /əʊə/ as in *lower*, /aɪə/ as in *wire*, /aʊə/ as in *sour*, and /ɔɪə/ as in *employer*. The resulting sequence, however, is pronounced fully only occasionally, as when using either a slow, formal style of pronunciation, or when the word containing the vocalic sequence is given special emphasis. Speakers of general RP, though, tend to weaken and/or omit the second [ɪ] or [ʊ] element in ordinary conversational style.

This vowel reduction, a form of compression technically known as 'levelling', has given rise to (i) two new diphthongs, one coming from /aɪ/ + /ə/, and another from /aʊ/ + /ə/, but which have not as yet been given phonemic status, and have to be considered (and transcribed) as allophonic realizations (i.e. [aə]); and (ii) new sets of homophones; for instance, the quality difference between the above reductions is so subtle, that pairs such as *tyre, tower* are often pronounced the same (see Fig 17); another example is diphthong No. 19 /eə/ and the levelling resulting from /eɪ/ + /ə/, as in *there, they're*.

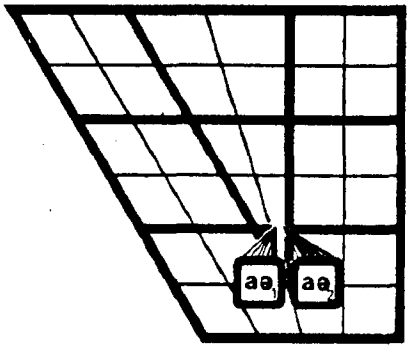


Fig 17 Diphthongs resulting from the levelling of sequences /aɪ/ + /ə/ (left), and /aʊ/ + /ə/ (right).

10 The English *v.* Spanish vowel systems

Our next step is a detailed confrontation of the vowel systems of English and Spanish, in order to know which are the difficulties that English presents for the Spanish learner. Our comparison must account for (i) phonemic oppositions, (ii) phonetic features, (iii) frequency of occurrence of the vowel phonemes, (iv)

distribution, and (v) spelling systems. Only after this confrontation will the teacher be able to decide on priorities, diagnose (and even predict) errors, and develop techniques for correction. This knowledge is an indispensable requirement for the foreign language teacher.

(i) The vowel diagram is an excellent example of how scientific data can be adapted to a visual aid for use in the teaching of pronunciation. Although the articulatory exactness of the vowel positions has been questioned (Ladefoged, 1975), the diagram continues to be a useful aid in describing the auditory relationships between vowel phonemes.

The best way to compare the vowel systems of English and Spanish is by examining the corresponding vowel diagrams (see Figs 11 and 12). The first striking difference is the abundance of English pure vowel oppositions (twelve) compared with Spanish (only five); the second is the existence of central vowels in English; finally, no Spanish vowel coincides exactly with any English one, although some are fairly similar. The numerical proportion is reversed in the case of diphthongs – eight in English *v.* thirteen in Spanish.

(ii) The main English vowel allophones have been described above; the Spanish ones have been detailed by T. Navarro Tomás (1932), who accounts for fifteen principal variants. But in spite of the fact that it is possible to distinguish between open, close, and weakened variants of nearly all Spanish vowels, we must remember that the native speaker is generally quite unaware of such differences. This, added to the fact that vowel qualities are difficult to place articulatorily makes a vowel confrontation at allophonic level less useful than a corresponding consonant confrontation.

As to diphthongs, the central (and centralized) qualities of the second element of all the English ones cause them to be in general much narrower than the Spanish ones. This can be seen by comparing the length and direction of the beams in the diagrams, which in the case of the Spanish set, generally go from one peripheral position to another.

A final confrontation of vowel quantity reveals that both English and Spanish vowels undergo length variations depending on phonetic environment and accentuation. Statistics show that the short variants are of similar length in both languages, and that the English long variants can be double the length of the Spanish ones. For instance while English /i/ can be 36 centiseconds at its longest, and about 12 cs at its shortest, Spanish accented /a/ can be 18.5 cs at its longest, and 8 cs at its shortest.[2] But although length variations are allophonic in both languages, in Spanish they do not actively influence meaning, as they do in English.

(iii) Several vowel frequency counts have been made, and although the different authors do not agree exactly, the important fact remains – segments tend to occupy the same place in all lists. The following data have been taken from D. B. Fry (1947) and T. Navarro Tomás (1968) respectively:

English			
/ə/	10.74%	/i/	1.65%
/ɪ/	8.33	/əʊ/	1.51
/e/	2.97	/æ/	1.45
/aɪ/	1.83	/ɒ/	1.37
/ʌ/	1.75	/ɔ/	1.24
/eɪ/	1.71	/u/	1.13
		r.v.	3.53
		Total	39.21%

Spanish	
/a/	13.00%
/e/	11.75
/o/	8.90
/i/	4.76
/u/	1.92
r.v.	3.16
Total	43.49%

Table 6 Frequency of occurrence of vowel phonemes. Under 'r.v.' are included the remaining vowels reaching less than 1% each.

From the comparison of the above figures we can draw two main conclusions. In the first place, Spanish presents a higher proportion of vowel sounds than English (43.49% *v.* 39.21%); in the second place, whereas Spanish shows a high frequency of occurrence of the three most open vowels of the series (/a, e, o/ totalling 33.65%), in English the centralized vowels (/ə, ɪ, ʌ, əʊ, ʊ, ɜ, ɪə, ʊə/ totalling 23.98%) predominate. Within this group /ə/ and /ɪ/ show an overwhelming frequency of occurrence.

(iv) An examination of the positional distribution of English vowels in words shows that in general it is possible for vowels to occur in all three positions – initial, medial and final – both in accented and unaccented syllables. Of the 120 slots shown in the table below, only twenty-two are empty (i.e. 18.3%):

	Accented			*Unaccented*		
	Initial	*Medial*	*Final*	*Initial*	*Medial*	*Final*
i	*ea*t	m*ea*n	s*ea*	*e*conomy	athl*e*te	bootee
ɪ	*i*nn	s*i*t		*i*nform	l*e*ttuce	many
e	*a*ny	p*e*t		*e*thnology	comm*e*nt	
æ	*a*nt	s*a*t		*a*mbition	c*a*ntact	
ɑ	*a*unt	c*a*rt	st*a*r	*a*rtistic	p*a*rtake	semin*a*r
ɒ	*o*dd	g*o*ne		*O*ctober	aer*o*sol	
ɔ	*ough*t	h*o*rse	l*aw*	*o*rnate	ac*o*rn	outl*aw*
ʊ		b*u*sh			b*oo*khood	
u	*oo*ze	r*u*de	bl*ue*		r*ou*tine	virt*ue*
ʌ	*u*p	t*ou*ch		*u*mbrella	pr*o*duct	
ɜ	*ea*rth	l*ea*rn	p*ur*	*u*rbane	exp*e*rt	milie*u*
ə				*a*lone	circ*u*s	bett*er*
eɪ	*a*che	p*ai*n	d*ay*	*é*lite	imit*a*te	ball*et*
əʊ	*o*ld	c*o*de	l*ow*	*o*asis	epis*o*de	narr*ow*
aɪ	*i*ce	b*i*te	l*ie*	*i*dea	outl*i*ne	alib*i*
aʊ	*ou*t	t*ow*n	h*ow*	*ou*tstay	blacko*ut*	anyh*ow*
ɔɪ	*oi*l	v*oi*ce	t*oy*		inv*oi*ce	cowb*oy*
ɪə	*ea*r	f*ie*rce	n*ear*		var*i*ous	superi*or*
eə	*a*rea	sc*a*rce	h*air*		there*a*fter	premi*ère*
ʊə		g*ou*rd	t*our*		tort*u*ous	cont*our*

Table 7 Distribution of English vowels in accented and unaccented syllables.

The following points must be noted with reference to the above table:

(a) /ə/ is not normally accented.
(b) /e, æ, ɒ, ʊ, ʌ/ never occur finally in a word. Possible exceptions: /ʊ/ in *to* and *into*; /ʌ/ in *uh-huh* /ʌˋhʌ/.
(c) /ʊ, ʊə/ do not occur word initially. Exceptions: /ʊ/ in *oomph, umlaut* and *Uruguay* (alternative: /ˋjʊərəgwaɪ/).
(d) Many slots, especially in the 'unaccented' columns can mainly be filled with either complex words (e.g. *blackout*) or with words of foreign origin (e.g. *élite*).

One of the limitations of distribution tables is that they do not show frequency of occurrence in the different accented and unaccented positions. They fail to reveal that although English phonology permits the so-called strong vowels to occur in unaccented positions, in some cases it restricts their occurrence to very few instances. For example, /i, e, ɜ, eɪ/ very rarely occur unaccented in initial position. An examination of 3,000 syllables containing strong vowels revealed that only 27% were unaccented, and that none of these, with the exception of /aɪ, eɪ, æ, əʊ/, exceeded 2% each. In general, the English strong vowels occur two or three times less frequently in unaccented syllables than in accented ones.

A comparison with the Spanish distribution table reveals that the five Spanish vowels can occur in all three positions in the word – initial, medial and final. The diphthongal table, however, shows a number of empty slots, and others which can only be filled with technical or regional terms and words of Amerindian origin, all of which are of questionable value for our purposes. Among the empty slots relevant to the confrontation, because they constitute near equivalents in English, are: accented and unaccented initial /ei/, and unaccented final /ei, ai, oi, au/.

(v) Although a confrontation between spelling systems is not strictly phonetic, it will serve to point out another problem area in the teaching of pronunciation. Whereas the five Spanish vowel phonemes can be represented in ordinary orthography with fourteen different spellings – /i/ alone being represented by the letters *i, ui, hi* and *y* – the twelve English vowel phonemes are symbolized with seventy regular spellings, apart from another seventy less common ones. At the top of the list is /ɔ/ with about thirty spellings (half of them regular); /ə/ is in the second place with about twenty (ten regular), and /ɪ/ is third with about seventeen (nine regular).

The eight English diphthongs are regularly represented by forty spellings, plus a similar number of less common ones; /ɪə/ is at the top with thirteen regular spellings, and /eɪ/ is second with seven. To sum up, in English (a) the same vowel phoneme is usually represented by several spellings; (b) one spelling may represent several vowel phonemes, and (c) two or more vowel letters may represent only one vowel phoneme, or no phoneme at all. (For examples, see chapter 6, section 12.)

11 Teaching problems

The above confrontation of the vowel systems of English and Spanish has pointed out a series of differences. We shall now examine the teaching problems arising from these differences, discuss techniques and suggestions for solving them, and give a few notes of warning.

Since the sounds of a new language are generally interpreted in terms of those of the speaker's mother tongue, the Spanish learner tends to equate the eight English diphthongs with his eight Spanish near-equivalents, and identify the twelve English pure vowels with his five Spanish ones:

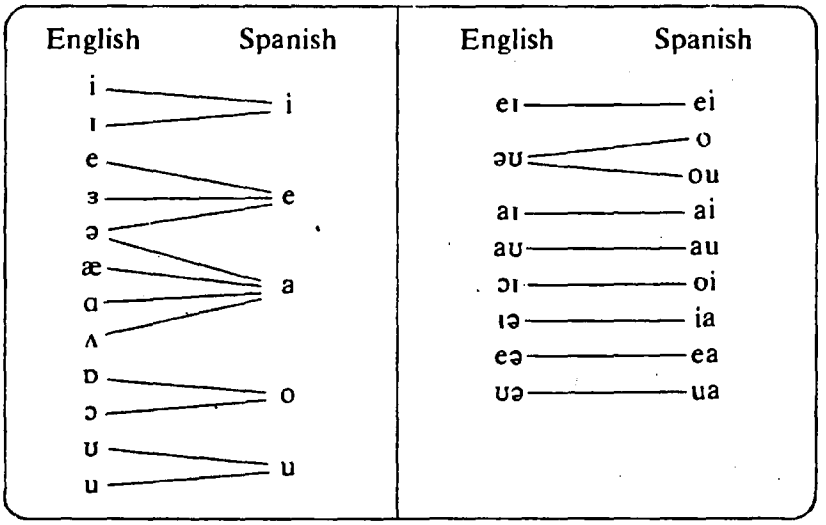


Table 8 The English vowel system and its interpretation by the untrained Spanish-speaking beginner.

It is obvious, then, that minimum intelligibility is more difficult to achieve with pure vowels than with diphthongs; although the Spanish diphthongal system is not phonetically identical to the English one, at least it provides a sufficient number of phonologically contrastive units to convey the eight oppositions that English requires. Our first priority must be to get the learner to master a larger number of pure vowel oppositions, placed articulatorily and auditorily closer to each other, than those of his mother tongue. This will imply the separation of qualities, e.g. /æ/ ~ /ʌ/ and /ɒ/ ~ /ɔ/, and the use of the central part of the vowel area. In this respect, a carefully graded ear-training course specifically oriented towards the Spanish learner, such as appears in Appendix A of this book, is a highly recommendable prerequisite to performance.

The Spanish learner should keep in mind the following points when tackling the English vowels:

(*i*) *Vowel quality*

(1) The qualities of the four Spanish pure vowels /i, e, a, u/ can be taken as near equivalents to English /i, e, ʌ, u/. It does not follow, however, that this similarity constitutes an advantage. A good practice will be the comparison between both sets, by identifying and producing these English sounds in Spanish

words, and vice versa. The learner should note that:

(a) English /e/ is opener than Spanish /e/.
(b) English /ʌ/ is not so open as Spanish /a/.
(c) English /i, u/ are not so close as the Spanish vowels, and will often be heard as slight diphthongs. Any attempt to imitate these diphthongal forms should be very accurate; otherwise they may sound vulgar or dialectal.

(2) Of the remaining seven English pure qualities, those of /ə(ɜ), ɪ, ʊ/ deserve special attention. This is due to the high frequency of occurrence of /ə, ɪ/, the difficulty in producing qualities within the central area, and the relaxed nature of central vowels. One of the ways of teaching new vowel qualities is by trying to obtain a vowel at an intermediate point between two already known qualities, e.g.:

(a) /ə/ is in a line between English /e–ɔ/. It is the typical hesitation noise in English, and the learner should be encouraged to use it as such; he should also be aware of the word-final opener variant [ɐ̯], but be careful when imitating it not to produce Spanish /a/.
(b) /ɪ/ can be elicited by going from /i/ to /ə/.
(c) /ʊ/ is half-way between /u/ and /ə/. Any error in the quality of /ɪ, ʊ/ should preferably be in the direction of /ə/.
(d) /æ/ is between /e/ and Spanish /a/. Tightening of the pharynx may be a useful prop.
(e) /ɒ, ɔ/ can be elicited by producing opener and closer varieties of Spanish /o/ respectively.
(f) /ɑ/ must not be as far back as CV 5, since this will sound affected.
(g) /ə, ɜ, ɑ/ must be practised with spread lips; /ʊ/ with loosely rounded lips; /ɒ/ with open lip-rounding, and /ɔ/ with close lip-rounding.
(h) /ɑ, ɔ, ɜ, ə/ must be practised with the tongue-tip behind the lower teeth, so as to avoid any r-colouring. Spelling *r* is to be pronounced only when a vowel sound follows it. Exception: *iron* /aɪən/.

(3) The starting points for English /aɪ, aʊ/ should present little difficulty. A vowel of the Spanish a-quality will make an acceptable initial element for both. Important considerations concerning diphthongs are:

(a) The finishing points for the English closing diphthongs (i.e. /ɪ/ and /ʊ/) should not exceed the half-close level. A useful hint is to think of them as very close e- and o-qualities.
(b) The starting points for English /eɪ, ɔɪ/ are distinctly opener than for their Spanish equivalents.
(c) Mid-central quality of starting point for /əʊ/ must be insisted upon. A further back beginning will sound old-fashioned, and a fronter one, affected.
(d) Lack of narrow-centring diphthongs in Spanish can bring about a variety of mispronunciations regarding beginnings and endings, especially in /ɪə, eə/. The first element in /eə/ is just a bit closer than RP /æ/.

A practical hint for the production of English diphthongs is to compare them with the Spanish set, as previously stated. (See Appendix A.)

(ii) Quality–quantity complex

A more difficult stage in vowel production is the mastery of the problem of quantity, which affects the thirteen relatively long vowels, /æ/, and the diphthongs resulting from levelling. Experience shows that many Spanish speakers who get to master the vowel and consonant qualities very proficiently, fail to produce quantity variations. For practical purposes, it is convenient for the Spanish learner to consider the conflicting pairs 1–2, 6–7, and 8–9 as consisting of triple oppositions, i.e.

[iː]~[iˑ]~[ɪ] as in *seed, seat, sit*
[ɔː]~[ɔˑ]~[ɒ] as in *poured, port, pot*
[uː]~[uˑ]~[ʊ] as in *mood, boot, book*

(iii) Stylistic and generational vowel markers

(a) The vowel reductions mentioned under 'levelling' (chapter 6, section 9) are definitely preferable to sequences containing an exaggerated [ɪ] or [ʊ] element. The learner must be aware of the fact that these changes also occur as a feature of conversational speech at word boundary, as in *try again* ['traː əˋgen], *now and again* ['naː ən əˋgen], and of the possibility of extreme reductions to monophthongs, as in *power* [paː]. He should not, however, be encouraged to adopt them, unless he is conscious of their stylistic implications.

(b) Although obsolete pronunciations can still be heard among some foreign teachers who are out of touch with new trends in pronunciation, the learner must not be tempted to adopt them; e.g. [ɔə] can no longer be considered a feature of RP, and [oʊ] represents a more conservative variant for /əʊ/. The learner will find greater difficulty with those pronunciations which are in the process of changing. For instance, centring diphthongs have a tendency to become monophthongal, especially in medial position, e.g. *weary* ['wɪˑɻɪ], *fair and square* ['fẹːɻ n̩ ˈskwẹː], *poor* [pɔː]. Similarly, in the endings *-ible, -ity, -ily, -ess, -ace* the use of /ə/ is becoming increasingly more frequent than /ɪ/, e.g. *horrible, quality, happily, careless, palace.* A modern pronouncing dictionary should always guide the learner's choice in these cases.

(iv) Alternations and spelling

Frequently a mispronunciation does not result from a faulty articulation, but from not knowing when to use a sound. However irrational English spelling may appear, the learner should be able to obtain the maximum amount of information from it, by systematically building up associations of sounds and spellings.

The learner can also make use of the rules governing vowel alternations, i.e. those rules that predict variations in the vowel quality of roots when affixes are added, e.g.:

/aɪ/↔/ɪ/		/i/↔/e/		/eɪ/↔/æ/	
der*i*ve	der*i*vative	impede	impediment	n*a*tion	n*a*tional
mob*i*le	mob*i*lity	p*e*nal	p*e*nalty	n*a*ture	n*a*tural
host*i*le	host*i*lity	ser*e*ne	ser*e*nity	p*a*tron	p*a*tronage
B*i*ble	b*i*blical	z*ea*l	z*ea*lous	ins*a*ne	ins*a*nity
arthr*i*tis	arthr*i*tic	supr*e*me	supr*e*macy	expl*ai*n	explanatory

12 Spellings[3]

The following brief outline will include neither regular common spellings nor obvious derivatives, but will concentrate on those spellings which have traditionally presented problems for the Spanish learner. He is strongly recommended to transcribe and read aloud each pronunciation. Key to symbols: 'C' will represent any consonant letter, 'V' any vowel letter, and # indicates that the pronunciation given is only one of the possibilities.

/i/ 1 Spellings *i* and *iCe* in words mainly of Latin origin; e.g. casino, Argentina, motif, litre, visa, ski; police, expertise, magazine, unique, prestige, fatigue.

2 Spellings *ae* and *oe* mainly in aesthetic #, anaemia, Caesar; foetus, phoenix.

3 Spelling *e* in plurals of words ending in *-is, -ex*, e.g. analyses, appendices, bases, theses, indices.

4 Spelling *ei* only in *cei*, e.g. conceive, deceive, receive, ceiling. Exc.: caffeine, protein, seize, seizure, and the names Keith, Leigh, Neil, Sheila.

5 Exceptional spellings: people, quay, geyser, key, debris, précis.

/ɪ/ 1 Spelling *ie*, e.g. hippie, mischief, movies, sieve.

2 Spelling *a* in a few words, e.g. character, orange, spinach.

3 Spellings *ai, ei* and *ee*, mainly in bargain, captain, fountain, mountain; forfeit, sovereign, surfeit; coffee, committee, toffee, Yankee.

4 Spelling *aCe*, especially *age*, e.g. image, postage, village, etc.; also furnace, preface, surface, private, octave, etc.

5 Accented *e* only in pretty, England, English; *u* only in busy, business, lettuce, minute (n.), missus; *o* only in women; *ui* only in circuit, conduit, build, biscuit; *ea* only in guinea, Chelsea.

6 The past verb suffix *-ed* is pronounced /d/ after vowel and lenis consonant sounds, and /t/ after fortis consonant sounds; it is pronounced /ɪd/ after /t, d/.

7 Adjectives ending in *-ed* are pronounced /ɪd/, e.g. aged, beloved, blessed, crooked, cursed, jagged, learned, ragged, rugged, sacred, wicked, wretched.

8 The ending *-edly* of adverbs is pronounced /ɪdlɪ/, e.g. assuredly, fixedly, supposedly, etc. Exc.: determinedly.

/e/ 1 Spelling *a* only in any, many, Thames, momentarily #, necessarily #.

2 Spellings *ei, ey* only in heifer, leisure, Leicester, Reynolds.

3 Spelling *eo* only in leopard, jeopardize, Geoffrey, Leonard.

4 Exceptional spellings: bury, burial; said, says, friend, lieutenant, ate.

/æ/ 1 Spelling *ai* only in plaid, plait.

2 Spelling *i* in words of French origin, e.g. impasse, meringue.

/ɑ/ 1 Spelling *a* in some 300 words, generally before the nasals and /s/,[4] the most common of which are:

/ɑ/ + nasal: command, demand; can't, plant, grant, shan't, advantage; branch; answer, chance, dance, glance, France; banana; drama, example, sample.
/ɑ/ + /s/: ask, basket, task; pass, class, glass, grass; grasp, gasp; cast, last, fast, fasten, past, vast, master, castle, disaster, nasty, broadcast, forecast.
Others: after, draft, staff, half; bath, path; rather.

2 Spelling *au* only in aunt, laugh, draught.
3 Spelling *er* only in clerk, sergeant, Derby, Berkeley.
4 Spelling *ah* only in ah, bah, aha, hurrah.
5 Spelling *oi* in French borrowings, e.g. repertoire, reservoir, bourgeois.
6 Exceptional spellings: heart, hearth, our #, bazaar.

/ɒ/ 1 Spelling *au* mainly in because, cauliflower, laurel, sausage.
2 Spelling *en* in French borrowings, e.g. encore, entrée, rendezvous.
3 Spelling *oCe* only in gone, shone, scone #.
4 Spelling *ou* only in cough, trough, Gloucester.
5 Exceptional spellings: knowledge, bureaucracy.

/ɔ/ 1 Spelling *oa* only in broad, abroad.
2 Spelling *oor* only in door, floor.
3 Spelling *an* in French borrowings, e.g. fiancé(e) #, restaurant #, séance.
4 Exceptional spellings: drawer (= thing), awe, Sean.

/ʊ/ 1 Spelling *u* in accented syllables in some thirty words, generally before /l/, the most common of which are:
/ʊ/ + /l/: bull, bullet, bulletin, bully, full, fulfil, pull.
Others: bush, cushion, push; pussy; butcher; put; pudding; sugar.
2 Spelling *oo*, mainly in book, brook, cook, cookie, foot, good, hood, hook, look, nook, rook, shook, soot, stood, took, wood, wool.
3 Spelling *ou*, mainly in could, should, would; courier, bouquet.
4 Spelling *o* only in bosom, woman, wolf, worsted, Worcester.

/u/ 1 Spelling *o* only in do, tomb, womb, who, whom.
2 Spelling *oCe* only in lose, move, prove, whose.
3 Spelling *oe* only in canoe, shoe.
4 Spelling *eu* mainly in adieu #, rheumatism, sleuth.
5 Exceptional spellings: manoeuvre, two.

/ʌ/ 1 Spelling *o* in some seventy words, generally before the nasals and /v/,[5] the most common of which are:
/ʌ/ + nasal: accompany, become, come, comfort, company, some, stomach; done, front, honey, London, Monday, money, month, none, once, one, onion, son, sponge, ton, won, wonder; among, monkey, tongue.
/ʌ/ + /v/: above, cover, glove, govern, love, oven, recover, shove.
Others: another, brother, mother, other; nothing; borough, thorough, worry; colour; dozen.
2 Spelling *ou*, mainly in double, trouble, couple; courage, flourish, nourish; country; cousin; southern; touch; young; enough, rough, tough; Douglas.

3 Spelling *oo* only in blood, flood.
4 Exceptional spellings: does, twopence, twopenny.

/ɜ/ 1 Spelling *our* only in bourbon, courteous #, courtesy #, journal, journey.
2 Spelling *eu* in French borrowings, e.g. connoisseur #, raconteur, Peugeot, milieu.
3 Exceptional spelling: colonel.

/ə/ Schwa can be represented by all five vowel letters (and *y*), e.g. c*a*nal, hundr*e*d, poss*i*ble, seld*o*m, s*u*spect, analysis; by vowel digraphs, e.g. vill*ai*n, surg*eo*n, veng*ea*nce, parl*ia*ment, reg*io*n, tort*oi*se, cam*ou*flage, etc., and by vowel letters + *r*, e.g. p*ar*ticul*ar*, p*er*fection, f*or*bid, s*ur*prise.

/eɪ/ 1 Spellings *é*(*e*), *ê*, in French borrowings, e.g. attaché, café, début #, régime; matinée, née, soirée; fête.
2 Spelling *-et* in French borrowings, e.g. ballet, bouquet, chalet, gourmet, sachet.
3 Spelling *ea* only in break, great, orangeade, steak, Reagan, Yeats.
4 Exceptional spellings: gaol, gauge, dossier, Gaelic, Israel #.

/əʊ/ 1 Spelling *oe* mainly in doe, foe, goes, toe, woe; Defoe, Joe, Poe.
2 Spellings *au* and *eau* in French borrowings, e.g. au pair, chauffeur, mauve; beau, bureau, château, plateau.
3 Exceptional spellings: brooch, sew, Pharaoh.

/aɪ/ 1 Spelling *ei* only in eider, either, height, kaleidoscope, seismic, sleight (of hand); Eileen, Fahrenheit, Geiger.
2 Exceptional spelling: Mackay.

/aʊ/ 1 Spelling *ough* mainly in bough, drought, plough.
2 Exceptional spelling: Macleod.

/ɔɪ/ 1 Exceptional spellings: buoy, voyage #.

/ɪə/ 1 Exceptional spellings: souvenir, weir, weird.

/eə/ 1 Exceptional spellings: mayor, prayer (thing).

/ʊə/ 1 Spelling *our* in French borrowings, e.g. bourgeois #, courgette, gourd #, gourmet #.

The reverse procedure, i.e. the grouping of sounds according to a given spelling, is particularly useful in the case of a few endings which have more than one pronunciation. In *-ate*, *-ful* and *-ment* a different phonemic pattern identifies different grammatical functions:

-ade 1 /-eɪd/ as in barricade, blockade, decade, escapade, lemonade.
2 /-ɑd/ mainly in charade, facade, promenade.
Note: *esplanade* can be either /-eɪd/ or /-ɑd/.

-age 1 /-ɪdʒ/ as in breakage, heritage, mileage, patronage.
2 /-ɑʒ/ as in camouflage, collage, mirage, sabotage.
Note: *garage* can be either /-ɑʒ/ or /-ɪdʒ/.

-ate 1 /-eɪt/ mainly in verbs, e.g. appreciate, celebrate, concentrate, graduate, illustrate.
2 /-ət/ in adjectives and nouns, e.g. accurate, certificate, consulate, delicate, fortunate, graduate, illiterate. Note: a few nouns and adjectives are pronounced /-eɪt/, e.g. cognate, debate, estate, inmate, innate, rebate. Others fluctuate between both forms, e.g. advocate, associate, candidate, delegate, designate, laureate, magistrate.
3 /-ɪt/ in climate #, private.

-ful 1 /-fʊl/ in nouns, e.g. handful, mouthful, pocketful, spoonful.
2 /-fl/ in adjectives, e.g. dreadful, grateful, hopeful, peaceful.

-ment 1 /-ment/ in verbs, e.g. complement, experiment, implement.
2 /-mənt/ in nouns, e.g. argument, experiment, government. Exc.: cement, comment.

The prefix *re-* has three pronunciations, /'ri-/ being used to express a repeated action, whenever a similar spelling with a different meaning is also possible, e.g.:

re- 1 /'ri-/ in re-count (= count again), re-cover (= cover again), re-form (= form again), re-mark (= mark again), re-present (= submit again), re-creation (= creating again), re-sort (= sort out again).
2 /rɪ-/ in recount (= tell), recover (= get back), reform (= improve), remark (= notice), repay (= pay back), resort (= make use of).
3 /'re-/ in represent (= symbolize), recreation (= amusement), recommend.

13 Alternative pronunciations

A striking difference between English and Spanish is that many English words have more than one acceptable pronunciation in RP. Descriptive pronouncing dictionaries such as *EPD*, which are not specifically designed for EFL purposes, set out to record the complete range of alternative pronunciations, and the learner must therefore be careful of the complexity of such information. On the other hand, dictionaries exclusively devised for the foreign learner, such as *CPD*, *LDCE*, and *OALD* must necessarily be prescriptive, in that they limit alternative pronunciations to the most common ones and offer advice as to preferred recommendations. In *CPD*, the author has excluded those forms representing the usage of less than 20% of RP speakers and includes only the pronunciations in a present state of 'equilibrium or near equilibrium'. He then offers the 'preferred recommendations', and the 'acceptable alternative'.

An examination of *CPD*, which includes a total of nearly 24,000 entries, shows that some 3,000 have optional pronunciations in RP, and within these, 75% correspond to vowel variabilities.[6] It will be useful for the learner to know what the main tendencies are, and be aware of a few individual cases.

(i) The greatest number of alternatives occurs between the following pairs: /ɪ/ ~ /ə/ and /ə/ ~ /ɪ/ – 22%; /æ/ ~ /ɑ/, etc. – 7%; /u/ ~ /ju/, etc. – 6.5%; /ɔ/ ~ /ɒ/, etc. – 5%. In general, /ə/ is present in 42% of the cases.[7] Within each group the main tendencies are:

1 /ɪ/ ~ /ə/

(a) Words beginning with *be-*, e.g. become, before, begin, behind, believe, belong, below, between.

(b) Words ending in *-et*, e.g. budget, bullet, cabinet, helmet, interpret, magnet, triplet.

(c) Words containing unaccented *e* or *i*, e.g. *de*licious, *de*livery, *e*dition, *e*lectric, eld*e*st, *E*lizabeth, *e*nough, *e*special, hatr*e*d, hostess, kitch*e*n; acc*i*dent, arthrit*i*s, defin*i*te, favour*i*te.

/ə/ ~ /ɪ/

(a) Words ending in *-et*, e.g. booklet, bracelet, Margaret, pamphlet, secret, tablet.

(b) Nouns ending in *-ess*, e.g. actress, business, mattress, mistress, murderess, Negress, witness.

(c) Nouns and adjectives ending in *-ate*, e.g. accurate, certificate, chocolate, delegate, delicate, moderate, obstinate, palate, pirate, senate.

(d) Words containing unaccented *a*, *e* or *i*, e.g. men*a*ce, mir*a*cle, purch*a*se, terr*a*ce; amn*e*sty, app*e*tite, b*e*cause, comp*e*tition, nec*e*ssary, oxyg*e*n, sacr*e*d, tel*e*phone; activ*i*ty, an*i*mal, beaut*i*ful, clar*i*fy.
Note also: for*ei*gn(er), pig*eo*n.

2 /æ/ ~ /ɑ/

(a) Words containing *as*, e.g. drastic, elastic, exasperate, masculine, plastic.

(b) Words beginning with *trans-*, e.g. transaction, transcribe, transform, transistor, transition, translate, transmission, transpire.

/ɑ/ ~ /æ/

(a) Words ending in *-graph*, e.g. mimeograph, monograph, photograph, seismograph, telegraph.

3 /u/ ~ /ju/

(a) Words containing *lu*, e.g. allusion, devolution, lubricate, lucid, luminous, pollution, voluminous.

(b) Words beginning with *super-*, e.g. superficial, supermarket, supersede, superstition, supervision.

(c) Words with *su*, e.g. sue, suicide, suit, suitcase; sewer.

/ju/ ~ /u/

(a) Words with *su*, e.g. assume, consume, insuperable, presume, pursue.
Note also: dil*u*te, enth*u*siasm, rec*u*perate.

4 /ɔ/ ~ /ɒ/

(a) Words with *al*, e.g. almost, also, alteration, although, false, halt, salt.

(b) Words with *au*, e.g. assault, auction, auspices, auxiliary, fault.

/ɒ/ ~ /ɔ/

(a) Words with *off*, e.g. off, off-hand, off-licence; show-off, take-off.
Note also: *Au*stria, *Au*stralia.

5 /ə/ ~ /ʊ/

(a) Words with unaccented *u* (i.e. /jə/ ~ /jʊ/), e.g. ambulance, accuracy, calculate, circular, regular.

/ʊ/ ~ /ə/

(a) Words with unaccented *u* (i.e. /jʊ/ ~ /jə/), e.g. accumulate, articulate, consulate, fabulous, singular, valuable.

(ii) Other important alternatives to mention are:

6 /i/ ~ /ɪ/ *ae*sthetic, *e*conomist, inval*i*d, ser*ie*s, spec*ie*s.
/ɪ/ ~ /i/ br*ee*ches, d*e*flate, d*e*rail, handkerch*ief*, paraff*i*n.

7 /i/ ~ /e/ cent*e*nary, *e*conomic(s), *e*vocation, p*e*diatric(s), z*e*bra.
/e/ ~ /i/ *e*go(centric), *e*lasticity, eph*e*meral, m*e*mo, r*e*tch.

8 /ɪ/ ~ /e/ anc*e*stor, *ex*chequer, *et*c, *ec*centric, *ex*quisite.
/e/ ~ /ɪ/ C*e*cil(y), Gr*ee*nwich, godd*e*ss, heir*e*ss, poet*e*ss.

9 /ɪ/ ~ /eɪ/ alw*ay*s, cin*e*, holid*ay*, Mond*ay*, Tuesd*ay*, etc.
/eɪ/ ~ /ɪ/ ber*et*, canap*é*, chal*et*, croch*et*, parqu*et*.

10 /ɪ/ ~ /aɪ/ *d*imension, *d*irect(or), m*i*nority, pr*i*vacy, v*i*tamin.
/aɪ/ ~ /ɪ/ d*i*gest (v.), d*i*verge, d*i*verse, f*i*nancial, tr*i*bunal.

11 /e/ ~ /ə/ alphab*e*t, consequ*e*nces, h*e*llo, outl*e*t, S*e*ptember.
/ə/ ~ /e/ conv*e*nt, gunm*e*n, inter*e*st, abdom*e*n, Sovi*e*t.

12 /e/ ~ /eɪ/ ag*ai*n, ag*ai*nst, d*e*bris.

13 /æ/ ~ /ə/ Abrah*a*m, circumst*a*nces, Greenl*a*nd, n*a*rration, secretari*a*t.
/ə/ ~ /æ/ *a*bstract (v.), *a*ccelerate, ali*a*s, c*a*shier, n*a*rrate.

14 /ɒ/ ~ /ə/ anyb*o*dy, bl*o*ckade, melanch*o*ly, nyl*o*n, therm*o*s.
/ə/ ~ /ɒ/ m*o*squito, nob*o*dy, *o*bscene, *O*thello, someb*o*dy.

15 /ɒ/ ~ /əʊ/ c*o*gnac, pr*o*ject (n.), sc*o*ne, s*o*lder, y*o*ghurt.
/əʊ/ ~ /ɒ/ C*o*lchester, h*o*mogeneous, h*o*mosexual, S*o*viet.

16 /ʊ/ ~ /u/ r*oo*m (and all derivatives); vac*uu*m cleaner (/jʊ/ ~ /ju/).
/u/ ~ /ʊ/ (bride)gr*oo*m, br*oo*m, br*u*sque; vol*u*me (/ju/ ~ /jʊ/).

17 /ʌ/ ~ /ə/ bankr*u*ptcy, dandr*u*ff, inc*o*me, tri*u*mph, *u*ntil.

18 /ə/ ~ /əʊ/ *o*mission, ph*o*netic, p*o*stpone, pr*o*hibit, r*o*mantic.
/əʊ/ ~ /ə/ d*o*main, m*o*bility, N*o*vember, r*o*bust, v*o*cation.

19 /ə/ ~ /eɪ/ estim*a*te (n.), hurric*a*ne, illustr*a*tive, predic*a*te (n.), v*a*cation.
/eɪ/ ~ /ə/ designate (adj.), initiate (n.), legislature, m*ai*ntain.

20 /ə/ ~ /ʊə/ aper*ture*, overt*ure*, premat*ure*.

21 /ʊə/ ~ /ɔ/ b*our*geois, g*our*d, g*our*met, m*oor*, s*ure*, t*our*.

Notes

1 The elements of certain compound words do not follow these shortening rules. Whenever this occurs pronouncing dictionaries make use of hyphens to indicate syllable separation and correct length. On the other hand, very few phonetic readers indicate variations of length. See E. L. Tibbitts (1963, 1967), and J. Windsor Lewis (1977).

2 For statistical data see A. C. Gimson (1980) ch. 7, who reproduces experiment results of other phoneticians, and T. Navarro Tomás (1932: 197 ff.).

3 The relationship between English spelling and pronunciation has been dealt with at length by W. Friederich (1958), L. A. Hill & J. M. Ure (1962), and A. Wijk (1966). The first and last of these also include brief historical introductions. The student is advised, however, to check the pronunciations given by these authors against a modern pronouncing dictionary, since some of their statements and analyses are not always up to date.

4 See J. Windsor Lewis's note 'The So-called Broad A' in *ELT* (1968).

5 See our note 'RP /ʌ/ and its Spelling o', in *ELJ* (1977a).

6 See our 'The *CPD* Alternative Pronunciations', forthcoming.

7 The second commonest vowel alternative in *CPD* is /ə/ ~ Ø, etc. – 7.3%. (See Elision.) Counting these, /ə/ is present in 50% of the cases.

7 The English consonants

1

In chapter 3 we described and classified consonant sounds articulatorily, and in chapter 4 we listed the twenty-six English and nineteen (or seventeen) Spanish consonant phonemes. Before attempting a confrontation between both inventories, as with vowels, we shall examine the main phonetic and phonological features that characterize the English set. In other words, we shall discuss energy of articulation, consonant length, voicing, aspiration, release types, and variations of place of articulation, and at the same time indicate the graphic representation of these in allophonic transcription. We shall be gradually adding elements to our notation, until we have displayed as much information as is necessary for our purposes.

2 Energy

Most English consonants can be grouped as either *fortis* or *lenis*, according to the energy with which they are articulated and perceived. This is the case with the plosives, fricatives and affricates listed in Table 3, where the energy opposition is present in all the pairs occupying the same box; each fortis sound is on the left, and the lenis on the right. Nasals, semi-vowels, /r/ and /l/, which have no phonemic counterpart, and are therefore alone in each box, do not participate in the opposition fortis/lenis. Three groups can then be established:

(A)	Fortis	p	t	k	tʃ	tr	f	θ	s	ʃ	
(B)	Lenis	b	d	g	dʒ	dr	v	ð	z	ʒ	
(C)	No opposition	m	n	ŋ	l	r	j	w			

Table 9 The English consonants grouped according to the fortis/lenis opposition.

The remaining phoneme, /h/, constitutes a special case, since it does not participate in the opposition, nor does it share the voicing feature typical of group C.

3 Length

In chapter 6 we referred to the capacity of English fortis consonants to shorten, and lenis consonants to lengthen, a preceding vowel. Similarly, they can also vary the length of the nasals and /l/, and once again syllable final plosives,

affricates or fricatives will be recognized mainly by the length of a preceding nasal or lateral. This is particularly noticeable with syllables containing short vowels, e.g.

simple [ˈsɪmp̚ɬ] ~ *symbol* [ˈsɪm·b̚ɬ]
sent [sen·t] ~ *send* [sen:d]
rink [ɻɪŋ·k] ~ *ringed* [ɻɪŋ:d]
self [seɬ·f] ~ *selves* [seɬ:vz]

4 Voicing

We indicated in chapter 3, section 5 that the oppositions voiceless/voiced do not always operate in distinguishing pairs of consonants in English, as the oppositions fortis/lenis do. While the nine English fortis consonants can be safely labelled voiceless,[1] consonants in groups (B) and (C) above, traditionally called 'voiced', can lose either part or all of their voice, according to the phonetic environment. For teaching purposes it is often enough to consider these consonants as being either voiced or devoiced, without explaining exactly to what extent they may lose their voice. The following rules can be stated:

(i) Consonants in (B) and (C) are voiced between vowels and/or other consonants of the same groups, e.g. all the consonants in the utterance *on the living-room door* [ɒn ðə ˈlɪvɪŋ ɻʊm ˈdɔ:]. Voiced consonants are left unmarked in allophonic transcription. On the other hand, /h/, which has no voiced counterpart at the phonemic level, may become voiced (i.e. [ɦ]) in between voiced sounds, e.g. *rehearse* [ɻɪˈɦɜ·s].

(ii) Lenis consonants are devoiced after and before pauses and fortis consonants, e.g. all the lenis consonants in the phrase *that good cause* [ð̥æt ˈg̊ʊd̥ ˈkɔ:z̥]. Devoiced consonants are marked with the diacritic [̥].

(iii) /l, r, w, j/ are devoiced when preceded by a fortis plosive in an accented syllable, e.g. *certain pupils got quite cross* [ˈsɜ·tn̥ ˈpju·p̚ɬz gɒt ˈkw̥a·ɪt ˈkɻɒs]. When preceded by a fortis consonant in unaccented syllables, all consonants in group (C) may be slightly devoiced, e.g. /n, l/ in *certain pupils.*

In order to understand fully the mechanism of this variable feature, it is convenient to describe the action of the vocal folds in relation to that of the articulators during the production of lenis consonants. In the following diagrams, articulators are represented as in chapter 3, section 5, absence of voicing by a straight line, and voicing by a wavy line. (The fact that different segments require the use of different pairs of articulators is not shown.)

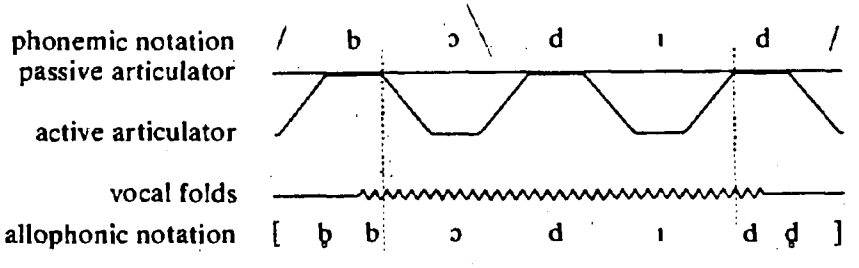


Fig 18 The voicing and articulatory diagrams of the word *boarded,* as said in isolation.

The word *boarded* contains three lenis plosives; intervocalic /d/ is fully voiced – the vocal folds vibrate throughout the three stages of its articulation; both /b/ and final /d/, being next to pauses, are devoiced – in /b/ the vocal folds start vibrating just before the release stage, and in /d/ they stop vibrating immediately after the articulators have formed the stop. The same would occur in the utterance *that boarded floor*, where *boarded* is both preceded and followed by fortis consonants; but a wavy line would indicate full voicing in *a boarded up window*, where *boarded* is surrounded by vowels.

When two lenis consonants occur consecutively in a devoicing environment, both of them may become devoiced; usually the one near the devoicing factor becomes completely devoiced, as in *verbs*, where the vocal folds stop vibrating just before the release of the stop for /b/. (See Fig 19.) For practical purposes, though, the allophonic notations [b̥bɔ·dɪdd̥] and [v̥vɜ:bb̥z̥] are simplified to [b̥ɔ·dɪd̥] and [v̥ɜ:bz̥], respectively. (For examples of devoicing in group (C), see chapter 7, section 5.)

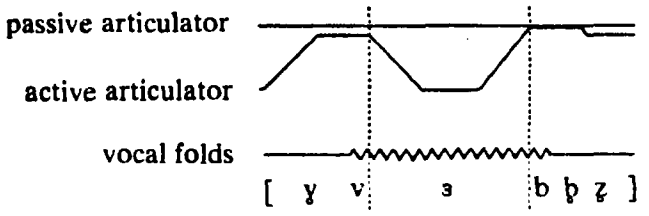


Fig 19 The voicing and articulatory diagrams of the word *verbs*.

5 Aspiration

When the English fortis plosives /p, t, k/ precede vowel sounds in an accented syllable, the voicing of the vowel does not begin together with the release stage of the plosive, but some time later. When the lips separate after the stop for the first segment in *purse*, for instance, the tongue is already in position for the vowel, but only breath comes out – i.e. [s̥] – before the vocal folds start vibrating. This voiceless interval between the release of a plosive and the voicing of a following vowel is called aspiration, and although it consists of a voiceless vowel, convention has assigned it the diacritic [ʰ]. Allophonically, then, *purse* is transcribed [pʰɜ·s] instead of [ps̥ɜs], though both notations are correct, phonetically speaking, since [h] is nothing but a voiceless variety of any vowel quality.

There are various degrees of aspiration, but for teaching purposes we shall consider only two possibilities – presence and absence. The rules are:

(i) /p, t, k/ are strongly aspirated in accented syllables, e.g. *come at ten past* ['kʰʌm ət 'tʰen ˈpʰɑ·st].

(ii) They are weakly aspirated in unaccented syllables, and generally in word final position. We shall leave these unmarked, e.g. *the upper lip* [ðiˑ 'ʌpə ˈlɪp].

(iii) They are unaspirated when /s/ precedes them, e.g. *the school staff* [ð̥ə 'sku:ɬ ˈstɑ·f].

The following diagrams show aspiration and unaspiration graphically:

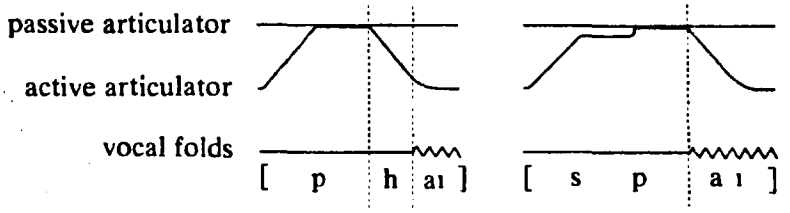


Fig 20 The aspiration and articulatory diagrams of the words *pie* and *spy*.

When /p, t, k/ are followed by /l, r, w, j/, especially in accented syllables, the aspiration of the former makes the latter devoiced. Whenever aspiration is manifested as devoicing (see Fig 21), it will be shown as [̥], e.g. *please try to clean quickly* ['p̥liːz̥ 't̥aːɪ tə 'k̥liːn ˈkʷ̥ɪklɪ].

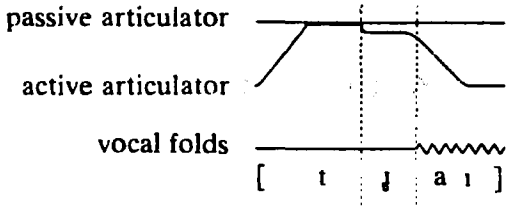


Fig 21 The aspiration and articulatory diagrams of the word *try*.

In practice, voiced plosives (as in *a bear*), devoiced plosives (as in *bear*), voiceless unaspirated plosives (as in *spare*), and voiceless aspirated plosives (as in *pear*) differ mainly in the point at which voicing starts, in relation to the release of the plosive. This is shown in Fig 22:[2]

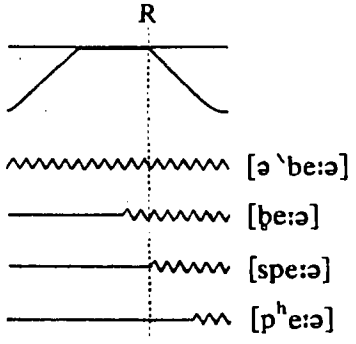


Fig 22 The voicing and aspiration diagrams for plosives. 'R' stands for 'release'.

6 Types of release

English plosives are not always released in the same way; they may present the following alternatives:

(*i*) *Oral release*

Plosives have quick oral release when followed by vowels or semi-vowels, either with or without the aspiration period, as in *pure tobacco*. The release stage may also be present before a pause, with or without aspiration.

(ii) Non-audible release

A further possibility for final plosives before pauses is lack of audible release, caused by a weak opening of the stop, or absence of release. Such plosives are said to be incomplete, and are quite frequent in familiar speech; e.g. lack of release is common in *all right*! For teaching purposes it is not necessary to mark this allophonic variant, which is in free variation with (i) above when in final position.

In clusters formed by two consecutive plosives, or plosive and affricate, the first one normally has non-audible release. This can happen either within a word (in the same or different syllables) or at word boundary, and it is marked with the diacritic [‿] placed under the cluster, e.g. *he grabbed it too* [hi· 'ɡɹæ:b‿d ɪt ˈt‿ʰu:].[3] In the cluster [b‿d] the plosion for [b] is not heard; when the lips come apart to release the compressed air, the tongue tip and alveolar ridge are already forming the stop for [d], and it is the release of the second plosive which is heard in the form of a burst. Finally, in the sequence [t‿t] the articulators form a longer stop than normal, which is perceived as a plosive with delayed release – either a period of silence, as in [t‿t], or a period of voice, as in *good day*. In general, a plosive has delayed release whenever it is followed by a stop made with the same articulators; in more technical terms, when followed by a homorganic stop. Non-audible release is shown in Fig 23:

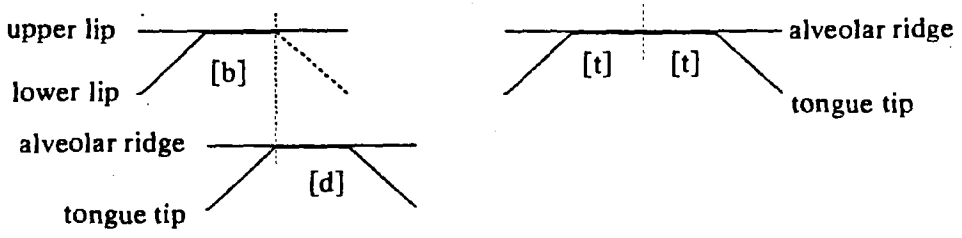


Fig 23 Diagram of the articulatory movements for [b‿d] (right), and [t‿t] (left); non-audible release of [b] is shown with a dotted line.

(iii) With glottal reinforcement

The fortis plosives and affricates can be reinforced with a glottal stop. Glottalization of /p, t, k/ is commonly made before pauses and consonants, though not between vowels, e.g. *take that out* ['tʰe·ɪʔ‿k ðæt ˈa·ʊʔ‿t]. With /tʃ, tr/, however, glottalization is possible between vowels as well, e.g. *matches* [ˈmæʔ‿tʃɪz̧]. In all these cases a glottal closure – and its corresponding release – is made either before or simultaneously with the oral closure for the plosive or affricate, as shown in Fig 24:

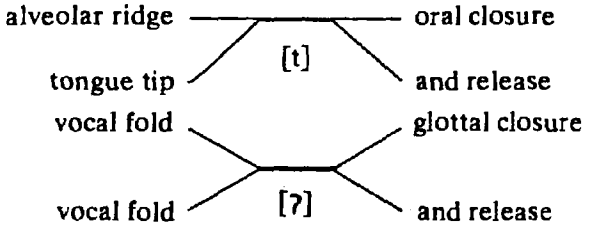


Fig 24 Simultaneous glottal reinforcement of /t/, as in [a·ʊʔ‿t].

To sum up, final fortis plosives /p, t, k/ can be realized in four main different ways – aspirated, unaspirated, with non-audible release, and with glottal reinforcement. All four are in free variation.

(*iv*) *Nasal release*

When a plosive is followed by a homorganic nasal (i.e. sequences /p, b/ + /m/, etc.), the release stage is not performed orally, but nasally. In other words, the third stage consists merely in the lowering of the soft palate, so that the air compressed behind the oral stop escapes through the nose. This can occur either within words (in the same or different syllables), or at word boundary, and it is also marked [‿], e.g. *you can get nine* [juˑ kn̥ ˈgetˌnaːɪn].

Another type of nasal release occurs in non-homorganic sequences, e.g. [pn̥] as in *happen*, [gm̥] as in *frogman*, etc. Here the oral release must be preceded by the complete articulation of the nasal; otherwise, some oral release will be perceived. Fig 25 shows homorganic nasal release as in *step-mother* [ˈstepm̥ʌðə]: when the lips are about to open, the velum is lowered.

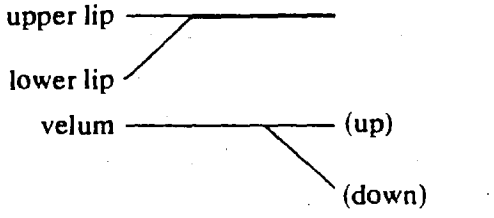


Fig 25 Nasal release of /p/ in [pm̥].

(*v*) *Lateral release*

When /t, d/ are followed by /l/, both plosives are normally released laterally, i.e. their release stage consists in the lowering of one or both sides of the tongue, while keeping the stop between the tongue tip and the front part of the alveolar ridge. If this front contact were released, the air would escape centrally over the tongue, and a vowel would be heard.

Lateral release, which is also marked [‿], can occur inside words or at word boundary, and the result can be either a syllabic or a non-syllabic lateral, e.g. *gentle and friendly* [ˈʤentl̥ ən ˈfɹenˑdl̥ɪ]:

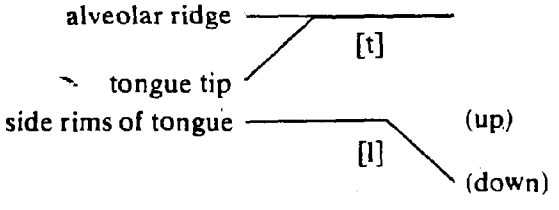


Fig 26 Articulatory diagram of lateral release.

7 Variations of place of articulation

We have seen how sounds influence one another when put together in words and sentences; a sound may influence one that follows, as with aspiration, or

one preceding it, as with length. Place of articulation may also be conditioned by the phonetic environment. The diacritics [˖] and [˗] are used in allophonic transcription to indicate fronter and backer variants, respectively; furthermore, [̠] is reserved exclusively for dental variants. We shall note only the following cases:

1. The velars /k, g/ are articulated further front in the mouth when followed by a front vowel or /j/, and further back when followed by a back vowel or /w/; true velar closures are made in all other cases, e.g. *keep quiet, girls!* [ˈk̟ʰiːp ˌk̠wəːət ˌgɜːt̠z̠]; /ŋ/ is affected by preceding vowels, e.g. *sing-song* [ˈsɪŋ̟sɒŋ̠].

2. The alveolars /t, d, n, l/ are articulated dentally when followed by /θ, ð/, and in the post-alveolar region when /r, tr, dr/ follow, e.g. *all the interest* [ˈɔːl̪ ðɪ ˈɪn̪t̠ɹəst].

3. The nasals /n, m/ are normally articulated labio-dentally when /f, v/ follow; the resulting variant is assigned the symbol [ɱ], e.g. *in forests and valleys* [ɪɱ ˈfɒɹɪsts əɱ ˈvæːlɪz̠].

8 The English consonants in detail

Our next task will be the listing of the twenty-six English consonant phonemes with their main allophones. Each phoneme will be assigned an articulatory label. Long/short consonants and glottalized stops are not included in the lists; allophones gathering more than one feature are listed only once: [k̟] is given, but not [k̟ʰ], etc.; absence of allophonic variants under /tʃ, tr, f, θ, s, ʃ/ simply means that their realizations do not deviate much from the label given, and are therefore not listed.

(1) Plosive

1 /p/ voiceless-fortis bilabial plosive.
- [pʰ]-aspirated: part, apart, plain, proud, pure
- [p]-weakly aspirated and unaspirated: participate; sport
- [p˽]-with non-audible and delayed release: napkin, step-child; top people
- [p˽]-with nasal release: step-mother, halfpenny

2 /b/ voiced-lenis bilabial plosive.
- [b]-voiced: probably, husband
- [b̥]-devoiced: bribe, obtain, scrap-book
- [b˽]-with non-audible and delayed release: robbed, subject; rob Peter
- [b˽]-with nasal release: submit, abnormal

3 /t/ voiceless-fortis alveolar plosive.
- [tʰ]-aspirated: talk, attack, true, twins, tube
- [t]-weakly aspirated and unaspirated: tenacity; story
- [t˽]-with non-audible and delayed release: football, at church; outdoor
- [t˽]-with nasal release: written, atmosphere
- [t˽]-with lateral release: gentle, outline
- [t̪]-dental: eighth, out there
- [t̠]-post-alveolar: try, boat race, night train

4  /d/ voiced-lenis alveolar plosive.
[d]-voiced: ladder, coldly
[d̥]-devoiced: dead, medicine, off duty
[d◡]-with non-audible and delayed release: feedback, odd job; bedtime
[d◡]-with nasal release: garden, admire
[d◡]-with lateral release: medal, side line
[d̪]-dental: hundredth, add these
[d̺]-post-alveolar: slide-rule, bad dream

5  /k/ voiceless-fortis velar plosive.
[k^{h}]-aspirated: card, account, claim, across, cue, quite
[k]-weakly aspirated and unaspirated: talker; whisky
[k◡]-with non-audible and delayed release: baked, picture; black coffee
[k◡]-with nasal release: thickness, pick-me-up
[k̟]-pre-velar: key, queue
[k̠]-post-velar: cool, question

6  /g/ voiced-lenis velar plosive.
[g]-voiced: again, exam, angle
[g̊]-devoiced: gag, egg-shell, office girl
[g◡]-with non-audible and delayed release: rugby, big joke; egg-cup
[g◡]-with nasal release: ignore, pigment
[g̟]-pre-velar: geese, argue
[g̠]-post-velar: lagoon, penguin

(*ii*) ***Affricate***

7  /tʃ/ voiceless-fortis palato-alveolar affricate.

8  /dʒ/ voiced-lenis palato-alveolar affricate.
[dʒ]-voiced: larger, enjoy, language lab
[d̥ʒ], [d̊ʒ̊]-devoiced: joy, misjudge, vegetable

9 /tr/ voiceless-fortis post-alveolar affricate.

10 /dr/ voiced-lenis post-alveolar affricate.
[d̺ɹ]-voiced: address, hundred, federal
[d̺ɹ̥]-devoiced: drama, bus-driver

(*iii*) ***Fricative***

11  /f/ voiceless-fortis labio-dental fricative.

12  /v/ voiced-lenis labio-dental fricative.
[v]-voiced: living, silver, seven
[v̥]-devoiced: valve, love-song, front view

13  /θ/ voiceless-fortis dental fricative.

14 /ð/ voiced-lenis dental fricative.
[ð]-voiced: rather, although, southern
[ð̥]-devoiced: then, loathe, withhold, since then

15 /s/ voiceless-fortis alveolar fricative.

16 /z/ voiced-lenis alveolar fricative.
[z]-voiced: busy, clumsy, puzzle
[z̥]-devoiced: zone, lose, hosepipe

17 /ʃ/ voiceless-fortis palato-alveolar fricative.

18 /ʒ/ voiced-lenis palato-alveolar fricative.
[ʒ]-voiced: measure, vision, usually
[ʒ̊]-devoiced: genre, beige

19 /h/ voiceless glottal fricative.
[h]-voiceless: who, high
[ɦ]-voiced: behind, perhaps, alcohol

(*iv*) *Nasal*

20 /m/ voiced bilabial nasal.
[m]-voiced: memory, rhythm
[m̥]-slightly devoiced: smell, shipment, half-mast
[ɱ]-labio-dental: comfort, some value

21 /n/ voiced alveolar nasal.
[n]-voiced: noun, indecision, sudden
[n̥]-slightly devoiced: snow, fatness, deafen, button
[n̪]-dental: synthesis, in there
[n̠]-post-alveolar: unreal, raindrop, entry
[ɱ]-labio-dental: rainfall, invite[4]

22 /ŋ/ voiced velar nasal.
[ŋ̟]-pre-velar: king, rang
[ŋ̠]-post-velar: long, wrong

(*v*) *Lateral*

23 /l/ voiced alveolar lateral.
[l]-clear (before vowels and /j/): lovely, fall-out, steelyard
[ɫ]-dark (before consonants, pauses and /w/): fulfil, steel wool
[l̥]-devoiced: place, class
[l̪]-dental: wealth, although
[l̠]-post-alveolar: ball-room, children, poultry

(*vi*) *Approximant*

24 /r/ voiced post-alveolar approximant.
[ɹ̥]-approximant (mainly before and between vowels): road, very, far away
[ɹ]-voiced fricative (after /d/): drive, laundry
[ɹ̊]-voiceless fricative (especially after fortis plosives): prize, true, cry
[ɾ]-alveolar tap (after /θ/): three, enthral

(vii) Semi-Vowel

25 /j/ voiced palatal semi-vowel.
[j]-voiced: yes, beyond, music
[j̥]-devoiced: pure, tube, cure, huge

26 /w/ voiced velarized-bilabial semi-vowel.
[w]-voiced: wild, await, gangway
[w̥]-devoiced: tweed, queen

9 Allophonic transcription and the Spanish learner

In chapter 5 we indicated the two main roles of allophonic transcription: to show graphically the variants determined by the phonetic environment, as well as those in free variation, and, on the other hand, offer a graphic comparison of the phonetic values of English and mother tongue.

Allophonic transcription may vary in its degree of narrowness. What phonetic features it should account for will depend on the languages being compared. In practice, it is not necessary to overload our notation by marking features common to both languages; thus, in the case of English and Spanish, there is no need to mark pre- and post-velar articulations, vowel nasalization, and other features we have not taken into consideration, such as lip-rounding of consonants when next to lip-rounded sounds (e.g. *choose well* [ˈt̪ʃuːz̪ ˈweɫː]). Similarly, it is also unnecessary to account for minor vowel quality variants, as well as variants in free variation, e.g. glottalized stops and different realizations of final plosives. By marking 'conflicting' features only, we shall be using allophonic transcription as a visual reinforcement in the teaching of pronunciation.

Below are two samples of allophonic transcription: (i) displaying all the phonetic information given so far, and (ii) a more simplified one, recommended for use by the Spanish learner:

(i) [ˈɔːɫ ˈtʰɪɪtʃɪn̪̊ əɣ̊ ˈspəˑukn̪̊ ˈĩn̪̊ˑglɪʃ ʃud͡bi ˈbeˑɪst ɒn ˈɔˑdɪt̪̊ɪ dɪˈskɟ̊ɪmĩˌneˑɪʃn̪̊ | ð̪̊ə ˈləˑnəɾ ˈʌɬtɪməɬ̪̊ɪ biin̪̊ ɪk̪̊ˈspəːuzd̪̊ t̪ə ˈdɪfɟ̊ɪnt ˈstaːɪɬz n̪̊ ˈɾeˑɪʔts əv dɪˈlɪvɾɪ əv ðə ˈtʃəˑuzn̪̊ ˈmɒɖ̪̊].

(ii) [ðə ˈstæˑndəd əv əˈtʃiˑvmənt͡tə biˑ ˌeːɪmd æt | wɪɬ dɪˈpʰenːd ɒn̪̊ ðə ˈniːdz əv ðə ˌləˑnə | b̪̊ət ˈiˑzɪ ɪnˈtʰelɪdʒəˈbɪlətɪ ɪn pɹəˈdʌkʃn̪̊ ən ɪˈmiˑdɪət ɪnˈtʰəˑpɟ̊ɪˈtʰeˑɪʃn̪̊ ɪn̪̊ ɾɪˌsepʃn̪̊ | məs b̪̊iˑ ˈbeˑɪsɪk ɾɪˈkw̪aˑəmənts].[5]

10 The English *v.* Spanish consonant systems

The consonant systems of English and Spanish will now be confronted on the following points: (i) phonemic oppositions, (ii) phonetic features, (iii) frequency of occurrence, (iv) distribution, (v) syllable structure, and (vi) spelling systems.

(i) An examination of the phonemic table on page 26 shows the following facts: first, English makes use of twenty-six consonant oppositions; Spanish only seventeen or nineteen, according to the variety spoken. Secondly, whereas English has two pairs of affricate and four pairs of fricative phonemes, Spanish

has one single affricate and five (or four) single fricatives. Thirdly, half the English phonemes (i.e. thirteen) are normally articulated in the alveolar region, as against only six in Spanish. Lastly, only ten (or eleven) of the twenty-six English phonemes have similar Spanish ones to correspond: /p, b, k, g, tʃ, m, n, l, f, (θ), s/.

(ii) A confrontation at the phonetic level reveals that only about half the seventy-odd English allophones listed in chapter 7, section 8 have either similar or near-equivalent Spanish ones to correspond. This proportion would be even lower if we took into consideration regional differences – e.g. [θ, z, ʒ, h], etc. occur only in certain varieties of Spanish – and other restrictions – mainly distributional – which will be dealt with later.

The following points are relevant to the comparison:

(a) Spanish consonants are in general articulated with weaker muscular tension than their English counterparts; e.g. [β, ð, ɣ] are the commonest realizations of Sp. /b, d, g/, and not unusually of /p, t, k/, as in *excepción, ritmo.*

(b) Spanish consonants are in general shorter than the English ones. Besides, variations of length in Spanish do not contribute to identify consonant quality, as they do in English, e.g. *felled ~ felt.*

(c) The Spanish lenis consonants are normally devoiced in the same circumstances as English ones; their scarce occurrence in final position, though, makes devoicing before pauses possible only in [ð̥], e.g. *ciudad.*

(d) Aspiration of Sp. /p, t, k/ is negligible, and for practical purposes considered non-existent.

(e) Spanish plosives do not occur together very frequently; therefore, non-audible, nasal and lateral types of release are of exceptional occurrence, the first two never appearing in the same syllable, and none of them in final position.

1 /pt/ and /kt/, as in *apto, acto,* are the only examples of non-audible release in Spanish; whenever a lenis plosive intervenes it is realized as a fricative, e.g. [ðɣ] and [βð] as in *Edgardo, abdicar.*
2 /t, k/ are the only two plosives which can have nasal release in careful Spanish, e.g. *étnico, técnica*; in familiar style, though, these sequences tend to be realized as [ðn] and [ɣn] or [ŋn] respectively. Pre-nasal lenis plosives become fricative, e.g. [ðm] and [ɣm] as in *admirar, dogma.*
3 Sp. /t/ is exploded laterally in just a few instances, e.g. *atlas.*

In sum, the number of possibilities of release types in the two languages is:

	Non-audible	*Nasal*	*Lateral*
English	60	14	2
Spanish	2	2	1

(f) The velars and /n, m/ are influenced by the phonetic environment in the same way in English and Spanish, thus giving rise to pre- and post-velar, and labio-dental articulations, respectively; dentalization of /n, l/ when followed by /θ/ is possible only in Castilian, though not in Latin American Spanish, e.g. *alza* ['alθa]; post-alveolar variants do not normally occur in Spanish.

(iii) The frequency counts by D. B. Fry (1947) and T. Navarro Tomás (1968) show the following figures:

English

/n/	7.58%	/w/	2.81%
/t/	6.42	/z/	2.46
/d/	5.14	/v/	2.00
/s/	4.81	/b/	1.97
/l/	3.66	/f/	1.79
/ð/	3.56	/p/	1.78
/r/	3.51	/h/	1.46
/m/	3.22	/ŋ/	1.15
/k/	3.09	/g/	1.05
		r.c.	3.32
		TOTAL	60.78%

Spanish

/s/	8.50%	/k/	4.23%
/n/	6.94	/m/	3.09
/ɾ/	5.91	/p/	3.06
/l/	5.46	/b/	2.54
/d/	5.00	/θ/	2.23
/t/	4.82	/g/	1.04
		r.c.	3.69
		TOTAL	56.51%

Table 10 Frequency of occurrence of consonant phonemes. 'r.c.' stands for remaining consonants, and includes all those reaching less than 1% each. In Latin American Spanish /s/ and /θ/ must be taken together (i.e. 10.73%). Eng. /tr, dr/ were counted as two phonemes each.

The above figures reveal that consonants occur a little more frequently in English than in Spanish. (See chapter 6, section 10.) On the other hand, the commonest place of articulation in English is alveolar – nearly 36%; cf. Spanish 28%. Finally, English stops have an occurrence of just over 20%, as against 14% in Spanish. A phonetic count shows that Sp. /b, d, g/ are realized as plosives only in one fifth of the cases, and as fricatives or approximants in the rest.

(iv) The distributional table of the English consonant phonemes shows only eight empty slots, out of a total of seventy-eight. (Initial /ʒ/ can be found in just a few loan words, e.g. *gigolo, genre.*)

	Initial	*Medial*	*Final*		*Initial*	*Medial*	*Final*
p	pin	upper	top	ð	those	father	soothe
b	buy	rubber	rib	s	same	pussy	miss
t	tea	butter	boot	z	zoo	reason	choose
d	desk	lady	word	ʃ	sure	ocean	rush
k	come	echo	weak	ʒ		vision	rouge
g	guest	again	rug	h	horse	ahead	
tʃ	cheese	richer	much	m	must	hammer	some
dʒ	joy	region	charge	n	nail	dinner	thin
tr	tree	extra		ŋ		hanger	long
dr	drive	address		l	look	allow	fall
f	fancy	affect	laugh	r	red	very	
v	voice	river	live	w	wet	away	
θ	think	earthy	faith	j	yet	beyond	

Table 11 The distributional table of English consonant phonemes.

In order to find out how this table differs from the Spanish one, we could fill in the slots corresponding to phonemes common to both languages with Spanish

words. We would find that more than half the resulting table remained empty. This would be particularly noticeable in final position, where there would be about twenty empty slots, which means that Spanish words tend to end in vowels. (Some of the slots could be filled in with a few loan words.) But this comparison is only phonemic, and therefore it fails to reveal important distributional restrictions which occur at the allophonic level. A further confrontation is therefore necessary.

The following is a list of distributional restrictions affecting allophones common to both languages:

(a) Sp. /b, d, g/ are realized as fricatives – i.e. [β, v, ð, ɣ] – or their corresponding approximants, between vowels (e.g. *abogado* [aβo'ɣaðo]), and between a vowel and /ɾ/ (e.g. *obra* ['oβɾa]). They are realized as plosives after nasals (e.g. *cambiando* [kam'bjando]). In initial position fricative and plosive variants are in free variation. Sp. /d/ is also realized as a plosive after /l/, and as a fricative in final position (e.g. *maldad* [mal̪'da̪ð̞]). In English, on the other hand, /b, d, g/ are realized as plosives, and /ð/ as a fricative, in all positions.

(b) Sp. [b, k, m] are of extremely rare occurrence in final position.

(c) Sp. [dʒ], an allophone of /ʝ/, can be heard most frequently after /n/ (e.g. *cónyuge* ['kondʒuxe]); Eng. /dʒ/ is of much freer occurrence.

(d) Sp. [s] is normally dropped in preconsonantal and final positions in Argentina, Chile and Central America, and replaced by [h].

(e) Sp. [z], an allophone of /s/ used by some nationalities (e.g. Colombian, Castilian), occurs only before voiced consonants (e.g. *mismo* ['mizmo]); Eng. /z/ is of much freer occurrence.

(f) Sp. [ŋ], an allophone of /n/, occurs only before velars (e.g. *hongo* ['oŋgo]). Its occurrence without the intervention of velars is restricted to some Andean and Central American nationalities; Eng. /ŋ/ occurs medially and finally, with or without the presence of other velars.

(g) Sp. /l/, either alveolar or dental, is realized as a clear variety in all positions; Eng. /l/ is clear only preceding vowels and /j/.

(h) Sp. [j] occurs before all vowels except [i], and Sp. [w], before all vowels except [u]; Eng. /j, w/ are found before most vowels, including /i, ɪ, ʊ, u/.

(v) A confrontation of the structure of the English and Spanish syllable reveals important differences:

(a) The simplest syllable structure in both English and Spanish is V (i.e. one vowel by itself), but whereas the English syllable may take up to three consonants before the vowel, and up to four after it, Spanish can only take two consonants before, and one – exceptionally two – after. This can be expressed as follows:

English syllable: (CCC)V(CCCC) – e.g. *spray, texts*
Spanish syllable: (CC)V(CC) – e.g. *trans-cri-bir*

(b) P. Delattre (1965: 41) gives the following figures for the four most frequent syllable types, which show that Spanish clearly favours the CV type:

	CVC	VC	CV	CCV
English	31.8%	11.9%	27.6%	4.0%
Spanish	19.8%	3.1%	55.6%	10.2%

(c) Whereas in English there is a predominance of closed syllables – i.e. those ending in C – 60%, Spanish strongly favours open syllables – i.e. those ending in V – 72%.

(d) The number of possibilities of consonant clusters in word initial and final positions in the two languages is:[6]

	CCV–	CCCV–	–VCC	–VCCC	–VCCCC
English	20	3	96	173	62
Spanish	12	0	0	0	0

(e) In chapter 3, section 6 we discussed the type of sound which can act as the V or C element in the syllable. This point constitutes a further difference between English and Spanish. Whereas in Spanish the V element can only be a vowel sound (except for a few interjections), in English it can quite frequently be a consonant sound. Out of a total of nearly 24,000 words appearing in *CPD*, there are about 3,500 syllabic consonants,[7] just over 3,000 of which correspond to [l̩] and [n̩]. The other English consonants that can have a syllabic function are /m/ and /r/. These four syllabic consonants are to be found in words pronounced in isolation (i.e. in their lexical or citation form); in connected speech, however, it is possible for practically any consonant to become the central element of a syllable.

(vi) A confrontation of spelling systems for consonants shows that whereas Spanish has twenty-eight (or twenty-five) spellings to represent its nineteen (or seventeen) phonemes, English has 120 spellings for its inventory of twenty-six phonemes. Of these, about two thirds can be considered of regular occurrence. At the top of the list we find /k/ and the sibilants. As to silent letters, Spanish has not more than four, *h* being the only common one; English, on the other hand, has a total of fourteen silent letters, most of which are of extremely common occurrence. (See chapter 7, section 12.)

11 Teaching problems

A significant difference between English and Spanish lies in which elements are responsible for regional varieties. In English it is mainly vowels that vary from one regional variety to another, whereas in Spanish it is mainly consonants. This fact must be borne in mind when discussing teaching problems concerning consonants, since different phonetic and even phonemic inventories within the various countries of the Spanish-speaking world will give rise to different pronunciation problems, which in turn will require different solutions. The foreign teacher will therefore have to make selective use of the clues, notes of warning and props that follow.

A general procedure for the teaching of both sounds and features such as devoicing, release types, etc. should be listening and discrimination (i.e.

ear-training), and finally production in controlled texts, before tackling reading passages with no attention pointers. Since consonants are produced with some kind of interference between articulators, articulatory instructions can now be used effectively, together with a variety of diagrams – facial and others. Very frequently a mispronunciation is not the result of a faulty articulation, but rather of not knowing when to use a sound; here the teacher will benefit from a knowledge of distribution, alternation and spelling rules. To sum up, the points of contrast dealt with in chapter 7, section 10 will prove essential to the understanding of the nature of pronunciation problems.

The high level of performance required by the teacher of English will permit him to make use of only three of the eleven equivalent consonant phonemes (i.e. /f, m, n/), with no phonetic restrictions, but just a few distributional differences. From the phonetic point of view, he will come up against a series of problems which will fall into one of the following categories: (a) phonemes common to English and Spanish with different realizations (e.g. the fortis plosives); (b) sounds which function as phonemes in one language and as allophones in the other (e.g. Eng. /ð/ ~ Sp. [ð]); (c) phonemes which occur only in English, the realizations of which constitute totally new sounds to be learnt by the Spanish learner.

Our first step will be to tackle the pronunciation problems of a general nature, and later those affecting individual sounds.

(*1*) *Length, voicing, aspiration*

Of these three features, aspiration is possibly the easiest to acquire, since it implies an easily recognizable 'puff of air' which may accompany a fortis plosive. To practise this feature the student may obtain a visual reinforcement by holding a sheet of paper in front of his mouth, which will flap at an aspirated plosive. He must take care, however, not to aspirate the lenis plosives, which he sometimes does, as a result of hypercorrection and an effort to sound less Spanish.

Experience has shown that length and devoicing are two of the last features to be mastered by the Spanish learner, because both are variable features, and because devoicing requires the co-ordination of simultaneous activity in two different places – glottis and mouth. Devoicing is most difficult in final position, particularly with the sibilants. As a general prop we suggest that aspiration and devoicing be demonstrated in slow motion in the initial practice sessions, and gradually modified to the correct degree (e.g. *ten* [thhhen], *seems* [siimmzzss], etc.). Before tackling the problem of devoicing [l̥, ɹ̥, w̥, j̥] when following an aspirated plosive, the student should experiment in voicing and devoicing /l, r, w, j/ – i.e. [l̥l̥l̥], etc. (At the same time, it may be pointed out to him that any articulation can be practised in this manner.)[8] As a next step he may add the plosive element and compare [pl̥] ~ [pl], etc. If /l, r, w, j/ were not devoiced after the fortis plosives, an English ear would interpret the latter as lenis plosives (cf. *clue* ~ *glue*, *pride* ~ *bride*, *tune* ~ *dune*), etc.

A mastery of length, voicing and aspiration in isolation, though, should not be the final aim, since they frequently act simultaneously, reinforcing one another, to provide clues for the identification of consonants. In other words, we must

accustom the learner to associate features, thus building up in him an English sound-discrimination mechanism which will operate differently from his Spanish one. For instance, in Spanish he will distinguish /p/ from /b/ either by the opposition voiced ~ voiceless, or plosive ~ fricative. What perceptual clues does an English speaker use to distinguish /p/ from /b/? In the case of *rope ~ robe*, the main clue will be vowel length, and possibly glottal reinforcement of /p/, and energy of articulation (if exploded). In *pay ~ bay* the only differentiating clue will be aspiration. In *plot ~ blot* the distinction will be made by voicing of /l/. Only in *sopping ~ sobbing* will voicing of the plosives act as the perceptual clue. It could be argued that a student will seldom be required to distinguish between minimal pairs such as the above in isolation, and that in connected speech the context will make the meaning sufficiently clear, even if they are pronounced incorrectly. The future teacher, however, cannot afford to use this reasoning as an excuse to sound less English than he could.

(*ii*) *Types of release*

In spite of the low occurrence of the various types of release in Spanish, their mastery is fairly straightforward, since they involve articulatory movements which can be felt. The future teacher must always be aware of these movements, so that when imitation proves to be insufficient, he will be able to provide a learner with articulatory instructions. The slow-motion technique mentioned above can be of use in the initial stages, when practising non-audible release. The most difficult types for the Spanish learner are nasal release involving the alveolars, and lateral release, when either of these constitute a single syllable. Fig 27 can be used as a visual aid to show that the tongue-tip must not separate from the alveolar ridge when going from the plosive to the nasal in /tn, dn/. In extreme cases a student can be encouraged to keep his tongue against the alveolar ridge by pressing it with a pencil, so as to avoid the insertion of a vowel – a prop also valid for /tl, dl/.

Fig 27 Nasal release in /tn, dn/.

(*iii*) *Place and manner*

(*a*) *Alveolar v. dental*

A common problem concerning place of articulation is the confusion of the English alveolars /t, d/ with Spanish dental /t, d/. Though affecting only two sounds, the mistake is extremely noticeable due to the high frequency of occurrence of the English set. The actual recognition and production of these sounds is not difficult, since the student is accustomed to making an alveolar stricture for Sp. /n/, which can be taken as a point of reference. Figs 28 and 29 illustrate the alveolar *v.* dental articulations. The difficulty lies rather in the unconscious,

fluent use of these sounds in connected speech. Constant practice using material specifically prepared for this purpose is the solution.

Fig 28 Alveolar /t, d/.

Fig 29 Dental /t, d/.

(*b*) *Stop v. fricative*

The realization of the English lenis stops /b, d, g, dʒ/ as fricatives (or approximants) is, together with the above, one of the commonest characteristics that betrays the Spanish speaker of English. Of these, the /d ~ ð/ confusion is the most complex, because it also constitutes a problem of phonemic status, thus interfering with intelligibility (cf. *wordy ~ worthy*, etc.). The clues provided by English spelling for /d, ð/ (as for /b, v/) seldom provide the visual aid one would expect of them, although they should be pointed out as reliable clues to pronunciation.[9] The existence of all these sounds as possible variants in Spanish, which implies their unconscious usage, indicates that the problem is rather one of selection. By means of ear-training and oral practice the student can be made aware of their existence as separate entities in English.

(*c*) *The sibilants and* /θ/

The main difficulty with Eng. /tʃ, dʒ, ʃ, ʒ/ is distinguishing between a pair of affricates and a pair of fricatives. This is especially noticeable in those nationalities (e.g. Chilean, Argentine) which use some or all of them as allophonic variants. Eng. /dʒ/ is also often replaced by the Spanish palatal fricative /ʝ/ between vowels. (See Figs 30, 31 and 32.) Plentiful discrimination and production exercises are required in this respect. If the place of articulation of /ʃ, ʒ/ constituted the difficulty, slight retraction of the tongue from Eng. /s/ is advisable.

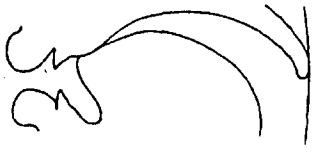


Fig 30 Palato-alveolar /tʃ, dʒ/.

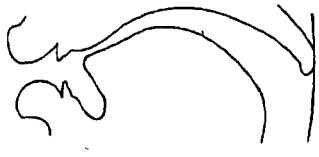


Fig 31 Palato-alveolar /ʃ, ʒ/.

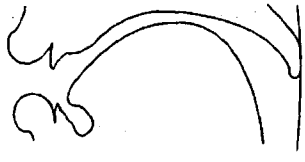


Fig 32 Palatal /ʝ/.

As to the rest of the English sibilants, the Latin American and Andalusian variety of /s/ are acceptable equivalents for English /s/. Whereas the /s/ pronounced in the rest of Spain is apical, i.e. the stricture is made with the tongue-tip and the alveolar ridge, the English one is made with the blade. (See Figs 33 and 34.) Since the apical /s/ has a slight [ʃ] quality, the /s ~ ʃ/ opposition should be practised.

The problem of Eng. /z/ is not generally one of articulation, but of its freer occurrence. Besides, spelling is not a reliable clue as to when it should be used.

(See chapter 7, section 12.) The Spanish speaker is not used to producing a variety of sibilants, and this makes it difficult for him to pronounce words and phrases containing more than one sibilant, e.g. *decision*, *scissors*, etc. This is also true when /θ/ is close to them, as in *thousand*, *enthusiasm*, *moths*, etc. The Sp. /θ/ used in most of Spain makes an acceptable equivalent for Eng. /θ/. (See Fig 35).

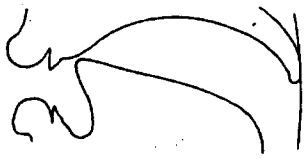


Fig 33 Apical /s/.

Fig 34 'Blade' /s/.

Fig 35 Dental /θ/.

(*d*) *The post-alveolar affricates*

The mastery of /tʃ, dʒ/ is a good introduction to learning /tr, dr/. Starting from the tongue posture for the former, the tongue must be retracted and hollowed, as seen in Fig 36. Furthermore, whenever the affricates come together in connected speech, care must be taken to articulate the fricative element of the first affricate (e.g. *change trains*; *lounge chair*).

Fig 36 Post-alveolar /tr, dr/.

(*e*) *The velar nasal*

The /n, ŋ/ pair is another problem concerning phonemic status (cf. *sin* ~ *sing*), and also distribution. Special attention must be paid by those speakers who frequently use [ŋ] as a common realization of Sp. /n/ (e.g. Peruvians, Ecuadorians, etc.). See Figs 37 and 38:

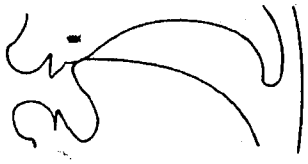


Fig 37 Alveolar nasal /n/.

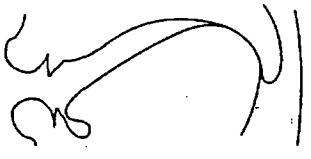


Fig 38 Velar nasal /ŋ/.

(*f*) *Clear and dark* /l/

In order to pronounce [ɫ], the student should start by pronouncing Eng. /ʊ/, thus raising the back of the tongue to the position for the secondary (velar) articulation (see chapter 3, section 5); keeping this position, he should articulate clear /l/ (cf. Figs 39 and 40). Words containing the sequence [-ʊɫ], as in *full*, or other vowels of similar quality, as in *all*, *rule*, may be used for practice, before going on to sequences such as in *feel*, *fell*, etc. Furthermore, the student should

keep in mind the distributional restrictions of [ɬ] in RP, which are not the same as those of General American.

Fig 39 Clear [l].

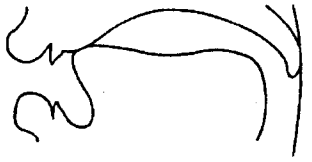


Fig 40 Dark [ɬ].

(*g*) *The approximant* [ɻ]

The first step the learner must take is to disassociate Eng. [ɻ] – the commonest realization of /r/ – from a consonant-like sound, as encouraged by the spelling, and think of it as an approximant – which is a vowel-like sound. The best prop, then, is to start from /ə/ and slowly raise the tongue-tip, curling it slightly backwards, but taking care not to make friction. (See Fig 41.) Care must also be taken with distribution – i.e. which allophone to use when – and with spelling, both of which are responsible for many mispronunciations; /r/ must not be pronounced in absolute final position. The pronunciation of r-spellings in General American may also cause interference.

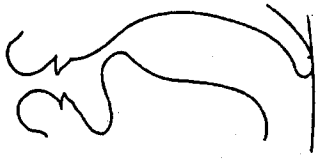


Fig 41 Approximant [ɻ].

(*h*) *The glottal fricative*

In order to pronounce /h/ and not [x] – the usual Spanish mistake – the student must be made to completely devoice a vowel quality of the type which follows /h/. For example, *hat* must be practised as [ḁæt], etc. Only in the case of /hju-/ (e.g. *huge*) can the fricative noise be a result of a stricture in the mouth.

(*i*) *The sequences* /ji-/, /jɪ-/ *and* /wu-/, /wʊ-/

The difficulty of these sequences, caused by distributional restrictions in Spanish, leads the student to pronounce words such as *year* as [iə], and *woman* as [gu̟-], [ɣu-] or [u-]. To begin the first sequence, the front of the tongue must be raised to the closest variety of [i], and glide quickly to an opener quality. In the second case, the student must begin the sequence with strong lip-rounding, and the back of the tongue must be raised as for a very close [u] quality; from there he should begin a quick glide to an opener variety. Both glides can be practised in slow motion in the initial stages.

(iv) Consonant clusters

These must constitute the final stage in the teaching of English consonants. Before they are tackled, the student must have mastered the pronunciation of

each individual consonant, and also features such as length, devoicing and aspiration.

In order to avoid the addition of a vowel before any of the eleven clusters beginning with /s/, these should be practised first without the sibilant, and then in slow motion with a long /s/, e.g. /kul/→/ssskul/, and finally /skul/. An additional problem will arise when other consonants precede the word in connected speech (e.g. *at school*). In the case of final clusters, a good technique is to begin with words containing one final consonant, and gradually build up a cluster from it, e.g. /rɪŋ/→/rɪŋk/→/rɪŋkl/→/rɪŋklz/ or /rɪŋkld/. The vast variety of final clusters makes a certain amount of selection and grading necessary. Examples of very common and difficult cases are those clusters containing syllabic consonants, such as the contracted forms *didn't, oughtn't, wasn't*, etc.

(*v*) *Stylistic and generational consonant markers*

Certain consonant sounds are also, in some degree, responsible for stylistic and generational differences. For example, the glottal reinforcement of fortis stops described in chapter 7, section 6 is becoming increasingly frequent in RP, and though not an indispensable feature, can safely be adopted. Furthermore, the use of [ɻ] before vowels is definitely preferable to [ɾ], which though still occasionally heard from some English speakers, can no longer be considered a feature of General RP.

Fluctuations between /tj, dj/ *v.* /tʃ, dʒ/ are responsible for both generational and stylistic changes. A careful, conservative-RP speaker would generally use the first alternative, whereas a younger speaker would tend to use the second. (For a detailed discussion see chapter 8.) A purely stylistic marker, which the foreign learner should be aware of, without attempting to adopt, is the weakening of unaccented plosives to the point of becoming fricatives. In this case, as with all aspects of pronunciation, we strongly advise him to listen to as many English native speakers as possible, either directly or by means of tapes, radio programmes, etc., and not to model his English on one particular speaker. His decisions as to what to adopt from whom should always be guided by his knowledge of the theory of English Phonetics.

(*vi*) *Alternations and spelling*

The relationship between consonant letter and consonant sound is relatively simple compared with that of vowels, and consequently the spelling-pronunciation rules are fewer. Frequently, though, it is more practical to remember the exceptions than the rules. For instance, the rule says that in the sequence V+double consonant, the vowel element is generally a pure vowel (cf. *latter* ~ *later*); the exceptions to this rule are scarce, and refer only to the spellings *ll* and *ss*, e.g. *droll, poll, roll, scroll, stroll, swollen, toll*; *bass* (musical), *gross*; derivatives have been omitted. In chapter 7, section 12 we include a basic list of such exceptions. The learner should be encouraged to work out his own rules and lists of words based on observation.

Consonant alternations also provide useful clues to pronunciation, e.g.:

/z/↔/ʒ/		/θ/↔/ð/		/m-/↔/mn/	
confuse	confusion	south	southern	autumn	autumnal
fuse	fusion	north	northern	hymn	hymnal
supervise	supervision	worth	worthy	condemn	condemnation
seize	seizure	breath	breathe	solemn	solemnity
close	closure	bath	bathe	damn	damnable

12 Spellings

As in chapter 6, section 12, regular common spellings, and obvious derivatives will not be dealt with. Key to symbols: 'C' stands for any consonant letter, 'V' for any vowel letter, and # for an alternative pronunciation.

/t/ Spelling *th* only in discotheque, thyme; Anthony, Esther, Thailand, Thames, Theresa, Thomas, Thompson.

/tʃ/ 1 Spelling *c* only in cello, concerto.
2 Exceptional spellings: *C*zech, pu*tsch*.

/dʒ/ Spelling *ch* only in sandwich#, spinach#; Greenwich#, Harwich#, Norwich#.

/f/ Spelling *gh* only in cough, draught, enough, laugh(ter), rough, tough, trough.

/v/ Spelling *ph* only in nephew; Stephen.

/s/ 1 Spelling *se* in some nouns and adjectives: abuse, close, diffuse, excuse, house, use. When these words function as verbs, all are pronounced with /z/. Exceptions: fuse, surprise, always with /z/; decrease, increase, promise, release, always with /s/.
2 In *used to*, when it means 'accustomed'; with /z/ when it means 'employed'.
3 Spelling *s*, e.g. base, case, chase, purchase; cease, crease, lease; geese; concise, paradise, practise, precise; dose; goose, loose, noose; louse, mouse; dense, rinse; conclusive, elusive, exclusive, expensive; comparison; nuisance.
4 Spelling *z* only in eczema, quartz, ritzy, waltz#; Switzerland.

/z/ 1 Spelling *ss* only in dessert, dissolve, hussy#, hussar, po*ss*ess, scissors; Missouri.
2 Spelling *x* mainly in *X*erox, xylophone.
3 Spelling *s* e.g. disease, ease, erase, phase, phrase; these; advertise, bruise, despise, disguise, noise, praise, revise, raise, rise, surprise, wise; choose, dispose, expose, hose, lose, nose, oppose, propose, suppose, those; arouse, blouse, cause, confuse, pause; deposit, desert, deserve, design, desire, di*s*aster, hesitate, houses, miserable, museum, music, physics, positive, position, president, resemble, resign, resist, resort,

result, trousers, visible, visit; busy, cosy, daisy, jersey, lousy; husband, Tuesday, Thursday; cousin, pleasant, poison, present, prison, reason.

/ʃ/ 1 Spellings *-Csion* and *-tion*, e.g. expulsion, tension, version, session; fiction, caution. Possible exceptions: equation#, transition#.
2 Spelling *sch* mainly in schedule, schmaltz, schwa, Schweppes.
3 Exceptional spelling: fuchsia.

/ʒ/ 1 Spellings *-Vsion*, *-Vsure* and *-Vsual*; e.g. confusion, closure, casual. No exceptions.
2 Spelling *g* in French loanwords, e.g. camouflage, collage, espionage, garage#, sabotage; beige, rouge; protégé; genre, gigolo.

/w/ 1 Spelling *-oi-* in French loanwords, mainly abattoir, chamois, choir, memoir, repertoire, reservoir.
2 Exceptional spelling: one, once.

The following letters stand for more than one pronunciation, and consequently tend to cause difficulty:

-ed (past tense and past participle suffix of regular verbs).
1 /-d/ when the last sound of the infinitive form is a vowel, or /b, g, ʤ, v, ð, z, ʒ, m, n, ŋ, l/, e.g. owed, rubbed, judged, loved, bathed, cleaned, hanged.
2 /-t/ when the last sound is /p, k, ʧ, f, θ, s, ʃ/, e.g. helped, ached, matched, laughed, brushed.
3 /-ɪd/ when the last sound is /t, d/, e.g. lasted, added.

-(e)s (plural, genitive case, third person singular, and reduced forms of *is* and *has*).
1 /-z/ when the last sound of the noun's singular, etc. is a vowel or /b, d, g, v, ð, m, n, ŋ, l/, e.g. cows, cabs, cards, halves, mouths, rooms, tongues, miles.
2 /-s/ when the last sound is /p, t, k, f, θ/, e.g. caps, seats, seeks, coughs, moths.
3 /-ɪz/ when the last sound is /ʧ, ʤ, s, ʃ, z, ʒ/, e.g. reaches, changes, ashes, loses, collages.

-x- 1 /-ks-/ when *x* is followed by an unaccented vowel, e.g. exercise, exit, oxygen, toxic. Main exceptions: fixation, proximity, relaxation, taxation, tuxedo, vexation, all /-ks-/.
2 /-gz-/ when *x* is followed by an accented vowel, e.g. exact, exam, example, exist, exotic. Possible exception: exile#.
3 /-kʃ-/ in anxious, complexion, luxury, noxious, sexual#.
4 /-gʒ-/ in luxuriant#, luxuriate#, luxurious#.
5 /z-/ mainly in *X*erox, xylophone.

-ng 1 /ŋ/ in final position, e.g. king, wrong, young, and in inflected forms, e.g. hanger, singer, winger; longish, stringy, bringing. Also in hangar, gangway.

2 /-ŋg-/ in medial position, e.g. anger, finger, hunger, language#, monger, singular, and in the comparatives and superlatives of long, strong and young, e.g. longer, longest, etc.

3 /-ndʒ/, e.g. astringent, change, danger, mingy, strange(r).

Finally, there are a number of silent letters, i.e. those which do not represent any sound at all, e.g.:

b in *-mb* and *-bt*, e.g. bomb(er), comb, plumb(er), thumb, tomb; debt(or), doubt, subtle.

c in corpuscle, muscle; Connecticut, indict, victual(s). Note *ch* in schism, yacht.

g in *-gm*, *-gn* and *gn-*, e.g. diaphragm, phlegm; assign, campaign, cologne, foreign, reign, sovereign; gnash, gnat, gnaw.

h in heir, honest, honour, hour; in *rh*, e.g. rhetoric, rheumatism, rhubarb, rhythm, diarrhoea; also in annihilate, bonhomie, vehement, vehicle; in proper names in *-ham*, e.g. Durham, Fulham, Graham.

k in *kn-*, e.g. knee, know, knot, knit. Note *ck* in blackguard.

l in *-lk* and *-lm*, e.g. chalk, folk, stalk, talk, yolk; almond, calm, Holmes, Malcolm, palm, salmon; also in calf, calm; could, should, would.

n in *-mn*, e.g. autumn, column, condemn, damn, hymn, solemn.

p in coup, cupboard, raspberry, receipt. Note *ps* in corps.

s in aisle, apropos, chassis, debris, demesne, Illinois, island, isle, Louis, viscount.

t in *-stle*, *-sten*, e.g. apostle, castle, hustle, mistletoe, nestle, thistle; chasten, christen, fasten, glisten, hasten, moisten; also in French loanwords e.g. baccarat, beret#, ballet, cabaret, debut, rapport; note also mortgage, often#, postpone, and *th* in asthma.

w in *wr-*, *wh-*, e.g. wrap, wreck, wring, wrist, wrong; who, whole, whom, whore, whose; in proper names in *-wick*, *-wich*, e.g. Berwick, Keswick, Warwick; Greenwich, Norwich (exc. Ipswich); also in answer, sword.

13 Alternative pronunciations

The number of alternative pronunciations concerning consonant sounds appearing in *CPD* – about 300 of the total – is considerably lower than that of vowels (see chapter 6, section 13).[10] Of these, the three largest areas of variation correspond to the choice between the fortis ~ lenis opposition, a palatalized *v.* non-palatalized form, and an elided *v.* non-elided consonant form. The main tendencies are:

1 /s/ ~ /z/

(a) Words ending in *-sive*, e.g. adhesive, evasive, (ex)plosive, persuasive.

(b) Words beginning with *trans-*, e.g. transfer, transform, transfusion, transit, transitive.
(c) absorb, absurd, advertisement, fantasy, grease (v.).

/z/ ~ /s/
(a) Words beginning with *trans-*, e.g. transaction, transistor, transition, translate, transmit.
(b) hussy, Joseph, opposite, treatise, usage.

2 /ʃ/ ~ /ʒ/
(a) Asia, conversion, excursion, magnesia, Persia, version.

3 /b/ ~ /p/
(a) abscess, absence, absolute, absorb, absurd.

For examples of palatalized *v.* non-palatalized and elided *v.* non-elided alternatives, see chapter 8.

Notes

1 The American/English tendency to realize intervocalic /t/ as a voiced flap cannot be considered a feature of RP.

2 'Voice onset time' (VOT) is a useful term to refer to the moment voicing starts, with reference to the release of a stop. Instrumentally, VOT is measured in milliseconds.

3 We have preferred the diacritic [ˌ] to symbolize non-audible, nasal and lateral release, instead of [ⁿ], which, though recently approved by the IPA, is restricted to the first case only.

4 The fact that [m̩] can be a realization of both /m/ and /n/ is an example of neutralization of phonemes.

5 Both passages are part of the summary of 'The Teaching of Pronunciation', a paper presented by Prof. A. C. Gimson at the 6th Annual Conference of IATEFL (London, Jan. 1973), and published in *IATEFL Newsletter No. 28.*

6 We have excluded unusual sequences from the table of initial clusters, and also those with /j, w/; /tr, dr/ are treated as one element each. The figures for final clusters have been taken from L. A. Hill (1965), and must not be considered as definitive, but as gross indicators of the size of the contrast. See also L. A. Hill (1960), and D. Powell (1962, 1965) for a treatment of the problem in connection with Spanish speakers.

7 See our 'Syllabicity as a Pronunciation Problem', forthcoming.

8 For plenty of articulatory exercises and questions for discussion see Wells & Colson (1971).

9 A surprising (for many) comment about the pronunciation of letter *v* in Spanish is found in T. Navarro Tomás (1932: 91f).

10 See our 'The *CPD* Consonant Alternative Pronunciations', forthcoming.

8 Features of connected speech

1

So far we have been mainly concerned with how sounds behave within the word. We have seen how English phonology accepts some combinations of sounds, and how Spanish accepts others. Our next step will be to examine the problems that the Spanish speaker faces when linking words together in connected speech, look into the processes by which the phonemic patterns of words may be altered, and see what the stylistic implications of these changes are.

2 Linking features

Sometimes the linking process will require modifications at the beginnings and ends of words in connected speech. Such is the case with the so-called *linking* /r/, which consists in pronouncing word-final spelling *r* when the next word begins with a vowel (cf. /ˈleɪtə/ ~ /ˈleɪtər ˈɒn/). Although it is possible to find cases where English speakers omit linking /r/, the foreign learner should adopt it, since it is an essential characteristic of fluent speech in RP. It must be noted, however, that when a pause separates word final spelling *r* from a word initial vowel the link is not made; cf. *What's more I like it* ~ *What's more* (pause) *I like it.*

It is also possible for /r/ to be pronounced when no *r* appears in the spelling. This so-called *intrusive* /r/ is the result of a process of analogy – a sort of extension of the linking /r/ rule to situations where it is not present in the spelling. For instance, word final /ə/ is generally the result of spelling *Vr*, as in *father, doctor*, but when it is the result of spelling *a*, as in *sofa*, many English speakers tend to insert /r/ in cases such as *sofa and chairs* /ˈsəʊfər ən ˈtʃeəz/, unconsciously following the same pattern as in *father and mother* /ˈfɑðər ən ˈmʌðə/. But *by sea and land* would take no intrusive /r/ because there is no case of analogy, since no English word ends in /-i/ represented by *Vr*. The question as to whether this controversial feature of RP should be adopted by the foreign learner, should depend on whether it comes naturally to him or not. It is not indispensable, but its unconscious use will be a mark of progress in his proficiency in English.

Other linking processes require no modifications at the edges of words, and yet they are difficult for the Spanish learner, because they involve consonant sequences to which he is unaccustomed. In cases where one word ends in a

consonant cluster and the next one begins with a vowel, the student tends to omit the final consonant. So as to avoid the omission of, for instance, final /t/ or /d/ in *He stopped and looked around*, and *He reached out and changed it*, the student should be encouraged to think of the utterances reorganized as /hi 'stɒp tən 'lʊk tə'raʊnd/, /hi 'ritʃ taʊt ən 'tʃeɪndʒ. dɪt/. A note of warning, though, should prevent him from aspirating word initial /p, t, k/ in these instances. There are a few phrases, however, in which the aspiration of /t/ marks the loss of word boundaries, as in *not at all* ['nɒt ə 'tʰɔːɬ], *at any rate* [ə 'tʰeni ɻeːɪt], *it is* [ɪ 'tʰɪʐ], *it isn't* [ɪ 'tʰɪzn̩t].

When a final cluster is followed by an initial consonant or consonant cluster, certain simplifications take place, which will be discussed below.

3

The articulatory adjustments discussed in chapter 7 concerning place of articulation, voicing, etc., take place at the allophonic level. For instance, in *Will they play?* ['wɪɻː ðeːɪ ˌpɻeːɪ] the first /l/ adjusts itself to the following dental sound by becoming dental, and the second becomes devoiced under the influence of the preceding fortis sound. These adjustments, known as *assimilation*, are the result of an unconscious propensity towards ease of articulation and economy of effort. More important assimilations can occur at the phonemic level, e.g. Eng. *don't you* /'dəʊntʃu/, Sp. *inmediato* /imme'diato/.[1]

In what sense does assimilation constitute articulatory simplification? The non-assimilated form of the English example /'dəʊnt ju/ requires two consecutive postures, alveolar for /t/ and palatal for /j/. In the assimilated form, on the other hand, the two postures coalesce into one palato-alveolar articulation /tʃ/. Assimilation, therefore, can be defined as the process by which sounds are influenced by neighbouring sounds and come to share some or all of their phonetic characteristics.

Another type of economy of articulation consists of omitting either a vowel or a consonant, as can be seen in Eng. *postman* /'pəʊsmən/, *secretary* /'sekrətrɪ/, and Sp. *extranjero* /ektɾan'xeɾo/ or /estɾan'xeɾo/. This omission of sounds is known as *elision*.

A third type of phenomenon occurs when a given articulation, either vowel or consonant, is performed in a shorter space of time. This occurs, for instance, when vowels are reduced to semi-vowels, as in Eng. *to open* /'twəʊpən/, Sp. *agua y aire* ['aɣwa'jaiɾe], when diphthongs are reduced to monophthongs, as in Eng. *tomorrow morning* /tə'mɒrə 'mɔnɪŋ/, or when syllabic consonants lose their syllabicity, as in Eng. *a couple of* . . . /ə 'kʌpləv . . ./; (see also levelling of vowel sequences, chapter 6, section 9). We shall refer to these simplifications as *compressions*.

These articulatory simplifications occur one way or another in all languages, following different sets of rules in each case. As seen in the above examples, they can occur inside words, thus giving rise to new lexical pronunciations (i.e. those forms said in isolation), and at word boundary.

4 Word internal phonemic variations

In all languages pronunciation is in a constant state of evolution, although for the last few hundred years English spelling has not reflected these changes. Many words have undergone processes of elision, assimilation and compression, and there is evidence to think that some modern spellings stand for old pronunciations. Cases of elision are to be seen in the words *comb*, *knee*, *listen*, *wreck*, *life*, etc., and assimilation has taken place in the words *ocean*, *sure*, *occasion*, *future*, *action*, etc. However, in a course of this type we are not concerned with the details of these historical changes, but with the language spoken today by the present two or three generations. This solution is not always simple, though, because many lexical (or 'citation') forms resulting from articulatory simplifications are relatively recent, and still not completely consolidated. An analysis of current English reveals that sometimes two, and less frequently three, alternative lexical pronunciations of the same word may exist simultaneously, i.e. the traditional form (e.g. *territory* /ˈterɪtərɪ/, *education* /ˌedjʊˈkeɪʃn̩, *actually* /ˈæktʃʊəlɪ/), and one which contains some relatively recent internal phonemic variation (i.e. /ˈterɪtrɪ, ˌedʒʊˈkeɪʃn̩, ˈæktʃəlɪ/).

In this respect, a prescriptive pronouncing dictionary such as *CPD* offers nearly 450 words with two pronunciations of almost equally common usage. Of these, 350 correspond to either vowel or consonant elision, and the rest to consonant assimilation. A descriptive pronouncing dictionary such as *EPD*, on the other hand, also offers assimilated and elided pronunciations, but which are not always of common use. The student should elide those sounds given in italics; pronunciations with an italicised /ə/ generally represent the speech typical of an older generation, and/or a more careful, studied form of speech. The younger generations tend to adopt elided, assimilated, and compressed forms which would even be considered negligent by their elders. Phonemic variations inside words, therefore, help to determine different generational varieties of RP, and are also closely connected with styles of pronunciations; lexical forms containing elisions, assimilations and compressions represent a less formal style of delivery.[2]

The word lists below contain lexical forms with current simplifications which will not always meet with consensus of opinion among phoneticians, due to the fact that transcribers do not totally agree on (a) the status of the different stylistic variants, and (b) which of these pronunciations the EFL learner should adopt. The learner will, therefore, come across the unsimplified forms of these words, both in dictionaries and in the speech of some native speakers. The reason why we recommend the adoption of these simplified forms as citation variants is to avoid the too generalized tendency among Spanish learners to use pronunciations which sound over-formal and conservative, by failing to make articulatory reductions. For many speakers of general RP the forms given constitute the only alternative.

5 Elision

(*i*) *Word internal*

Elision of vowels mainly affects the weak, centralised one /ə, ɪ, ʊ/ when they are preceded and followed by consonants in unaccented syllables. The most frequent vowel elisions occur when the following consonant is /r, n, l/, as can be seen in the following examples:

	1 /–tn̩/	2 /-tn̩C/	3 /-dn̩C/	4 /-sn̩C/	
A	certain	importance	guidance	absence	
	curtain	remittance	pedant	nonsense	
	pattern	blatant	prudent	adjacent	
	tartan	potent	student	absent	
	5 /-ʃn̩/	6 /-ʃn̩C/	7 /-ʒn̩/	8 /-rn̩C/	9 Others
	caution	conscience	allusion	appearance	golden
	emotion	impatience	explosion	occurrence	govern
	magician	ancient	occasion	apparent	woven
	passion	patient	vision	inherent	medicine

There are no exceptions in groups 4 to 9. Main exceptions in groups 1 to 3 are *Latin*, *Saturn*, and possibly words with an accent on the ante-penultimate syllable, e.g. *competence*, *confidence*, *relevance*.

When any of the nasals precedes the sequences /-dən, -tən/, schwa must not be elided, with the only possible exception of *acquaintance*:

/-ndən, -ntən/, e.g. abandon, London; attendance, correspondence; dependant, redundant; badminton, lantern; sentence; accountant, repentant.

/-ŋdən, -ŋtən/, e.g. Huntingdon, Kingdon; Paddington, Washington.

/-mdən, -mtən/, e.g. Camden; Hampton, Northampton, Southampton.

	1 /-kl̩/	2 /-fl̩/	3 /-vl̩/	4 /-sl̩/	
B	classical	forgetful	approval	cancel	
	local	graceful	arrival	consul	
	medical	peaceful	interval	rehearsal	
	musical	powerful	rival	universal	
	5 /-zl̩/	6 /-ʃl̩/	7 /-ml̩/	8 /-rl̩/	9 Others
	Diesel	commercial	animal	barrel	chapel
	disposal	essential	decimal	moral	verbal
	nasal	official	formal	oral	hostel
	refusal	special	normal	quarrel	vandal
					legal
					lethal

The only exceptions are in group 2, with nouns ending in *-ful*, e.g. *pocketful*, *spoonful* which always have /-fʊl/.

C /-Cl̩ɪ/ ~ /-Clɪ/ Syllabic clear [l̩] is retained when the suffix *-ly* is added in the sequences /-tl̩ɪ/, /-fl̩ɪ/, /-ʃl̩ɪ/, /-ml̩ɪ/, /-nl̩ɪ/ and /-rl̩ɪ/, e.g. *totally, gracefully, socially, normally, externally, orally.* But note *beautifully, carefully* /-flɪ/. The syllabic lateral is not recommended in the sequence /-klɪ/, e.g. *basically*, except when the elided form is a disyllabic word, e.g. *locally* /-kl̩ɪ/.

D /-Cr̩ɪ/ ~ /-Crɪ/ Elision of /ə/ allows the formation of affricates in /-trɪ/, /-drɪ/, e.g. *secretary, secondary*; /ə/ may be elided but the syllable is not lost when the resulting word will be disyllabic, e.g. *lottery, mystery, slippery*, all with /-Cr̩ɪ/; /-brɪ/ is the only recommendation for the spellings *-berry* and *-bury*, e.g. *strawberry, Salisbury*, but not in *-bery*, e.g. *bribery* /-br̩ɪ/. (See Compression on page 82.)

E Double vowel elision may cause two syllabic consonants in the same word:

liberal /ˈlɪbr̩l̩/	admiralty /ˈædmr̩l̩tɪ/	civilization /ˈsɪvl̩aɪˈzeɪʃn̩/
literal /ˈlɪtr̩l̩/	ordinarily /ˈɔdn̩rlɪ/	concentration /ˈkɒnsn̩ˈtreɪʃn̩/
optional /ˈɒpʃn̩l̩/	governmental /ˈgʌvn̩ˈmentl̩/	presentation /ˈprezn̩ˈteɪʃn̩/

F Vowel elision in word-medial position does not necessarily produce syllabicity of consonants in a number of words, e.g.:

asp*i*rin	dec*o*rative	gen*e*rous	orig*i*nal
com*f*ortable	def*i*nitely	lit*e*rature	reas*o*nable
comp*a*rable	fath*e*r-in-law	mod*e*rate	temp*e*rature
consid*e*rable	gen*e*rally	op*e*ning	veg*e*table

G Elision of consonants inside words mainly affects alveolars, especially when preceded and followed by other consonants, e.g. *handsome* /ˈhænsəm/, *postpone* /pəˈspəʊn/; note also *asthma* /ˈæsmə/, *asked* /ɑst/, *prohibition* /ˈprəʊɪˈbɪʃn̩/. In the following examples the sound represented by the italicized letter is normally elided in the citation form of the word:

gran*d*ma	direc*t*ly	instinc*t* /-ŋt/	ex*h*alation
gran*d*pa	pos*t*card	precinc*t* /-ŋt/	in*h*ibition
san*d*paper	pos*t*man	assum*p*tion	pre*h*istoric
san*d*wich	pos*t*script	tem*p*tation	re*h*abilitate

(ii) At word boundary

The word final alveolars /t, d/ are generally elided when preceded and followed by a consonant, especially when the following is a stop, e.g.:

next turn	best thing	cashed them	served drinks
next stop	soft chair	send two	couldn't she
first day	worst joke	cold day	didn't call
last talk	soft drink	caused trouble	rubbed down

There is, however, a tendency to retain /t, d/ before initial /h/ (e.g. *guest-house, send home*), and /t/ in the sequences /-nt, -lt/ (e.g. *sent them, spoilt child*), which is very often realised as [ʔ], e.g. [ˈseŋ̍ʔ ðm̩].

/h/ is elided in unaccented, non-initial *he, his, her(self), him(self), have, has, had,* and sometimes *who,* e.g. *Give him his biro* /. . . ɪm ɪz . . ./, *George has seen her twice* /. . . əz sin ɜ . . ./. If the preceding word ends in an optional /r/, either /h/ or /r/ must be elided, e.g. *Peter himself* /-ər ɪm-/ or /-ə hɪm-/.

6 Assimilation

(*i*) *Word internal*

The following are examples of words in which the assimilated variant can be considered the normal lexical form for very many speakers. The non-assimilated variant may be regarded as belonging to a more studied, conservative style of speech:

/tʃ/ ~ /tj/	/dʒ/ ~ /dj/	/ʃ/ ~ /sj, sɪ/
ma*t*ure	e*d*ucation	associ*a*tion
Chris*t*ian	individ*u*al	gla*c*ial
accen*t*uate		appre*c*iation
si*t*uation		
impor*t*unate		

In the following cases, the assimilated forms are the only recommendation for the learner to adopt:

/tʃ/		/dʒ/	/ʃ/	
bi*t*umen	for*t*une	gra*d*ual	appre*c*iate	nego*t*iate
even*t*ually	sa*t*uration	gra*d*uate (n.)	asso*c*iate	sen*s*ual
fac*t*ual	sta*t*ue	proce*d*ure	depre*c*iation	sen*s*uous
fa*t*uous	vir*t*ue		differen*t*iation	se*x*ual
			i*ss*ue	ti*ss*ue

(*ii*) *At word boundary*

This type of assimilation is often referred to as *juxtapositional* or *contextual.* The English consonant sounds most easily influenced by adjacent sounds in connected speech are the alveolars /t, d, s, z, n/.

(a) /t, d, n/ may be assimilated to /p, b, m/ respectively under the influence of the bilabials /p, b, m/, e.g. *that plan* /ˈðæp ˈplæn/, *you'd better* /jub ˈbetə/, *on purpose* /ɒm ˈpɜpəs/.

(b) /t, d/ may be assimilated to /tʃ, dʒ/ respectively when immediately followed by /j/, e.g. *last year* /ˈlɑstʃɪə/, *behind you* /bɪˈhaɪndʒu/.

(c) /s, z/ may be assimilated to /ʃ, ʒ/ respectively when /ʃ, j/ follow, e.g. *her voice shook* /hɜ ˈvɔɪʃ ˈʃʊk/, *in case you do* /ɪŋ ˈkeɪʃ ju . . ./ or /ɪŋ ˈkeɪʃ ʃu . . ./, *here's yours* /hɪəʒ ˈjɔz/ or /hɪəʒ ˈʒɔz/, *he was shot* /hi wɔʒ ˈʃɒt/.

(d) /t, d, n/ may be assimilated to /k, g, ŋ/ respectively when in contact with /k, g/, e.g. *hot cakes* /ˈhɒk ˈkeɪks/, *I should go* /aɪ ʃuq ˈgəʊ/, *his own car* /hɪz ˈəʊŋ ˈkɑ/, *he won't go* /hi ˈwəʊŋk ˈgəʊ/.

According to the direction of the change, assimilation can be *regressive,* when the initial sound of a word affects the final sound of the previous word, e.g. *not*

possible /-p p-/, *close shave* /-ʃ ʃ-/; or *progressive*, when the initial sound of the second word is affected, e.g. *bookish style* /-ʃ ʃ-/, *I told you* /aɪ ˈtəʊldʒu/. Of the two, regressive assimilation is much more common in English than progressive. Furthermore, assimilatory adjustments concerning place of articulation are far more common than those concerning manner.

7 Compression

(*i*) *Word internal*

The forms with either /ʊ/ or /ə/ instead of /ʊə/ in the central syllables of *actually*, *usually* and *valuable* constitute the normal citation form for many speakers. The same applies to words such as *envious*, *brilliant*, *influence*, *annual*, with /jə, wə/ instead of /ɪə, ʊə/.

Pronunciations with /ə/ rather than /əʊ/ could be said to represent a more casual style in words such as *automobile*, *extrovert*, *mobility*, *November*, *omission*, *romantic*, *vocation*, although for many speakers the compressed form is their normal lexical pronunciation.

(*ii*) *At word boundary*

In all cases the compressed forms denote a fast style, e.g. *the apple of my eye* /ˈðjæpləv ma(ɪ) ˈaɪ/.

8 Styles of pronunciation

We do not always speak in the same way, but adapt ourselves to situations by using different styles. For instance, we vary our choice of vocabulary and grammatical structures depending on the formality or informality of the circumstances. Likewise, we make a series of phonetic adjustments which include a great complexity of features such as *tempo* (or speed of delivery), *rhythm* (or regularity of prominent syllables and words), *continuity* (or place and length of pauses), *muscular tension* (in the form of articulatory precision), *gradation* (weakening of structural words), *compression*, *elision*, and *assimilation*. Of these, only the last two and gradation have traditionally received systematic treatment in manuals of Phonetics.[3]

Important changes have been taking place over the last fifty years in the matter of styles of pronunciation. One of the most decisive is the fact that English spoken by the present generation is perceptibly quicker, both at word and connected speech level, than that of previous generations. Widespread radio and television broadcasting, and increasing informality in public speaking and social behaviour have undoubtedly contributed to this speeding up and flexibility. A comparison of old and new versions of pronouncing dictionaries, and recordings of news bulletins and films testify to this point.

These changes, together with the elusive nature of some of the phonetic features mentioned above, make it difficult to draw exact dividing lines between different styles of pronunciation. This is why phoneticians who have attempted

to do so for teaching purposes do not always coincide in their views. For practical reasons we shall refer to Formal, Unhurried Colloquial, and Informal Colloquial styles.[4]

(i) Formal Characterized by slow tempo, precise articulation, and high frequency of accented words. Its use is limited to very specific occasions, such as formal recitations, church services, etc. The learner should under no circumstances be tempted to adopt it for normal, everyday use, in spite of its extreme clarity.

(ii) Unhurried Colloquial Of all the conversational styles, it is that maximally clear, slow one, which makes most use of the 'ideal' citation forms, i.e. those appearing in pronouncing dictionaries. The deliberately slow tempo that characterizes this style requires a high frequency of accented words, a minimum number of contextual assimilations and elisions of the type described above, and precise articulation. Depending on the age of the speaker, it may also include word-internal elisions and assimilations.

(iii) Informal Colloquial It is that conversational style which can be placed at the most informal end of the scale, and generally referred to as 'rapid' colloquial. The term 'rapid', however, must not imply that this style is simply a quicker version of Unhurried Colloquial, although its tempo is, on the average, faster. Rather it is the result of a series of phonetic simplifications of the ideal citation forms. These simplifications take the form of a maximum number of assimilations, elisions and compressions, lax, slurred articulations, and a reduction of accented words. Apart from the elisions and assimilations possible in Unhurried Colloquial, a further set of simplifications takes place in Informal Colloquial, as follows:

(a) assimilation of lenis to fortis before another fortis, but preserving vowel length appropriate to lenis, e.g. *those people* /ðəʊs ˈpipl̩/;
(b) assimilation of /t, d, n/ to /p, b, m/ before /w/, e.g. *in winter* /ɪm ˈwɪntə/;
(c) assimilation of /d/ to /n, m/ before /n, m/, e.g. *good night* /gʊn ˈnaɪt/, *good morning* /gʊm ˈmɔnɪŋ/;
(d) assimilation involving weak vowels, e.g. *under your seat* /ˈʌnd(ɪ) jə ˈsit/, *we were warm* /wɪ wʊ ˈwɔm/;
(e) elision of consonants in cases other than those mentioned in chapter 8, section 5, e.g. /d/ in *wild west* /ˈwaɪl ˈwest/; /v/ when *of, have* are followed by a consonant, as in *a cup of tea* /ə ˈkʌp ə ˈti/; /l/ when following /ɔ/, as in *already* /ɔˈredɪ/, and in the ending *-ly*, e.g. *only* /ˈəʊnɪ/;
(f) elision of weak, unaccented vowels before the main accent, e.g. *suppose* /spəʊz/, *police* /plis/;
(g) vowel elision leads to a series of violations of the rules governing syllable structure at citation level, such as 'impossible' clusters and syllabic consonants, e.g. *of course* /f̩ ˈkɔs/, *it's not* /ts̩ ˈnɒt/, and pre-consonantal /r/, e.g. *very nice* /ˈver ˈnaɪs/;

(h) compression of syllabic consonants, which become non-syllabic, e.g. *totally* /ˈtəʊtlɪ/, *library* /ˈlaɪbrɪ/, *trouble is . . .* /ˈtrʌblɪz . . ./;
(i) compression of double (geminated) consonants, e.g. *in my class* /ɪmaɪ ˈklɑs/, *take care* /ˈteɪˈkeə/, *some more* /sə ˈmɔ/;
(j) vowel compressions similar to those dealt with in chapter 6, section 11, e.g. *they're in* /ðer ˈɪn/, *how are your pets?* [ˈha jə ˈpets], *I'm not* [am ˈnɒt];
(k) cases of consecutive elision and assimilation, e.g. *send both* /ˈsem ˈˈbəʊθ/;
(l) weakening of plosives, e.g. *speaking* [ˈspixɪŋ], *he must be* [hi ˈmʌsβi];
(m) generalized glottal reinforcement or replacement of fortis plosives, e.g. *not one* [ˈnɒʔt ˈwʌn] or [ˈnɒʔ ˈwʌn];
(n) modifications of rules governing length of sounds at citation level, e.g. *everybody* [ˈevːɪɪbɒdɪ], *incredible* [ɪŋˈkɪːedəbl̩].

9

Of the styles of pronunciation referred to, we are mainly concerned with the two conversational ones. Due to the impossibility of drawing a dividing line between them, it is convenient to think of a scale running from formal to informal, with Unhurried Colloquial at one end, and Informal Colloquial at the other. There is, however, an infinite number of styles in between, depending on the situation, the topic, the backgrounds of speaker and listener, and the relationship between them.

Newsreaders, for example, have nowadays adopted a very informal, friendly style, when transmitting within the UK, but a slightly more formal one for overseas transmissions. An English lecturer addressing a class of English students would probably use a very informal style, which a foreign student would find hard to understand at first; the same lecturer addressing a class of non-native speakers of English in a foreign country might unconsciously make some concessions to his audience, by using a less informal style in order to be clearer. Non-native teachers of English almost invariably use the Unhurried Colloquial style in all situations. Taped courses aimed at the EFL learner have traditionally been recorded in this style, because it constitutes a clear standard for reference and an easily repeatable model, although very rarely heard from native speakers chatting to each other. In the last five years, advanced courses using a more informal style have begun to appear, in an attempt to provide a more realistic model for comprehension.

To sum up, the foreign student can safely adopt the Unhurried Colloquial style provided by his models – generally a foreign teacher of English and taped EFL courses – as long as he is provided with examples of Informal Colloquial English in the more advanced stages.

Let us now examine some utterances spoken in different styles. The phrase *is she?* would suffer the following simplifications as it moved along the scale from formal to informal: [ˌiz̩ ʃi]→[ˌɪʒ̊ ʃi]→[ˌɪʃ ʃi]→[ˌɪʃɪ]→[ˌ-ʃɪ]. The following dialogue is transcribed (a) in an Unhurried Colloquial style containing only the basic simplifications such as the learner should aim at producing, and (b) in an

extremely Informal Colloquial style such as would be used by two native speakers chatting informally to each other:

A: D'you mean to say your sister'll be coming along too?
B: Of course she will. It could be very nice, you know.
A: I should have thought she'd have been bored stiff.
B: Well, it's only going to last half an hour.

(a) A: dʒu 'mɪn tə 'seɪ jɔ 'sɪstər əl bi 'kʌmɪŋ əlɒŋ ˏtu
B: əv ˋkɔʃ ʃi wɪl. ɪk kʊb bi 'verɪ ˋnaɪʃ ju nəʊ
A: aɪ ʃʊd əv 'θɔt ʃɪd əv bɪm 'bɔd ˋstɪf
B: wel ɪts 'əʊnlɪ gəʊɪŋ tə 'lɑst 'hɑf ən ˋˇaə

(b) A: dʒʊ 'mintseɪ jə 'sɪstr̩ bɪ 'kʌmɪŋ l̩ɒŋ ˏtu
B: f̩ ˋkɔʃɪ wɪl. ɪkəbɪ 'ver ˋnaɪʃ ʃə nəʊ
A: aɪʃ tf̩ 'θɔʔ ʃɪb bɪm 'bɔ ˋstɪf
B: wets'əʊnɪ ŋənə 'lɑs hɑf n̩ ˋˇa

10 Teaching problems

The learner can only begin to tackle the problems of linking words together in connected speech once he has mastered the pronunciation of citation forms, and acquired an easy command of spoken English. The more proficient he becomes in the use of the language, the more naturally will features of connected speech come to him.

How many of the simplification features described in this chapter should the learner aim at using spontaneously? The answer is: at least the basic ones described under the Unhurried Colloquial style of pronunciation. Despite the fact that none of these features are indispensable for intelligibility, failure to produce the basic elisions and assimilations will make the speaker sound unnatural and, in some cases, old-fashioned. By basic simplifications we do not mean the adoption of a few temptingly easy forms such as *p'raps* or *s'pose*, but the systematic and consistent use of the more common elisions and assimilations.

The next question is, at what stage of language learning will the student be able to adopt these articulatory simplifications? This will probably not occur during the first two or three years of his language course, nor should it be attempted until he has acquired an easy fluency and adequate tempo. Any attempt to do so in the stumbling initial stages will sound just as artificial as failure to do so later. The learner must also take care not to use un-English elisions and assimilations resulting from Spanish interference, such as elision of pre-consonantal and final /s/, simplification of clusters as in *extent*, or assimilations of fortis to lenis ('voicing'), as with the sibilant in *this man*, or the fortis stop in *blackmail, light brown*; at this point learners would do well to observe the prevalence of the glottal stop, and should be encouraged to use it. Obviously, the type of interference will depend on the regional variety of Spanish. Native speakers of English will not in general prove to be helpful informants in this respect, since linguistically naive people are not conscious of the way they

speak, and when pressed will probably condemn all simplified forms as careless or substandard.

Our last question is, what use will the future teacher make of the Informal Colloquial style of pronunciation? The answer here is that his use of it will be passive, in that while it is quite unnecessary for him to adopt it as a model for production, he must be able to understand it with ease. In order to develop this 'receptive fluency' he will require a theoretical description of this style and systematic exposure to spontaneous, informal, conversational English. This will enable him gradually to understand a message from sometimes very simplified phonetic information.

Notes

1 D. Jones (1956: 217) distinguished between the terms assimilation, i.e. the 'process by which certain pronunciations are evolved', and similitude, which refers to allophonic adjustments. This distinction, however, is not made by all phoneticians.

2 In this respect it is interesting to compare the 14th edn (1977) of *EPD*, which has been extensively revised by A. C. Gimson, with previous editions. *EPD* was first published in 1917.

3 Only very recently have the remaining features begun to receive systematic treatment. See D. Crystal (1969), D. Crystal & D. Davy (1969, 1975), G. Brown (1977), and J. Windsor Lewis (1977, 1979, and forthcoming (b)).

4 See I. Ward (1939: 198), D. Jones (1956: 13), A. C. Gimson (1980: 297), and J. D. O'Connor (1971: vii). For a deeper discussion of the Informal Colloquial style, see H. Ortiz Lira (1976) and G. Brown (1977). We have preferred the label 'informal' to 'rapid' because analysis has shown that this type of speech is not rapid throughout, but its rate of delivery is continuously changing. Similarly, we have discarded 'slow' in favour of 'unhurried', to avoid the misleading connotation of the former.

9 Accentuation

1

Until now we have been cutting up speech into segments, and analysing *segmental* features. We are now going to study another set of phonetic features, which do not affect one segment, but long stretches of utterance, such as the syllable, the word and the sentence. These features, which are so to speak superimposed on segments, and are known as *suprasegmental* or *prosodic* features[1] include accentuation, rhythm and intonation.

2 Prominence

When we speak we give more emphasis to some parts of an utterance than to others. We can make a syllable stand out with respect to its neighbouring syllables in a word, and some words stand out with respect to the rest of the words in a longer utterance. Let us consider those elements that produce *prominence* at syllable level: *pitch*, *quality*, *quantity* and *stress*.

In the past, these terms – particularly stress – were not very strictly defined, in that articulatory and auditory criteria were often confused. When we gave articulatory definitions for consonants and vowels, we did not have much difficulty in feeling and sometimes seeing what was happening in our vocal tract. That was because we were dealing with fairly accessible articulators. Now, however, owing to the elusive nature of the elements producing prominence, it will be necessary to refer to each of them in terms of how they are produced, and how the listener perceives them.

Let us first consider *pitch*. In chapter 2, section 4 we explained that the tenser the vocal folds, the faster they vibrate, and the higher the note that is produced – an articulatory definition. But we cannot actually feel our vocal folds vibrating faster or slower. What we hear is a higher or lower note. So articulatorily pitch depends mainly on the tension and consequent rate of vibration of the vocal folds. Auditorily, it is that quality of a sound in terms of which it can be placed on a scale running from high to low, or acute to grave. It is only possible for changes of pitch to occur on some syllables in an utterance.

In order to consider *quality* we shall once again refer to the speech mechanism. In chapter 2, section 5 we said that vibration of the vocal folds produces an almost inaudible note, that is modified by the resonators as it passes through them, thus varying the quality of a sound. Articulatorily, therefore, quality depends on the shape of the resonators. Auditorily, it is that feature in terms

of which two sounds, similarly presented and having the same loudness, quantity, and pitch, are perceived as dissimilar, e.g. the difference between /s/ and /ʃ/, or /ɪ/ and /e/.

It is not necessary for our purposes to define *quantity* from the articulatory point of view. Auditorily, it is that property of a sound that enables us, using only our ears, to place it on a scale going from long to short. From the perceptual point of view it is referred to as *length*.

Finally we shall examine *stress*. From the articulatory point of view, it is caused by greater muscular energy and breath forces. Auditorily, it is perceived as *loudness*, and can be defined as that property of a sound which enables us, using only our ears, to place it on a scale going from loud to soft. So the speaker feels this feature in one way – extra energy – and the listener hears it in another way – extra loudness.

What kind of syllables are associated with prominence in the light of these four elements? In the case of pitch, those which can act as pitch movement initiators; in the case of quality, those containing a strong vowel; as to quantity, those containing a long vowel and/or consonant, and in the case of stress, those containing a loud sound. Lack of prominence is associated with syllables that cannot usually act as pitch movement initiators, those containing weak vowels or syllabic consonants, and short, soft sounds.

All of the elements described above can play a part in making a syllable stand out with respect to its neighbours. They do not all play an equally important part, though, nor are all four always present together.

Until fairly recently stress was considered to be the most important element in producing prominence. The third syllable in Sp. *embajada*, or the second one in Eng. *dictation* would be said to be stressed, that is, pronounced with a greater degree of force than the surrounding syllables. But stress is not the only factor that makes these two syllables more prominent. This can easily be demonstrated if we interfere with the normal pitch pattern of the words. Their normal citation forms are /emba'xada/  and /dɪk'teɪʃn/ . Let us try saying them on a monotone, applying only stress – or greater energy – to the prominent syllables, but making no pitch movement. The pattern would then be *embajada* and *dictation* . We shall find that when said on a monotone, it is not so easy to distinguish which syllable is the most prominent one. Try the same experiment with the English words *'insult* (noun) and *in'sult* (verb), or the Spanish words *ca'mino ~ cami'nó*. Here it is even more difficult to distinguish the prominent syllable when said on a monotone.

Obviously, it is incorrect to say that syllables are made prominent by stress alone. There is also pitch movement on these syllables, which is far more important than stress in conveying prominence. This movement need not necessarily be downwards; we may say the word in a questioning tone, e.g. /dɪk,teɪʃn/ , in which case the movement would be upwards. The important fact is that some sort of pitch movement can start on these syllables, i.e. they can act as pitch movement initiators.

Let us now consider the English word *cigarette* /'sɪgə'ret/ . This has two prominent syllables, but they are prominent in different ways. In the

first syllable the chief element causing prominence is stress, whereas in the third syllable the main factor is change of pitch. Notice also that the non-prominent syllable contains the short weak vowel /ə/.

Finally, syllables may receive some prominence due to the quality and/or quantity of the vowel sound in them, without any extra muscular energy or pitch movement; e.g. the last syllable in *attitude* /ˈætɪtjud/ ◝ . ◦ may be said to have inherent prominence, produced rather by the inherent quality and quantity of the strong vowel /u/ than by a voluntary action on the part of the speaker.

3 Accent

When a syllable is a starter of pitch movement, or has the natural potential to be one, we shall say that it is *accented*, irrespective of whatever other elements are present. When any of the elements causing prominence are present, but the syllable is incapable of acting as a pitch movement initiator, we shall simply say that it is *prominent*.

Let us examine a few English words in their citation forms. The second syllable in *install* . ◝ is accented because it contains a long, strong, stressed vowel with a change of pitch, and is at the same time actually acting as the pitch movement initiator. In *ability* . ◝ . . the second syllable is accented because it is stressed, has pitch movement and is the pitch movement initiator. The first syllable in *millionaire* • . ◝ is accented due to stress and the potential to act as pitch movement initiator. The first syllable of *afternoon* • . ◝ is accented because of stress, a strong vowel, and the potential for starting pitch movement. Although the first syllables of the last two examples are not actually acting as pitch movement initiators, they could do so if we changed their citation patterns to ◝ . ∾. The last syllable in *diagram*, however, is not accented even when said in a falling-rising tone, i.e. ◝ ◞ , since the pitch movement begins on *dia-*, but could never begin on *-gram*. This last syllable is merely *prominent*. To sum up, all accented syllables are prominent, but not all prominent syllables are accented.

4 Types of accent

When a word has two or more accents, pitch movement will naturally start on the last one. We shall call this the *primary* accent and mark it /ˈ/, or ◝ in the scalar notation. The previous accent (or accents) are less likely to initiate pitch movement; we shall call them *secondary* accents and mark them /ˌ/, or • .[2] Syllables with inherent prominence, and unaccented, non-prominent syllables will be marked in the scalar notation only, i.e. ◦ and . respectively.

5 Perception of accent

The native speaker and listener do not always depend on the same clues as the foreign student for the perception of accent. When two native speakers communicate, they are sharing the same linguistic code, and consequently will often make judgements based not on what they actually hear, but on what they know

they should hear. The native listener's perception of accent is then subjective – it is influenced by his previous knowledge of the language. He always knows where accent is and will never confuse it with prominence. An often-quoted extreme example of this is *Thank you* pronounced /ˌ-kju/, which a native listener will hear as unaccented: the accent is on a non-existing first syllable, the second one bearing only prominence. Questions of this type, which are of course irrelevant in the case of native speakers and listeners, may cause learners with weak knowledge of English accentual patterns to confuse accentuation with prominence given by pitch movement, when asked to discriminate between them, e.g. ˈ*comment* ~ ˈ*comˌment*, the latter being non-English.

6 Accentuation of simple words

By *simple* words we mean those made up of roots alone or with the addition of affixes. It is difficult to establish rules for the accentuation of simple words in English, so students should learn the accentual pattern of each new word just as they must learn its pronunciation. The following lists include examples of the main word accentual patterns in English in their citation forms.[3]

(*i*) *Two-syllable words*

(1) Primary accent + unaccented syllable (•\ .)

ˈteacher	ˈapple	ˈillness	ˈsenate	ˈMonday
ˈhusband	ˈchocolate	ˈcolour	ˈlittle	ˈregion
ˈcircus	ˈisland	ˈpreface	ˈmountain	ˈentrance

(2) Primary accent + prominent syllable (•\o)

ˈfemale	ˈempire	ˈconduct	ˈexpert	ˈepoch
ˈaccess	ˈcolleague	ˈclimax	ˈaspect	ˈforecast
ˈfortune	ˈborrow	ˈcontact	ˈcontrast	ˈproverb

(3) Unaccented syllable + primary accent (. •\)

aˈgain	aˈlone	faˈtigue	caˈreer	aˈbove
reˈmark	beˈlieve	caˈress	paˈtrol	ofˈfence

(4) Prominent syllable + primary accent (o •\)

canˈteen	arˈcade	carˈtoon	bouˈtique
bruˈnette	chamˈpagne	augˈment	alˈthough
camˈpaign	shamˈpoo	doˈnate	techˈnique

(5) Secondary accent + primary accent (• •\)

ˈunˈknown	ˈChiˈnese	ˈdeˈcode	ˈnon-ˈstop
ˈmisˈuse	ˈmayonˈnaise	ˈfareˈwell	ˈeighˈteen
ˈelseˈwhere	ˈreˈwrite	ˈreˈbuild	ˈvioˈlin

(*ii*) *Three-syllable words*

(1) (•\ . .)

ˈfortunate	ˈlunatic	ˈcomparable	ˈgenerally

ˋcatholic	ˋliterature	ˋnecessary	ˋdecorative
ˋsubsequent	ˋcommentary	ˋcomfortable	ˋfashionable

(2) (•◝.o), (•◝o.)

ˋcorridor	ˋabsolute	ˋcatalogue	ˋcaravan
ˋhandicap	ˋparagraph	ˋsubtitle	ˋcorpuscle
ˋpullover	ˋcucumber	ˋtriangle	ˋrectangle

(3) (.•◝.)

imˋportant	beˋhaviour	conˋfusion	aˋbandon
jaˋlopy	subˋstantial	adˋvantage	deˋtermine
deˋvelop	conˋsider	hoˋrizon	hiˋstoric

(4) (o•◝.), (.•◝o)

amˋbition	fanˋtastic	parˋtition	auˋthentic
opˋtician	transˋmission	toˋmato	toˋbacco
atˋtaché	diˋstribute	fiˋancée	conˋtribute

(5) (•◝.)

'subˋstandard	'preˋjudgement	're`marry	'non-ˋfiction
'scienˋtific	'nonˋsmoker	'upˋcountry	'subˋconscious

(6) (•.◝)

'guaranˋtee	'seven`teen	'cigaˋrette	'magaˋzine
'pictuˋresque	'serviˋette	'recomˋmend	'underˋstand
'oranˋgeade	'millioˋnaire	'refuˋgee	'volunˋteer

(*iii*) *Four-syllable words*

(1) (◝...)

ˋcategory	ˋarbitrary	ˋdelicacy	ˋeligible
ˋpreferable	ˋirritable	ˋmemorable	ˋtestimony
ˋceremony	ˋaccuracy	ˋimitative	ˋmatrimony

(2) (◝.o.), (◝..◎)

ˋcentimetre	ˋcommentator	ˋcalculator	ˋdemonstrator
ˋarchitecture	ˋoperator	ˋcharacterize	ˋcapitalize
ˋaristocrat	ˋregularize	ˋsystematize	ˋautomobile

(3) (.◝..)

geˋography	oˋbligatory	comˋbustible	acˋcompaniment
deˋmonstrative	laˋboratory	preˋparatory	cerˋtificate
aˋrithmetic	adˋvertisement	parˋticular	deˋplorable

(4) (.◝.o), (o◝..)

preˋoccupied	apˋpreciate	enˋthusiast	aˋpologize
siˋmilitude	eˋconomize	orˋthography	auˋthority
teeˋtotaller	morˋtality	diˋameter	anˋtiquity

(5) (•.◝.)

'variˋation	'circuˋlation	'explaˋnation	'eleˋmentary

'demon`stration	'cafe`teria	'idi`otic	'ado`lescence
'conver`sation	'advan`tageous	'inter`ference	'emi`gration

(6) (●○◥.)

'accep`tation	'conur`bation	'expec`tation	'retar`dation
'depart`mental	'relo`cation	'demar`cation	'impor`tation

(*iv*) *Five-syllable words*

(1) (◥....)

`capitalism	`puritanism	`figuratively	`cannibalism
`monosyllable	`radicalism	`qualitatively	`speculatively

(2) (.◥...)

i`nevitable	ca`tholicism	in`adequacy	com`municative
ad`ministrative	me`tabolism	im`practicable	vo`cabulary

(3) (.◥.○.)

ac`celerator	re`frigerator	in`cinerator	so`phisticated
en`thusiasm	ad`ministrator	in`gratiating	a`pologizing

(4) (●.◥..)

'curi`osity	'ari`stocracy	'archae`ology	'uni`versity
'peda`gogical	'ide`ology	'capa`bility	'irre`sistible
'possi`bility	'inex`plicable	'incon`siderable	'ambi`guity

(5) (●.◥.○)

'diffe`rentiate	'under`estimate	'reha`bilitate	'decon`taminate

(6) (●..◥.)

'classifi`cation	'characte`ristic	'Mediter`ranean	'qualifi`cation

(7) (.●.◥.)

con'tinu`ation	con'side`ration	ap'preci`ation	en'thusi`astic
pro'nunci`ation	ab'brevi`ation	as'soci`ation	e'xami`nation

(8) (●●.◥.)

'pre'dispo`sition	'pre'occu`pation	'self-'preser`vation
'pre'fabri`cation	're'valu`ation	'mis'calcu`lation

(*v*) *Six-syllable words*

(1) (●.◥...)

'unex`ceptionable	'indi`vidualism	'indi`stinguishable
'ille`gitimacy	'unpro`fessionally	'uni`maginative

(2) (●..◥..)

'irrita`bility	'characte`ristically	'etymo`logical
'disconti`nuity	'unsyste`matically	'sentimen`tality

(3) (.●.◥..)

fa'mili`arity	a'vaila`bility	in'feri`ority	re'sponsi`bility

(4) (.●..◥.)

e'lectrifi`cation	so'lidifi`cation	ex'perimen`tation
per'sonifi`cation	ex'emplifi`cation	dis'qualifi`cation

(5) (●.●.◥.)

'diffe'renti`ation	'insu'bordi`nation	'indi'vidua`listic
'mispro'nunci`ation	'misap'propri`ation	'reca'pitu`lation

(vi) Seven-syllable words

(1) (.●..◥..)

in'telligi`bility	i'nevita`bility	in'vulnera`bility
im'practica`bility	un'altera`bility	im'pressiona`bility

(2) (●.●.◥..)

'irre'sponsi`bility	'indi'vidu`ality	'uncon'vention`ality
'super'fici`ality	'incom'pati`bility	'unre'lia`bility

7 Alternative accentual patterns

There exists a large number of words with optional accentuations, of which about 150 are in a relative state of equilibrium.[4] Of these we shall include those of more frequent usage. Prominent syllables are not indicated:

1 *Two-syllable words*

(a) (◥.)~(.◥)

adult	brochure	bureau	chauffeur	Christine
contact (v.)	decade	defect (n.)	detail (v.)	finance
meantime	mishap			

(b) (.◥)~(◥.)

bouquet	discharge (n.)	elsewhere	meanwhile	Pauline
perfume (v.)	quinine	régime	research (n.)	syringe
terrain	weekend			

2 *Three-syllable words*

(a) (.◥.)~(◥..)

disputant	exquisite	sonorous	uprising

(b) (●.◥)~(◥..)

discothéque	gabardine	registrar	souvenir	submarine
undersigned				

(c) (◥..)~(●.◥)

caravan	caviare	Ecuador	kerosene	parachute

3 *Four-syllable words*

(a) (•\...)~(.•\..)

applicable	controversy	exigency	formidable
kilometer	nomenclature		

(b) (.•\..)~(•\...)

demonstrable	despicable	disputable	explicable
hospitable	metallurgy		

(c) (•\...)~(•.•\.)

television

4 *Five-syllable words*

(a) (•.•\..)~(•\...)

momentarily necessarily

8 Accentuation of compound words

By *compound* we mean words made up of two and less frequently three roots, and certain collocations, all of which may or may not be written with a hyphen in the spelling.[5] As with simple words, it is difficult to reduce the accentuation of the total inventory of English compounds to rules. The following lists, based on grammatical or lexical patterns, rather than on number of syllables, by no means cover the entire range of possibilities. We shall refer to (i) single-accented, and (ii) double-accented compounds. Of the two, single-accented compounds are commoner, and take the accent on the first element.

(*i*) *Single-accented compounds*

1 The largest group is formed by the combination of two nouns.[6]

(a) The second noun indicates the performer of the action, as in:

ˈbaby-sitter	ˈcar dealer	ˈpain-killer	ˈholiday-maker
ˈbook seller	ˈdish washer	ˈhousekeeper	ˈrecord-player
ˈtin-opener	ˈtypewriter	ˈlawn-mower	ˈbartender
ˈlie-detector	ˈtaxi-driver	ˈegg-beater	ˈvacuum cleaner
ˈdress-hanger	ˈhair-dryer	ˈballet-dancer	ˈstamp-collector

(Exception: ˈstage ˈmanager).

(b) In the following cases the resulting compound may be a noun or an adjective:

(ˈbreath/ˈleave-/ˈpains) taking	ˈwindow (-dressing/-shopping)
(ˈbee-/ˈbook-/ˈhouse) keeping	ˈtime (saving/-consuming)

(c) The first noun delimits the meaning of the second, by stating 'what type of thing' it is, e.g.:

(ˈcurrent/deˈposit/ˈjoint/ˈprivate/ˈsavings) account
(ˈhead/ˈtooth/ˈear/ˈstomach/ˈback) ache
(ˈegg/desˈsert-/ˈsoup-/ˈtable/ˈtea/ˈsalt) spoon
(ˈhand/ˈkit/ˈmail/ˈtool-/ˈschool) bag
(ˈbase/ˈfoot/ˈtennis-/ˈsnow/ˈbeach) ball
(ˈbook-/ˈtoy/ˈporn/ˈfruit-/ˈrecord) shop
(ˈbirthday/ˈChristmas/ˈtime-/ˈcredit/iˈdentity/ˈpost) card

ˈschool (boy/-days/girl/age/-time/-book)
ˈbed (-bug/-clothes/room/side/spread/time)
ˈsea (food/gull/-level/plane/port/side/man/-water)
ˈblood (-relation/bank/-group/pressure/hound/-transfusion)
ˈclothes (-brush/-basket/-line/-peg/-hanger)
ˈair (-craft/hostess/letter/mail/port/-pump/raid/terminal)
ˈtime (-bomb/-sheet/-limit/-signal/table/-work)
ˈnews (agent/boy/letter/paper/reel/sheet/stand)
ˈwater (-biscuit/-bottle/-colour/fall/melon/mill/-power/proof)

2 Another important group of compounds is formed by the combination of adjectives and nouns.

(a) Normally, when a noun is preceded by an adjective, both are accented. However, when this combination constitutes a specific, long-established compound, the first component tends to carry the primary accent, as in:

ˈblack (berry/bird/board/leg/list/mail)
ˈgrand (child/daughter/father/ma/mother/pa/parent/son)
ˈhigh (brow/chair/jump/light/street/time/-school/way)

ˈfolk music	ˈgreengrocer	ˈdark room	ˈsecondary school
ˈmental home	ˈpostal order	ˈgrey matter	ˈsweet potato

(b) In the following cases the adjective is an *-ing* form, e.g.:

ˈdriving (-belt/licence/mirror/school/test)
ˈshopping (bag/basket/centre/list/street)
ˈwriting (-desk/-ink/-pad/-paper)

(ˈboxing/ˈcooking/ˈdancing/ˈdrawing/ˈdriving/ˈsinging) lessons
(ˈadding/ˈmincing/ˈprinting-/ˈsewing-/ˈwashing-/ˈweighing-) machine

ˈhearing-aid	ˈwaiting list	ˈswimming pool
ˈboarding school	ˈfiling cabinet	ˈsteering-wheel
ˈparking zone	ˈfreezing point	ˈselling price

3 Verbs and nouns sometimes combine, as in:

ˈcatchword	ˈcookbook	ˈpickpocket	ˈplayboy
ˈtelltale	ˈcork-screw	ˈdaybreak	ˈfire-escape
ˈheartbreak	ˈroll-call	ˈpushchair	ˈswearword

(Exception: ˈcease ˈfire.)

4 Many two-word verbs give origin to nouns, e.g.:

a `hold-up a `let-down a `take-off a `walk-over
(Main exception: a 'lie-`down.)

(ii) Double-accented compounds

1 Compounds made of nouns may be double-accented in the following cases:

(a) The first noun indicates the position of the second one, as in:

'country-`house 'camp-`bed 'shop `window 'kitchen `cupboard

(b) The second noun 'is made' of the first one, as in:

'apple `sauce 'cotton `wool 'cherry `brandy 'fruit `salad
'lemon `squash 'olive `oil 'plum `pudding 'pork `pie
(Main exceptions: `corn-flakes, `fruit-cake, and all compounds with *juice*.)

(c) Other common noun + noun compounds are:

'mother `tongue 'bank `holiday 'city `centre
'fellow-`citizen 'ground `floor 'head `master
'level `crossing 'science `fiction 'mass `media
'woman `doctor 'woman's `lib 'woman `driver

2 Some common double-accented compounds formed by nouns and adjectives are:

(a) Adjective + noun:

'barbed `wire 'best `man 'best-`seller
'black `market 'civil `war 'cold `war
'common `sense 'loud-`speaker 'prime `minister
'short `circuit 'vicious `circle 'wet `blanket
de'veloping `country 'falling `star 'leading `article
'living `wage 'flying `colours 'sliding `door

(b) Noun + adjective:

'stone (-`blind/-`cold/-`dead/-`deaf/-`sober)
('duty-/'post-/'rent-/'tax-) `free

'brand-`new 'navy `blue 'snow-`white 'world-`wide

3 Participles make up some common compounds, e.g.:

'high (-`minded/-`pitched/-`powered/-`priced/-`spirited)
('absent-/'broad-/'mean-/'narrow-/'open-/'strong-/'weak-) `minded

'close-`fisted 'deep-`frozen 'far-`fetched 'old-`fashioned
'air-con`ditioned 'bell-`bottomed 'hand-`knitted 'home-`made
'easy-`going 'far-`reaching 'good-`looking 'hard-`working

4 The following three-root compounds are arranged according to their accentual pattern:

'bed-`sitting-room
'hot-`water bottle
'value-`added tax

'great-`grandfather
'teacher `training-college
'waste-`paper basket

'audio-visual `aids
'ballpoint-`pen
'four-letter `word

'back seat `driver
'cod-liver `oil
'take-home `pay

Single-accented three-root compounds are less common, e.g.:

`merry-go-round
`windscreen-wiper
`fire-insurance policy

for`get-me-not
`crossword puzzle
`test-tube baby

9 The distinctive function of accent

Just as accent in Spanish may function distinctively (cf. *`término ~ ter`mino ~ termi`nó*), so in English it may distinguish between pairs of words of identical spelling and identical or similar phonemic pattern. This function may operate both in simple words and nouns + modifiers.

In the case of simple words the tendency is for nouns and/or adjectives to be accented on the first syllable, and verbs on the last:

(i) In most verbs the unaccented syllables contain a weak vowel, but this tendency is not so strong in the case of nouns, e.g. *abstract* /`æbstrækt/ (adj./n.) ~ /əb`strækt/ (v.) Similarly:

accent	annex	attribute	conduct	conflict	contest
contract	convict	decrease	defect	desert	export
extract	contrast	frequent	object	permit	pervert
present	progress	project	protest	rebel	record
subject	survey	suspect			

(ii) In a few cases it is only the accentual pattern which distinguishes between noun and verb, as in *increase* /`ɪnkris/ (n.) ~ /ɪn`kris/ (v.). Similarly:

dictate digest discount import insult torment transport

There are a few cases where accent does not function distinctively, i.e. verbs and nouns/adjectives have the same phonemic and accentual forms, e.g.:

ad`dress `comment `concrete de`posit di`rect ex`press `process

As to nouns + modifiers, different accentual patterns may distinguish between noun phrases and established compounds. For instance, a *'green `house* denotes a house painted that colour; but a *`greenhouse* is a special building used for growing plants. *'Cooking `apples* could be the the answer to the question *What's she doing*?; but *`cooking apples* are apples suitable for cooking.

Accent can also distinguish between verbs followed by adverbs, which are accented, and prepositions, which are unaccented, e.g.:

'Don't let the oppor'tunity go `by (=pass)
That's 'not a 'good 'map to `go by (=follow)

'What 'time did she 'come `to? (=regain consciousness)
Just 'look what we've `come to (=reached)

At 'seven o"clock the 'doctor came `by (=called)
'During the re'cession 'jobs were 'difficult to `come by (=find)

'What 'time will the 'troops be 'marching `in?
What a 'lovely 'uniform you'll be `marching in

'This is the 'music that 'turns me `on (=excites)
'This is the 'pivot the 'wheel `turns on (=gyrates)

10 Accentuation in connected speech

In connected speech we make some words stand out with respect to others, according to the amount and type of information they carry. Just as the learner must know which syllable(s) to accentuate in a word, he must also know which words to accentuate in connected speech. Although the same applies to his mother tongue, the Spanish speaker will be faced with a series of difficulties in English. In the cases where correspondence between both languages does occur, the student is not sufficiently linguistically aware of the accentual characteristics of his own language to benefit from the similarities. It will now be necessary to indicate primary accent with a rising pitch movement [ˏ], a falling one [ˎ], and a falling-rising one [ˇ].

In general, *content* words are likely to be accented in an utterance: nouns, principal verbs, adjectives and adverbs; *structural* words tend to be unaccented: auxiliary verbs, personal, reflexive and relative pronouns, prepositions, articles, possessive adjectives, and conjunctions. There is, however, a group of structural words which are frequently accented: demonstrative and possessive pronouns, interrogative words, and negative anomalous finites. The following sentence exemplifies this rule:

'People who have 'never 'come to 'England beˏfore, and 'think their 'English is ˏgood, 'often 'ask themselves 'why the 'man in the 'street 'doesn't underˎstand them.

The above rules will often suffer modifications. There exists a certain degree of elasticity in accenting words, as can be seen if we examine a given utterance spoken either by different speakers, or by the same speaker in different circumstances. The following sentence, for instance, could be accented in a variety of ways, although the accentuation of certain words is inevitable:

'Does he 'always 'have to 'come ˏlate?
Does he 'always 'have to 'come ˏlate?
Does he 'always have to come ˏlate?

A more complex set of modifications occurs in order to satisfy English rhythm and usage, and to convey different meanings.

(i) Rhythmical modifications

English rhythm requires accented syllables to be separated by unaccented ones – a tendency which functions both at word and at connected speech level.

1 In sequences of three content words, the second one tends to lose its accent it if has not more than two syllables, e.g.

a 'nice old ˌchair	I 'can't speak Chiˌnese
a 'nice cosy ˌchair	I 'can't study Chiˌnese
cf. a 'nice 'comfortable ˌchair	cf. I 'can't trans'late Chiˌnese

2 Phrasal verbs that can take a direct object adopt different accentual patterns, depending on the position and the nature of the object, as in:

'put on your ˌshoes	'turn off the ˌtap
'put your ˌshoes on	'turn the ˌtap off
'put them ˌon	'turn it ˌoff

Phrasal verbs that cannot take a direct object are accented on both verb and particle, unless they are immediately preceded and/or followed by another accented word, e.g.:

'come ˌin	he 'woke ˌup
you 'can't come ˌin	he 'soon woke ˌup
you can 'come in ˌnow	he 'woke up ˌearly

3 Many double-accented compounds and some simple words may lose the accent which is closest to another accent in the utterance, e.g.:[7]

'during the weekˌend	'tell the headˌmaster
a 'weekend ˌparty	the 'headmaster's ˌoffice
on 'Friday afterˌnoon	'near the ground-ˌfloor
the 'afternoon ˌconcert	the 'ground-floor ˌlights
he 'often interˌrupted	'nineteen nineˌteen
an 'interrupted ˌvisit	

When adjectives are used attributively (i.e. next to a noun) they drop their primary accent; when they are used predicatively (i.e. as part of the predicate) they lose their secondary accent, e.g.:

a 'good-looking ˌboy	my 'sweet-tempered ˌwife
I 'find him good-ˈlooking	she's 'very sweet-ˌtempered
a 'well-chosen ˌbook	a 'hand-made ˌsweater
the 'words are well-ˈchosen	it's 'totally hand-ˈmade

English place names provide the following examples:

in 'Hyde Park ˌCorner	on 'Piccadilly ˌCircus
'opposite Hyde ˌPark	she 'lives near Piccaˌdilly
from 'Waterloo ˌStation	at 'Heathrow ˌAirport
an 'office in Waterˌloo	a 'taxi to Heathˌrow

4 Less frequently single-accented words may suffer this rhythmical modification, e.g.:

he 'eats in ex`cess	he's 'there al`ready
'did you pay 'excess ˏluggage	he's 'already ˎgone
he 'said hel`lo	a 'photo of 'Princess ˎAnn
`ˊhello, Stephen	a 'young prinˎcess

To sum up, we have dealt with four groups of words: single- and double-accented simple words, and single- and double-accented compound words. The following is a summary of the rhythmical behaviour of these words:

(a) Only a small number of single-accented simple words suffer rhythmical modifications.

(b) All double-accented words, both simple and compound, may be affected by these modifications.

(c) Single-accented compound words do not undergo rhythmical modifications.

All these rules, however, may be broken for contrastive or emphatic purposes (see (iii) below).

Let us now see what happens when double-accented words are used in noun phrases:

'Japaˎnese	(A)	'ice-ˎcream
a 'Japanese ˎpicture	(B)	an 'ice-cream ˎsoda
a 'Japaˎnese lesson	(C)	an 'ice-ˎcream bowl

In (B) above rhythm modifies the accentual pattern of the citation form (A). In (C), on the other hand, the rule governing compounds prevails, since these phrases follow the patterns of similar established compounds, such as ˎ*English lesson* and ˎ*soup-bowl.*

(ii) Accentuation and usage

A number of announcements, set phrases and collocations follow accentuation tendencies that depend mainly on usage:

1 In announcements the accent tends to fall on the noun about which something is being said, rather than on the following content word, e.g.:

There are 'no ˎbuses today.	`Kate's on the phone
I'm 'doing ˎFrench this year	The `milkman's here
I 'saw `Nora yesterday	There's a `cat on my bed
We had some `rain last night	There's a mi`stake in this letter
Your `taxi's waiting	'Where's that `shirt I gave you?
The `baby's crying	I 'found the `book I wanted
The `kettle's boiling	'Let's have that ˎdrink you suggested
The `phone's ringing	'What about that ˎdress you bought?

2 Set phrases may take their own particular accentual pattern:

The 'new 'play brought the `house down
They 'get on like a ,house on fire
I've 'just seen ,what's-his-name
He 'has a `screw loose
I'm 'leaving in a ,day or two
I'm 'staying for a ,year or so
We'll 'get there in `no time
He 'didn't 'win by a ,long chalk

3 The word *street* is unaccented when it forms part of a place name, e.g.:

,Oxford Street	,Regent Street	Vic,toria Street
cf. 'Oxford ,Circus	cf. 'Regent's ,Park	cf. Vic'toria ,Station

4 Nouns used in a wide, unspecific sense, are normally unaccented, e.g.:

I'm a'fraid you're `seeing things
'Do you en'joy ,meeting people?
We've 'lived in `several places

(*iii*) *Emphatic and contrastive patterns*

Special meanings can be conveyed by varying the rule of accentuation of content and structural words.

1 Structural words may be accented for purposes of emphasis, e.g.:

You were 'driving `fast	'This is the 'book to ,read
cf. You `were driving fast	cf. This is 'the ,book to read
You must `go now	You've 'made a `mess of it
cf. You 'must ,go now	cf. You `have made a mess of it

Words used specifically for purposes of emphasis always take an accent:

I'm a `stranger here	'Come ,in
cf. I'm a 'stranger here my`self	cf. `Do come ,in
'Yes, I `will	It's a 'dull `book
cf. `Yes, of `course I will	cf. It's a `terribly dull book

2 When an explicit contrast is expressed, the elements which are in opposition attract the accent, leaving the repeated elements unaccented, e.g.:

I 'didn't 'say Oxford `Street, I said Oxford `Road
He 'plays both 'popular music and ,classical music
Did 'he divorce ,her, or did 'she divorce ,him?
'I must see 'John before his 'parents see `me
'Are you working ,indoors or ,outdoors?

In general, repetitions and synonyms are left unaccented, e.g.:

A: 'What's your ˌname? B: ˌMills. ˌGordon Mills
A: You 'haven't 'made that ˋphone call. B: I ˋknow I haven't

I 'hate the ˏinstitute, and the 'people conˌnected with the institute
'January was a ˋwonderful month

Exceptions can be found in some sayings, and echo utterances, e.g.:

A: 'Buy me 'six ˌpairs. B: 'Buy you 'six ˏpairs?
'First ˏcome, 'first ˌserved
'Out of ˏsight, 'out of ˌmind

Note the accentuation of the following implicit contrasts:

As far as ˇI'm concerned, you can 'go aˋhead
A: 'Did they ˏboth come? B: ˋOscar did

11 English *v.* Spanish word accentuation

If we grouped languages according to the mobility of the primary accent in the word, we would conclude that both English and Spanish have *free* accent, i.e. the place of the accent is variable, and accentuation rules – with their exceptions – have to be learned in order to know which syllables to accentuate. Within this freedom, however, Spanish shows a marked tendency towards fixed position of word accent, and English a tendency towards greater variability. The following figures show the relationship between place of word accent and number of syllables in the word:[8]

	2-syllable words		3-syllable words			4-syllable words			
	1st	2nd	1st	2nd	3rd	1st	2nd	3rd	4th
English	74	26	55	39	6	33	36	29	2
Spanish	78	22	6	74	20	0	11	80	9

Table 12 English and Spanish accent in words of 2, 3, and 4 syllables. The figures are given in percentages.

Table 12 reveals that the main differences are found in three- and four-syllable words. Whereas Spanish shows a clear tendency towards accent on the penultimate syllable, English favours accent on the first syllable.

12 Teaching problems

We shall now examine a series of points concerning accentuation, which frequently cause difficulty to the Spanish learner, and suggest some possible solutions.

(*i*) *Word accent*

The above confrontation reveals that Spanish speakers are not used to accentuating three- and four-syllable words on their first syllables. Furthermore, English derivatives do not always follow the accentual and/or phonemic patterns of their roots, e.g. *ˈperson > perˈsonifiˈcation, comˈpare > ˈcomparable*, etc.

Spanish speakers must also be aware of the presence and placing of secondary accents in English. Although they may exist in some styles of Spanish, secondary accents do not bring about any perceptible vowel quality modifications, as they do in English, e.g. *conˈverse ~ ˈconverˈsation*. The existence of cognate words seldom proves helpful in accentuation, cf. *ˈsupermarket ~ supermerˈcado, ˈatmosphere ~ atˈmósfera, ˈcomfortable ~ conforˈtable*. A further difficulty occurs whenever accent breaks a vowel sequence into separate syllables, as in *ˈgraduˈation, ˈvariˈation*, where the learner tends to triphthongize the vowel sequences, i.e. pronounce /-jeɪ-/ instead of /ɪˈeɪ/, etc. The last problem concerns syllables with inherent prominence. Spanish learners will generally have little trouble in recognizing syllables made prominent by diphthongs (e.g. *moˈtel, diˈlute*), but will find difficulty when these syllables contain pure vowels, especially after they have mastered English vowel weakening, e.g. *ˈcongress, ˈprogramme, sarˈcastic, ˈapricot*, etc.

The rules governing the so-called *accentual alternations* provide some clues which may help the learner to predict accentual patterns in simple words, as can be seen in:

(◝. .) ↔	(. ◝. .) ↔	(● .◝ .)
diplomat	diplomacy	diplomatic
photograph	photography	photographic
benefit	beneficence	beneficial
democrat	democracy	democratic
politics	political	politician

(. ◝) ↔	(● .◝ .)
explain	explanation
compete	competition
incline	inclination
derive	derivation
repeat	repetition

It is also useful for the learner to remember the accentual tendencies produced by the addition of certain suffixes, since some of them attract the accent towards themselves, while others reject it to preceding syllables. In this respect it may be easier for the learner to remember the exceptions, e.g.:

1 The suffixes *-ee* and *-ette* attract the accent towards them. Main exceptions: *comˈmittee*; *ˈetiquette, ˈomelette*.

2 The endings *-ic* and *-ible* reject the accent to the immediately preceding syllable. Main exceptions: *ˈArabic, aˈrithmetic, ˈcatholic, ˈlunatic, ˈpolitic, ˈrhetoric*; *ˈeligible, inˈtelligible, ˈnegligible*.

3 The suffix *-ute* rejects the accent to the antepenultimate syllable. Exceptions: *at`tribute* (v.), *con`tribute*, *di`stribute*.

4 Some derivatives follow the pattern of the word from which they are derived, e.g. adjectives ending in *-able*. Main exceptions: *`admirable*, *`comparable*, *`preferable*, *`reputable*.

The following clues give some indication as to the placing of secondary accents:

5 In words of three or more syllables, primary accents are generally separated from secondary ones by one, two, and exceptionally three syllables, e.g. *'engi`neer*, *i'dentifi`cation*, *'nationali`zation*.

6 When the prefixes *re-* and *de-* mean 'to do again' and 'to undo' respectively, they carry a secondary accent, cf. *'re-`form* ~ *re`form*; *'de`code*, etc.

At compound word level the problem is twofold: in the first place the student must learn whether the word is single- or double-accented; in the second place, he must know which of the words that are double-accented in their citation form lose one of their accents when used either attributively or predicatively. Furthermore, the student must be careful not to alter the information he wishes to convey (cf. a *`dark-room* ~ a *'dark `room*), nor produce nonsense expressions (e.g. a *'walking `stick* would imply a stick that is walking, instead of the correct compound *`walking-stick*).

There are two further points which apply both to simple and compound words. The first one deals with generational differences in accentuation: certain accentual patterns which were the recommended forms some generations ago are no longer accepted as such, and others which were considered as secondary options may now have become the first, or disappeared altogether (e.g. *ex`plicable* has superseded *`explicable*, and *`birthday present* has displaced *'birthday `present*).

The second one deals with differences brought about by RP and General American usage; e.g.:

RP	*GA*	
(.◥)	(◥o)	– address, and disyllabic verbs in *-ate*, e.g. donate, locate, vibrate, etc.
(◥o)	(.◥)	– ballet, café, cliché, detail, garage, précis
(● .◥)	(◥ .o)	– cigarette, magazine
(◥ .o)	(● .◥)	– cabaret
(.◥o)	(● o◥)	– fiancé(e)
(.◥ . .)	(● .◥ .)	– advertisement
(.◥ . .)	(◥ .o .)	– laboratory

(ii) Accent in connected speech

In the initial stages the learner tends to over-accentuate, due to both a lack of fluency and ignorance of the accentual tendencies of connected speech in English, in spite of the fact that these are, on the whole, quite similar to Spanish. English word order provides a further difficulty; for instance, the learner tends to

accentuate the last words in *Give it to me* and *Who are you writing to*? because in the first case Spanish personal pronouns in final position are only used emphatically and are therefore accented, e.g. *'Dámelo a ˋmí*; and in the second case, because Spanish sentences do not normally end in prepositions. Another common problem arises from the fact that Spanish auxiliary verbs tend to be accented, whereas English ones do not, cf. *'Todos es'taban canˏtando 'Everyone was ˏsinging.*

All modifications of the accentuation rule – i.e. those concerning rhythm, usage and emphasis – constitute an even greater difficulty, which even advanced students often fail to master. In the case of rhythm the learner will have to adopt different habits, because Spanish citation accentual patterns are kept invariable in connected speech. As to usage, the student will have to master the accentual pattern corresponding to each ready-made expression. Contrastive and emphatic devices are perhaps easier to learn, since they follow roughly similar tendencies to Spanish.

Owing to the fact that most accentuation rules in English are so elusive, we advise learners to try also to get the 'feel' of the problem, since this will enable them to know instinctively whether a word should be accented or not. Accentuation should be dealt with from the earliest stages of language learning. For this we suggest the selection of good models, constant and systematic listening to English, and practice in imitation of these models with the question of accentuation in mind. Further practice can be obtained by reading aloud passages from phonetic readers.[9]

Notes

1 The most complete work on prosodic features is that of D. Crystál (1969). Under 'prosodic systems' he includes pitch direction, pitch range, pause, loudness, tempo, and rhythmicality, and under 'para-linguistic systems', voice qualifiers (e.g. whisper) and voice qualifications (e.g. laughter), with tension belonging to both systems.

2 We have preferred J. Windsor Lewis's notation /'/ and /ˋ/ to the traditional /ˌ/ and /'/ mainly because the slant of the primary accent is a visual indication of the pitch movement typical of all citation forms. R. Kingdon (1958a) also uses marks to indicate prominent syllables; he refers to them as 'partial (or subordinate) static stresses'.

3 The most complete study of word accentual patterns has been carried out by R. Kingdon (1958a) and L. Guierre (1970). The latter analysed some 40,000 words by means of computational methods. N. Chomsky & M. Halle (1968) investigated English word accent within the framework of generative phonology.

4 See our 'The CPD Alternative Accentual Patterns', forthcoming.

5 We have solved the difficulty of deciding whether two separate roots can be considered a compound or not by accepting as compounds those which have attained dictionary status in *OALD* and/or *LDCE*.

6 R. Kingdon (1958a: 148) examined some 7,000 English compounds. The analysis of his corpus revealed that compounds with a noun as the second component formed 84.3% of the list. Of these the noun + noun type of compound was over 62%.

In both *EPD* and *LDCE* the polysyllabic second elements of compounds show secondary marks following the primary accent; these marks merely indicate rhythmic stresses.

7 There are two pronouncing dictionaries in which these rhythmical modifications are indicated – *EPD* and *LDCE*.

8 Adapted from P. Delattre (1965).

9 See E. L. Tibbitts (1946, 1963), N. C. Scott (1965), G. F. Arnold & A. C. Gimson (1973), G. F. Arnold & O. M. Tooley (1971, 1972), and J. D. O'Connor (1971, 1973b).

10 Gradation

1

An examination of the phonemic composition of polysyllabic content words reveals that about eight out of every ten unaccented syllables contain either a vowel of a centralized quality (i.e. /ə, ɪ, ʊ, ɪə, ʊə/), or none at all. Historical evidence points out that many of these syllables originally contained strong vowels that were gradually weakened or elided. This process of phonemic changes, which has been going on for centuries, is known as *gradation*, and is exemplified in words such as *instrument* /ˈɪnstrʊmənt/, *porcelain* /ˈpɔsl̩ɪn/, *envious* /ˈenvɪəs/, *usual* /ˈjuʒʊəl/.

Gradation is plainly evident in a few cases where words exist on their own – e.g. *man, board, head, fast, pan* – and at the same time form part of compounds, i.e. *gentleman* /ˈdʒentl̩mən/, *cupboard* /ˈkʌbəd/, *forehead* /ˈfɒrɪd/, *breakfast* /ˈbrekfəst/, *saucepan* /ˈsɔspən/. Many English place names provide further examples of this process, e.g. *Plymouth* /ˈplɪməθ/, *Scotland* /ˈskɒtlənd/, *Oxford* /ˈɒksfəd/, etc.

2 Weak-form words

A group of about fifty structural words presenting a very high frequency of occurrence in the English language are also subject to gradation. There is, however, an important difference between gradation in content and structural words. Forms such as /ˈfɒrɪd/ and /ˈenvɪəs/, which have undergone a historical process of gradation, remain unchanged no matter whether they are accented or unaccented in an utterance. The group of structural words which can undergo gradation, on the other hand, present different phonemic patterns depending on accentuation or prominence, and in some cases, position in the utterance. These structural words, which we shall call *weak-form words*, are therefore said to have one or more *weak-forms*, which will always be unaccented or non-prominent in an utterance, and a *strong-form*, which will always be accented or prominent. Since structural words are seldom prominent or accented, or used in isolation, the weak-forms are the most frequent pronunciations of these words. Weak-form words are characterized by obscuration towards a centralized vowel quality and/or elision of a vowel or a consonant.

3 The essential weak-forms

The following list includes those weak-form pronunciations which students must incorporate into their speech if their English is to sound natural. It contains

thirty-seven words representing thirty-eight grammatical items (*her* appears as both adjective and pronoun), totalling forty-six weak-forms.[1]

(*i*) *The Seven Adjectival Words*

Word	*Weak-Form*	*Notes and Examples*
a	/ə/	Used before consonant sounds and semi-vowels.
an	/ən/	*An* /ən/ *'old 'man with a* /ə/ *ˌbeard.*
the	/ðə/	Only used before consonant sounds and semi-vowels, e.g.: *The* /ðə/ *'north, the* /ði/ *'east, and the* /ðə/ *ˌwest.*
some	/sn̩/	Used when it means 'an indefinite quantity of'. The strong-form /sʌm/ is used when contrasted with 'the other(s)' and also when used as a pronoun, e.g.: *I 'saw some* /sn̩/ *ˌcherries, so I `bought some* /sʌm/. *'Some* /sʌm/ *'children 'came ˌlate.*
his	/ɪz/	Not used after a pause, or as a pronoun, e.g.: *He 'came in his* /ɪz/ *`car.* *'Are you a ˌfriend of his* /hɪz/?
her	/ɜ/	Not used after a pause. *'Tell her* /ɜ/ *her* /hɜ/ *ˌmother needs her* /ɜ/.
saint	/sn̩t/	Only used before names, e.g.: *St* /sn̩t/ *'Andrew and 'all the ˌother saints* /seɪnts/.

(*ii*) *The Six Pronouns*

he	/i/	Not used after a pause, e.g.: *He* /hi/ *'said he* /i/ *`would.*
him	/ɪm/	Also in *himself.*
her	/ɜ/	Also in *herself.*
us	/s/	Used after *let* in suggestions, but not with the meaning of 'allow', e.g.: *'O.ˌK. 'Let's ˌgo*; cf. *`Please, let us* /əs/ *ˌgo.*
	/əs/	Not used after *let* with the meaning of 'suggestion'.
them	/ðm̩/	Also in *themselves.*
there	/ðə/	Used anticipatorily before the verb *to be*, but never as an adverb of place, e.g.: *There* /ðə/ *was `nobody there* /ðeə/.

(*iii*) *The Five Conjunctions*

and	/ən/	Generally used after vowel sounds.
	/n̩/	Generally used after /t, d/ and all fricatives, e.g.: *'You and* /ən/ *'I can take 'Pete and* /n̩/ *ˌMary.*
as	/əz/	*As 'soon as ˌpossible.*
but	/bət/	A: *But* /bət/ *'was there any ˌbeer*? B: *Nothing `but* /bʌt/ *beer.*
than	/ðən/	*'More 'often than ˌnot.*

that	/ðət/	Also used as a relative pronoun, but never as a demonstrative, e.g.: *He ex'plained that* /ðət/ *'that* /ðæt/ *'man was the 'new ˎboss.*

(iv) The Five Prepositions

at	/ət/	*I'll be at 'work at 'two o'ˎclock.*
for	/fə/	*For 'better or for ˎworse.*
from	/frəm/	*A 'month from toˎday.*
of	/əv/	*An 'old ˎfriend of mine.*
to	/tə/	Also in *into.* Not used before vowel sounds, e.g.: *At 'ten to* /tə/ *ˏsix, and ten to* /tu/ *ˎeight.*

When any of the five prepositions occur finally in a clause, they take the strong-form, e.g.:

The 'man I was 'talking to /tu/ *'asked me 'where I ˏcame from* /frɒm/, *and 'what I was `looking at* /æt/.

Before unaccented personal pronouns they may also take the strong-form, e.g.:

He `read it to /tə (or) tu/ *me.*

(v) The Fifteen Anomalous Finites

am	/m/	Only used after *I.*
	/əm/	Used before *I*, e.g.: *I am* /m/ *`here now*; *am* /əm/ *I ˏlate?*
is	/z/	Used after vowel sounds, and after voiced consonants except the sibilants. Not used after a pause, e.g.: *'This is* /ɪz/ *ˏyours, and 'that one is* /z/ *ˎmine.*
are	/ə/	*'Roses are 'red, 'violets are ˎblue.*
was	/wəz/	*It was `Pat who was against it.*
were	/wə/	*There were 'two who were ˎready.*
have	/v/	Used after *I, we, you, they*, and generally after vowel sounds, e.g.: *I have* /v/ *been 'here be`fore.*
	/əv/	Used elsewhere, e.g.: *You should have* /əv/ *`told me.*
	/həv/	Only used after a pause, e.g.: *Have* /həv/ *you ˏbeen there?*
has	/z/	Used after vowel sounds, and after voiced consonants except the sibilants. Not used after a pause, e.g.: *`John has* /z/ *acˏcepted, but 'Peter has* /z/ *reˎfused.*
	/əz/	Only used after the sibilants, e.g.: *`George has* /əz/ *arrived.*
	/həz/	Only used after a pause, e.g.: *Has* /həz/ he *ˏphoned?*

had	/d/	Used after *I, he, she, we, you, they*, and generally after vowel sounds, e.g.: *We had* /d/ *pre`dicted it.*
	/əd/	Used elsewhere, e.g.: *The 'papers had* /əd/ *been `stolen.*
	/həd/	Only used after a pause, e.g.: *Had* /həd/ *he ˌleft by then?*
do	/də/	Used before consonant sounds, e.g.: *'How do* /du/ *`I know? 'How do* /də/ *`you know?*
does	/dəz/	*'What does `that mean?*
shall	/ʃl̩/	*Shall I ˌhelp you?*
will	/l/	Not used after a pause. After /l/ it becomes /əl/, e.g.: *'John will* /l/ *ˌask, and 'Paul will* /əl/ *ˏanswer.*
can	/kən/	*'What can I `say?*
must	/məst/	Not usual before unstressed *have*, e.g.: *You must* /məst/ *`answer it.* *You 'must* /mʌst/ *have ˏseen it.*
would	/d/	Used after *I, he, she, we, you, they.*

When any of the fifteen anomalous finites occur in final position, as in short answers, they take the strong-form, whether accented or not, e.g.:

Of `course I can /kæn/.

They also take the strong-form when used as main verbs, as opposed to auxiliaries. The only exception is the verb *to be*, e.g.:

I was /wəz/ *ˌthirsty, so I had* /hæd/ *some ˏtea.*

Other general points to remember are:

1 Weak forms consisting of a single consonant sound like those in which /h/ has been dropped, are not to be used at the beginning of sentences or after pauses.
2 For teaching purposes it is convenient to consider *our* as having only one pronunciation, i.e. the compressed form /ɑ/.
3 The word *not* has not been included in the list, because its form *n't* is only used as part of contracted, normally accented forms, which are better treated as single words.
4 Some of the weak-forms given may suffer further reductions as we move towards the informal extreme of the scale of pronunciation styles, e.g. *than* /ðn̩/, *that* /ðt̩/, *was* /wz̩/, etc.
5 Similarly, some of them can also undergo assimilation, e.g. *and* /əm, əŋ/, *is* /s/, *saint* /sn̩/, e.g. *you and me, you and Ken, St. Paul.*

4 Other weak-forms

Apart from the list of essential weak-forms, there exist others which the foreign learner need not adopt, either because their use is optional, or because they are

typical of the Informal Colloquial style of pronunciation. The first group includes words such as *could, should, would,* which can be pronounced with either /ə/ or /ʊ/, the latter being a common pronunciation even in familiar speech. The same can be said of *towards*, pronounced either /tʊˋwɔdz/ or /tɔdz/.

Among the weak-forms typical of rapid, informal speech are: *I* /ə/, *them* /əm/, *on* /ən/, *you've* /jəv/, *anyone* /ˋenɪwən/, *till* /tl̩/, *your* /jə/, etc.

5 English *v.* Spanish vowel weakening

Both in English and Spanish vowels are weakened in unaccented syllables. The degree of obscuration, however, is extremely different in the two languages. Although it is more noticeable in some varieties of Spanish (e.g. Mexican) than in others, vowel weakening is in general negligible and does not go beyond the allophonic level in this language: if we compare the first and last vowels in Sp. *agua*, for instance, they are still easily recognizable as belonging to the same /a/ phoneme. In English, on the other hand, vowel weakening is much more marked and, as in the case of weak-forms, it can even modify the phonemic patterns of words.[2]

6 Teaching problems

Failure to produce correct central vowel qualities and syllabic consonants in content words is one of the main factors causing a foreign accent in English. In this respect the relationship spelling-sound is a serious obstacle, which in the case of Spanish learners can be tackled by resorting to the comparison of cognates such as *memorandum*, Eng. /ˈmeməˋrændəm/ ~ Sp. /memoˋɾandum/; similarly, *banana, Amanda,* etc.

As to structural words, the use of strong-forms where weak-forms are required can make a student's English sound not only foreign, but also over-formal or affected, and can obstruct fluency and sometimes even understanding. The lists of weak-form words given by different EFL phoneticians vary considerably, because they do not distinguish between essential and optional forms, nor between different styles of pronunciation. A good reason for making this distinction is the fact that the non-essential ones may very well be ignored, without causing any of the problems mentioned above, and that the essential ones are sufficient if the student is aiming at an Unhurried Colloquial style. Weak-forms with /ɪ/ (as in *me, he, she, we, be, been,* and *the*), with /ʊ/ (as in *you, who, do, to,* and *into*), and with /ə/ (in the case of *her, per, sir*), which are to be found in nearly all the current lists, do not constitute an essential feature of spoken English, and therefore need not be shown in a phonemic transcription of a text in the Unhurried Colloquial style.[3] The adoption of these forms and other non-essential ones (e.g. *because* /bɪkəz/) can be left to the advanced stages of fluency and proficiency in English.

It cannot be too strongly emphasized that gradation, in close connection with accentuation, must be taught from the earliest stages of language learning. Teachers must not be tempted to speak artificial 'classroom' English, by using strong-forms in an effort to make themselves clear. On the contrary, students

should be constantly corrected in the misuse of strong-forms. Practice can be given in the repetition of utterances containing gradually longer sequences of weak-forms of the type *The one that came, The one that was at the party*, etc., and in the reading of transcribed texts.

Notes

1 For similar views see R. Kingdon (1950), and J. Windsor Lewis (1969).

2 For an acoustic and articulatory comparison of vowel weakening in English and Spanish, see P. Delattre (1969), and H. Vivanco (1976).

3 A detailed explanation of the matter can be found in J. Windsor Lewis (1965, 1967). Basically, the range of variation implied by the use of /ɪ, ʊ, ə/ instead of /i, u, ɜ/ in these fifteen words might be condemned as slightly 'phonetic' (as opposed to 'phonemic'), and therefore do not constitute indispensable alterations.

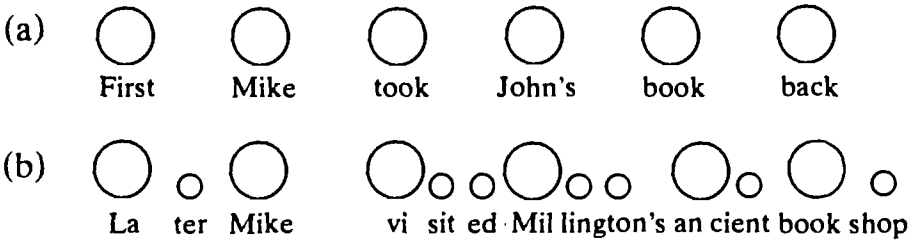
11 Rhythm

1

We have already examined the elements which make certain parts of an utterance stand out with respect to others. We are now going to take a closer look at the way in which these 'peaks of prominence' are distributed in the utterance; in other words, we shall deal with the rhythmic pattern of English. We have seen that one of the basic principles governing English rhythm is the fact that the accented syllables tend to be separated from each other by unaccented ones (see chapter 9, section 10), a tendency which also occurs in polysyllabic words.

2 English rhythm

Although it is possible to find English utterances of the type *'First 'Mike 'took 'John's 'book ˌback*, where every syllable is liable to be accented, this pattern constitutes the exception rather than the norm. A pattern of more frequent occurrence is the type found in *'Later 'Mike 'visited 'Millington's 'ancient ˌbook-shop*. If we were to use a large circle to represent an accented syllable, and a small circle to represent an unaccented one, the two sentences would look like this:



Both patterns (a) and (b) show that the large circles are separated by equal distances from each other, irrespective of the presence or absence of unaccented syllables separating the accented ones. This would appear to indicate that in actual speech the accented syllables are separated from each other by equal units of time, or in more technical terms, that the rhythmic beats are *isochronous*.

This absolute isochrony displayed in the examples will seldom be found in real speech. It will be easier to detect isochrony in carefully organized, flowing sentences, particularly in reading aloud, but it will be far less evident in a jerky, informal, conversational style full of stammerings, false starts and interruptions. It is therefore more exact to say that English rhythm shows a tendency towards

isochrony. Furthermore, utterances (a) and (b) display the maximum number of accents possible, which means that they have been said in a slow, deliberate style. We could, however, reduce the number of accents by quickening the tempo, e.g.:

(c) 
La ter Mike vi sit ed Mil ling ton's an cient book shop

Each accented syllable constitutes the peak of prominence in a *rhythmic group*, which may or may not include other unaccented syllables. In (b) and (c) above each accented syllable marks the beginning of a rhythmic group. Boundaries between them are not always absolute, as sometimes unaccented syllables could be equally attributed to the end of one group or the beginning of the next. They are more easily definable when they coincide with a definite grammatical boundary.

A stricter concept of rhythmic group is the one held by some phoneticians[1] who have taken the *foot* as the unit of English rhythm, each foot always starting with an accented syllable. We have preferred the more elastic notion of rhythmic group, because its respect for natural grammatical boundaries serves as a better indicator of where pauses should be made.

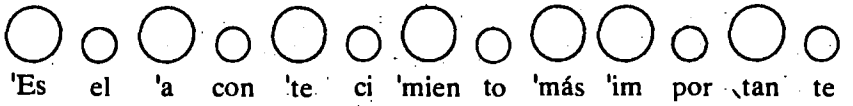
3 Spanish rhythm

Spanish rhythm has some characteristics in common with English. As explained before, very much the same types of words – content, as opposed to structural – are liable to be accented in Spanish. This leads to easily identifiable rhythmic groups, each one containing an accented syllable with or without the addition of unaccented ones. Furthermore, the number of accents in an utterance can be reduced as tempo is quickened, as can be seen in:

(d) 
'Es el a con te ci - 'mien to 'más im por ˌtan te

(e) 
'Es el a con te ci 'mien to más im por ˌtan te

One of the differences between English and Spanish rhythm lies in the fact that Spanish vowel weakening in terms of quality and quantity is very slight compared with English. A further difference can be seen in Spanish polysyllabic words, which may take extra stresses apart from those that would normally occur in the citation form, thus producing an affected or emphatic rhythm, e.g.:

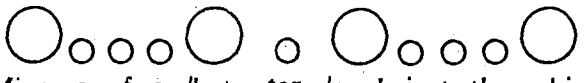
(f) 
'Es el 'a con 'te ci 'mien to 'más 'im por ˌtan te

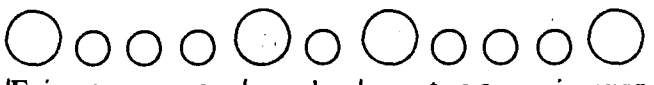
4 Stress-timed *v.* syllable-timed rhythm

In 1945 K. L. Pike coined the terms 'stress-timed' and 'syllable-timed'[2] to describe two different types of rhythm. English has a *stress-timed* rhythm because the accented syllables tend to occur at fairly regular intervals. When two accented syllables are separated by unaccented ones, these tend to be compressed and quickened, so that the time between each beat will be approximately the same as the time taken by two consecutive accented syllables. This means that because examples (a) and (b) above contain six accented syllables each, both take roughly the same amount of time, although (b) has seven extra unaccented syllables. Similarly, example (g) takes longer than (h) because, though both have the same number of syllables, (g) has more accented ones:

(g) 'Jean 'Craig 'didn't 'post 'Bob the 'letter at ˌonce
(h) I'd have 'thought it was going to be ˋposted

Although Spanish rhythm is also determined by rhythmic beats, their occurrence is not so regular as in English. Spanish can be said to have a *syllable-timed* rhythm because it is the syllables, either accented or unaccented, which tend to occur at more or less regular intervals. The time taken to produce a Spanish utterance will be proportionate to the number of syllables it contains, since unaccented syllables are only slightly shortened and weakened, a fact that has caused Spanish rhythm to be likened to the staccato effect of a machine-gun. This can be seen when comparing (i) with (j) below, which have the same accentual pattern. Medium-size indicators show Spanish unaccented syllables:

(i) 
'Mine was of a 'bet ter 'qual i ty than ˌhis

(j) 
'Fui mos se pa 'ra da 'men te a a ve ri ˌguar

5

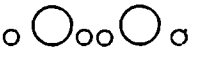
Rhythm has traditionally been conceived as the way in which accented and unaccented syllables follow each other in the utterance. For purposes of classification we have considered the elements which tend to occur regularly in the utterance – in Spanish the syllables in general, in English only the accented ones. These criteria are sufficient for purposes of comparison, but not if we wish to make a more general statement of the nature of rhythm. Rhythm cannot only be said to depend on the occurrence of beats or syllables; rather it is a more complex set of elements. From the auditory point of view the rhythm of a language can be described as that overall impression caused by the prominent and non-prominent parts, and the way in which they succeed each other in an utterance.

In the case of English, its rhythm is based on a marked contrast between the prominent and non-prominent parts. The former consist of syllables which are

made prominent by one or all four of the elements described in chapter 9, section 2 – pitch movement, a strong vowel quality, length, and stress. As implied before, English syllable length in actual speech is governed by much more complex rules than those given in chapter 6, section 3. For example, in order to comply with the tendency of English rhythm towards isochrony, syllable length will be greatly determined by the number of syllables forming part of a rhythmic group. Thus, the syllable /tʃeɪndʒ/ will become shorter as we go from (k) to (m):

(k) to 'change `trains 

(l) a 'change of `mind 

(m) this 'changeable `weather 

The way in which the phonemes of a language combine together also helps to shape the rhythm of a language. The possible occurrence of fortis stops, alone or in clusters, and their increasing tendency to be glottally reinforced in syllable final position, thus allowing syllables to end abruptly, makes English rhythm sound jerky to the Spanish ear.

The non-prominent, compressed parts consist of syllables lacking one or all four of the elements described above. Their degree of compression will depend, apart from the number of non-prominent syllables in the rhythmic group, on whether they occur before or after the rhythmic beat: non-prominent syllables preceding the beat are normally even less prominent (shorter, slurred) than those following it, and consequently more difficult to disentangle for the Spanish learner. It is also in the non-prominent syllables where phonetic and phonemic modifications (i.e. elisions, assimilations, and compressions) tend to occur: plosives are articulated so weakly as to become fricatives; fricatives are very easily realized as approximants, and diphthongs are normally monophthongized. A graphic representation of the sentence *But I don't know* [bət aɪ 'dəʊnʔ `nəːʊ] would look like this:

6 Pause

Closely connected with rhythm is pause, a feature which may either be grammatically predictable, and will therefore fit in naturally with the rhythmic groups, or may break them up in unpredictable places – particularly in spontaneous speech. Predictable pauses, such as those required for the speaker to take breath, or for the separation of grammatical units (e.g. sentences, some types of clauses, etc.) will coincide with rhythmic group boundaries. The unpredictable ones, such as those produced by hesitations, false starts, etc. may occur at any place in the utterance. Either type of pause may be filled with some kind of sound – normally a vowel of a central quality, or the lengthening of a sound – or may consist of silence.

7 Teaching problems

Since English rhythm constitutes the meeting place of a series of features, it can conveniently be tackled from two angles. On the one hand, students should previously have drilled and mastered step by step each one of the component elements – basically syllable length, accentuation and vowel weakening – and on the other, they should have been exposed to the language as a whole from the initial stages, so as to have become accustomed to its overall auditory effect. The latter type of activity will obviously affect students differently, depending on their natural ability, or 'ear for languages'.

Accentuation is perhaps the most important prerequisite, which the student should ideally come to feel almost physically. This is why any kind of accompanying movement, such as tapping or gesturing to the rhythmic beat of an utterance is useful.[3] A good technique to learn to control timing is the type of exercise to be found in Appendix B, where the learner is required to repeat a given utterance with different rhythmic patterns. Spanish speakers find special difficulty in producing utterances introduced by several non-prominent syllables.

Reading aloud is an indispensable skill for the future teacher to develop. Good organization into rhythmic groups and correct placing of pauses are necessary in order to acquire fluency in this respect. In spontaneous speech,[4] on the other hand, the student must learn to fill in his pauses with the correct English hesitation noises, such as /m/, /ə/, /əm/, and not the typical Spanish ones.

Notes

1 See D. Abercrombie (1964a, 1964b, 1967), and other phoneticians of the Edinburgh School of Phonetics, e.g. M. A. K. Halliday (1964, 1967, 1970). See also C. Mortimer (1976).

2 See K. L. Pike (1945: 34f.).

3 See E. L. Tibbitts (1967: introduction, 1966).

4 For EFL material based on spontaneous, unscripted speech, see D. Crystal & D. Davy (1975), and J. Windsor Lewis (1977).

12 Intonation

1

Spoken language arranges itself into three main patterns which function simultaneously. We have already dealt with the phonemic and rhythmic patterning of English and Spanish. Our concern in this last chapter will be an examination of the third type – the patterns of *intonation*.

Owing to the fact that intonation is not only characteristic of each language, but also of the many varieties within each language, we shall be obliged to limit the scope of our English–Spanish comparison to a few illustrative examples when dealing with teaching problems. Our aim is therefore to present an introduction to the system of English intonation, that will provide the student with the basic framework necessary to pursue more specialized analyses of the subject.

2

Intonation has traditionally been defined in terms of the rises and falls of the voice in speech – a strictly phonetic definition, which only takes into account vocal fold activity. A wider view of intonation does not define it in terms of patterns of falls and rises only, but as a complex of features belonging to different prosodic systems, mainly pitch movement, loudness, rhythmicality and tempo.

3 The intonation system of English

In chapter 9, section 3, we pointed out that pitch movement can be carried by both accented and prominent syllables, although only the former can act as initiators of it. The rudimentary set of marks we have been using so far to indicate pitch movement has taken into account direction only (i.e. falling, rising, level), without considering how wide the movement is. A more accurate description of the intonation system of English, however, must also account for pitch range. Although pitch range may have an infinite number of degrees, for practical purposes it is sufficient to distinguish no more than two – wide and narrow. A given pitch direction and pitch range constitute a *tone*, which can be spread over one or more syllables.

The English intonation system can be conveniently described in terms of eight basic tones:[1]

Symbol	*Name of tone*	*Description*	*Scalar notation*
1 ˈm	High Level	Syllable at a high, sustained pitch	
2 ˌm	Low Level	Syllable at a low, sustained pitch	
3 ˊm	Mid High	Syllable begins at a mid pitch and rises to a high pitch	
4 ˋm	High Mid	Syllable begins at a high pitch and falls to a mid pitch	
5 ˨˩m	Low High	Syllable begins at a low pitch and rises to a high pitch	
6 ˩˥m	High Low	Syllable begins at a high pitch and falls to a low pitch	
7 ˨˧m	Low Mid	Syllable begins at a low pitch and rises to a mid pitch	
8 ˧˩m	Mid Low	Syllable begins at a mid pitch and falls to a low pitch	

Table 13 The eight basic tones of English; /m/ stands for any syllable.

4 Notation systems of intonation

There are three notation systems in general use at present, two of which are displayed in Table 13:

(a) The 'tonetic stress-mark' system, devised by R. Kingdon in 1939. It has been widely used in its original and adapted forms in Britain because of its practicality and dual function – the marks indicate accented syllables by their presence and tone by their form and position.

(b) The 'scalar' or 'interlinear' system is the most accurate one. Its pictorial nature allows the display of fairly delicate details of pitch direction and range, as well as accent/prominence contrasts. Its great disadvantage lies in that it is not economical, and is therefore inadequate for extended use.

(c) The 'numerical' system makes use of numbers (e.g. 1 to 4) to indicate pitch direction and range, but gives no indication of accent or prominence, which have to be shown separately. It is the system generally preferred in America.

5 Structure of the intonation unit

Just as any English utterance can be divided into rhythmic units, from the point of view of intonation it can also be organized into *intonation units*, which can be as short as one syllable.

(*i*) *Nucleus*

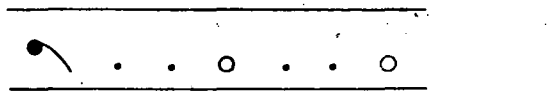
The essential element of an intonation unit is the *nucleus*, which is the last (accented) syllable acting as pitch movement initiator in the intonation unit,

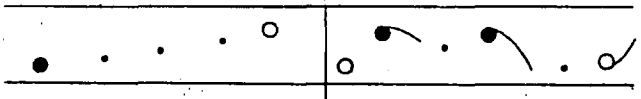
and the tone on that syllable is called *nuclear tone*. The nucleus may consist of a 'simple' pitch movement, as indicated by one of the eight basic tones already described, or it can have a 'complex' pitch movement, shown by a combination of two (or sometimes three) of the basic tones. We shall account mainly for two complex tones, [ˋ ˊ] and [ˊ ˋ], e.g.:

A nuclear tone can also act as initiator of pitch level contrast, if it consists of a High Level tone, e.g.:

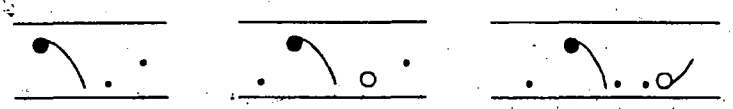
(ii) Tail

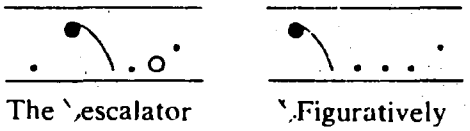
In all the above examples the nucleus is the last syllable of the intonation unit. It often happens, however, that the nucleus is followed by one or more unaccented syllables forming the *tail* of the unit. By definition there can be no accented syllables in the tail, but only prominent ones, which either play a rhythmical part, and/or are merely a vehicle for the pitch movement initiated and indicated by the nucleus. Such prominent syllables are left unmarked in the tonetic stress-mark notation system. Tails to any of the two nuclear tones reaching the bottom pitch continue at that low pitch level; tails to any of the three rising nuclear tones continue the rise indicated by the nucleus, e.g.:



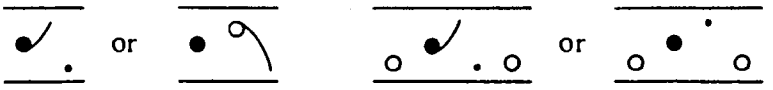


When a fall–rise tone occurs on polysyllabic words the fall takes place on the nuclear syllable, and the rise on the next rhythmical beat. The fall–rise mark, however, is placed before the nuclear syllable, e.g.:





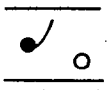
A rise–fall tone can be realized in two different ways: either as a rise on the nuclear syllable and the tail at a low pitch, or the nuclear syllable at a mid pitch and a falling tail. In either case the mark is placed before the accented syllable, e.g.:



^Never My ^overcoat

The following examples show the difference between a rise–fall and a rise plus fall, where there are two accented words:

A: Is it late? B: ^Too late

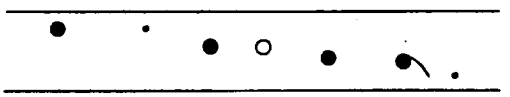


A: What's the matter? B: It's ˏtoo ˋlate

(*iii*) *Head*

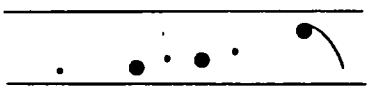
Apart from the accented syllable constituting the nucleus there may be (an)other accented word(s) preceding it and forming the *head* of the intonation unit. A head, then, can be as short as one monosyllabic word; longer heads begin on the first accented syllable and end on the syllable immediately preceding the nucleus.

Heads may contain any of the eight basic tones. When tones of the same kind occur in succession we shall interpret the sequence in terms of a simple convention: the four tones occupying (or starting at) the upper part of the pitch range will descend by steps, and the four tones occupying (or starting at) the lower part of the range will ascend by steps, e.g.:



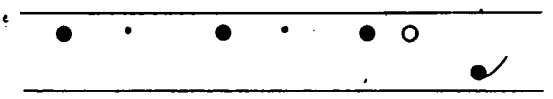
A: 'How'd you 'like my 'new ˏsweater?

B: ˋVery ˋnice



C: You're ˏabsoˏlutely ˋright

This stepwise progression can be broken by inserting a bar thus:

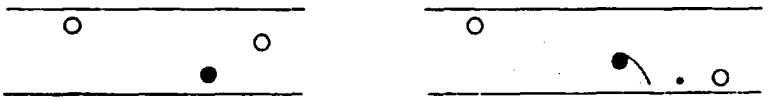


'Will you | 'come to | 'morrow ˏnight?

(*iv*) *Prehead*

A prehead consists of any unaccented, and usually non-prominent, syllables preceding a head or nucleus. Preheads are normally said quickly and on a low

variety of mid pitch, and are left unmarked. Sometimes, however, preheads are given pitch prominence mainly to make the nucleus stand out, as in exclamations. This prominence is conveyed by either a low or a high pitch, but any structural words in this prehead will retain their weak-form pronunciation. We shall only consider high-pitched preheads, the most noticeable of the 'tonal' ones, and mark them with a high, horizontal stroke, e.g.:



A: ¯Was /wɀ/ ˏthat all? B: ¯Of /əv/ ˎcourse it was

A further use of the bar | already introduced is to indicate that the unaccented syllables that follow resume the prehead level, e.g.:

'After the ˏrain | it was 'beautifully ˎclear

6 Correlates of intonation

The final effect produced by any utterance is the result of the interaction of a number of variables which are mutually related, and which correlate with intonation in its strictly traditional sense. For teaching purposes it is important to be at least aware of the existence of these correlates – some of which are of a linguistic, others of a non-linguistic nature – since they can all interact so as to produce substantial distinctions or even subtle shades of meaning. Unfortunately, some of these correlates are so intricately intertwined, that it is very difficult to determine the effect of each one on the total meaning, and even more so to reduce their function to rules. We shall therefore limit ourselves to a brief examination of the main variables, and give a few illustrative examples.

(i) In the first place, let us consider the features responsible for *tone*, i.e. pitch direction and pitch range. From the point of view of the type of information being conveyed, it is more important to know whether the nuclear tone is falling or rising, than whether it is a narrow or wide fall or rise: distinctions made by means of pitch direction, such as those between statements and questions, are weightier than those made by pitch range, which would distinguish for instance between two types of question. This does not mean, however, that all statements take a falling, and all questions a rising nuclear tone in English; or that a given nuclear tone represents an invariable, single meaning in itself.

The variations the components of tone can undergo are very complex, and therefore the meaningful distinctions they can convey are extremely rich. We can assume that in most situations speakers make use of a 'normal' set of features, and any departures from the norm will contribute to signalling special effects, such as anger, incredulity or enthusiasm, in different degrees. Most contrasts in

meaning are conveyed by the interplay between the tones of the head and the nuclear tones. All these can be said at extra high or low levels, arranged in either smooth progression or sudden upward or downward climbs, or a mixture of both; similarly, pitch range can be widened to occupy most of the speaker's voice range, or narrowed to a monotone; or it can be spread over a part or the whole of the utterance.

Tone can, to a great extent, be responsible for changes of meaning that may range from minute subtleties to extreme differences, as in the case of *We're ˈnot going ˏanywhere v. We're ˋnot going ˋˏanywhere* (implying *We're going somewhere special*).

In general, with reference to direction and range of pitch movement, three basic attitudes can be established: (a) Falling tones tend to be *conclusive*, i.e. they indicate that the utterance ends there and there is nothing further to be added; rising tones tend to be *inconclusive*: either the speaker has not finished his utterance and intends to continue, or he will not continue, but implies that something has been left unsaid. (b) The upper range tones generally indicate *animation* on the part of the speaker; the lower range ones are more frequently used to express an *unanimated* attitude. (c) Wide tones can be said to be more *emotive* than narrow ones, which tend to be *unemotive*.

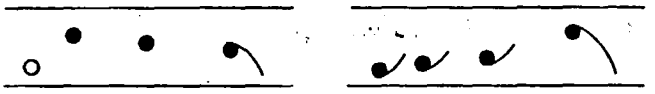
(ii) The meaning of an intonation unit will largely depend on which words are made to stand out by means of accent, because they carry most important information, and especially on the word containing the nucleus. The term used to refer to the location of the nuclear syllable is *tonicity*.[2] Normally tonicity occurs on the last content word of the unit, but sometimes structural words, or other content words, attract the nucleus towards themselves so as to establish special semantic contrasts. (See Accentuation.)

Tonicity is determined either by the grammatical context, as in the case of alternative questions (e.g. *Would you like a ˊlong drink | or a ˏshort drink*?), or by the situational context, as with defining *v.* nondefining clauses (e.g. *My ˋˏsister | who works in ˋˏLeeds | is getting ˋmarried v. My sister who works in ˋˏLeeds | is getting ˋmarried*). The tonicity pattern of the first case is the only possibility, whereas in the second case the pattern will depend on the situation.

Quite often new information is distributed over two nuclear tones: these are cases of compound tonicity, and it is always the falling nuclear tone which carries more important information than the rising one, e.g. *I ˋthought you'd come ˏearlier* (= and you did) *v. I ˏthought you'd come ˋearlier* (= but you did not).

(iii) The succession of prominent and non-prominent syllables in an utterance determines the rhythm of that utterance. As with tone and tonicity we can also assume that every speaker has a rhythmic norm, from which he will depart each time he wants to convey a special meaning. We can use the general term *rhythmicality* to refer to the various possibilities of departures. For instance, we can deliberately enlarge or reduce the number of prominent syllables in an utterance; we can make its rhythm more or less isochronous than the norm;

accented syllables can be either drawled, by lengthening their central (and/or possibly marginal) elements, or abruptly clipped, e.g.:



I 'just 'don't ˌknow ˌI ˌjust ˌdon't 'know

(iv) *Pause*, already briefly described in chapter 11, section 6, can also contribute to creating a desired impression on the hearer, especially when used deliberately, for instance to produce suspense or expectancy. Of all the correlates it is perhaps the most easily identifiable, and consequently can readily be accounted for in the transcription of a text.

(v) Apart from the *loudness* we can perceive on certain prominent or accented syllables, it is also possible to refer to the general loudness with which part of, or the whole of, an utterance may be perceived. Once again, each speaker can be said to have a norm of loudness which he uses in most situations, from which he will depart to contribute towards different attitudes.

(vi) Closely connected with rhythmic and loudness variations are those regarding rate of delivery. As above, variations from a normal *tempo* may affect different parts of an utterance, either by quickening it up or slowing it down, and each departure will have some influence on meaning.

(vii) Other vocal effects which play an important role in conveying attitudes are those which come under the general heading of 'paralinguistic' features. One group comprises different types of *voice quality*, resulting from different shapes of the glottal and supraglottal organs, e.g. 'breathy' voice, produced by ordinary voice and a simultaneous extra amount of escaping air (i.e. a form of [ɦ]); 'creaky' voice, characterized by a low frequency of vocal fold vibration; 'falsetto' voice, by an extra high pitch; 'spread' voice, produced by spreading the lips, as when speaking and smiling at the same time, etc. A second group includes various types of 'spasmodic' articulations, as caused by laughing, giggling, sobbing or crying while speaking.

(viii) Both *grammatical structures* and *lexis* are also responsible for determining meaningful contrasts of intonation. Just as certain grammatical constructions can help to make a particular element in the utterance stand out (e.g. ˈˈ*Never have I said such a thing!*, where ˈˈ would signal a fall from extra high), the lexical contents of the utterance can largely contribute to the general meaning of an intonation pattern, e.g. ˉ*How de*ˌ*lightful!* and ˉ*How re*ˌ*volting!* indicate two totally opposite attitudes.

(ix) Finally, we have to consider two non-linguistic variables. The first one concerns *kinesic activity*, which can accompany speech in order to reinforce, or even contradict (if not replace) the vocal part of the message, such as a shrug

of the shoulders, or facial expression. For instance, ^\m could either signal great pleasure or extreme disgust, and a powerful distinguishing clue would be facial expression.

The second extra-linguistic variable has to do with the *situation* in which an utterance is produced. Different meanings can arise from different situations in which the speakers are found, even though the intonation pattern is the same. For instance, *He's `quite in`,telligent* may imply praise or criticism, depending on whether the context was, for instance, *He's the laziest student in the class*, or *He's the brightest student in the class*, respectively.

The interaction of some of these variables can be seen in the following examples:

Yes but \can you come tomorrow?	A falling tone on a yes–no question, and tonicity on the anomalous finite result in a searching question.
¯In\credible!	Syllable 1, at extra high level; falsetto voice; drawled. Syllables 2, 3, 4 at extra low level; creaky voice.
`Old Mrs `/Grant, | that ,lady I was ,telling you about \/yesterday, | keeps 'twelve `cats	Here the whole interpolation is said on a low pitch, a fast tempo, and reduced loudness.

7

Although tone and tonicity alone cannot convey attitude, we shall limit our practical analysis to the meanings conveyed by them, bearing in mind that any statement made here may be modified by the other variables. For purposes of organization we shall use a grammatical classification, and consider the intonation of four major syntactic classes: statements, questions, commands and exclamations.

(*a*) *Statements*

Neutral, straightforward, conclusive statements normally take a falling tone, e.g.:

A: It's 'starting to `rain B: I must ,take my um\brella then

Non-conclusive statements take some kind of rising tone, e.g.:

He 'turned round /suddenly | and 'there she \was

Enumerations take a rise on each element to indicate that the list is incomplete, and a fall on the final element to indicate conclusiveness, e.g.:

I've brought /apples, /peaches, /oranges . . . cf.
I've brought /apples, /peaches, | and \oranges

A falling–rising nucleus indicates some kind of implication, which may be either expressed or understood, e.g.:

I ˋdidn't ˋ↗want to come, | but I 'felt I ˋhad to
ˋ↗I enjoy reading (the implication being: even if you don't)

Apologies generally take a divided falling–rising tone, i.e. a tone which is spread over different syllables, e.g.:

I'm ˋterribly ↗sorry

Awe and astonishment are often expressed by means of a rising–falling tone, e.g.:

There were ^thousands of them!

(b) Questions

We shall consider several classes:

(i) Wh-questions

These consist of a 'wh-element' or question-word before the verb, and expect some sort of information in the answer. They normally take a falling intonation, e.g.:

A: ´Where are my ↘gloves? B: 'Where did you ˋput them?

A rising nucleus may be used to give the impression of politeness, softening the question to such an extent as to make the word *please* almost unnecessary, e.g.:

'What's the ↗time?

(ii) Yes–no questions

They normally begin with a verb and expect either the answer *yes* or *no*. They are normally said on a rising tone, e.g.:

'Did you 'bring your ↗camera?

Yes–no questions may take the form of declarative questions, or their subject and verb may be omitted altogether. In either case, they take a rising intonation, e.g.:

You're ´ready? ´Like it? ´Happy?

Short, negative yes–no questions can be turned into exclamations by changing from rising to falling intonation, e.g.:

'Wasn't it ↗nice? (question)
ˋWasn't it nice! *or* ´Wasn't it ↘nice! (exclamations)

In the same way, the question *Will you?* can be changed into an exclamation by using a falling tone, e.g.:

ˋWill you ↗stop it? cf.
'Will you ↘stop it!

(*iii*) *Question tags*

When expressing doubt, question tags are said on a rising tone, no matter whether they are part of an utterance, or are said in answer to an utterance, e.g.:

It's 'nearly `six, ,isn't it? (= or is my watch wrong?)
A: I `told you about it B: ,Did you? (= I'm not sure that you did)

Question tags which merely seek confirmation of what has been said, or are used as 'fillers' to keep a conversation going, take a falling intonation, e.g.:

She's 'quite `pretty, `isn't she?
A: What `lovely ,roses B: `Yes, `aren't they?

(*iv*) *Alternative questions*

They take rising intonation on the first element of choice, and falling intonation on the second, e.g.:

A: Shall we go ,out | or stay at ,home?
B: You mean to´night | or to,morrow night?

(*v*) *Echo questions*

These are used either to express incredulity, or to ask for a repetition of something the listener fears he has misheard. They generally take a high rising tone, e.g.:

A: I've ,jammed it! B: You've ´what?
A: They've `won. B: ´Really?

This same tone is used when the listener has not heard, or has not been paying attention, e.g.:

A: `,Darling
B: ´Mm?
A: It's `nearly half past `eight
B: ´Pardon?

(*c*) ***Commands***

These take a verb in the imperative mood, and generally some kind of falling intonation, e.g.:

A: `Stop it! B: 'Don't inter,fere!

Commands may change from sharp orders to polite requests by the use of a fall plus rise, e.g.:

`Pass me the ,ashtray, John

It should be remembered, however, that other correlates such as voice quality and facial expression are just as important as tone and tonicity in changing an order to a request; thus an imperative can adopt different shades of meaning, ranging from sharpness to plaintiveness.

In addressing children, a rising tone preceded by a high level tone is frequently heard, thus giving the effect of encouragement and reassurance, e.g.:

'Hold 'Mummy's ˌhand

An imperative spoken with a falling–rising nuclear tone becomes a warning, e.g.:

Look ˋˌout. | You'll ˋˌdrop them
Be ˋˌcareful!

(d) Exclamations

These may consist of either a *what* or *how* phrase placed at the beginning of an utterance, or a single exclamatory word, phrase, or interjection, and normally take some kind of falling intonation, e.g.:

A: What an ˊawful ˎday it's been! B: ¯Disˎgusting!
A: 'How ˌlucky you happened to be ˋhere! B: ^Yes!

Expressions of gratitude can vary in intonation depending on their degree of intensity, e.g.:

ˎThank you (deeply grateful)
ˋThank you (lighter)
ˌThank you (casual)

In calling from a distance, a high–mid fall is frequently used; a sequence of two level tones is also heard in these cases, the second tone being slightly lower than the first, e.g.:

A: ˋJohn! ˋTelephone! B: ˋComing!
'Bye 'bye!

8 A short guide to intonation studies

As pointed out before, the present section on intonation was only intended as an introduction to the subject. There are on the market at present a number of courses providing theory and practice material on intonation, which can be used to enlarge on the matter. They differ mainly in the theoretical analysis underlying each approach, the notation system used, the type and source of the material (corpus) studied, their assignment of meaning, their account of other correlates, and their pedagogical value.

In spite of the amount of bibliography on intonation, it is still one of the subjects with the least defined course. This is due, among other reasons, to the very complex nature of intonation and its correlates – which makes it difficult to analyse and systematize – and to the natural clash between work carried out for descriptive, as opposed to pedagogical purposes.[3] Let us examine briefly the main characteristics of the chief works on English intonation.

(*i*) *A Handbook of English Intonation*, by L. Armstrong & I. Ward (1926)
It is now theoretically inadequate. It proposes two basic tones, a low fall and a low rise, other tones being treated as emphatic, or as variations of the two; stress (accent) is dependent on intonation. The only notation used is scalar. Meanings

are described in terms of syntax and attitudes. It deals mainly with the intonation of descriptive and narrative prose; very little conversational speech. The only correlates dealt with are tone and tonicity, the rest being practically ignored. The recordings are of historical value only.

(*ii*) *The Intonation of American English*, by K. L. Pike (1945)
It is the first exhaustive account of the intonation of American English, based on the assumption that this is subject to a phonemic analysis in terms of four significant levels, or 'pitch phonemes'. The numerical notation system used (1-extra high, 4-low, plus extra marks for stress) can show pitch patterns very accurately, but it is of questionable value for EFL. It provides a comprehensive review of earlier works on the subject up to 1945, and a theory of the possible meanings of voice quality, rhythmicality, loudness, and pause. Total meaning is assigned to the result of the speaker's attitude superimposed on the lexical meaning. It includes a large corpus and useful suggestions on teaching methods especially directed at Latin Americans.

(*iii*) *The Groundwork of English Intonation*, by R. Kingdon (1958)
Unanimously considered the most influential of the analyses of British intonation from the point of view of theory and notation. Kingdon develops the analysis of the intonation unit made by H. E. Palmer in 1922 into prehead, head, body, nucleus and tail – an analysis which, with the exception of the body, has been adopted by other leading phoneticians. His tonetic stress marking system, including conventions such as double tone marks and sequences of similar marks, is a refinement of H. Sweet's notation (1907). The detailed tonetic analysis accounts for five basic tones, each one of which adopts four varieties (e.g. the rising tone can be high or low normal, and high or low emphatic). The meanings are assigned to grammar and attitude, the relationship between intonation and stress is emphasized, but other correlates are not considered. A practical application of Kingdon's analysis is to be found in his *English Intonation Practice* (1958c) – which provides tonetic texts and useful recordings of conversations, prose, drama and verse – in his complete re-writing of H. E. Palmer's *Grammar of Spoken English* (1969), and in P. A. D. MacCarthy's *An English Conversation Reader* (1956).

(*iv*) *Intonation of Colloquial English*, by J. D. O'Connor & G. F. Arnold (1961, 1973)
Probably the most widely used intonation course at present, due to its highly pedagogical approach and large amount of practice material offered. Its structural analysis and notation are adapted from Kingdon. It accounts for seven nuclear tones and four head tones. It leans very heavily on the division of utterances into word groups, the distinction between stress (a feature of the syllable) and accent (a feature of the word), and the relationship between intonation and grammar, and intonation and attitude. In practice, meaning is stated in terms of attitudes, for which some 150 labels are provided. It has, however, received criticism on the excessive specificity and even incompatibility of some of the

attitudinal labels, with total disregard for correlate combinations, and some too rigid theoretical concepts. The corpus is strictly conversational English, and the recordings, though pedagogically clear, are rather lifeless. This analysis is also exemplified in G. F. Arnold & A. C. Gimson's *English Pronunciation Practice* (1973) and, in a very simplified version, in V. Cook's *Active Intonation* (1968).

(*v*) *Intonation and Grammar in British English* (1967), and *Intonation: a Course in Spoken English* (1970), by M. A. K. Halliday

This approach to intonation is made as an essential component of a description of the grammar of spoken English. The analysis is based on the rhythmic notion of the foot, working along with tonality (division into intonation groups), tonicity (placement of tonic, nuclear syllable), and tone (five simple ones, two compound ones, and a large number of secondary ones for more subtle distinctions). Meanings are assigned in syntactic and attitudinal terms, and the notation consists of numbers placed before each tone group, apart from other marks, thus producing a rather cumbersome effect. The corpus includes colloquial and literary matter, and the recording is useful. Insufficient account is taken of correlate combinations, and the general pedagogical value is rather controversial.

(*vi*) *Prosodic Systems and Intonation in English*, by D. Crystal (1969)

This constitutes the most complete analysis of non-segmental phonology, apart from intonation. It accounts for seven prosodic features – pitch direction, pitch range, pause, loudness, tempo, rhythmicality, and tension – plus three paralinguistic ones. The tonetic analysis accounts for three simple, five compound, and four complex tones, and distinguishes between seven degrees of pitch height, and three widths. The notation, consequently, is difficult to interpret and adapt for EFL purposes. The corpus is based mainly on informal discussions and conversations. It also contains a valuable résumé of past work, and bibliographic information of over a thousand entries. A simplified notation is offered in D. Crystal & D. Davy's *Investigating English Style* (1969), and even more simplified in *Advanced Conversational English* (1975), consisting of fifteen passages of unscripted, informal colloquial RP, and an extremely valuable tape.

(*vii*) *People Speaking*, by J. Windsor Lewis (1977)

This analysis is tonetically based on Kingdon, with the influence of Crystal on the parametric approach. The notation accounts for eight basic tones plus an angled stroke to indicate very narrow movement; four pitch ranges are conveyed – extra-high, high, mid and low, thus totalling twenty-five simple tonetic possibilities. Unlike Kingdon's, these marks only indicate pitch movement, but not accent. Rhythmic and pausal features are shown in the notation, and comments on other features are made separately. All tones are classified into three semantic groups, according to conclusiveness, animation and emotiveness. The corpus consists of over fifty passages – nine unscripted – in colloquial style, including remarks, conversations and play-reading. Very valuable tape, mostly recorded by actors.

10 Teaching problems

Although English spoken with some type of Spanish intonation does not present serious problems of intelligibility, we must remember that the future teacher must aim at the highest possible level of performance. He should therefore be exposed to English spoken with correct intonation from the earliest stages of language learning. He will not, however, be ready to study it systematically until he has acquired a complete mastery of accentuation and rhythm. His models will therefore not only be the particular course chosen for language and intonation, with its corresponding recorded material, but also every one of his teachers.

The first step in the systematic learning of intonation consists of the recognition of the basic tones on monosyllables, which will require a graded, intensive course of ear-training, to be gradually expanded to longer utterances. The next step will include recognition of the different types of heads and pre-heads, until the student is capable of recognizing any type of pattern accounted for by the course in question. All this drilling must be accompanied by corresponding production drills, with constant recapitulation. A third step will include controlled listening and production; the former can be carried out by getting the student to listen to recorded material and at the same time following the texts with intonation marking; the latter can be drilled by means of exercises of the stimulus-response type. A final step, frequently omitted, consists of making the student use the correct intonation patterns in spontaneous speech. This can be drilled by creating situations where he is required to narrate incidents, introduce people, make telephone calls, etc., and calling his attention to the intonation patterns he has used. Teachers of intonation frequently omit this final stage, and are satisfied with good performance at the controlled level, oblivious of the fact that once the final examination is over, the student will fall back on his native intonation.

Although systematic comparison with Spanish intonation would appear to be highly desirable, the general lack of analyses of Spanish intonation is a serious drawback. It is, however, possible to call students' attention to situations in both languages requiring specific intonation patterns, such as greetings, calls from a distance, questions, etc.

What should be done about 'the other correlates' of intonation? Only recently has any serious attempt been made to analyse these variables systematically, and to record material where they are taken into account. In this respect the future teacher should not limit himself to listening to EFL material, but should also have access to spoken English through radio and TV programmes, tapes and records. Most teachers do a great deal towards keeping up to date with printed material. They would do well to pay equal attention to their collections of recorded material.

Notes

1 This analysis into eight basic tones follows J. Windsor Lewis's approach (1977).

2 Term coined by M. A. K. Halliday (1967, 1970).

3 For more details, see D. Crystal (1969, ch. 1).

Appendices

The following units, although separated into ear-training, oral practice, and written work, can be put to various uses. Thus, the ear-training material may be used for extra reading practice, the oral exercises for dictation, and so on. Furthermore, all exercises must be taken as samples or guide-lines for additional material which may be prepared by the teacher himself, since he will often find that some specific problems require more extensive drilling.

Appendix A

Ear-training

These ear-training units have been prepared on the assumption that the ear will not function effectively and reliably without training. In other words, no matter whether the students speak some English or none at all at the start, they must be taught to listen. This must be done carefully and systematically, and should be carried out prior to any drills in the production of sounds.

This ear-training course is comprehensive in that it covers a fairly complete collection of points of general difficulty for the majority of Spanish speakers. In the first place it drills all those sounds which present difficulty because of their unfamiliar articulatory, distributional, and sequential characteristics. In the later stages it provides systematic practice in the recognition of those features which contribute to identify informal styles of delivery characterized by simplified articulations. It is graded in that it deals with one problem at a time; as far as possible, extra articulatory difficulties irrelevant to the problem being drilled have been avoided (e.g. dark-l might distract the listener's attention at an early stage, and therefore will itself be subject for drilling at a later stage). It is flexible in that trainers may alter it or add to the drills offered, and dictate the items in whichever order they wish. An activity of this type necessarily depends on the regional characteristics of the trainees' mother tongue.

Dictation may be given of one, two or three items at a time. The student's response may also be of a varied type: he may be asked to write down vowel numbers, symbols, discriminate between 'same' and 'different', 'right' and 'wrong', 'English' and 'Spanish', etc., mark accentuation, or transcribe the complete item.

Finally, this ear-training course is contrastive in that students are made to discriminate not only between English items, but also between English and Spanish, wherever interference is likely to occur. Conflicting vowel and consonant qualities in English can easily be discriminated by having Spanish words pronounced with English segmental qualities; the same can be done with Spanish lexical items said with English intonation patterns, etc.

It should be noted that diacritics for aspiration, devoicing, length, etc., have only been used when particular features are being drilled, so as not to overload the notation.

UNIT 1 English vowels Nos. 1, 2, 3 /i, ɪ, e/ short, and Spanish /i, e/.

A.	seat	mess	bit	net	feet
	sit	miss	bet	neat	fit
	set	niece	beat	knit	met
B.	ˈany	ˈmini	ˈmisty	ˈpenny	
	ˈsilly	ˈBetty	ˈcity	ˈmissy	
	ˈlettuce	beˈlief	ˈmany	ˈlimit	
C.	sí	mini	cine	Nelly	Félix
	Lily	bikini			

UNIT 2 English vowels Nos. 4, 5, 10 /æ, ɑ, ʌ/ short, and Spanish /a/.

A.	lack	mark	fuss	bark	bus	
	lark	muck	mass	back	pass	
	luck	mac	farce	buck	lass	
B.	ˈSally	ˈfunny	ˈmummy	ˈFanny		
	ˈcarpet	ˈasset	ˈAlice	ˈmarket		
	ˈsunny	ˈmalice	anˈtique	ˈlucky		
C.	tan	más	casi	taza	Nancy	Panamá

UNIT 3 English vowels Nos. 5, 6, 7 /ɑ, ɒ, ɔ/ short, and Spanish /o/.

A.	farce	fork	lot	pass	pork	
	loss	lock	part	moss	mark	
	force	lark	fought	sauce	mock	
B.	ˈnasty	ˈcomment	ˈoffice	ˈcoffee		
	ˈcomic	ˈcombat	ˈMartin	ˈnaughty		
	ˈcaustic	ˈColin	ˈsaucy	ˈMolly		
C.	con	nos	como	sopa	imponga	coloso	Boris

UNIT 4 English vowels Nos. 7, 8, 9 /ɔ, ʊ, u/ short, and Spanish /u/.

A.	fought	force	put	look	suit
	foot	loose	port	Luke	soot
	loot	puss	boot	fork	sort
B.	ˈforfeit	ˈpussy	ˈforty	ˈfully	
	ˈbully	ˈbooty	ˈbookie	ˈlucid	
	ˈLucy	ˈbootee	bouˈtique	ˈfaucet	
C.	sus	luz	puso	blusa	acuso	Lucy	fuma

UNIT 5 English vowels Nos. 2, 3, 10, 11, 12 /ɪ, e, ʌ, ɜ, ə/, and Spanish /i, e, a, o/.

A.	bit	duck	miss	purse	neck	
	bet	Dick	nurse	bus	lurk	
	but	Turk	mess	Bess	lick	
	Bert	deck	fuss	kiss	luck	
B.	ˈmercy	ˈsilly	ˈdotty	a ˈmess	ˈBessy	
	ˈmessy	ˈcellar	ˈdirty	imˈmerse	ˈbursar	
C.	Linda	Norman	Oliver	Mónica	Verónica	América
	Amanda	España	Elena			

UNIT 6 Recapitulation – all short vowel qualities in disyllabic words.

ˈmanner	ˈbicker	ˈlitre	ˈmurky
ˈmany	ˈBecky	ˈletter	ˈmucky
ˈmoney	ˈbacker	ˈlitter	ˈmarker
		ˈlatter	ˈmocker
ˈmetre	ˈliquor	ˈBetty	ˈpetty
ˈmartyr	ˈlocker	ˈbitter	ˈputty
ˈmatter	ˈlucky	ˈbetter	ˈparty
ˈmutter	ˈlacquer	ˈbatter	ˈpity
ˈmortar	ˈlooker	ˈbatty	ˈporter
		ˈbutter	ˈpotty
			ˈpotter

UNIT 7 Quality–quantity complex.

A. English vowels Nos. 1 and 2 [iː, i, ɪ].

bee	seek	feet	mitt	knee	bee
beat	see	fit	meet	niece	if
bit	sick	fee	me	miss	beef

B. English vowels Nos. 5 and 10 [ɑː, ɑ, ʌ].

bar	farce	cuff	la	car	mark
bark	fuss	car	luck	cart	muck
buck	far	calf	lark	cut	mar

C. English vowels Nos. 7 and 6 [ɔː, ɔ, ɒ].

core	moss	nor	loss	port	core
cork	more	nought	sauce	pot	cot
cock	Morse	not	law	paw	caught

D. English vowel Nos 9 and 8 [uː, u, ʊ].

Sue	Luke	foot	shoe	book
suit	look	boo	shook	soup
soot	loo	boot	shoot	sue

UNIT 8 English diphthongs /eɪ, aɪ, ɔɪ/ and Spanish diphthongs /ei, ai, oi/.

A. Identify Eng. /eɪ/ and Sp. /ei/:

eɪ	lei	sei	seɪs	leɪk	feis
ei	leɪ	seɪ	seis	leik	feɪs

B. Identify Eng. /aɪ/ and Sp. /ai/:

aɪ	laɪ	bai	laɪs	baɪk	nais
ai	lai	baɪ	lais	baik	naɪs

C. Identify Eng. /ɔɪ/ and Sp. /oi/:

ɔɪ	bɔɪ	soi	sois	lɔɪs	noik
oi	boi	sɔɪ	sɔɪs	lois	nɔɪk

D. Identify the quality and quantity of the English diphthongs /eɪ, aɪ, ɔɪ/:

lay	by	sight	case	coy	lie
late	boy	say	cake	may	toy
light	bite	sigh	Kate	my	bait

UNIT 9 English diphthongs /əʊ, aʊ/ and Spanish diphthongs /eu, au, ou/.

A. Identify Eng. /əʊ/ and Sp. /eu, ou/:

əʊ	nəʊ	leu	souk	nəʊt	feuk
eu	nou	ləʊ	səʊk	nout	fəʊk

B. Identify Eng. /aʊ/ and Sp. /au/:

aʊ	baʊ	bauk	lauf	saʊk	laut
au	bau	baʊk	laʊk	sauk	laʊt

C. Identify the quality and quantity of the English diphthongs /əʊ, aʊ/:

know	bough	sew	couch	so
note	bout	sow	cow	soak

UNIT 10 English diphthongs /ɪə, eə, ʊə/ and Spanish diphthongs /ia, ea, ua/.

A. Identify Eng. /ɪə/ and Sp. /ia/:

ɪə	nɪə	fia	bia	pɪəs	fɪəs
ia	nia	fɪə	bɪə	pias	fias

B. Identify Eng. /eə/ and Sp. /ea/:

eə	fea	beə	seəs	lea	neəs
ea	feə	bea	seas	leə	neas

C. Identify Eng. /ʊə/ and Sp. /ua/:

ʊə	pʊə	bua	sua	nʊə	lʊə
ua	pua	bʊə	sʊə	nua	lua

UNIT 11 English vowel No. 5 /ɑ/, English diphthongs /aɪ, aʊ/, and English sequences /aɪə, aʊə/ – all long.

A. Identify Eng. /ɑ, aɪ/, and /aɪə/ realized as [aə]:

ɑ	laɪ	baə	fɑ	kaɪ	maə
aɪ	laə	bɑ	faə	kɑ	maɪ
aə	lɑ	baɪ	faɪ	kaə	mɑ

B. Identify Eng. /ɑ, aʊ/, and /aʊə/ realized as [aə]:

ɑ	saʊ	kɑ	paə	taə	baʊ
aʊ	saə	kaʊ	pɑ	taʊ	ba
aə	sɑ	kaə	paʊ	tɑ	baə

UNIT 12 Alveolar and dental lenis articulations. Distribution.

A. Identify [d, d̪, ð]:

di ðeɪ d̪u ðɔ d̪ə dɔɪ d̪ɑ ðeə deə

B.

ˈʌdə	əˈd̪u	ˈɔðə	aɪˈdu	ˈəʊd̪ə	ˈedɪ
ˈʌðə	əˈðu	ˈɔdə	aɪˈd̪u	ˈəʊðə	ˈed̪ɪ
ˈʌd̪ə	əˈdu	ˈɔd̪ə	aɪˈðu	ˈəʊdə	ˈeðɪ

C.

ˈʌndə	ˈætdə	ɒn̪ˈðɪs	ˈæd̪ d̪əm	ən̪ ˈðen	ˈɪn̪d̪i
ˈʌn̪ðə	ˈæt̪d̪ə	ɒn ˈdɪs	ˈæd̪ ðəm	ən̪ ˈd̪en	ˈɪndi
ˈʌn̪d̪ə	ˈæt̪ðə	ɒn̪ ˈd̪ɪs	ˈæd dəm	ən ˈden	ˈɪn̪ði

D.

ðə ˈdeɪ	ˈdɪðə	di ˈʌdə	ˈdædɪ	den̪ˈðu
ðə ˈðeɪ	ˈðɪðə	ði ˈʌdə	ˈðæðɪ	ðenˈdu
də ˈdeɪ	ˈdɪdə	ði ˈʌðə	ˈdæðɪ	ðen̪ˈðu

E. dedo donado adonde dedicado candado

UNIT 13 Alveolar and dental fortis/lenis articulations. Aspiration.

A. Identify [t, tʰ, t̪, d]:

tʰi ti t̪i tu t̪u tʰu den t̪en tʰen ten

B.

ˈsɪtɪ	ˈlædə	ˈlet̪ə	ˈʌt̪ə	ˈmædə
ˈsɪt̪ɪ	ˈlætə	ˈletə	ˈʌdə	ˈmætə
ˈsɪdɪ	ˈlæt̪ə	ˈledə	ˈʌtə	ˈmæt̪ə

C. tʰɪk tʌn ˈdædɪ təˈdu ˈtʰɒtə
tɪk dʌn ˈtʰætɪ t̪əˈt̪u ˈt̪ɒt̪ə
t̪ɪk tʰʌn ˈt̪æt̪ɪ dəˈdu ˈtʰɒdə
dɪk t̪ʌn ˈtætɪ təˈtʰu ˈdɒdə

D. tan ata intenta taxi Tina Tahiti cantata

UNIT 14 Syllable length and final consonant value. Devoicing.

A. Identify /t, d/:

sɪt mʌd̥ lɪt sed̥ bɪd̥ nɒt
sɪd̥ mʌt lɪd̥ set bɪt nɒd̥

B. siːd̥ kʰɑːd̥ sɔˑt laˑɪt feˑɪt lenːd̥
siˑt kʰɑˑt sɔːd̥ laːɪd̥ feːɪd̥ lenˑt

C. ə ˈliˑdə aˑi ˈsenːd̥ ˈfɔː ə ˈtʰaːɪd ˈnɒt ˈaˑɪðə ˈset
ə ˈliˑtə aˑi ˈsenˑt ˈfɔː ə ˈtʰaˑɪt ˈnɒt ˈaˑɪdə ˈsed̥

UNIT 15 Bilabial and labio-dental articulations.

A. Identify [b, β, v]:

baə vaə βaə vəʊt bəʊt bæn βæn væn bet vet

B. ˈlʌbə ˈneβə əˈvaʊt əˈbɔɪ ˈlɪβə əˈbi
ˈlʌvə ˈnebə əˈβaʊt əˈβɔɪ ˈlɪvə əˈvi
ˈlʌβə ˈnevə əˈbaʊt əˈvɔɪ ˈlɪbə əˈβi

C. ˈbɒbɪ bɪˈlʌvɪd ˈbɒbɪn ˈvɪvɪd ˈbɪvɪən
ˈbɒvɪ vɪˈlʌbɪd ˈbɒβɪn ˈbɪbɪd ˈvɪβɪən
ˈbɒβɪ bɪˈlʌβɪd ˈvɒbɪn ˈbɪβɪd ˈvɪvɪən

D. ˈemvɪ ɪmˈbeɪd səm ˈvɪps ˈɪmvɔɪs ɪmˈvju
ˈembɪ ɪmˈveɪd səm ˈbɪps ɪmbɔɪs ɪmˈbju

E. ave sube bobo aviva Viviana Olivia Bolivia

UNIT 16 Bilabial fortis/lenis articulations. Aspiration.

A. Identify [p, pʰ, b]:

pi pʰi bi pæt bæt pʰæt bɪn pɪn pʰɪn

B. ˈʌpə ˈnæpɪ ˈlebəd ˈsʌpə ˈnɪbɪ
ˈʌbə ˈnæbɪ ˈlepəd ˈsʌbə ˈnɪpɪ

C. pəˈpʰɑ ˈbepə ˈpʰʌpɪt pəˈbaʊnd ˈpɒpɪ
pəˈpɑ ˈpʰepə ˈpʌpɪt bəˈpaʊnd ˈpʰɒbɪ
pəˈbɑ ˈpepə ˈbʌbɪt pəˈpʰaʊnd ˈpʰɒpɪ

D. paz apenas papel apócope Paula

UNIT 17 Syllable length and final consonant value. Devoicing.

A. Identify /b, p, v, f/:

	nɪp	mɒb̥	ɒf	lɪb̥	pʰɒp	sɪɣ
	nɪb̥	mɒp	ɒɣ	lɪp	b̥ɒb̥	sɪf

B.

kʰæˑp	eːɪb̥	læːb̥	nəuːb̥	tʰæˑp	ləːub̥
kʰæːb̥	eˑɪp	læˑp	nəˑup	tʰæːb̥	ləˑup

C.

səːɣ	faˑɪf	seˑɪf	laːɪɣ	kʰɑːɣ	bɪˈliːɣ
səˑf	faːɪɣ	seːɪɣ	laˑɪf	kʰɑˑf	bɪˈliˑf

D. əˈlaːɪv n̩ ˈseˑɪf — ə ˈded ˈliˑf — aˑɪ ˈniːd ə ˈsəˑvɪs
ˈseːɪv ə ˈlaˑɪf — ˈliːv ə ˈdet — ə ˈniˑtə ˈsəˑfɪs

UNIT 18 Velar and labio-velar articulations.

A. Identify [g, ɣ, w]:

	gu	ɣu	gʌn	ɣʌn	ɣes	ges	glu	ɣlu

B.

ˈbegə	ə ˈglɑs	əˈɣəu	ˈvɪɣə	ˈʌglɪ	ˈægnɪs
ˈbeɣə	ə ˈɣlɑs	əˈgəu	ˈvɪgə	ˈʌɣlɪ	ˈæɣnɪs

C.

wu	gʊd	wum	wund	ˈgʊlən	ˈgʊmən
gu	wʊd	gum	gund	ˈwʊlən	ˈwʊmən

D. lago pagoda bodega magno iglesia siglo globo

UNIT 19 Velar fortis/lenis articulations. Aspiration.

A. Identify [k, kʰ, g]:

	kʰʌm	kʌm	gʌm	kɒt	kʰɒt	gɒt	gəut	kəut	kʰəut

B.

ˈvɪkə	ˈlægəd	ˈbɪkə	ˈpʰekɪ	ˈbegə
ˈvɪgə	ˈlækəd	ˈbɪgə	ˈpʰegɪ	ˈbekə

C.

ˈkʰʊkə	ˈkʰɑkɪ	ˈkʰɪgɪt	ˈkʰɔkɔs	kəuˈkʰet
ˈkʰʊgə	ˈkɑkɪ	ˈkʰɪkɪt	ˈgɔkɔs	gəuˈket

D. que cómodo cántico Carlos Canadá Aconcagua

UNIT 20 Syllable length and final consonant value. Devoicing.

A. Identify /k, g/:

	pʰek	dɒg̊	mʌk	pʰɪk	lɒg̊	beg̊
	pʰeg̊	dɒk	mʌg̊	pʰɪg̊	lɒk	bek

B.

mæˑk	liːg̊	vəːʊg̊	læːg̊	feˑɪk	bæːg̊
mæːg̊	liˑk	fəˑʊk	læˑk	veːɪg̊	bæˑk

C. ˈseːɪv ə ˈlɒg̬ ə ˈbləˑʊk ɪn ə ˈmæˑk aˑɪ ˈset ɪt ˈbæˑk
ə ˈseˑɪf ˈlɒk ə ˈmæːg ɪn ˈvəːʊg̬ aˑɪ ˈsed ə ˈbæːg̬

UNIT 21 Quality of sibilants.

A. Identify /s, z, θ/:

su zu θu zɪp θɪp sɪp zɪŋk sɪŋk θɪŋk

B. saʊs mɪs mɒθ pɑs fɔθ
saʊθ mɪθ mɒs pɑθ fɔs

C. ˈfʌsɪ ˈmɒsɪ ˈlɪzɪ tə ˈθɔ ˈbɒsɪ ə ˈsaɪ
ˈfʌzɪ ˈmɒθɪ ˈlɪsɪ tə ˈsɔ ˈbɒzɪ ə ˈθaɪ

UNIT 22 Syllable length and final consonant value. Devoicing.

A. Identify /s, z/:

bʌs leg̬ fʌs ðʌs seg̬ ˈzeləs
bʌg̬ les fʌg̬ dʌg̬ ses ˈseləg̬

B. niˑs laːɪg̬ saːəns feˑɪs pʰɜːg̬ denːg̬
niːg̬ laˑɪs saːɪnɡ̬ feːɪg̬ pʰɜˑs denˑs

C. pʰɪks bɪbg̬ kʰɪdg̬ fɒks bedg̬ sɒps
pʰɪgg̬ bɪps kʰɪts fɒgg̬ bets sɒbg̬

D. læˑps liːgg̬ saˑɪts gæˑps kʰɑːdg̬ bæˑks
læːbg̬ liˑks saːɪdg̬ gæːbg̬ kʰɑˑts bæːgg̬

E. bɑːðg̬ kʰɑːvg̬ seˑɪfs juˑθs θiˑfs
bɑˑθs kʰɒfs seːɪvg̬ juːðg̬ θiːvg̬

F. ə ˈpʰˑis əv ˈaˑɪs ðə ˈtʰæˑps ə ˈluˑs ˈkʰeːɪg̬ ˈfɪːəg̬
ˈaːɪz laˑɪk ˈpʰiːg̬ tə ˈluːz ðə ˈtʰæːbg̬ ə ˈfɪˑəs ˈkʰeˑɪs

UNIT 23 The English laterals. Syllable length. Devoicing.

A. Identify [l, ɬ, l̥]:

ɔl ɔɬ gəʊl gəʊɬ mɪɬ mɪl aɪl aɪɬ

B. lʌɬ ɬʌɬ lɒɬ ɬɒɬ ɬaɪɬ laɪɬ

C. ælf sɪɬk meɬt gʌlf mɪlk seɬf
æɬf sɪlk melt gʌɬf mɪɬk self

D. feɬˑt pʰʌɬˑp fɔːɬg̬ bɪɬˑt kʰəːʊɬd̬ eɬːg̬
feɬːd̬ bʌɬːb̬ fɔˑɬs bɪɬːd̬ kʰəˑʊɬt eɬˑs

E. lu l̥u leɪ l̥eɪ l̥eə leə

F. klu pleɪ kl̥ɪə pl̥i klaʊd plʌm
kl̥u pl̥eɪ klɪə pli kl̥aʊd pl̥ʌm

G. plan plaza aplauso clan clima atlas
calma mil col papel filmar culto

UNIT 24 Lateral release. Clusters. Syllable length.

A. dəɬ tʰəɬ kɬ d̪ɬ səɬ t̪ɬ nəɬ
d̪ɬ t̪ɬ kʰəɬ dəɬ sɬ tʰəɬ nɬ

B. ˈpʰet̪ɬ ˈtʰaˑɪd̪ɬ ˈvɪt̪ɬ ˈmet̪ɬ ˈsæˑd̪ɬ ˈbæˑt̪ɬ
ˈpʰed̪ɬ ˈtʰaˑɪt̪ɬ ˈfɪd̪ɬ ˈmed̪ɬ ˈsʌt̪ɬ ˈpʰæˑd̪ɬ

C. ˈnɪpɬ ˈbʌsɬ ˈgɪgɬ ˈmeˑɪbɬ ˈɔˑfɬ ˈsɜˑkɬ
ˈnɪbɬ ˈpʰʌzɬ ˈpʰɪkɬ ˈmeˑɪpɬ ˈəˑʊvɬ ˈgɜˑgɬ

UNIT 25 The English nasals.

A. Identify /n, ŋ/:

θɪn θɪŋ bæn bæŋ gɒŋ gɒn sʌŋ sʌn

B. ˈsɪnə ˈfɪŋgə ˈbæŋə ˈdɪŋgɪ ˈlɒŋə
ˈsɪŋə ˈfɪnə ˈbæŋgə ˈdɪnɪ ˈlɒŋgə
ˈsɪŋgə ˈfɪŋə ˈbænə ˈdɪŋɪ ˈlɒnə

UNIT 26 Nasal release. Clusters. Syllable length.

A. tʰən t̪n dən d̪n ˈmɒd̪n ˈmɒdən ˈsɪtɪn ˈsət̪n

B. ˈiˑd̪n ˈbɜˑt̪n ˈkʰɑˑt̪n ˈsʌd̪n ˈleˑɪt̪n ˈwaˑɪd̪n
ˈiˑt̪n ˈbɜˑd̪n ˈgɑˑd̪n ˈsʌt̪n ˈleˑɪd̪n ˈwaˑɪt̪n

C. ˈdefn ˈluˑsn ˈdʌznt ˈpʰɪˑəsn ˈtʰʌfn
ˈdevn ˈsuˑzn ˈmʌsnt ˈpʰɔˑɪzn ˈgʌvn

UNIT 27 [ɻ, ɹ, l̥, ɾ, r].

A. ɻɑ ɹɑ l̥ɑ ɾɑ rɑ
ˈeɻə ˈeɹə ˈel̥ə ˈeɾə
ˈveɾɪ ˈveɻɪ ˈmæɻɪd ˈmæɾɪd

B. gɻeɪ bɻaʊ dɹaɪ tɻi pɾeɪ kl̥aɪ fɾi
gɾeɪ bɹaʊ dɻaɪ tɾi pl̥eɪ kɹaɪ fɻi

C. tɻaɪ kl̥u pl̥aɪd dɻeɪn bɻɪm kl̥eɪt
dɻaɪ gɻu bɻaɪd tɻeɪn pl̥ɪm gɻeɪt

D. ron perro tres drama prensa Brasil
crimen Grecia Francia

UNIT 28 The English palato-alveolars and palatal. Syllable length.

A. Identify /tʃ, dʒ, ʃ, ʒ, j/:

	tʃɪn	ʃɪn	ʃɔ	tʃɔ	ʃu	tʃu	tʃɪə	ʃɪə
B.	dʒet	ʒet	jet	ʒɑd	jɑd	dʒɑd	jəʊk	ʒəʊk	dʒəʊk
C.	tʃɑ	ʃu	jes	tʃeə	ʃɔ	ju	ʒɪə	dʒu	
	dʒɑ	ʒu	ʒes	ʃeə	jɔ	dʒu	jɪə	tʃu	

D. ˈsevn ˋdʒəʊks ˈwʌn ˋʃɒp ˈɔl ˋjɔz aɪl ˋtʃɒp
ˈsevn ˋjəʊks ˈwʌn ˋtʃɒp ˈɔl ˋdʒɔz aɪl ˋʃɒp

E. dɪʃ dɪtʃ edʒ̊ etʃ mæʃ mætʃ ɻɪdʒ̊ ɻɪtʃ

F. mɑ·tʃ bæːdʒ̊ sɜːdʒ̊ e·ɪtʃ bel·tʃ hɪnːdʒ̊
mɑːdʒ̊ bæ·tʃ sɜ·tʃ eːɪdʒ̊ bʌlːdʒ̊ ɪn·tʃ

G. yo yema calle cónyuge ancho choque hechura

UNIT 29 The glottal and velar fricatives.

A. Identify [h (ɦ), x]:

hɜ	xɜ	hu	xu	haɪ	xaɪ	xɪt	hɪt

B. ə`hed bɪ`xaɪnd ɪŋ`xɪz ˈɔl `hɜz
ə`xed bɪ`haɪnd ɪn`hɪz ˈɔl `xɜz

C. ají hoja ojo gente

UNIT 30 Non-audible release. Syllable length. Devoicing.

A.	æt	rɒd	tʰaɪt	bed	eɪt	wet
	ækt	rɒbd	tʰaɪpt	begd	eɪkt	wẹpt
	ækt̚	rɒbd̚	tʰaɪpt̚	begd̚	eɪkt̚	wept̚

B. ə`tʰi ˈpʰeɪ `bæk ə`tʰeɪn aɪ `du ˈtʰeɪk `eə
ət`tʰi ˈpʰeɪd `bæk əb`tʰeɪn aɪd `du ˈtʰeɪk `kʰeə

C. webd̚ liːgd̚ rəːubd̚ bekt̚ mɒpt̚ plʌgd̚
wept̚ liːkt̚ rə·upt̚ begd̚ mɒbd̚ plʌkt̚

UNIT 31 Clusters. Syllable length. Devoicing.

A.	steɪt	ɪ`stim	`speʃl	spaɪ	ə`streɪ	ə`staʊnd
	ɪ`steɪt	stim	ɪ`speʃl	ɪ`spaɪ	streɪ	stænd
B.	desk	pets	lɪsps	eɪt	wɒtʃ	sɪks
	deks	pest	lɪps	eɪtθ	wɒʃt	sɪksθ
	desks	pests	lɪsp	eɪtθs	wɒtʃt	sɪksθs

C. fɪkst rɪsk̚t gɑsp̚t læpst kɒŋk̚t help̚t

D. sen·ts flɪn·tʃt fə:uldz̚ ˈma·ɪtn̩t ˈri·znd̚
sen:dz̚ frɪn:dʒd̚ bə·ults ˈwa·ɪdn̩d̚ ˈri·snt

UNIT 32 Vowel weakening.

A. əˈnæləgəs məˈnɒtənəs rɪˈdɪkjʊləs
kəˈmemərətɪv ˈmelədrəˈmætɪk ˈɪnkəmˈpætəˈbɪlətɪ
ˈpɒsəˈbɪlətɪ ˈɒpəˈretə

B. ˈæneks kənˈvət ˈsʌspekt ˈkɒndʌkt kənˈtest
əˈneks ˈkɒnvət səˈspekt kənˈdʌkt ˈkɒntest

C. ɑ ˈdɔ ˈkupɒn ˈsɪnəmə ˈevrɪbədɪ həˈləʊ
ə ˈdɔ ˈkupən ˈsɪnəmɑ ˈevrɪbɒdɪ heˈləʊ

ˈkeɪvmən ˈsʌmwʌn ˈwaɪtmæn pəˈvəs kæˈʃɪə
ˈkeɪvmen ˈsʌmwən ˈwaɪtmən pəˈvəs kəˈʃɪə

D. jə ˈkɑ ʌntɪl ˈten ˈgəʊ ət ɪt ˈwʌn fə ˈtu
jɔ ˈkɑ əntɪl ˈten ˈgəʊ æt ɪt ˈwʌn ˈfɔ ˈtu

wɪð ɑ ˈfrend hi dʌznt ˈnəʊ ˈraɪt fɔr ɪt ˈfaɪv ˈtu ˈθri
wɪð ə ˈfrend hi dəznt ˈnəʊ ˈraɪt fər ɪt ˈfaɪv tə ˈθri

UNIT 33 Vowel elision. Syllabicity. Compression.

A. ˈtʃɪldrən ˈkɒntrərɪ ˈkuʃɪn ˈjuʒʊəl ˈfebruərɪ
ˈtʃɪldrn̩ ˈkɒntr̩ɪ ˈkuʃn̩ ˈjuʒl̩ ˈfebr̩ɪ

ˈglʌtənəs ˈɒnr̩ɪ ˈɪtəlɪ ˈlɪtr̩ɪ ˈnɒstrl̩
ˈglʌtn̩əs ˈɒnrərɪ ˈɪtl̩ɪ ˈlɪtrərɪ ˈnɒstrɪl

B. ˈæksɪdənt əˈkɔdn̩s ˈmɒdn̩ ˈbrɪtən ədˈmɪtəns
ˈæksɪdn̩t əˈkɔdəns ˈmɒdən ˈbrɪtn̩ ədˈmɪtn̩s

C. ˈdʌblɪ ˈfæktr̩ɪ ˈlʌkl̩ɪ ˈsʌtlɪ ˈkætəgr̩ɪ
ˈdʌbl̩ɪ ˈfæktrɪ ˈlʌklɪ ˈsʌtl̩ɪ ˈkætəgrɪ

D. ˈdɪfɪkltɪ ˈfeɪvr̩ɪt ˈdesprət ˈhɪstrɪ ˈlætrl̩
ˈdɪfkl̩tɪ ˈfeɪvrɪt ˈdespr̩ət ˈhɪstr̩ɪ ˈlætərl̩

E. ˈjunɪˈvəsɪtɪ ækˈtɪvɪtɪ ˈkɒrɪdʒəbl̩ ˈpɒsəˈbɪlətɪ
ˈjunɪˈvəstɪ ækˈtɪvtɪ ˈkɒrdʒəbl̩ ˈpɒsˈbɪlətɪ

F. aɪ ʃl̩ ˈkʌm ju kən ˈsi wel ˈjes aɪ ʃud ˈθɪŋk
aɪ ʃəl ˈkʌm ju kn̩ ˈsi wl̩ ˈjes aɪ ʃd ˈθɪŋk

sm̩ ˈmɔ ðərə ˈlɒts ˈhaɪd ən ˈsik tl̩ ˈsevn̩
səm ˈmɔ ðər ˈlɒts ˈhaɪd n̩ ˈsik tɪl ˈsevn̩

UNIT 34 Consonant elision.

A.	ˈteksbʊk	klәuðz	mʌnθs	fɪθs
	ˈtekstbʊk	klәuz	mʌns	fɪfθs
B.	ɪt ˈmʌst bi	ˈwʌn әv ðm̩	ðә ˈraɪt ˈtaɪm	ˈsi hɜ
	ɪt ˈmʌs bi	ˈwʌn ә ðm̩	ðә ˈraɪ ˈtaɪm	ˈsi ɜ
C.	ɪt ˈsim sәʊ	wi ˈjus tu	ˈәʊl ˈtɒm	ˈlɑs ˈtaɪm
	ðә ˈnek ˈstrit	ˈmәʊs pipl̩	ˈfɜs pleɪs	ә ˈkәʊl ˈdeɪ
D.	ju ˈhævn̩ ˈsed	aɪ ˈkɑn ˈtel ju		ju ˈwʊdn̩ ˈdeә
	ɪˈtɪzn̩ ˈtru	ʃi ˈtɜn ˈtu		wiv ˈkep ˈtræk

UNIT 35 Assimilation.

A.	ˈkɒstjum	ˈstætju	ɪmˈpɔtʃun	ˈæmplɪtʃud
	ˈkɒstʃum	ˈstætʃu	ɪmˈpɔtjun	ˈæmplɪtjud
B.	ˈgrædʒʊәl	ˈɪndɪˈvɪdjʊәl	ˈgrædʒʊeɪt	
	ˈgrædjʊәl	ˈɪndɪˈvɪdʒʊәl	ˈgrædjʊeɪt	
C.	ˈfrukk̲eɪk	ˈsɑdʒәm ˈmeɪdʒә	ә ˈkləʊʃ ˈʃeɪv	
	ˈsæmwɪdʒ	ˈfʊp̲bɔl	әbˈmɪt	
D.	ju kŋ ˈkʌm	ɪm maɪ ˈrʊm	ˈgreɪp‿ˈpipl̩	
	ˈmaɪndʒu	hi ˈwәʊmp‿bi	ˈkɑntʃu	
	ˈnɒp ˈveɪ	ˌwɒʃ ʃi	ˈðæp mʌtʃ	

UNIT 36 Informal speech.

ˈhaʊ dju ˈdu	ˈaɪ dәnә ˈwaɪ	aɪ ʃ ˈθɪŋk sәʊ	dʒu ˌwɒmp wʌn
a ŋәnә ˈbaɪ ɪt	ˈwɒdɪdɪ ˈdu	ˈha jә ˈfәʊks	ðe ˈhæbm̩ ˈbin
ˈraɪtʃuˈɑ	aɪŋ ˈglæd	ɪt ˈhæpm̩ ˈwʌns	aɪ ˈdɪbm̩ ˈwɒn tu

UNIT 37 Intonation. The falling tones [ˋ], [ˎ], [ˋ].

A. ˋ1 ˋ2 ˋ3 ˋ4 ˎ5 ˎ6 ˋ1 ˋ2 ˎ3 ˋ4 ˎ5 ˋ6

B. ˋwow ˎyes ˋno ˎright ˋthanks ˋquite

C. ˎseven ˋmany ˋnonsense ˋplenty
ˎno one ˋcareful ˎvery ˋthank you

D. of ˋcourse I do no ˎwonder he did I ˋtold you
ˎnobody wanted it ˋyes, mummy ˋhundreds of them

UNIT 38 Intonation. The rising tones [ˏ], [ˊ], [ˏ].

A. ˏ1 ˏ2 ˏ3 ˏ4 ˊ5 ˊ6 ˊ1 ˏ2 ˏ3 ˏ4 ˊ5 ˏ6

B. ˏwhy ˏyes ˊwhat ˏwell ˊme ˏgood

C. ˊcoming ˌwhich one ˌreally ˊshall I
ˌdid you ˌyes, dear ˊshall we ˌoften

D. you were ˊsaying ˌhow many in the ˊevening
ˌwhat was that did you acˌcept ˊwhen was that

UNIT 39 Intonation. The level tones [ˈ], [ˌ].

A. ˈ1 ˋ2 ˈ3 ˎ4 ˌ5 ˈ6 ˌ7 ˈ8 ˋ9

B. ˈvery ˈwell ˈvery ˎwell ˈvery ˌwell
ˈwhy ˎnot ˈright ˌnow ˈbye ˈbye

C. ˌonce ˌmore ˌonce ˌmore ˌonce ˊmore
ˌlucky ˌyou ˌdo ˊwhat ˌwhat's ˌmore

D. ˈI ˌdon't ˋknow ˈjust the ˎthing ˌwhere's ˌmy ˋpen
ˈjust ˈtaste ˎthis ˌnot a ˈsingle ˎone he ˌbloody ˌwell ˋdid

UNIT 40 Intonation. The compound tones.

A. ˋ1 ˏ2 ˋˏ3 ˋˎ4 ˋ5 ˏ6 ˊ1 ˋ2 ˆ3 ˊ4 ˇ5 ˆ6

B. ˋˏyes ˋˏsure ˆwell ˋˏno ˆmm ˆgold

C. in the ˏwhite ˋhouse in the ˆWhite House
ˋˏtwo, you mean ˋthat's what I ˏmean
with ˏfresh ˋwater with ˆfreshwater

D. ˋnot aˋˏgain it was ˏall inˋvention ˏno ˏprivate ˋbathroom
I ˋdidn't ˋˏmean to ˋvery ˏgood inˋdeed ˋnot aˋgainst the ˋˏcurrent

Appendix B

Oral practice

These practice drills consist of phrases and sentences for repetition, an activity which should be carried out in close connection with ear-training, and not divorced from it. As soon as the students have listened to sounds sufficiently to be able to discriminate them, they should repeat them after the model as many times as is necessary to achieve a correct rendering and fix them in their memory. These drills must naturally be expanded so as to include material used in the language syllabus. This can be done by making use of suitable passages and dialogues used in the language course, which will most probably not be graded phonetically but grammatically and/or semantically. The students will therefore be receiving intensive, graded ear-training and practice with the Phonetics teacher, while they will be exposed to the complete range of English sounds with the language teacher. We suggest that pronunciation practice should therefore take place at two levels: intensively, using the graded material provided in these appendices, and extensively, using suitable material selected from the language syllabus.

We suggest that the following procedure should be used when dealing with the 'extensive' passages or dialogues: (a) teacher reads passage at normal speed, making all the necessary contractions and weak-forms, and taking care not to sound artificial in an exaggerated attempt to be clear; (b) teacher reads again, sentence by sentence, getting students to mark sentence accentuation and pauses. This will be difficult at first, but if practised constantly will help students to get a feeling for English rhythm; (c) in the initial stages it is useful to read a third time, after accentuation has been marked; and (d) students read individually.

Accentuation and intonation are two points that teachers frequently leave alone in the first stages of language learning, and suddenly thrust upon the students at a later period, when bad habits have already been formed. If correct rhythm is insisted on as soon as connected speech is used for pronunciation practice, we shall be giving our students a good foundation on which to practise intonation later on. Accentuation and basic intonation patterns can be taught by using a minimum of tonetic stress marks, and by giving the following simple explanation. It should be pointed out to the students that in English we tend to accentuate content words and to weaken and compress structural words. Furthermore, we do not speak on a monotone; our voice rises and falls in some parts of the sentence. If we do this correctly, our English 'will sound English'. If we

simply apply our Spanish rules of accentuation and intonation to English, we shall sound definitely foreign and sometimes unintelligible. The syllable where our voice rises or falls in the sentence is going to be referred to as the 'nucleus'. If an utterance is long, it will sometimes be necessary to divide it into groups, and each group will have at least one nucleus. The syllables or words following the nucleus are less important than the nucleus itself, and therefore they must not be made to stand out. A preliminary, rudimentary notation system would operate like this. The mark ['] placed before the accented syllable will indicate accented words before the nucleus. The marks [ˋ] and [ˏ] placed before the accented syllable of the nucleus word will indicate whether the voice falls or rises. A passage accented in this way would look like this:

The de'tective 'came 'out of the poˋlice-station. | He 'ran down the ˏsteps | and 'opened the 'door of his ˋcar. | 'Then he ˋsaw it. | 'There on the 'front 'seat was the 'gun he had ˋlost. | "Where did ˋthis come from?" he murmured thoughtfully to himself. | "Did 'someone 'put it there on ˏpurpose? | I 'must find ˋout."

During the second reading, the teacher should ask which is the nucleus of the first sentence. When it has been established that it is the second syllable in the word *police*, it should be pointed out that *police-station* is a compound word, and that English tends to accent the first element of a noun + noun compound, rather than the second. (A pronouncing dictionary should always be consulted here.) The second sentence could also be treated as one group instead of two, with a falling accent on *car*. In the fifth sentence it should be pointed out that the reporting phrase *he murmured thoughtfully to himself* must not be made prominent, so that the actual words of the speaker will stand out. The two questions can be used as examples of wh-questions using falling intonation, and yes–no questions using rising intonation. Naturally the marks [ˋ] and [ˏ] must be treated very flexibly. They can be interpreted as either high or low falls and rises. Absolute values will only be given to them when intonation is studied. The aim of the above procedure is to give students a visual aid to English rhythm. On no account should they be asked to supply the accentuation marks without the teacher's aid. This practice must go on until they have reached a high degree of proficiency in pronunciation, and are fluent enough to deal with prosodies in detail.

The next question is how much correction should be done in order to ensure a good rendering, but at the same time not inhibit the student, or detract from fluency. In the initial stages, correction should be limited to the most glaring mistakes and/or to those sounds which are being drilled intensively at that moment. As often as possible attention should be drawn to whatever visual aid spelling offers.

UNIT 1 The twelve English pure vowels (short).

A.
a 'city
a 'city 'limit
a 'misty 'city
some 'mitts
some 'neat 'mitts
some 'mitts for 'Micky

in a 'minute
'meet me in a 'minute
'let me 'fit it
'sit on a 'seat
a 'seat for 'Peter
a 'piece of 'meat

B.
a 'fast 'bus
a 'fast black 'bus
a 'sunny 'park
a 'seat in a 'park
'Fanny and 'Alice
'Alice 'sat in a 'park
'Fanny in a 'neat 'mac

'any ˌmoney?
'bus money
'pass me some 'money
'money for 'Mark
'pass it to 'Philippa
'Philippa 'laughed
'Emma 'laughed at 'Max

C.
a 'coffee cup
'office 'coffee
'nasty 'coffee
'nasty 'office 'coffee
a 'cup of 'coffee
'Colin 'bought some 'coffee

'pass me a 'fork
'pass me some 'pork
a 'pot of 'sauce
a 'cup and 'saucer
a 'lot of 'pork
a 'lot of 'talk

D.
'look at 'pussy
a 'naughty 'pussy
'look at 'naughty 'pussy
'puss in 'boots
'look at 'puss in 'boots

'look at 'Lucy
'Lucy 'cooks
a 'sort of 'soup
'Lucy 'took a 'fork
'Lucy 'took some 'soup

E.
a 'cellar
a 'messy 'cellar
a 'murky, 'messy 'cellar
a 'circus
an 'amateur 'circus
an im'mense 'circus

a 'nurse
a 'fussy 'nurse
a 'silly, 'fussy 'nurse
a 'purse
'Bessy 'lost her /ɜ/ 'purse
'Bessy lost her 'purse in a 'cinema

UNIT 2 The twelve English pure vowels (i) short, and (ii) long in open syllables.

A.
'Nick's 'seasick
'keep some 'meat for 'me
'keep it for 'Len
some 'biscuits for 'tea
'keep a 'litre for 'Lily
'sit on 'Pete's 'knee

a 'pity Mr 'Lee 'left
'Betty 'sent a 'letter
a 'letter for 'me
'let me 'see it
'Milly, 'Nelly and 'me
'meet 'Emily for 'tea

B. a 'fast `car
'Ann 'bought a 'fast `car
'Alan 'bought a 'lucky `number
'Fanny 'lost a `sock
'Ma 'lent me a `mac
'Bert, 'Molly and `Pamela

a 'funny `party
a 'mark on a `carpet
a 'fat 'calf in a `park
'not 'far from a `park
'money for Mr `Carter
'Pa 'caught a `salmon

C. 'four 'more `cooks
'cook some 'more `sauce
a 'few 'loose `corks
'soot from a `cooker
'Lucy in a 'new `suit
'Percy 'fought `Sue

'soup for `four
Mr 'Porter 'took a `look
'look it 'up in `books
Mr 'Fuller 'saw Mr `Porter
'Lucy mi'stook it `too
a 'naughty 'look from `Curtis

UNIT 3 The English diphthongs (i) short, and (ii) long in open syllables.

A. 'make me a 'nice `cake
'late at `night
'take a 'tie for `Mike
I 'might say `eight
an 'oily `toy
'take a `night flight
'be po'lite to `Faye

a 'late 'night in `May
I 'might 'like to 'eat some `pie
'pay for my `toy
my 'mate 'likes to an`noy me
'late in `life
'buy me an `ice
my 'face `aches

B. I 'know I 'owe some `money
I 'might not 'know it `now
'buy me a 'cake of `soap
'make 'Mike a `coat
'keep an 'eye on `Kay
for 'Kay, 'Mike and `Kate
a 'light 'boat on a `lake

'now I `know it
'sew it 'on `tight
it 'may come 'out if I `soak it
'type my 'notes `now
a 'lifelike `photo
a 'low `note
'no 'sight of `Kate

C. a 'careless `pair
a 'fearless `cow
'air must be `pure
it's 'merely a 'poor `mouse

'pay my `fare
I ap'pear to inter`fere
'Sonia and Ce`cilia
I 'must 'cure my `fear

D. an 'hour near the `fire
'buy me a `flower
it's a 'lower `tower

an en'tire so`ciety
a 'motor for 'Nick's `mower
a 'sour `pear

UNIT 4 English /d, ð/.

A. 'send `Dick
and `Dennis
and `Dolly
'find `Dominic
and `Dan
and `Duncan

and `this
and `that
and `then
and `thus
and `them
in `there

'that `day
'that `dot
'that `date
'that `doubt
'that `debt
'that `deep

\`cut them	'did ,Dan?	\`fed them
\`put them	'did ,Dick?	\`said them
\`fight them	'did ,Dennis?	\`did they?
\`let them	'did ,Dominic?	\`add them
\`light them	'did ,Duncan?	\`led them
\`meet them	'did ,Dolly?	\`did them

the \`other	the \`ladder	a 'deaf \`doctor
the \`mother	the \`media	a 'deep \`dent
the \`feather	the \`meadow	a 'dark \`day
the \`leather	the \`leader	a 'dim \`destiny
the \`weather	the \`laddy	a 'definite de\`feat
the \`father	the \`needy	a 'delicate \`dinner

B. did 'Dominic ,do it?
on 'that 'date I de\`parted
'this, 'that and the \`other
it's made of 'delicate \`leather
'that 'day they de\`feated them
I'm de'lighted that the 'doctor said \`that
'any i'deas for the ,dance?~
'Daddy must be \`mad at this
'did they do 'that to the 'deaf ,lady?
'Dick con'sidered 'that \`dirty

UNIT 5 English /t/. Syllable length.

A.

a 'letter for Mr \`Tooley	Mr 'Curtis 'taught him to \`type
I 'saw it on the \`telly	a 'petticoat and some \`tights
a 'tart for \`tea	'Tom bought a 'tender \`turkey
'fourteen eighty \`two	'twenty two 'tickets for to\`night
'sit on that set\`tee	'Anthony 'took 'Tessy to \`Italy
'talk to me on \`Saturday	'Teddy saw 'Natalie at a \`party
a mar'tini for \`Thomas	'Katie 'taught him to 'like \`tennis
'talk to me \`later	I 'ate a to'mato and some \`lettuce
it's 'too 'tough to \`eat	some 'toffee for the 'tiny \`tots
'put it on 'top of the \`motor	'take that 'toy to the \`attic

B.

I 'mend \`coats	I 'seemed to 'find a \`pint
I 'meant a \`code	I 'need a 'neat \`paper
in \`aid of them	a 'wide 'tent on 'white \`sand
in \`eight of them	some 'bought 'cakes for the 'bored \`men
they 'need a 'coat of \`paint	'Bert 'laid the 'fire for the 'late \`dinner

UNIT 6 English /b, v, p/. Aspiration. Syllable length.

A. I 'envy 'Vivien that 'super bi\`kini.
'This is a 'better view of the \`bay.
They 'sent the 'invoice be'fore the \`packet.

We were in'vited to see 'Venice by `night.
I 'never put my 'books `there.
They've at'tempted to put a 'bomb in a `bar.
Bo'livia 'can't be in'vaded by `boat.
It's a 'book about 'baby `leopards.
I be'lieve Mr 'Bennet made a 'bad in`vestment.
I 'bought a 'book for 'Pat's 'invalid `mother.

B. I must 'pay the `porter.
The po'liceman took my `passport.
'Buy me a 'pint of 'beer at the `pub.
'Pass me a 'piece of that 'pork `pie.
'Ben took the 'puppy to the `vet.
'Lend me a 'pen and a 'piece of `paper.
I can 'put this 'book in my `pocket.
'Pa took 'Betty and 'me to see the `palace.
It's a 'pity 'Bert's 'pony is `lame.
'Sit 'down and put 'pen to `paper.

UNIT 7 English /k, g, w/. Aspiration. Syllable length.

A. They 'found an 'ugly 'pagan 'god made of `copper.
They at'tempted to 'kidnap the `governor.
Our 'guide got us `lost again.
'Gavin bought 'Connie a 'gas `cooker.
Can 'Colin and 'I 'go by ,car?
It's the 'kind of 'log 'cabin you 'get in `Canada.
I for'got to 'get a 'bigger `bag.
I 'can't 'get any 'good `coffee.
They 'came 'back a'gain and a`gain.
We 'made a 'cake with only 'one `egg.

B. It's the 'woman in the 'coat with the 'fur `collar.
What 'good would it 'do to go `early?
'Wear a 'warm woollen `sweater.
I 'wonder what the 'government 'wants us to `do.
We've 'painted the 'woodwork `white.
The 'weather got 'worse at the week`end.
I 'won't say 'one `word about it.
We 'work there 'once a `week.
'What would 'men 'do without `women?
They 'went out 'west in a 'covered `waggon.

UNIT 8 English /s, z, θ/. Syllable length. Devoicing.

A. Our 'visit to the 'zoo was a di`saster.
I 'think a 'thousand is 'too `many.
The 'summer season is a `busy one.

They were de'lighted with the 'birth of their 'fourth `son.
E'lizabeth says 'Thursday was a `lousy day.
'Pass 'Leslie the `scissors.
It's a 'book about the 'death of `Caesar.
'Take the 'path that 'goes `south.
'Thousands of 'cars and 'buses 'make our 'cities `noisy these days.
They're 'so 'lazy they de'serve to be `sacked.

B. 'May's 'hands were like 'ice and her 'knees `shook.
I 'gazed into the 'man's 'fierce dark `eyes.
'Don't lose those `postcards; my 'niece 'saves them for the `kids.
Of `course Susan pays for the bus fares.
A 'loose 'wheel was the 'main 'cause of the di`saster.
It's 'easy to 'lose one's 'way in a `maze.
'Bees were 'buzzing out'side in the `flower beds.
I 'need some 'more 'tins about `this size.
The 'farmer buys 'bags of 'maize for his `hens.
There were 'lines on her 'face and her 'eyes were `tired.

UNIT 9 English /l/. Lateral release.

A. 'Get me a 'clean `glass, please.
The 'plane 'quickly 'climbed above the `clouds.
'Clare bought a 'plum-coloured `blouse.
I'm 'glad that 'plenty of 'people `came.
She 'lives in 'Plymouth because of the `climate.
The 'lady with the 'clear blue 'eyes was `blind.
The 'clock on Dr 'Clifford's 'clinic 'wall is `slow.
We 'found a 'pleasant 'place to 'eat near the `club.
'Classify them into com'plete and `incomplete.
The 'thief's 'nasty black 'gun was 'only made of `plastic.

B. 'People must be 'careful to 'settle their 'legal matters before `leaving.
He 'mumbled 'something about a `parcel.
'Cecil felt 'awful as he 'dialled 'Mabel's `number.
'Phil's 'illness 'turned out to be `fatal.
'Michael sent a 'note to 'all the 'members of the `council.
In the 'middle of the 'battle the 'temple caught `fire.
I was 'dazzled by the 'lights and 'bustle of the `city.
I've 'lost some 'papers that are `vital.
The 'weather was 'simply `awful.
I 'wasn't 'able to 'find out the `title.

UNIT 10 The English nasals. Nasal release.

A. I'm 'simply 'longing to 'visit `England.
The 'old 'tinker was 'singing a `love song.
You've got 'ink on 'all your `fingers.

I 'won't 'wait for my 'uncle any `longer.
'What 'length 'curtains do we 'need for this `window?
I'm 'learning to 'play `bingo.
I 'flung my 'book 'down among the 'others and I 'can't `find it.
The 'sun will go 'in before `long.
The 'children were 'playing at 'keeping `shop.
'Shopping and 'cleaning take a 'long `time.

B. 'Adam and 'Eve 'lived in the 'Garden of `Eden.
He was 'killed in an 'accident in `Sweden.
I 'haven't eaten 'mutton for `months.
'Last 'night we 'listened to a 'concert from `Britain.
He a'bandoned 'London 'suddenly before the `war.
'Don't for'get to 'look at the `footnotes; they're 'quite im`portant.
He 'bought himself a 'little wooden 'cabin in the `mountains.
I 'beg your 'pardon, but I 'don't like 'modern `art.
I need 'seven 'buttons for my 'cotton `blouse.
'Gordon went to 'live in 'Sidney 'not long a`go.

UNIT 11 English /r, dr, tr/.

A. 'Read through this 'letter and 'see if it's `right.
'Robert is the 'repre'sentative of an im'portant `firm.
'All 'right, I'm 'nearly `ready.
That 'radio programme is 'really rather `boring.
The 'reason we 'can't 'go is that it's `raining.
'Run round to 'our place and 'borrow some `raincoats.
Our 'garden is 'simply 'full of red `roses.
It was a 'really 'good re'port, but I'd 'already `read it.
I 'don't re'member re'ceiving this 'letter of `Ron's.
We had 'red 'wine with our 'roast `beef.

B. 'Adrian and 'Brenda are in Bra`zil at present.
'Brian's pretty 'sister is called `Audrey.
It's 'wrong for 'children to take `drugs.
When I was a'broad I 'travelled 'mainly by `train.
'Richard was 'very sur'prised at the 'price of `bread.
'Try 'getting the 'drip `dry ones next time.
'Andrew has 'won the `drama prize.
My 'great 'grandfather was a 'very `practical person.
There's been a 'dreadful 'traffic accident 'due to bad `driving.
'Raise your 'right 'hand and 'ring the `bell, please.

UNIT 12 English /tʃ, dʒ, ʃ, ʒ, j/. Syllable length. Devoicing.

A. 'Jean 'seems to look 'younger each `year.
'Put the 'jelly and the marga'rine in the `fridge.
You 'shouldn't 'judge people by their re`ligion.

The in'vasion took 'place in 'late 'June and 'early Ju'ly.
'James will be 'joining the 'navy in 'March.
I've been 'given a 'large jar of 'jam.
The E'gyptian am'bassador made 'several sug'gestions.
'John says there's a 'great 'shortage of 'jobs for 'college 'graduates.
He's a 'young 'lawyer but has 'great pre'stige.
He's a 'sergeant 'major in the 'Argentine 'army.

B. 'Angela en'joys 'watching 'television.
'Jerry has ar'ranged to take 'yoga lessons.
The 'passenger a'pologized for 'keeping the 'bus waiting.
A 'cheese 'sandwich and a 'glass of 'orange juice, please.
We 'all 'joined in the 'search for the 'ancient 'treasure.
'John 'yawned in his 'lounge chair while he 'waited for 'George.
It's an a'bridged 'version of that 'book on 'British 'culture.
I 'lost my 'luggage when I 'changed 'trains at the 'village 'station.
I'll 'just get some a'stringent lotion for 'Janet.
'German ma'chinery was the at'traction of the 'show.

UNIT 13 English /h/.

It was a 'plane he hijacked, 'not a 'helicopter.
'These 'houses are 'quite unhy'gienic.
'Most of my 'holiday I 'hitch-hiked.
The 'hero was an 'unhappy 'prince called 'Hugo.
It 'took us 'hours to get 'Henry to the 'hospital.
The 'children came 'home 'tired and 'hungry.
I 'hate dis'honest people and 'hypocrites.
'Don't 'hesitate to 'call for 'help.
Has 'anybody 'heard from ,Helen lately?
He got a 'terrible at'tack of 'hiccups when he was 'having 'lunch at the ho'tel.

UNIT 14 Syllable length. Non-audible release. Consonant Clusters.

A. I be'lieve their 'wives are 'buying 'clothes.
My 'wife has 'bought a 'floor cloth.
I 'bathed in the 'cove, so 'I shan't need a 'bath.
'Breathe 'deeply through your 'nose.
'Don't 'talk while you're 'out of 'breath.
The 'race is 'due to 'start at 'sunrise.
We'll 'cut this 'huge 'loaf in 'two 'halves.
I was o'bliged to 'wait for 'ages.
'Could you please 'lend me 'half a pound of ,marge?
The 'door was 'barred and the 'shutters 'nailed.

B. His 'work clothes were 'dark 'blue.
They 'stopped us and 'looked at our 'permits.
We 'stopped at the 'last 'station to 'have the 'engine fixed.

'These desks are 'not all the 'same `width.
'This film 'lasts at 'least 'three `hours.
In the 'after'noon she just 'reads and `rests.
He's in the 'sixth 'form of a 'special 'school for the `blind.
'Mother 'asked us to 'get her `bike fixed.
They 'slept a 'little on the `boat train.
Al'though he 'lisps 'badly, he asks 'lots of 'questions in `class.

UNIT 15 Gradation

A. Read the following questions twice, using (a) the accented strong-form, and (b) the unaccented weak-form of the verb.

Am I ,right?	Of `course you are.
Are you ,ready?	Of `course I am.
Was he ,there?	Of `course he was.
Were they ,in?	Of `course they were.
Have you ,finished?	Of `course we have.
Has he ,come?	Of `course he has.
Are there any ,oranges?	Of `course there are.
Had she ,seen it?	Of `course she had.
Do they ,know?	Of `course they do.
Does it ,hurt?	Of `course it does.
Can I ,help you?	Of `course you can.
Must I ,pay for it?	Of `course you must.
Would you ,like one?	Of `course I would.
Was there any ,left?	Of `course there was.

B.

'What are you `looking at?	At the `traffic.
'Who are you `writing to?	To my `girl-friend.
'Who's this `letter from?	From the `agency.
'What's he a`fraid of?	He's afraid of `everything.
'What are you `waiting for?	For the `bell to ring.

C. There's 'someone at the `door.
There was a po`liceman on the corner.
There were a 'lot of `people there.
There's 'something I must `tell you.
There's been an `accident.
There was 'nothing `left.
There've been some 'funny `things happening.
There were 'no `seats left.
There's been a `robbery next door.
There've been a 'lot of `books stolen.

D. He ex'plained that it was the 'wrong `number.
I 'found that the 'candle had been 'left `burning.
We 'thought it was 'better that they should 'go `home.

It would've been 'nice if you could have 'come `earlier.
'John'll be at the 'station `waiting for them.
There were 'only a 'few of them `left.
It could've been 'much 'better than the `last one.
She 'told me that the 'baby had `had its supper.
He was to have ar'rived at 'ten `thirty.
'Peter'll 'probably 'ask them to have `dinner with us.
It is a 'work of 'art that is among the 'best in the `world.
Sup'pose it was 'your shop, and it had been 'broken `into.
I 'don't 'think it can have been 'more than `ten.
Ar'range your 'work so that it can be 'easily `read.
'Some people 'treat their 'animals as if they were 'human `beings.
She 'said she 'couldn't 'show it to him because it was for his `birthday.

UNIT 16 Elision

A. 'Five past `nine.
The 'man next `door.
He 'used to `work there.
The 'next three `years.
'Most people `do.
He 'got first `prize.
I'll 'have to ac`cept them.
The 'second `day.
We 'found they'd `left.

B. I 'simply don't `know.
My 'brother doesn't `care.
I 'wouldn't like to `try.
I 'don't think I `can.
I've 'spoilt that `dress.
She 'felt like `crying.
We 'won't di`scuss it.
We 'haven't seen a `thing.
It 'smelt like `gas.

UNIT 17 Assimilation

A. The 'right `person.
It's 'not `pretty.
'Great `Britain.
'White `bread.
A 'lot `more.
It's 'not `mine.

B. 'Third `place.
A `card player.
A 'cardboard `box.
They `could be.
A 'good `man.
A `road mender.

C. In `prison.
'One `person.
In `brackets.
It's 'gone `bad.
On `Monday.
'Brown `bread.

D. 'Hot `coffee.
'White `kittens.
'Get `going.
'Let `go.

E. I'd `kill him.
You'd 'catch `cold.
'Who'd `guess it?
We'd 'go to`gether.

F. In `custody.
'Thin `curtains.
'One `girl.
In 'Granny's `house.

G. 'Didn't you ˌlike it?
'Couldn't you ˌbring one?
'Wouldn't you ˌlike to?
'Shouldn't you ˌphone her?
'Can't you ˌmake one?
'Won't you ˌhave some?
'Weren't you ˌgiven any?
'Haven't you ˌread it?
'Hadn't you ˌbeen there?
'Mustn't you ˌdrink any?

H. 'Did you ˌlike it?
'Could you ˌbring one?
'Would you ˌlike to?
'Should you ˌphone her?
'Had you ˌbeen there?

I. 'Who's your `boy-friend?
'Where's your `handbag?
'How's your `mother feeling?
'Here's your `passport.
'There's your `raincoat.
'Why is she `waving to us?
'Who's she `talking to?
'Those young `men are here.
'Whose `shoes are those?
'Cars should `all have them.

J. Recapitulation

I 'met him as he was 'doing his 'Christmas `shopping.
'Does your 'boy-friend 'often go ˌcamping?
I 'thought you 'said you en`joyed British films.
My 'husband's going to a 'medical con`vention next year.
I should have 'thought he'd be `tired of it by now.
We were 'almost `sure you'd be late.
'Aren't you 'lucky to have 'finished your e`xams!
I'm 'not quite 'sure what he 'meant about 'going to`gether.
'George has asked 'Tessa to 'join his associ`ation.
'What d'you sup'pose `happened between them?
D'you 'really 'think these 'exercises will im'prove my pronunciˌation?
I 'think she 'married him as 'second best `choice.
I 'wish you'd 'tell me what you'd 'like for a `birthday present.
Your i'deas will 'probably 'change as you get `older.
You must 'try and con'vince yourself that it 'can't `happen.
I be'lieve he 'spent the 'night in that `bus shelter.
Is she 'still 'writing the 'history of our 'local ˌhospital?
I sup'pose I should have 'stayed at your `flat last night.
'Would you read 'both of them aˌgain please?
'What 'colour would you 'like me to 'paint the 'bathroom `wall, darling?

UNIT 18 Accentuation.

A. Vowel sequences broken by accent.

situation	pronunciation	inferiority	differentiation
medieval	negotiation	peculiarity	misappropriation
punctuation	appreciation	familiarity	reconciliation

B. Citation, attributive and predicative forms.

indoors	downhill	overseas	overnight
outdoors	upstairs	overhead	off-hand
uphill	downstairs	overall	everyday

An outdoor life is very healthy.
Farmers live mainly outdoors.

Public employees are often off-hand.
I can't give you an off-hand answer.

She gets very tired walking uphill.
Preparing that exam was uphill work.

We've put in a new toilet downstairs.
The upstairs bathroom isn't enough for a large family.

The kids will have to stay indoors because it's raining.
They'll have to play indoor games.

C. Accentuation and usage.

We had no class this morning.
Let's go out this evening.
Show me that record they gave you.
I believe the books have arrived.
I can see the bus coming.
How's that dog of yours?
Where's that umbrella you were holding?
Why not wait a few minutes?
My nose is bleeding.
From that window I can hear the birds singing.

D. Set phrases.

It's a nice coat, but it's rather on the big side.
He's not very talkative at the best of times.
We'll decide what to do if and when it happens.
Better get a dozen and be on the safe side.
I don't know how you can put up with it.
I'll be ready in next to no time.
My sister's in the family way.

Failing that exam brought him down a peg or two.
I think we read about it in some book or other.
The baby's yelling its head off.

E. Recapitulation.

When Anne finishes secondary school she intends to enter a teacher training-college.
In a wet climate you need a washing-machine, a spin-drier, and all sorts of labour-saving devices.
The secret agent was caught red-handed when he was placing a microphone in the Prime Minister's office.
The platinum-blonde secretary was wearing tight, navy-blue trousers.
A day-return ticket to Waterloo, please.
There's a shop that sells them near Piccadilly Circus station.
Jim's girl-friend has jet-black hair and incredible blue eyes.
John Nash built Regent Street in the eighteenth century.
For dessert we had strawberry jelly and whipped cream.
The general manager's office isn't even air-conditioned.
I first met my mother-in-law in her old country-house in Kent.
Weekend conferences seldom last the whole weekend; they usually have Sunday afternoon off.
My great-grandmother lived in Fosset Road till nineteen sixty-six.
We generally listen to the eight o'clock news on the BBC.
Our hostess gave us tea with home-made scones and gooseberry jam.
His watery-blue eyes and snow-white hair made him look older than he really was.
Keep your coat on till I light the fire; then you can take it off.
For the first fifteen years of my life I lived in a tiny, old-fashioned village.
I bought my tape-recorder at an extremely well-known shop.
When we told him about the newly-weds he stared at us open-mouthed.

UNIT 19 Rhythm. Read the first two sections (A and B) forwards and then backwards.

A.
'1 '2 '3 '4 '5 `6
'1 2 '3 4 '5 `6
'1 2 '3 4 5 `6
'1 2 3 '4 5 `6
'1 2 3 4 '5 `6

B.
'A B 'C D 'E F `G
A 'B C 'D E `F G
A B 'C D 'E F `G
A B C 'D E `F G
A B C 'D `E F G

C. 'Are 'these 'books ,yours?
'Are these 'books ,yours?
'Are these books ,yours?
Are 'these books ,yours?

D. an ex`traordinary wóman
she was an ex`traordinary woman
I guess she was an ex`traordinary woman
But I guess she was an ex`traordinary woman

E. a `thousand
there were a `thousand
there should be a `thousand
there should have been a `thousand
There should have been at least a `thousand

F. I'm a'fraid it's an `accident
I'm a'fraid there was an `accident
I'm a'fraid there may be an `accident
I'm a'fraid there may have been an `accident

G. 'How many `were there?
'How many more `were there?
'How many more of those `were there?
'How many more of those flowers `were there?

H. 'No `smoking
'No `smoking here
'No `smoking here now
'No `smoking here now, please
'No `smoking here now, please, sir.

I. I've `been there
but I've `been there once
but I tell you I've `been there once
But I tell you I've `been there with them once.

J. 'say it as if you `meant it
well, then 'say it as if you `meant it
well, but then 'say it as if you really `meant it
Yes, well, but then 'say it as if you really `meant it!

UNIT 20 Intonation. (In the following passages, full stops play the same role as modulation bars, i.e. after a full stop the tone begins at pre-head level. Pauses and other correlates are not accounted for.)

A. 'Brief En\counter (Mr Darby goes into a shop and meets a young student of his.)

Mr D: \,Hello, John. 'How're \you this morning?
John: Good\,morning, Mr Darby. I'm \fine, ,thanks.
Mr D: ´Shopping?
John: `Yes, sir. ,Trying to get a new `fishing rod.

B. \Phone Call (Christine and voice.)

Chris: Hel´lo?
Voice: 'Good ,morning. Is 'that two 'oh double `ˇeight?
Chris: ,Yes
Voice: 'Could I 'speak to `,Christine please?
Chris: `Speaking.

C. Col'lecting \Family (Mrs Lang is calling her family in to lunch. They are out in the garden, some distance away.)

Mrs Lang: `Alison! `Paul! `Lunch is ready!
Children: `Coming, Mummy.
Mrs Lang: `Call ´Daddy, will you?
Children: `Daddy! 'Mummy says `lunch is ready.
Mr Lang: 'O.'K. 'Just 'coming.

D. 'Incom'muni\cation (A young married couple are having lunch. She has been talking at length, he has been silent. She suddenly interrupts his thoughts.)

She: ´What's the `matter, darling?
He: The ´matter? `Nothing. `Why?
She: `,Something's the matter. You've been ´staring into `space for ´twenty `minutes. You `haven't listened to a `ˇword of what I've been \,saying.
He: `Sorry. What `did you say?
She: 'Oh, 'don't \worry. 'It can ,wait.

E. \Gossip (Mrs Batty meets Mrs Nutty for an exchange of local news.)

Mrs B: `Old Mrs `Smith has ´bought the `Grant's house.
Mrs N: `Has she?
Mrs B: You 'won't \tell anyone ,yet, \will you?
Mrs N: She 'doesn't want 'anyone to `know, ,does she?
Mrs B: `Not ,yet. You can `under\,stand her, `can't you?

F. A 'Cat by 'Any 'Other \Name (Gordon and Graham, who share a cottage, are discussing what to call the cat.)

Gordon: 'What are we 'going to 'call the 'new \kitten?
Graham: \Pinky, or ,something like \that.
Gordon: `,Pinky?
Graham: ´Don't you `ˇlike it?
Gordon: It \stinks! 'Let's 'call him Na\poleon.

G. The 'Classical ˌUncle (Tony and Sonia are discussing a present for their great-uncle.)

Tony: ˊWhat can we ˋgive Uncle Alan for ˌChristmas?
Sonia: A ˋrecord. 'Something ˌclassical. ˏOpera, | a ˏsymphony . . .
Tony: But 'does he really ˋlike classical music?
Sonia: He ˋalways ˋˏsays he does.
Tony: 'O.ˌK. ˊWhat was it you suggested? A ˊsymphony?

H. 'East 'Meets ˌWest (Mrs West is pushing her trolley round the supermarket. Suddenly she collides with Mrs East's trolley. They apologize.)

Mrs East: ˊWhoops! ˋˏSorry!
Mrs West: Oh, I'm ˋso ˏsorry. I 'wasn't looking 'where I was ˆgoing.
Mrs East: I'm aˋfraid it was ˆmy fault ˆtoo. ˋOh well, 'no ˏharm done.

I. ˌToothache (Patsy, aged five, is being taken to the dentist for the first time.)

Patsy: ˋˏMummy, 'is it going to ˋˏhurt?
Mummy: ˌNo, darling. 'Just 'open ˏwide.
Dentist: ˊWide ˏopen. ˋThat's a good ˏgirl. ˌThere, ˊsee? ¯It ˌdidn't ˊhurt, ˋdid it?

J. A 'Pat on the ˌBack (Mrs Van is admiring the garden that Mr Higgs has been digging.)

Mrs Van: ˊMy ˆgoodness, you've ˌmade ˌprogress.
Mrs Higgs: ˋHe's been ˏworking all ˆmorning.
Mrs Van: ˊYou've ˏmade a ˆsplendid job of it.

K. 'Paper ˌBoat (Paul, aged twelve, has made a paper boat which his sister Alison, aged five, wants.)

Alison: ˋPlease let me ˏsee it, Paul.
Paul: 'All 'right. But 'don't ˌtouch it.
Alison: 'Let's try 'sailing it in the ˌbath tonight.
Paul: ˌNo.
Alison: ˋJust one ˊtiny little sail?
Paul: I said ˌno, ˏdidn't I? 'Buzz ˌoff.

L. Exami˪nation Bound (Mr and Mrs Lowe are discussing possible visitors.)

Mr Lowe: 'Did you say the ˋMorrisons were ˌcoming ˌround this ˏevening?
Mrs Lowe: I said ˋJim and ˋˏKaren were. But ˋnot the ˌˏkids. ˋThey're doing eˏˌxams.
Mr Lowe: ¯I ˏthought they'd ˋfinished.
Mrs Lowe: ˋOnly the ˌˏlittle ones.

M. 'Phoning Pro'fessor ˌHamlin (Jean Robertson, a university student, is phoning Mrs Hamlin, the wife of one of her professors. They have never met before.)

Mrs H: Hel´lo?
Jean: ˈHello. Is ˈthat ˈtwo five ˈsix double ˈˌthree? Proˌfessor ˈˌHamlin's house?
Mrs H: ˌYes.
Jean: ˈOh, ˈgood afterˌnoon. ˈMy name's ˈJean ˈRobertson. I ˈunderˈstand the Proˈfessor's aˈway at present.
Mrs H: I'm aˈˌfraid so. ˈIs there anything I can ˈˌdo for you?
Jean: ˈWell, Proˈfessor ˈHamlin ˈlent me some ˈbooks. ˈHistory books. I'd ˈlike to reˈˌturn them, | because I'm ˈgoing on ˈholiday. ˈCould I ˈbring them ˈround this weekˈˌend?
Mrs H: Well, ˈnot on ˈˌSaturday. But ˈˌSunday | would be ˈfine.
Jean: ˈOh, | ˈSunday would suit ˈme ˌtoo. I'll ˈdrop in about ˌten. ˈThanks a ˌlot.
Mrs H: ˌNot at ˈall. ˌThank ˈyou. ˉGood ˌbye.
Jean: ˈBye.

N. ˈMonday ˈMorning at the ˌOffice (The hall porter of a large firm is standing at the door, greeting different members of the staff as they enter the building. He is obviously on different terms of formality and informality with each of them.)

General Manager: ´ˌMorning, James.
Porter: Good ˈˌmorning, Mr Onslow.
General Manager: ˌˌNippy in the morning ˌnow.
Porter: ˌQuite ˈchilly, sir.
Junior clerk: ˈMorning.
Porter: ˌMorning.
Young secretary: ˇ´Morning, Jimmy.
Porter: ˈˌMorning, my dear.
Young secretary: ˈHow's the ˈwife getting on?
Porter: Oh, ˈmuch better, ˌthanks. She was ˈreally ˈtickled with those magaˌˌzines you sent her.
Young secretary: ˈGood. I'll ˌhave some ˈmore at the ˌend of the ˌweek.
Fellow porter: ˈˌHello, mate.
Porter: ˈˌMorning, Alf. How're ˌyou, all ´right?
Fellow porter: ˈCan't comˌplain. ˈOld man ´in?
Porter: ˌYeah. ˈJust gone ˌup.
Fellow porter: ˈSee you ˈbout eˌleven.

O. ˈOne for the ˌRoad (Harry and Bob, two middle-aged friends, are discussing a near-accident, over a drink at the local pub.)

Harry: I ˈhear you had an ˈargument with a ˈten ton ˈlorry.
Bob: Well, I was ˈdriving aˈlong | quiteˌˌslowly, | when ˈsuddenly this ˈbloody great ˌtruck | just ˈswerves across the ˈroad. We ˈboth stopped in the ˈnick of ˌtime.
Harry: ^ˈDid you! ^ˈThat was ˌlucky!

Bob: I 'got 'out and I said "Just ˊwhat the ˌhell d'you think ˋyou're doing?" And d'you ˊknow what he ˇsaid? ¯He said "ˋˌSorry, old man, | I 'must've dropped ˋoff". I said "ˋYou ˌought to have your ˋlicence taken away". And he said "You're ˋprobably ˋˌright, you know". 'Just like ˋthat!

Harry: ˌShit!

P. 'Morning Enˌcounter (A young man is recounting an anecdote to a friend. The friend does not take part in the conversation.)

¯D'you 'know who I 'ran ˋˌinto today? ˋJames. He was 'standing in this ˌqueue | at the ˌBank, and I 'went and 'touched him on the ˌshoulder, and 'said, "'How's it ˋˌgoing, James?" And he 'turned ˌround | and ˌhad that 'far away ˌlook in his eyes, and said, "ˌLousy!" ˋI said, "ˋHey, what's the ˋmatter?" And ˌhe said, "Veˋronica has just ˌasked me for a diˋvorce". ¯I ˌjust ˋgaped. ¯I ˌdidn't know what to ˋsay. I mean, it's ˋno surˋˌprise, | but it was the ˋshock of ˌseeing his ˋface. ¯He ˌlooked like an ˋanimal that had been ˋkicked!

Q. The 'South A'merican ˌPenguin (A teacher is introducing a visiting lecturer. The situation is fairly formal.)

¯Good ˌevening, ladies and gentlemen. It gives me 'very great 'pleasure | to 'intro'duce | our ˋspeaker this ˌevening, | Dr 'Richard ˌSnow. I'm ˋsure ˋall of us ˌhere | are ac'quainted with his ˋfascinating ˌbook | on the ˋˌmating habits | of the 'South A'merican ˌpenguin, | and 'therefore | you will 'all 'share | my 'great ˌinterest | in 'meeting the 'author himˌself. 'Dr 'Snow | has 'just re'turned from yet aˋnother trip, 'ˌthis time | to the 'southernmost 'latitudes of ˌChile. And ˋˌthis evening | he's going to 'tell us 'some of his eˌxperiences. 'Ladies and ˊgentlemen, | Dr 'Richard ˌSnow.

Appendix C

Written work

The following written exercises are intended for homework assignments to enlarge the students' phonetic observation. They consist mainly of dictionary work, and their aim is to encourage the students from the very initial stages to investigate pronunciations on their own, and to fix in their minds difficult pronunciations of common use with the aid of written work. At a later stage this may also be expanded by getting students to transcribe short passages from their language textbook. It must always be borne in mind, however, that transcription is a visual aid to improve pronunciation, but that it is perfectly possible for a student to be able to make a correct transcription of a passage and yet not be able to read it even intelligibly. Transcription must not, therefore, be treated as an end in itself. It is far more important for students to know the exact value of each symbol.

At a later stage students will be required to transcribe words allophonically, both in English and Spanish. It is particularly important that exercises in allophonic transcription should be applied to both languages, since this is the only way of bringing into evidence the actual realizations of the phonemes of each language. It is the teacher's job to ensure that allophonic transcription is not merely the result of applying a series of memorized rules, but that the students are fully aware of the value of each symbol and diacritic. This can be checked by getting them to transcribe English words spoken with a Spanish accent and vice versa, asking the students to pronounce what they have written, and transcribe and correct errors in pronunciation. This type of exercise should be the final proof of a total understanding of the phonetics and phonology of the two languages.

1 *Homophones* Transcribe and list the following words into groups of homophones, e.g. *B, be, bee* /bi/:

1. key 2. weak 3. Q 4. pore 5. saw 6. course 7. or 8. which 9. nor 10. sum 11. wore 12. seen 13. war 14. sun 15. blew 16. nun 17. sought 18. some 19. meet 20. one 21. cue 22. son 23. quay 24. witch 25. paw 26. won 27. oar 28. scene 29. sore 30. coarse 31. awe 32. week 33. sort 34. none 35. meat 36. ore 37. gnaw 38. pour 39. soar 40. blue 41. queue

2 Transcribe and list the following words into groups of homophones:

1. there 2. boy 3. pear 4. deer 5. by 6. sight 7. fair 8. tide 9. here 10. night 11. neigh 12. yolk 13. way 14. break 15. hair 16. steak 17. Y 18. wait 19. their 20. pane 21. where 22. brake 23. they're 24. dear 25. fare 26. yoke 27. buy 28. site 29. née 30. tied 31. hear 32. buoy 33. wear 34. stake 35. weigh 36. bye 37. knight 38. weight 39. hare 40. pain 41. pair 42. why 43. ware 44. cite 45. nay 46. pare

3 Give two different spellings for the following pronunciations:

1. greɪt 2. daɪd 3. meɪd 4. wiv 5. pis 6. sɔs 7. pleɪn 8. ɑnt 9. kɔ 10. swit 11. weɪst 12. gris 13. rɪŋ

4 Give three different spellings for the following pronunciations:

1. səu 2. tʃek 3. reɪn 4. sent 5. aɪ 6. raɪt 7. ʃɔ 8. preɪz 9. siz 10. aɪl

5 *Relation letter-sound* Give the different pronunciations of the spelling *ea* in:

1. team 2. guinea 3. leather 4. Sean 5. vengeance 6. great 7. idea 8. wearing

6 Give the pronunciation of the vowel sound in:

1. truth 2. boot 3. clue 4. soup 5. flew 6. juice 7. sleuth 8. shoe 9. tomb

7 What conclusions can you draw from 5 and 6 above?

8 *Homographs* Give the pronunciation of the spelling *ough* in the following words:

1. through 2. tough 3. thorough 4. though 5. plough 6. thought 7. cough 8. hiccough

9 Give two different pronunciations and a brief definition for each of the following words:

1. sow 2. lead 3. bass 4. live 5. drawer 6. bow 7. ass 8. cleanly 9. buffet 10. tear 11. invalid 12. bathed 13. blessed 14. wind

10 *Near homographs* Transcribe the following pairs of words, and make sure of their meanings:

1. holly, holy 2. ski, sky 3. cloth, clothes 4. collar, colour 5. cost, coast 6. model, modal 7. suit, suite 8. wonder, wander 9. polish, Polish 10. quite, quiet 11. solder, soldier 12. carton, cartoon 13. artist, artiste 14. defer, differ 15. envelope, envelop 16. moral, morale 17. Lewis, Louise 18. ingenious, ingenuous 19. resume, résumé 20. rational, rationale 21. secret, secrete 22. marine, mariner 23. motive, motif 24. noble, Nobel 25. critic, critique 26. repairable, reparable 27. physics, physique 28. technic, technique

11 *Alternative pronunciations* Most of the following words can be pronounced in two ways. Transcribe them:

1. Monday 2. Tuesday 3. Wednesday 4. Thursday 5. Friday 6. Saturday 7. Sunday 8. holiday 9. yesterday 10. birthday 11. Doomsday

12 Give the most common alternative pronunciation first:

1. again 2. against 3. somebody 4. data 5. direct 6. November 7. room 8. sure 9. telegraph 10. translation 11. vocation 12. year 13. yogurt 14. always 15. hotel 16. asked

13 *Suffixes* Transcribe the following words and formulate the rule and its exceptions:

1. England 2. Switzerland 3. Thailand 4. highlands 5. lowlands 6. homeland 7. Iceland 8. Netherlands 9. wonderland 10. Finland 11. dreamland 12. midlands 13. Shetland 14. Poland 15. Scotland 16. Ireland 17. mainland

14 Transcribe the following words and formulate the rule and its exceptions:

1. middleman 2. barman 3. chairman 4. snowman 5. superman 6. caveman 7. countryman 8. craftsman 9. fireman 10. handyman 11. fisherman 12. Frenchman 13. frogman 14. weatherman 15. layman 16. salesman 17. spokesman 18. cameraman 19. workman 20. gunman

15 Give the pronunciation of the plurals in 14.

16 *Prefixes* Look up words beginning with the following prefixes, and note their pronunciation:

1. homo- 2. bi- 3. pre- 4. tri-

17 *Spanish spelling* Give examples from Spanish of sounds which can be spelt in more than one way, and examples of silent letters.

18 *Loan words* Transcribe the following loan-words incorporated into English:

1. faux pas 2. pizza 3. massacre 4. brochure 5. judo 6. odour 7. cliché 8. premier 9. concierge 10. pasta 11. hors d'oeuvres 12. corral 13. depot 14. turquoise 15. martini 16. astronaut 17. masseur 18. karate 19. liqueur 20. première 21. eau de Cologne 22. menu 23. entrée 24. cafeteria 25. guerrilla

19 *Proper names* Transcribe the following names:

1. Citroën 2. Geneva 3. Barcelona 4. Ecuador 5. Reuter 6. Renault 7. Montevideo 8. Chevrolet 9. Gibraltar 10. Venezuela 11. Rio de Janeiro 12. Madrid 13. Santiago 14. Buenos Aires 15. Peugeot

20 *Double consonant letters* Transcribe the following words containing double consonant letters:

1. coolly 2. wholly 3. dully 4. fully 5. immediate 6. immense 7. immune 8. commence 9. plainness 10. thinness 11. unnoticed 12. innate 13. innovate

21 Transcribe the following pairs and state what rule governs their pronunciation:

1. biter, bitter 2. filing, filling 3. holy, holly 4. fogey, foggey 5. cuter, cutter 6. bony, bonny 7. gable, gabble 8. title, tittle 9. later, latter 10. piped, pipped 11. diner, dinner 12. navy, navvy

22 *Plurals* Transcribe the singular and plural forms of:

1. bath 2. mouth 3. oath 4. path 5. truth 6. youth

23 *Abbreviations* Give the pronunciations of the following:

1. e.g. 2. i.e. 3. sic 4. viz 5. GB 6. UK 7. UFO 8. RAF 9. NATO 10. D Sc 11. VAT 12. D Phil 13. Messrs 14. cf 15. Bros 16. VIP

24 *Vowel alternations* Transcribe the following pairs:

1. severe, severity 2. sincere, sincerity 3. occur, occurrence 4. furry, furrier 5. neurosis, neurotic 6. deter, deterrent 7. punish, punitive 8. study, student 9. wild, wilderness

25 Transcribe the following pairs of adjectives and adverbs:

1. deserved(ly) 2. marked(ly) 3. composed(ly) 4. resigned(ly) 5. surprised(ly) 6. reserved(ly) 7. detached(ly)

26 *Consonant alternations* Transcribe the following pairs:

1. benign, benignity 2. resign, resignation 3. muscle, muscular 4. bomb, bombardment 5. prohibit, prohibition 6. autumn, autumnal 7. sign, signature

27 *Syllabification* Transcribe the following words and divide them into syllables:

1. Ian 2. archaic 3. babyish 4. radio 5. being 6. chaos 7. copyist 8. employee 9. fluent 10. flying 11. hyena 12. idiotic 13. poem 14. vehicle 15. drawer (person) 16. viewer 17. truant 18. vehement 19. neon 20. greyish

28 *Articulatory movements* Transcribe the following words, and then describe briefly the simultaneous action of (a) tongue, (b) velum, and (c) vocal folds, for each of the sounds represented in italics:

1. har*dened* 2. fri*endly* 3. di*dn't* 4. impor*tant* 5. pre*sent* (adj) 6. diffe*rence* 7. *general* 8. Ro*nald* 9. emo*tional* 10. abu*ndant*

29 *Vowel length* Transcribe the following, indicating vowel length:

1. infuriating 2. authoritarian 3. Eileen 4. superfluous 5. futile
6. turquoise 7. souvenir 8. superior 9. broadcast 10. arthritis
11. arduous 12. deportee 13. abstract 14. automobile 15. tomato
16. campaign 17. barbarian 18. foreword 19. cauliflower 20. alternate

30 *Consonant length* Transcribe the following, indicating length of laterals and nasals:

1. kilt 2. killed 3. friend 4. youngster 5. younger 6. selfish 7. pump
8. longed 9. honk 10. hunter

31 *Place of articulation* Transcribe the following, indicating place of articulation of /t, d, s, n, l/:

1. side-road 2. tinfoil 3. tenths 4. London 5. hundredth 6. stealth
7. unready 8. width 9. Mildred 10. foot-race

32 *Voicing* Transcribe the following, indicating consonant voicing:

1. godchild 2. existence 3. disdainful 4. misjudge 5. pleasurable
6. remittance 7. withhold 8. classmate 9. rememberance 10. enthusiasm

33 *Release* Transcribe the following, indicating types of release:

1. bedtime 2. bootlace 3. footnote 4. floodlit 5. step-child 6. blackmail
7. step-mother 8. tug-boat 9. title 10. feedback

34 *Liquids* Transcribe the following, indicating the allophones of /l, r/:

1. steelyard 2. steelwool 3. filthy 4. rivalry 5. cruel 6. breadcrumb
7. terrorism 8. pleasurable 9. particularly 10. literal

35 *Distribution in Spanish* Make up a table showing the distribution of Spanish vowels and consonants. (Cf. tables 7 and 11.)

36 *RP v. GA* Give the RP and GA pronunciations of:

1. Mary 2. writer 3. student 4. when 5. pass 6. worry 7. organization
8. Yorkshire 9. fertile 10. secretary 11. territory 12. ceremony
13. advertisement 14. detail 15. figure 16. nephew 17. suggest 18. ate
19. shone 20. (n)either

37 *Gradation in place-names* Look up and transcribe place-names with the following endings:

1. -borough 2. -bury 3. -folk 4. -ford 5. -ham 6. -land 7. -mouth
8. -shire 9. -stone

38 *Weak-form words* Transcribe the following:

1. I must 'go and 'pay them for the ˈvase he broke. 2. You should have ˈseen her! 3. What is ˈthat for, for goodness' sake? 4. There were some 'fifty ˈpeople there. 5. 'Bill will be aˈway for some time. 6. 'Where do

'Pete and `Sam come from? 7. 'Some people 'said that was un`heard-of. 8. If I had 'known he was going to be ,laughed at, I would have `stopped it.

39 *Elision* Transcribe the following and note the elided forms:

1. I ob'ject to 'fixed `costs. 2. It `wasn't five past nine. 3. He was 'quite 'right the `second time. 4. The 'first 'prize went to `her. 5. 'Most 'cheques are 'payable on 'presen`tation. 6. 'Civili'zation is 'literally 'thousands of years `old. 7. They 'served the 'best soft 'drinks in `town. 8. At'tendance is com'pulsory at the `practical lessons.

40. *Assimilation* Transcribe the following names, giving the assimilated form of *St.* whenever possible:

1. St. Paul 2. St. Thomas 3. St. Andrew 4. St. Michael
5. St. Christopher 6. St. Francis

41 *Connected speech* Transcribe the following, indicating all possible cases of phonetic simplification:

1. Does she 'have to be at your 'beck and ,call? 2. She 'says she 'doesn't `care. 3. They 'can't 'mix like 'ordinary, 'decent `people. 4. I 'don't know whether it could be 'done `temporarily. 5. In the 'present situ'ation we 'mustn't make 'last minute de`cisions. 6. 'Can't you 'get it for him as you 'do your 'Christmas ,shopping? 7. 'Would you 'tell her she should have 'finished 'ten `minutes ago? 8. He went 'purple with 'anger and said it was 'certainly the 'last `straw. 9. We had de'cided to ac'cept the 'second best `choice. 10. 'Any other sug'gestion will 'definitely be `preferable.

42 *Accentuation of simple words* Group the following two-syllable words according to their lexical accentual pattern:

1. commence 2. suburb 3. café 4. impulse 5. control 6. canal 7. excerpt
8. folklore 9. robot 10. distinct 11. sarcasm 12. vaccine 13. suspense
14. lament 15. massage

43 Group the following three-syllable words according to their lexical accentual pattern:

1. interval 2. disciple 3. entertain 4. contagious 5. cauliflower
6. decisive 7. expertise 8. dormitory 9. tribunal 10. complacent
11. questionnaire 12. recipient 13. recognize 14. molecule 15. pyramid

44 Group the following four-syllable words according to their lexical accentual pattern:

1. optimism 2. centenary 3. apparatus 4. profitable 5. irreparable
6. penicillin 7. monopoly 8. intermittent 9. situated 10. corrugated
11. temperamental 12. mediocre 13. complicated 14. hereditary
15. escalator

45 Group the following five-syllable words according to their lexical accentual pattern:

1. commemorative 2. communication 3. recommendation
4. intermediary 5. intelligible 6. indivisible 7. abominable
8. contamination 9. proliferation 10. improvisation 11. interrogation
12. incalculable 13. humanitarian 14. verifiable 15. collaborator

46 Group the following six-syllable words according to their lexical accentual pattern:

1. onomatopoeic 2. municipality 3. predetermination 4. decontaminated
5. overpopulation 6. peculiarity 7. decontamination 8. superiority
9. improbability 10. inflexibility

47 *Accentual alternations* Arrange the following triplets according to their endings and accentual patterns:

1. observe-observatory-observation 2. prefer-preference-preferential
3. vary-variable-variation 4. declare-declarable-declaration 5. declaim-declamatory-declamation 6. imitate-imitation-imitative 7. rely-reliable-reliability 8. execute-execution-executive 9. irritate-irritation-irritable
10. present-presentable-presentation 11. mechanism-mechanic-mechanization 12. legislate-legislation-legislative 13. exclaim-exclamatory-exclamation 14. penetrate-penetration-penetrable
15. demonstrate-demonstration-demonstrative 16. value-valuable-valuation 17. organism-organic-organization 18. respect-respectable-respectability 19. speculate-speculation-speculative 20. refer-reference-referential

48 Arrange the following pairs according to their accentual patterns:

1. advertise-advertisement 2. ridicule-ridiculous 3. allergy-allergic
4. secretary-secretarial 5. maintain-maintenance 6. suburb-suburban
7. advantage-advantageous 8. compensate-compensatory 9. majesty-majestic 10. adjective-adjectival 11. narrate-narrative 12. remedy-remedial 13. academy-academic

49 *Accentuation of compound words* Accentuate the following and, if possible, give the corresponding rule for each case:

1. lemon-squeezer 2. love-story 3. life expectancy 4. sky-scraper
5. foam rubber 6. fortune teller 7. slide projector 8. traffic indicator
9. daylight robbery 10. wisdom tooth 11. tea-strainer 12. money-lender
13. girl Friday 14. blood bank 15. kitchen sink 16. bricklayer
17. mass production 18. rubber-stamp 19. package tour
20. the West Country

50 In the following nouns one of the elements is an *-ing* word. Give their lexical accentuation patterns:

1. hiding-place 2. shoplifting 3. air conditioning 4. ironing-board

5. stapling-machine 6. sight-seeing 7. folding chair 8. tracing-paper
9. launching-site 10. parking-meter 11. sitting tenant 12. mining industry
13. zebra crossing 14. salad-dressing 15. price-freezing

51 Accentuate the following compounds formed by adjective + noun:

1. human rights 2. hard labour 3. short cut 4. postal order 5. pop group
6. printed matter 7. common knowledge 8. political prisoner
9. front door 10. fair sex 11. red tape 12. short circuit

52 Accentuate the following noun phrases:

1. a television programme 2. a cigarette holder 3. a magazine stand
4. punctuation marks 5. a communication line 6. a recreation ground
7. a Portuguese lesson 8. a refugee camp 9. the registration number
10. Independence Day

53 Give the lexical accentuation patterns of these three-word compounds:

1. thermal power station 2. public relations officer 3. shorthand-typist
4. roll-top desk 5. fine-tooth comb 6. stay-at-home 7. male voice choir
8. red-letter day 9. All Saints' Day 10. might-have-beens
11. a five-year-old

54 The following nouns are used in some varieties of Spanish. Check their lexical accentuation patterns:

1. video-tape 2. station-waggon 3. goalkeeper 4. sex appeal
5. radio receiver 6. nightclub 7. sound-track 8. weekend
9. Foreign Office 10. best-seller

55 Look up compounds under the following headings:

1. tea 2. show 3. work 4. fire 5. station 6. hand 7. day 8. table

56 *Compounds v. noun phrases* Explain the meaning of the following:

1. an ˋEnglish teacher/an 'English ˋteacher 2. a ˋlight house/a 'light ˋhouse 3. a ˋlong jump/a 'long ˋjump 4. a ˋtight rope/a 'tight ˋrope 5. a ˋshort list/a 'short ˋlist 6. a ˋhot house/a 'hot ˋhouse 7. a ˋcommon room/a 'common ˋroom 8. a ˋcrossword/a 'cross ˋword

57 *Distinctive function of accent* Accentuate the following passage and transcribe the words in italics:

A group of students who *frequented* the Wayside Café, met there to stage a *protest* meeting. Police *suspected* some of the young *rebels* who *frequently* went there to *protest* about the *subject* of grants. A recent *increase* had been rejected, and so far little *progress* had been made. When the police raided the café, the meeting was being *conducted* in *perfect* order, but soon *insults* were heard and some arrests were made. The young *suspects* were *escorted* to the police station and *subjected* to questionning. The *subject* of *increasing* the grants had to be put off.

58 Accentuate the following compound adjectives:

1. That dress is moth-eaten/light-coloured/ready-made/skin-tight/bottle-green.
2. Ann is quite sunburnt/tight-fisted/class-conscious/plain-spoken/house-proud/round-shouldered.
3. The arrangement is really well-known/foolproof/first-class/long-standing.
4. I hate thick-skinned/empty-headed/long-winded/cold-hearted/quick-tempered people.

59 *Phrasal verbs* Accentuate the following:

1. Switch the telly off/Switch off the telly/Switch it off
2. Let the dog out/Let out the dog/Let him out
3. Do your coat up/Do up your coat/Do it up
4. Turn the page over/Turn over the page/Turn it over
5. Bring the clothes in/Bring in the clothes/Bring them in

60 *Attributive v. predicative* Accentuate the following:

1. A non-stop train/I danced non-stop 2. The great open air/An open-air theatre 3. Really first rate/A first-rate teacher 4. Exactly midday/A midday meal 5. The lower middle class/A middle class family 6. I can't say off-hand/An off-hand remark 7. It's quite off-putting/An off-putting look 8. The bathroom's outside/An outside bathroom 9. The stars overhead/An overhead projector 10. He works part-time/A part-time job 11. He goes everyday/Everyday clothes

61 *Accentuation and usage* Accentuate the following:

1. Which bus are you taking? 2. I'm going to eat something now 3. What was that song you were singing? 4. I've kept your dinner hot 5. I loved that cake you made 6. There's a fly in my soup! 7. Where's that restaurant you were talking about? 8. What colour suit was he wearing? 9. Mike Lacey turned up this morning 10. Tell you father the dinner's ready 11. I've got a letter to write

62 Find the accentual pattern of the following set phrases:

1. Smith and Co. 2. a Jack of all trades 3. make your hair stand on end 4. for the most part 5. the so-and-so 6. in the first place 7. give the game away 8. something or other 9. a stick-in-the-mud

63 *Emphatic and contrastive accentual patterns* Accentuate the following:

1. Neither he nor Jack were clear-headed enough 2. You might get sunburnt, terribly sunburnt 3. To my way of thinking, dry wine is much better than sweet wine 4. Is that mirror you bought half-length or full-length? 5. Rush to the butcher's while I get the pan heated 6. Let's do

exercise sixty-five on page sixty-five 7. Mr Clark works full-time and Mrs Clark part-time 8. Leeds United two, Manchester United two 9. There weren't nearly so many sports-cars as last time

64 *Intonation* Explain the difference in meaning between the following pairs of sentences:

1. (a) My ˋ,jacket, | which I ˋusually wear in the early ˎ,morning, | has been ˈsent to the ˋcleaner's.
   (b) My ˋjacket which I usually wear in the early ,morning, | has been ˈsent to the ˋcleaner's.
2. (a) I ˋthought they'd ,bring something to ,eat.
   (b) ¯I ,thought they'd bring something to ˋeat.
3. (a) It's eˋxpensive, | ˋisn't it?
   (b) It's eˋxpensive, ,isn't it?
4. (a) ˈBring me some ˎcoffee.
   (b) ˋBring me some ,coffee.
5. (a) They ˋdidn't come because they were aˎ,fraid.
   (b) They ˈdidn't ˈcome because they were aˋfraid.
6. (a) There's ,pork, | or ,beef, | or ,lamb.
   (b) There's ,pork, | or ,beef, | or ˎlamb.
7. (a) ´Isn't it ˈraining ,hard?
   (b) ˋIsn't it raining hard!

65 *Intonation* Supply intonation marks for the following dialogues and passages:

1. *Brief Encounter* (Mr Darby goes into a shop and meets a young student of his.)

   Mr D: Hello, John. How're you this morning?
   John: Good morning, Mr Darby. I'm fine, thanks.
   Mr D: Shopping?
   John: Yes, sir. Trying to get a new fishing-rod.

2. *Phone Call* (Christine and voice.)

   Christine: Hello?
   Voice: Good morning. Is that 2088? (two oh double eight)
   Christine: Yes.
   Voice: Could I speak to Christine please?
   Christine: Speaking.

3. *Collecting Family* (Mrs Lang is calling her family in to lunch. They are out in the garden, some distance away.)

   Mrs Lang: Alison! Paul! Lunch is ready!
   Children: Coming, Mummy.
   Mrs Lang: Call Daddy, will you?
   Children: Daddy! Mummy says lunch is ready.
   Mr Lang: O.K. Just coming.

4. *Incommunication* (A young married couple are having lunch. She has been talking at length, he has been silent. She suddenly interrupts his thoughts.)

She:	What's the matter, darling?
He:	The matter? Nothing. Why?
She:	Something's the matter. You've been staring into space for twenty minutes. You haven't listened to a word of what I've been saying.
He:	Sorry. What did you say?
She:	Oh, don't worry. It can wait.

5. *Gossip* (Mrs Batty meets Mrs Nutty for an exchange of local news.)

Mrs B:	Old Mrs Smith has bought the Grant's house.
Mrs N:	Has she?
Mrs B:	You won't tell anyone yet, will you?
Mrs N:	She doesn't want anyone to know, does she?
Mrs B:	Not yet. You can understand her, can't you?

6. *A Cat by Any Other Name* (Gordon and Graham, who share a cottage, are discussing what to call the cat.)

Gordon:	What are we going to call the new kitten?
Graham:	Pinky, or something like that.
Gordon:	Pinky?
Graham:	Don't you like it?
Gordon:	It stinks! Let's call him Napoleon.

7. *The Classical Uncle* (Tony and Sonia are discussing a present for their great-uncle.)

T:	What can we give Uncle Alan for Christmas?
S:	A record. Something classical. Opera, a symphony . . .
T:	But does he really like classical music?
S:	He always says he does.
T:	O.K. What was it you suggested? A symphony?

8. *East Meets West* (Mrs West is pushing her trolley round the supermarket. Suddenly she collides with Mrs East's trolley. They apologize.)

Mrs E:	Whoops! Sorry!
Mrs W:	Oh, I'm so sorry. I wasn't looking where I was going.
Mrs E:	I'm afraid it was my fault too. Oh well, no harm done.

9. *Toothache* (Patsy, aged five, is being taken to the dentist for the first time.)

Patsy:	Mummy, is it going to hurt?
Mummy:	No, darling. Just open wide.
Dentist:	Wide open. That's a good girl. There, see? It didn't hurt, did it?

10. *A Pat on the Back* (Mrs Van is admiring the garden that Mr Higgs has been digging.)

Mrs V: My goodness, you've made progress.
Mrs H: He's been working all morning.
Mrs V: You've made a splendid job of it.

11. *Paper Boat* (Paul, aged twelve, has made a paper boat which his sister Alison, aged five, wants.)

A: Please let me see it, Paul.
P: All right. But don't touch it.
A: Let's try sailing it in the bath tonight.
P: No.
A: Just one tiny little sail?
P: I said no, didn't I? Buzz off.

12. *Examination Bound* (Mr and Mrs Lowe are discussing possible visitors.)

Mr L: Did you say the Morrisons were coming round this evening?
Mrs L: I said Jim and Karen were. But not the kids. They're doing exams.
Mr L: I thought they'd finished.
Mrs L: Only the little ones.

13. *Phoning Professor Hamlin* (Jean Robertson, a university student, is phoning Mrs Hamlin, the wife of one of her professors. They have never met before.)

Mrs H: Hello?
Jean: Hello. Is that 25633? Professor Hamlin's house?
Mrs H: Yes?
Jean: Oh, good afternoon. My name's Jean Robertson. I understand the professor's away at present.
Mrs H: I'm afraid so. Is there anything I can do for you?
Jean: Well, Professor Hamlin lent me some books. History books. I'd like to return them, because I'm going on holiday. Could I bring them round this weekend?
Mrs H: Well, not on Saturday. But Sunday would be fine.
Jean: Oh, Sunday would suit me too. I'll drop in about ten. Thanks a lot.
Mrs H: Not at all. Thank you. Good bye.
Jean: Bye.

14. *Monday Morning at the Office* (The hall porter of a large firm is standing at the door, greeting different members of the staff as they enter the building. He is obviously on different terms of formality and informality with each of them.)

General Manager: Morning, James.
Porter: Good morning, Mr Onslow.
General Manager: Nippy in the morning now.
Porter: Quite chilly, sir.
Junior clerk: Morning.
Porter: Morning.
Young secretary: Morning, Jimmy.
Porter: Morning, my dear.
Young secretary: How's the wife getting on?
Porter: Oh, much better, thanks. She was really tickled with those magazines you sent her.
Young secretary: Good. I'll have some more at the end of the week.
Fellow porter: Hello, mate.
Porter: Morning, Alf. How're you, all right?
Fellow porter: Can't complain. Old man in?
Porter: Yeah. Just gone up.
Fellow porter: See you 'bout eleven.

15. *One for the Road* (Harry and Bob, two middle-aged friends, are discussing a near-accident, over a drink at the local pub.)

H: I hear you had an argument with a ten ton lorry.
B: Well, I was driving along quite slowly, when suddenly this bloody great truck just swerves across the road. We both stopped with inches to spare.
H: Did you! That was lucky!
B: I got out and I said "Just what the hell d'you think you're doing?" And d'you know what he said? He said "Sorry, old man, I must've dropped off". I said "You ought to have your licence taken away". And he said "You're probably right, you know". Just like that!
H: Shit!

16. *Morning Encounter* (A young man is recounting an anecdote to a friend. The friend does not take part in the conversation.)

D'you know who I ran into today? James. He was standing in this queue at the Bank, and I went and touched him on the shoulder, and said, "How's it going, James?" And he turned round, and had that far away look in his eyes, and said, "Lousy!" I said, "Hey, what's the matter?" And he said, "Veronica has just asked me for a divorce". I just gaped. I didn't know what to say. I mean, it's no surprise, but it was the shock of seeing his face. He looked like an animal that had been kicked!

17. *The South American Penguin* (A teacher is introducing a visiting lecturer. The situation is fairly formal.)

Good evening, ladies and gentlemen. It gives me very great pleasure to introduce our speaker this evening, Dr Richard Snow. I'm sure all

of us here are acquainted with his fascinating book on the mating habits of the South American penguin, and therefore you will all share my great interest in meeting the author himself. Dr Snow has just returned from yet another trip, this time to the southernmost latitudes of Chile. And this evening he's going to tell us some of his experiences. Ladies and gentlemen, Dr Richard Snow.

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Glossary of technical terms

All words in italics are also explained in the Glossary.

accent That property of a syllable which enables it to be *pitch contrast initiator.*

advanced vowel One produced with the raising of the tongue between central and back.

affricate consonant One produced by a *stricture* of complete closure followed by release of the *air-stream* through a stricture of close approximation.

air-stream Column of air passing through the vocal tract.

allophones The variants of each *phoneme.*

allophonic transcription A type of transcription which records the actual realization of each *phoneme.*

alveolar consonant One produced by raising the blade (or tip and blade) of the tongue towards the alveolar ridge.

approximant Sound produced by an approximation of the articulators too open to cause friction.

aspiration Voiceless interval between the *release* of a *plosive* and the voicing of a following sound.

assimilation The process by which sounds are influenced by neighbouring sounds and come to share some or all of their phonetic characteristics.

back vowel One formed with the back of the tongue raised.

bilabial consonant One produced between the lower lip and the upper lip.

breath Non-vibrating column of air that goes in and out of the lungs.

cardinal vowels A system of vowel sounds chosen to form a scale of reference.

central vowel One formed with the middle of the tongue raised.

centring diphthong One in which the tongue makes a *glide* towards a central position.

citation form/pronunciation = lexical form/pronunciation.

close vowel One formed with the tongue raised towards the palate.

closed syllable One ending in a *consonant* sound.

closing diphthong One in which the tongue makes a *glide* towards a closer position.

cluster A sequence of two or more *consonant* sounds belonging to the same syllable.

complementary distribution Said of *allophones* which are mutually exclusive, i.e. can never occur in the place of others.

compression Process by which a *phoneme* of the *lexical pronunciation* is substituted by another that is reduced in articulatory movement or length.

consonant sound A sound in forming which the *air-stream* meets either a *stricture* of complete oral closure, or one of intermittent closure, or one of partial oral closure, or one of close approximation.

contoid = consonant sound.

dental consonant One produced by raising the tip of the tongue towards the upper teeth.

devoiced sound One in which voicing has ceased partially or completely.

diacritic A small mark which, added to a phonetic symbol, gives extra information about its realization.

diphthong A *vowel sound* where the tongue *glides* from one vowel position in the direction of another, within the same syllable.
distinctive function The capacity to bring about changes of meaning.
elision The process by which a *phoneme* is omitted.
falling diphthong One in which the first element is more *prominent* than the second.
fortis consonant One which is produced with great *breath* force and muscular effort.
free variation Said of *allophones* which can occur in the same *phonetic environment*, without being in contrast.
fricative consonant One produced by a *stricture* of close approximation through which the air is released causing friction.
frictionless continuant = approximant
front vowel One formed with the front of the tongue raised.
General American (GA) That variety of English spoken by educated speakers in the USA, which has no regional characteristics.
glide Gradual movement of an articulator.
glottal consonant One produced by a *stricture* of the vocal folds.
glottal reinforcement (glottalization) Glottal stop occurring before or together with the oral closure of a *plosive* or *affricate*.
gradation The process by which strong *vowels* are weakened, and vowel or *consonant* sounds are *elided*.
head That part of an *intonation unit* extending from the first *accented* syllable to the last syllable before the *nucleus*.
homorganic Produced by the same organs.
inherent prominence *Prominence* produced by the *quality* and/or *quantity* naturally present in certain sounds.
intonation 1. The rises and falls of the voice in *speech*. 2. A complex of features belonging to different *prosodic* systems, mainly *tone*, *loudness*, *rhythmicality* and *tempo*.
intonation unit Syllable, or group of syllables, containing one or two *nuclear pitch movements*.
intrusive /r/ /r/ inserted between two words where no *r* exists in the spelling.
isochronous rhythm Type of *rhythm* in which the *prominent* syllables occur at relatively equal units of time.
labialization *Secondary articulation* consisting of simultaneous *lip-rounding*.
labio-dental consonant One produced between the lower lip and the upper teeth.
language Human vocal noise, or the graphic representation of this noise in writing, used systematically and conventionally by a community, mainly for purposes of communication.
lateral consonant One produced by a *stricture* of partial oral closure, so that the *air-stream* escapes down one or both sides of the closure.
length That aspect of auditory sensation in terms of which sounds may be ordered on a scale running from 'long' to 'short'.
lenis consonant One which is produced with a small degree of *breath* force and muscular effort.
levelling A form of *compression* consisting in the weakening or omission of the second element in sequences of *diphthongs* + /ə/.
lexical form/pronunciation That maximally clear pronunciation a word has when said in isolation, as it would appear in a pronouncing dictionary.
Linguistic Sciences The two sciences which study *language* – *Linguistics* and *Phonetics*.
Linguistics The science concerned with how *language* is structured grammatically and semantically.
linking /r/ Pronunciation of word-final spelling *r* when the next word begins with a *vowel*.

lip-rounding Position where the opening between the two lips is round in shape.
liquid consonant Cover term for the consonants /l, r/.
loudness That aspect of auditory sensation in terms of which sounds may be ordered on a scale running from 'soft' to 'loud'.
mid vowel One produced with the tongue raised to a mid position, i.e. half-way between *close* and *open*.
narrow diphthong One in which the tongue makes a short *glide* from one *vowel* position in the direction of another.
narrow transcription = allophonic transcription
nasal consonant One produced with complete oral closure and lowered velum, so that the *air-stream* escapes through the nose.
nasalized vowel A vowel pronounced with the velum lowered, so that the *air-stream* escapes simultaneously through mouth and nose.
non-syllabic sound One that functions as the marginal element of a syllable.
nucleus The last *accented* syllable acting as *pitch contrast initiator* in an *intonation unit.*
opening diphthong One in which the tongue makes a *glide* towards a more open position.
open syllable A syllable which ends in a *vowel sound.*
open vowel One produced with the tongue lowered.
oral consonant One produced with the velum raised, so that the *air-stream* escapes through the *stricture* in the mouth.
palatal consonant One produced with the front of the tongue raised towards the hard palate.
palatalization *Secondary articulation* consisting of the raising of the front of the tongue towards the hard palate.
palato-alveolar consonant One produced by the raising of the blade (or tip and blade) of the tongue towards the alveolar ridge, with simultaneous raising of the front of the tongue towards the hard palate.
paralinguistic features Features (such as whisper, falsetto, laugh, sob, etc.) which are neither involuntary nor present as a permanent background to a person's speech.
pause A relatively brief silence or other speech phenomenon producing a similar impression.
phoneme The smallest contrastive phonological unit which can produce a difference in meaning.
phonemic transcription One which provides one symbol for each *phoneme.*
phonetic environment Position with respect to other sounds.
Phonetics The study of *phonic substance* and its function in spoken *language.*
phonetics The study of *phonic substance.*
phonic substance Any vocal sound a human being is capable of producing.
phonology The study of the selection and organization of *phonic substance* into a given form or pattern.
pitch That aspect of auditory sensation in terms of which sounds may be ordered on a scale running from 'low' (grave) to 'high' (acute).
pitch movement initiator A syllable on which *pitch contrast* begins.
plosive consonant One produced by a *stricture* of complete closure which is opened suddenly to release the *air-stream.*
post-alveolar consonant One produced by the raising of the tip of the tongue towards the back part of the alveolar ridge.
prehead The unaccented syllable(s) preceding the first accented syllable in an *intonation unit.*
primary accent The (last) *accent* of a word, which will initiate *pitch contrast.*
primary articulation The closer of two simultaneous *strictures.*
prominence The condition of standing out due to *pitch, quality, quantity* and/or *stress.*

prosodic features Features (such as *pitch*, *loudness*, *quantity* and *pause*) that affect stretches of utterance longer than a *segment*, such as a syllable, a word, or a sentence.

pure vowel One whose *quality* is relatively sustained.

quality That aspect of auditory sensation in terms of which two sounds similarly presented and having the same *loudness*, *quantity* and *pitch* are perceived as dissimilar.

quantity Phonological use of *length*.

release Third stage in the articulation of a *plosive*.

Received Pronunciation (RP) The most widely taught British English accent, due to its high degree of intelligibility, lack of regional characteristics, and general social acceptability.

resonator A body containing a volume of air, which can be set in motion by the vibrations of another body.

retracted vowel One produced by the raising of the tongue between front and central.

rhythm The pattern of *prominent* and non-prominent syllables in an utterance.

rhythmic group Group of syllables or words considered from the point of view of the pattern of their *prominent* and non-prominent constituent elements.

rhythmicality Departures from the normal *rhythm* of speech.

rising diphthong One in which the second element is more *prominent* than the first.

roll *Consonant sound* produced by an active articulator making a rapid succession of *taps* against a passive one.

rounded (see *lip-rounding*).

secondary accents In a word carrying two or more *accents*, those least likely to initiate *pitch* movement.

secondary articulation The opener of two simultaneous *strictures*.

segment *Speech* sound.

segmental features Features (such as *aspiration*) which affect only one *segment*.

semi-vowel *Vowel sound* (*vocoid*) which functions as a *consonant*, i.e. a marginal element in a syllable.

sibilant *Consonant sound* with a hissing kind of friction.

speech The oral manifestation of *language*.

speech chain A series of events that takes place from the moment a message arises in a speaker's brain until the moment it reaches a listener's brain.

stop 1. Second phase in the articulation of a *plosive*. 2. Any *consonant* produced with a *stricture* of complete closure.

stress Articulatory energy exerted on a syllable.

stress-timed rhythm Type of *rhythm* in which the accented and/or prominent syllables tend to occur at fairly regular intervals.

stricture The partial or complete closure of the air passage.

strong-form The pronunciation a few structural words take when accented or prominent.

suprasegmental features = *prosodic features*

syllabic That functions as the central element of a syllable.

syllable-timed rhythm Type of *rhythm* in which syllables, either accented or unaccented, tend to occur at fairly regular intervals.

tail One or more unaccented syllables following the *nucleus* in an *intonation unit*.

tap *Consonant sound* produced by an active articulator tapping once against a passive one.

tempo Rate of delivery of an utterance.

tone A given *pitch* direction and pitch range.

tonetic stress marks System of *intonation* notation in which marks indicate accented syllables by their presence, and *tone* by their shape and position.

tonicity Position of the nuclear syllable in an *intonation unit*.

velar consonant One produced by raising the back of the tongue towards the velum.
velarization Secondary articulation consisting in the raising of the back of the tongue towards the velum.
vocoid = vowel sound.
voice Sound produced by the vibration of the vocal folds.
voiced sounds Those produced with vibration of the vocal folds.
voiceless sounds Those produced without vibration of the vocal folds.
vowel sound A sound in the production of which the *air-stream* comes out through the mouth (and nose), centrally over the tongue, and meets a *stricture* of open approximation.
weak-form The usual pronunciation a few structural words take when unaccented and non-prominent.
weak-form words A group of structural words frequently subject to *gradation.*
wide diphthong One in which the tongue makes a long *glide* from one *vowel* position in the direction of another.

Index

e.t.=ear-training; pr.=oral and/or written practice

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4. /siːz/

5. /ˈbaɪ/

6. /ˈsɪŋə/

7. /piːs/

8. /weə/

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