AN INTRODUCTION TO THE THE PRONUNCIATION OF ENGLISH

SECOND EDITION

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FOREWORD

The phonetic detail of the pronunciation of British English has already been described in several excellent works, notably those of Daniel Jones. This present book, written after a number of years of teaching the spoken language both to English students and to foreign learners, sets out to place the phonetics of British English in a larger framework than has been customary. For this reason, emphasis is given to the function of the spoken medium as a form of communication. Some treatment of the historical background and the linguistic implications of the present sound system is included, as well as information concerning the acoustic nature of English sounds. Those sections in Part II, in which detailed descriptions of the realizations of phonemes are given, deal with spelling forms, articulatory and acoustic features, variants and chief historical sources. In addition, throughout Parts II and III, general advice to the foreign learner is included.

The book is intended to serve as a general introduction to the subject which will encourage the reader to consult more specialized works on particular aspects. Though my own views and observations intrude both in the material and in its presentation, much of the information given is derived from the numerous sources quoted in the Bibliography. In particular, new evaluations, which seem to me to reflect more nearly the current trend of RP forms, are made of the phonetic characteristics of certain phonemes. In the acoustic field, where so much remains to be investigated and where research proceeds so rapidly, an attempt has been made to sum up the results of work done in the post-war period, though many of the conclusions must as yet be regarded as tentative. It was tempting to apply to British English a logical, elegant, and economical phonemic analysis such as is now commonplace in the United States, involving a very much simplified phonemic notation. If this has not been done, it is mainly because a type of analysis was required which was explicit on the phonetic level as well as reasonably tidy on the phonemic level; it seemed easier, for instance, to deal with phonetic developments and variants in terms of the largely traditional (for British English) transcription which has been used.

Throughout the book, the influence of my teachers, Professor Daniel Jones and Dr. H. N. Coustenoble, will be obvious. To them my sincere thanks are due, not only for their teaching over the past twenty-five

years but also for the example of dedication which they gave me. My gratitude is also due to Professor D. B. Fry and all my colleagues of the Department of Phonetics, University College, London, whose brains I have constantly picked during the writing of this book. In particular, I have valued the help of Mr. J. D. O'Connor and Dr. A. J. Fourcin, who have read sections of the book, made corrections, and suggested improvements. I am also much indebted to Professor Randolph Quirk for his helpful comments on several points of Old English phonology. I am most grateful, too, to Mr. J. C. Wells, who has generously allowed me to use unpublished figures resulting from his work on the formants of RP vowels.

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December, 1961.

PREFACE TO SECOND IMPRESSION

A number of mistakes have been corrected in this second impression. My grateful thanks go to all those who have pointed out errors, particularly to Mrs. H. J. Uldall and Mr. J. C. Wells for their corrections and comments, and to Mr. G. Perren of the British Council, London, who has kindly allowed me to use on p. 219 his amended figures for the English consonant frequencies.

A. C. G.

November, 1963.

PREFACE TO THE SECOND EDITION

In this revised edition, a number of sections have been modified or expanded in the light of evidence which has appeared since the first publication of this book. The changing status of RP, especially amongst young people, has necessitated the re-writing of the pages dealing with this matter, and it has seemed to me worthwhile to add a section on the current problems of the intelligibility of spoken English in the world. The chief additions, however, are concerned with the phonotactic possibilities of English, the permissible variations in the phonemic components of English words and the frequency of occurrence of monosyllables and polysyllables in continuous speech. Finally, the bibliography, while remaining selective, has been considerably extended.

March, 1970.

A. C. G.

LIST OF PHONETIC SYMBOLS AND SIGNS

a   Cardinal Vowel no. 4 (approximately as in French *patte*) ; used for first element of Eng. diphthong [aɪ]

æ   front vowel between open and half-open (Eng. vowel in *cat*)

ɑ   Cardinal Vowel no. 5 (approximately as in French *pas*) ; used for first element of Eng. diphthong [ɑʊ], and for Eng. [ɑː] in *car*

ɒ   open rounded Cardinal Vowel no. 5 (Eng. vowel in *dog*)

b   voiced bilabial plosive (Eng. *b* in *labour*)

ɓ   voiced ingressive bilabial plosive

β   voiced bilabial fricative

c   voiceless palatal plosive

ç   voiceless palatal fricative

ɔ   Cardinal Vowel no. 6 (approximately as in German *Sonne*) ; used for Eng. [ɔː] in *saw*, and first element of diphthong [ɔɪ]

d   voiced alveolar plosive (Eng. *d* in *lady*)

ɗ   voiced ingressive alveolar plosive

ð   voiced dental fricative (Eng. *th* in *other*)

e   Cardinal Vowel no. 2 (approximately as in French *thé*) ; used for Eng. [e] in *bed*, and first element of diphthong [eɪ]

ə   unrounded central vowel (Eng. initial and final vowels in *another*)

ɚ   retroflexed central vowel (American *er* in *water*)

ɛ   Cardinal Vowel no. 3 (approximately as in French *père*); used for first element of diphthong [ɛə]

ɜ   unrounded central vowel (Eng. vowel in *bird*)

f   voiceless labio-dental fricative (Eng. *f* in *four*)

ɟ   voiced palatal plosive

g   voiced velar plosive (Eng. *g* in *eager*)

ɠ   voiced ingressive velar plosive

h   voiceless glottal fricative (Eng. *h* in *house*)

ɦ   voiced glottal fricative (sometimes Eng. *h* in *behind*)

i   Cardinal Vowel no. 1 (approximately as in French *si*) ; used for Eng. [iː] in *see*

ɨ   unrounded central close vowel

ɪ   centralized unrounded half-close vowel (Eng. vowel in *sit*)

j   palatal unrounded semi-vowel (Eng. *y* in *you*)

ɾ   linguo-alveolar tap (sometimes *r* in Eng. *very*)

k   voiceless velar plosive (Eng. *c* in *car*)

l   voiced alveolar lateral continuant (Eng. *l* in *lay*)

ɫ   voiced alveolar lateral continuant with velarization (Eng. *ll* in *ill*)

ɬ   voiceless alveolar lateral fricative (Welsh *ll*)

m   voiced bilabial nasal (Eng. *m* in *me*)

ɱ   voiced labio-dental nasal (Eng. *m* in *comfort*)

ɯ   unrounded Cardinal Vowel no. 8

n   voiced alveolar nasal (Eng. *n* in *no*)

ŋ   voiced velar nasal (Eng. *ng* in *sing*)

ɲ   voiced palatal nasal (French *gn* in *vigne*)

o   Cardinal Vowel no. 7 (approximately as in French *eau*)

ø   rounded Cardinal Vowel no. 2 (approximately as in French *peu*)

œ   open rounded Cardinal Vowel no. 3 (approximately as in French *peur*)

θ   voiceless dental fricative (Eng. *th* in *thing*)

p   voiceless bilabial plosive (Eng. *p* in *pea*)

r   linguo-alveolar roll (Scottish, Italian *r*); also used for Eng. *r* in *red*

ɹ   voiced post-alveolar frictionless continuant (Eng. *r* in *red*)

ɻ   voiced retroflex frictionless continuant

ʀ   voiced uvular roll

ʁ   voiced uvular fricative or frictionless continuant

s   voiceless alveolar fricative (Eng. *s* in *see*)

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

t   voiceless alveolar plosive (Eng. *t* in *tea*)

ʇ   voiceless alveolar click

u   Cardinal Vowel no. 8 (approximately as in French *doux*); used for Eng [u:] in *do*

ʉ   central rounded close vowel

ʊ   centralized rounded half-close vowel (Eng. *u* in *put*)

v   voiced labio-dental fricative (Eng. *v* in *ever*)

ʌ   unrounded Cardinal Vowel no. 6; used for Engl. vowel in *cup*

ʋ   labio-dental frictionless continuant

w   labio-velar semi-vowel (Eng. *w* in *we*)

ʍ   voiceless labio-velar fricative (sometimes Eng. *wh* in *why*)

x   voiceless velar fricative (Scottish *ch* in *loch*)

y   rounded Cardinal Vowel no. 1 (approximately as in French *du*)

ʎ   voiced palatal lateral continuant (Italian *gl* in *egli*)

ɤ   unrounded Cardinal Vowel no. 7

ɣ   voiced velar fricative

z   voiced alveolar fricative (Eng. *z* in *lazy*)

ʒ   voiced palato-alveolar fricative (Eng. *s* in *measure*)

ɸ   voiceless bilabial fricative

ʖ   voiceless alveolar lateral click

ʔ   glottal plosive (stop)

:   indicates full length of preceding vowel

·   indicates half length of preceding vowel

ˈ   main accentual stress or pitch prominence on following syllable

ˌ   secondary accentual stress on following syllable

˗   high unaccented pre-nuclear syllable

ˋ   high falling pitch

ˎ   low falling pitch

ˊ   high rising pitch

ˏ   low rising pitch

ˇ   falling-rising pitch

ˆ   rising-falling pitch

•   syllable carrying secondary accent

o   syllable, immediately following nucleus, carrying secondary accent based on quality/quantity

❱   syllable carrying primary (nuclear) accent

.   unaccented syllable

~   nasalization, e.g. [õ]

¨   centralization, e.g. [ö]

ˌ   more open quality, e.g. [ǫ]

.   closer quality, e.g. [ọ]

.   devoiced lenis consonant, e.g. [ʒ̥] (above in the case of [ŋ̊, ȝ̊, g̊])

ˌ   syllabic consonant, e.g. [n̩] (above in the case of [ŋ̍])

ˌ   dental articulation, e.g. [t̪]

[ ]   phonetic transcription

/ /   phonemic transcription

LIST OF CONTENTS

PART 1

SPEECH AND LANGUAGE

CHAPTER 1

COMMUNICATION

1.1 Speech

One of the chief characteristics of the human being is his ability to communicate to his fellows complicated messages concerning every aspect of his activity. A man possessing the normal human faculties achieves this exchange of information mainly by means of two types of sensory stimulation, auditory and visual. The child will learn from a very early age to respond to the sounds and tunes which his elders habitually use in talking to him ; and, in due course, from a need to communicate, he will himself begin to imitate the recurrent sound patterns with which he has become familiar. In other words, he begins to make use of *speech* ; and his constant exposure to the spoken form of his own language, together with his need to convey increasingly subtle types of information, leads to a rapid acquisition of the framework of his spoken language. Nevertheless, with all the conditions in his favour, a number of years will pass before he has mastered not only the sound system used in his community but also has at his disposal a vocabulary of any extent or is entirely familiar with the syntactical arrangements in force in his language system. It is no wonder, therefore, that the learning of another language later in life, acquired artificially in brief and sporadic spells of activity and without the stimulus arising from an immediate need for communication, will tend to be tedious and rarely more than partially successful. In addition, the more firmly consolidated the basis of a first language becomes or, in other words, the later in life that a second language is begun, the more the learner will be subject to resistances and prejudices deriving from the framework of his original language. It may be said that, as we grow older, the acquisition of a new language will normally entail a great deal of conscious, analytical effort, instead of the child's ready and facile imitation.

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1.2 Writing

Later in life the child will be taught the conventional visual representation of speech—he will learn to use *writing*. To-day, in considering those languages which have long possessed a written form, we are apt to forget that the written form is originally an attempt at reflecting the spoken language and that the latter precedes the former for both the individual and the community. Indeed, in many languages, so parallel are the two forms felt to be that the written form may be responsible for changes in pronunciation or may at least tend to impose restraints upon its development. In the case of English, this sense of parallelism, rather than of derivation, may be encouraged by the obvious lack of consistent relationship between sound and spelling. A written form of English, based on the Latin alphabet, has existed for more than 1,000 years and, though the pronunciation of English has been constantly changing during this time, few basic changes of spelling have been made since the fifteenth century. The result is that written *English is often an inadequate and misleading representation of the* spoken language of to-day. Clearly it would be unwise, to say the least, to base our judgments concerning the spoken language on prejudices derived from the orthography. Moreover, if we are to examine the essence of the English language, we must make our approach through the spoken rather than the written form. Our primary concern will be the production, transmission, and reception of the sounds of English—in other words, the *phonetics* of English.

1.3 Language

From the moment that we abandon orthography as our starting point, it is clear that the analysis of the spoken form of English is by no means simple. Each of us uses an infinite number of different speech sounds when we speak English. Indeed, it is true to say that it is difficult to produce two sounds which are precisely identical from the point of view of instrumental measurement : two utterances by the same person of the word *cat* may well show quite marked differences when measured instrumentally. Yet we are likely to say that the same sound sequence has been repeated. In fact we may hear clear and considerable differences of quality in the vowel of *cat* as, for instance, in the London and Manchester pronunciations of the word ; yet, though we recognize differences of vowel quality, we are likely to feel that we are dealing with a ' variant ' of the ' same ' vowel. It seems, then, that we are concerned with two kinds of reality : the concrete, measurable reality of the sounds uttered, and another kind of reality, an abstraction

made in our minds, which appears to reduce this infinite number of different sounds to a ' manageable ' number of categories. In the first, concrete, approach, we are dealing with sounds in relation to *speech* ; at the second, abstract, level, our concern is the behaviour of sounds in a particular *language*. A language is a system of conventional signals used for communication by a whole community. This pattern of conventions covers a system of significant sound units (the *phonemes*), the inflexion and arrangement of ' words ', and the association of meaning with words. An utterance, an act of speech, is a single concrete manifestation of the system at work. As we have seen, several utterances which are plainly different on the concrete, phonetic level may fulfil the same function, i.e. are the ' same ', on the systematic language level. It is important in any analysis of spoken language to keep this distinction in mind and we shall later be considering in some detail how this dual approach to the utterance is to be made. It is not, however, always possible or desirable to keep the two levels of analysis entirely separate : thus, as we shall see, we will draw upon our knowledge of the linguistically significant units to help us in determining how the speech continuum shall be divided up on the concrete, phonetic level ; and again, our classification of linguistic units will be helped by our knowledge of their phonetic features.

1.4 Redundancy

Finally, it is well to remember that, although the sound system of our spoken language serves us primarily as a medium of communication, its efficiency as such an instrument of communication does not depend upon the perfect production and reception of every single element of speech. A speaker will, in almost any utterance, provide the listener with far more cues than he needs for easy comprehension. In the first place, the situation, or context, will itself delimit very largely the purport of an utterance. Thus, in any discussion about a zoo, involving a statement such as ' We saw the lions and tigers ', we are predisposed by the context to understand *lions*, even though the *n* is omitted and the word actually said is *liars*. Or again, we are conditioned by grammatical probabilities, so that a particular sound may lose much of its significance, e.g. in the phrase ' These men are working ', the quality of the vowel in *men* is not as vitally important for deciding whether it is a question of *men* or *man* as it would be if the word were said in isolation, since here the plurality is determined in addition by the demonstrative adjective preceding *men* and the verb form following. Then again, there are particular probabilities in every language as to the different

combinations of sounds which will occur. Thus in English, if we hear an initial *th* sound [ð], we expect a vowel to follow, and of the vowels some are much more likely than the others. We distinguish such sequences as *-gl* and *-dl* in final positions, e.g. in *beagle* and *beadle*; but this distinction is not relevant initially, so that even though *dloves* is said, we understand *gloves*. Or again, the total rhythmic shape of a word may provide an important cue to its recognition : thus, in a word such as *become*, the general rhythmic pattern may be said to contribute as much to the recognition of the word as the precise quality of the vowel in the first, weakly accented syllable. Indeed, we may come to doubt the relative importance of vowels as a help to intelligibility, since we can replace our twenty English vowels by the single vowel [ə] in any utterance and still, if the rhythmic pattern is kept, retain a high degree of intelligibility. An utterance, therefore, will provide a large complex of cues for the listener to interpret, but a great deal of this information will be unnecessary, or *redundant*, as far as the listener's needs are concerned. On the other hand, such an over-proliferation of cues will serve to offset any disturbance such as noise or to counteract the sound quality divergences which may exist between speakers of two dialects of the same language. But to insist, for instance, upon exaggerated articulation in order to achieve clarity may well be to go beyond the requirements of speech as a means of communication ; indeed, certain obscurations of quality are, and have been for many centuries, characteristic of English. Aesthetic judgments on speech, such as those which deplore the use of the ' intrusive ' *r*, take into account social considerations of a somewhat different order from those involved in a study of speech as communication.

1.5 Phonetics and Linguistics

This book is primarily concerned with the sound system of English and it is proper, as we have seen, that phonetic and phonemic analysis should occupy an important place in the study of any language. Indeed, when it is a question of a language which is being subjected for the first time to scientific analysis, it is necessary that some statement of the sound system should be made at the very outset, so that a notation can be devised for the recording of the language in a written form. Nevertheless, it should be remembered that phonetic analysis constitutes but one step in a linguistic investigation.

A complete description of the current state of a language must provide information on several interrelated levels :—

(1) *Phonology*.—The concrete *phonetic* characteristics (articulatory,