

PREFACE

This report proposes some questions to be discussed by specialists working on various aspects of speech communication. These questions concern the ultimate discrete components of language, their specific structure, their inventory in the languages of the world, their identification on the acoustical and perceptual levels and their articulatory prerequisites.

We regard the present list of distinctive features, and particularly their definitions on different levels, as a provisional sketch which is open to discussion and which requires experimental verification and further elaboration. The nature of these problems calls for coordinated research by linguists, psychologists, experts in the physiology of speech and hearing, physicists, communications and electronics engineers, mathematicians, students in symbolic logic and semiotics, and neurologists dealing with language disturbances, as well as the investigators of the poetic use of speech sounds.

The occasional remarks on auditory experience with respect to single distinctive features are meant merely as clues to future experiments in this domain. The articulatory data have deliberately been made brief and their only justification is a desire to outline the connection between the motor means and the acoustic effect; for a more complete treatment of articulatory movements see handbooks of general phonetics (1).

Since this study is addressed to workers in several fields, it was considered appropriate in places, to include certain data even though it might appear elementary to the specialist in any one domain. We have done our utmost to avoid the ambiguity and misunderstanding resulting from the unfortunate diversity of the terminology used in the different disciplines relating to communication.

The names of the distinctive features are meant to denote linguistic discriminations: in other words, the significant discriminations utilized in the code common to the members of a speech community. The stage of the speech event to which a given term is etymologically connected is much less important. Thus a term which alludes to the articulation may at times be used if the articulatory fact in question is common to all the manifestations of the given feature, e.g., the nasalization feature. Similarly, it is not important whether the term refers primarily to the physical or perceptual level, as long as the feature is definable on both levels. In cases where no generally accepted term was available, we have used names for certain distinctive features which may later be supplanted by more suitable ones. Nevertheless, a discussion of the features themselves seems to us more pertinent than an argument over their labels.

Wherever suitable English examples were available, they have been used. Unless otherwise indicated the specimens are from the stabilized and unified British Standard which has been exhaustively described under the label RP (Received Pronunciation) coined by Daniel Jones (2). When languages other than

English are used, we have endeavored to make the examples as simple and as clear as possible.

The signs employed in transcribed examples are those of the International Phonetic Association (3) with a few modifications. A) The affricates are represented by single letters, the same as those used for the corresponding (homorganic) constrictives but with a superscript \wedge : sh - /ʃ[^]/, ch - /tʃ[^]/. B) When indicating the stress, the sign is placed immediately before the accented vowel. C) In accordance with the proposals of the Copenhagen Phonetic Conference (4) we render the syllabic and non-syllabic function of a phoneme by the subscripts \circ and \wedge respectively, voicing by v , and voicelessness by v° .

The examples quoted within diagonals present the phonemic ("broad") transcription which analyzes speech into phonemes. The examples quoted in square brackets give the phonetic ("narrow") transcription which is concerned with the variety of speech sounds emitted, without reference to their function in language. Examples given in conventional spelling form are underlined.

Many problems which are merely mentioned in passing will be discussed by us elsewhere. A more detailed treatment of the theoretical questions outlined in Chapter I and particularly of the relation between the sound shape and its functions in language will be given in a future publication (5), where also our analysis of the English phonemic pattern will be discussed more explicitly.

The mathematical treatment of the information carried by the distinctive features within a message and of their information capacity within a given language code is the subject of a special study being prepared in collaboration with Professor W. Hurewicz of the Department of Mathematics of M.I.T.

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Criticisms and comments on any of the facts, concepts, terms, or interpretations presented in this report will be appreciated.

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