

TWO TYPES OF PHONOLOGICAL VALUE

W. HAAS

1. In phonetics, as in any other descriptive discipline, description is selective. We cannot describe everything. We *select* what is worth describing; and we *grade* what we describe in an order of relative importance. The most significant advances of modern phonetics are found in our awareness of its *principles of relevance*, i.e. the clearer notion we have of the *values* of phonetic elements.

2. On one such principle there seems to be general agreement – the principle, namely, that we should select elements of “diacritical value”. It is referred to by various terms: “commutation”, “contrastive substitution”, “opposition”, “the technique of minimal pairs”. Even distributional techniques, though they proceed – more precariously – by discounting what is less important, rather than by picking out the more important, do share the objective of techniques of direct selection: indirectly, they too aim at obtaining “*distinctive*” elements, so-called.¹

I shall assume here (though this is not accepted so generally) that *features* as well as segments can be selected as distinctive (commutable); and, further, that “distinctive features” may be of two sorts: (a) *sound-features* (such as labiality, voicelessness, etc.) which may characterise a distinctive unit-segment (“distinctive sound”) and which are often referred to as “phonemic”, and (b) *prosodic features* (i.e. multi-segmental features such as accentual patterns or pitch-contours) which characterise larger units only.

3. Distinctiveness is not the only kind of phonological value. Phoneticians seem to be agreed that there are important phonetic elements which are *not* distinctive (in the sense of contracting minimal oppositions), or are only marginally so (such diacritical power as they may have being no measure of their importance in the language). Most of such elements are prosodic; but there are also mere sound-features and even sound-segments among them.

Two questions I wish to ask: (i) Is there some one common principle on which we can rely for selecting those phonetic elements, whose relevance does not consist, or does not primarily consist, in diacritical power? (ii) If there is such a principle, what is its connection with commutation and commutability? – These questions are not new. But they do not seem to have found satisfactory answers.

¹ Cf. my “Relevance in Phonetic Analysis”, (*Word*, 15, No. 1 (1959)).

4. It has been suggested that we can distinguish two general types of phonological value by referring to paradigmatic and syntagmatic relations, respectively. Distinctive elements are picked out by noting their "opposition" in a "paradigm" (substitution-class), while other important elements are supposed to be selected on account of their "contrast" in some "syntagma" (sequence, or text). But this won't do. Though it is a normal condition of picking out something as a phonetic element that it should be distinguishable from its neighbours, the mere fact that it is thus distinguishable is no sufficient condition for picking it out. Syntagmatic difference is no criterion of relevance. We certainly do not care to take notice of everything that is distinguishable ("contrastive") in the flow of speech. We may have failed to recognize this in theory, but surely not in our practice.

5. If segments or features of speech, whether "distinctive" or not, are picked out as phonetically relevant, the reason is that they play a special role in the constitution of utterances – something beyond just being distinguishable "parts". – Before attempting a general statement, let us remind ourselves of some familiar cases – some typical examples of the kind of phonetic relevance which does not consist in diacritical value.

One sort of element, not necessarily discoverable by commutation, was pointed out by Trubetzkoy, when he drew our attention to *Grenzsignale* – to elements that serve as markers of grammatical boundaries. They divide a text into a sequence of grammatical classes (of words or morphemes, etc.). Such elements may be prosodic features (e.g. a fixed word-accent, or a break in vowel-harmony); or they may be sound-features, even sounds (e.g. the German "glottal stop"). – But *Grenzsignale* are only a special case of non-distinctive relevance. There are others. And many have had their importance overlooked, simply because one was content to note some marginal diacritical power which, in addition to its classifying power, the element in question might happen to have.

Consider, for example, those familiar oppositions in English words or phrases: 'import ÷ im'port, 'transfer ÷ trans'fer, 'make up ÷ make'up, 'set back ÷ set 'back, etc. The effective functional load of such accentual oppositions is extremely low. For any such two forms to contrast in the same utterance-frame, is very rare indeed. And this is so, precisely because their respective accentual patterns serve other and non-diacritical purposes – purposes which prevent their occurrence in the same frame: – these patterns serve as markers of *different grammatical categories* – hence, generally, of different syntactical positions: the "falling" pattern being more frequent with disyllabic nouns, the "rising" with disyllabic verbs. The range of these markers extends far beyond their few potentially "distinctive" occurrences. Cf. *apply, admit, begin, contain, decide, pronounce, rely, select, undress*, etc. and the many compounds: *put up, come in, go on*, etc., as against very many nouns such as those ending in *-er* (*brother, caller, founder, driver, rider*) or *[-fn]* (*action, friction, passion*) or *-ing* (*feeling, breeding, dripping*), or compounds (*cobweb, sunrise, income, daylight*), etc. etc. We learn little of the true significance of these accentual patterns by merely hunting

for the few "minimal pairs". If there were no such pairs, the importance of the patterns would still be almost the same.

For an example of accentual patterns in the role of very regular grammatical markers, we might refer to German. Again, the diacritical value is merely marginal. The functional load of oppositions such as 'übersetzen ÷ über'setzen, 'unterstellen ÷ unter'stellen is no measure of the importance of the two accentual patterns: their chief significance is that they mark German verbal constructions and idioms as "separable" and "inseparable", respectively. By its accentual pattern, 'übersetzen is marked as belonging to a very large class of verbs and verbal phrases (most of which do not admit of accentual opposition): *ent'gegengehen, 'abgeben, 'aufsuchen, zu 'Grunde gehen*, etc. while über'setzen is marked as belonging to another large class *be'setzen, ver'gehen, ent'kommen, zer'brechen*, etc. etc. We take notice of the patterns, not because of the few cases in which they are "distinctive", but because of the great regularity with which they correlate with ("determine") important grammatical constructions.

Another kind of "non-distinctive" element we wish to take account of are those which, following J. R. Firth, we may call "phonaesthetic"; e.g. the word-initial English sequence *sl-*. Again we note that such elements are relevant, though not picked out for diacritical power, as *s* or *l* would be; they are relevant, because they determine a fairly large class of semantically related words (*slide, slick, slither, slim, slip, slender*, etc.).

Finally, we might mention syllabic contours. Familiarity with them should not prevent us from asking what our reason is for finding them significant. The contours – those various movements towards and from a peak of prominence – are generally not "distinctive" at all. They are relevant, because they help us to organise our utterances; and they do this, because there are far fewer different syllabic contours in a language than there are different combinations of phonemes. So it is possible to state regularities of phoneme-combination ("phonotactic" regularities) in terms of those contours. Each is found to characterise a *type of phonetic sequence*, i.e. a sequence of *classes* of phonemes. The type of sequence is generally stated in terms of such classes (CV, CVC, CCVC, etc.). But the classes themselves are defined as phonotactic categories: they – the whole structural classification of phonemes as consonants, sonants, semivowels, vowels, etc. – are determined by the given syllabic contours of the language.

Is any general statement possible about the relevance of all such diverse phonetic elements? – We find that each characterises (or "marks") some descriptively-important type of unit of higher rank (units, either more complex like syllables, or of higher level like morphemes, words, grammatical constructions). If other elements serve to *distinguish* utterances, these serve primarily to *classify* them. Others, so to speak, are *chosen*; these *determine ranges of choice*. Each, while not being itself necessarily "distinctive", determines some class or classes of distinctive elements. Let us speak, then, of the "*determinant power*" of such markers or classifiers.

6. Can we proceed to say anything more definite about the relation of these "determinant elements" to "the distinctive"? I think we can. All we seem to require is a more exact statement than is usual, of the conditions of commutation and distinctive value.

We need to recognise explicitly that commutation is an operation we can only perform *within* some determinate linguistic unit. Trubetzkoy spoke of "Rahmeneinheiten", frame-units (*Grundzüge*, 225). Phonetic elements are commutable, distinctive, have diacritical power, only with regard to determinate frame-units – in logical terminology, "functions". We transform any linguistic unit (a morph, a word, a phrase) into the appropriate "frame" or "function", by considering substitutions for ("oppositions" to) an element of it, while keeping the rest constant. The word *pit* is transformed into a word-function (-it) – read: "blank, *it*" or "x, *it*" –, when its initial is replaced by a "blank" or "variable". When we consider substitutions (*pit*, *bit* *kit*, *hit*, etc.), it is important to be clear about the elements which determine the function, and thus the range of the variable. It is important e.g. to be clear that we are keeping constant what may be described as "monosyllabic word-function, consisting of simple onset plus *it*". This will exclude *skit*, *split*, *do it*, and the like from being "values" of the function. It is a difference of functions and of variable-ranges, that prevents us from contrasting *p* and *o* as they occur in, say, *chaos* /keios/ and *capes* /keips/. Also, not all the distinctive elements of a language are diacritical within the same sort of functions; we must state, for instance, whether "maximum stress" is "maximum" within a word or a phrase or a sentence, i.e. say what the "Rahmeneinheit" is. "Phonetic environment" is not enough.

It is true that every element which is distinctive for some functions can also be viewed as determinant for others: *p*, being distinctive for some word-function (-it), is determinant for another (p-t). This seems to be why determinant power has received little attention; it seemed to be merely implied by diacritical power. However the implication is not mutual; there are elements which are *not distinctive*, and are yet important on account of their determinant power. E.g. the specification of a function as "monosyllabic" may be important, even if this specifying feature itself never occurs with diacritical power. Its importance may consist exclusively in its power of determining important functions and classes for *other* elements to contrast in. Saussure describing relevant elements as "négatives", "oppositives", "différentielles" (*Cours*, 164 ff) is always quoted. We should not forget that he spoke also of "cette phonologie combinatoire [qui] circonscrit les possibilités et fixe les relations constantes des phonèmes interdépendants" (79). The two kinds of phonological value are complementary: distinctive elements contrast in determinate functions, and functions are determined for distinctive elements to contrast in.

In selecting determinant elements, we must of course submit to certain limitations. Not every feature of a frame-unit or function is worth our attention. We select, and shall call "determinant", only such features or markers as determine "important" functions. And a function is considered important, if the variable it contains, or the

class of its own values, is found to represent a type of unit (a linguistic category), in terms of which we are able to state syntagmatic regularities of the language – phonetic, grammatical, or semantic regularities. Determinant elements are important *as markers of syntagmatic regularities*, never merely as bearers of syntagmatic contrasts.

7. Phonetic analysis may stop sooner or later. Techniques of selection do not distinguish between relevant and irrelevant, but between more and less relevant. *Distinctive* elements are graded according to the functional burden of the oppositions which they contract; further, there are elements of subsidiary diacritical power, and others which are of stylistic rather than more narrowly linguistic significance. *Determinant* elements are graded according to the descriptive value of the category they mark, and according to the degree of regularity with which they mark it. Both kinds of gradation seem to require a good deal of further study. Moreover, in order to assess the relative importance of some *particular* phonetic element, we shall have to remember that it may be important on both counts, being distinctive in some functions, and determinant in others.

8. It would seem that, with the exception of Trubetzkoy and the late Professor Firth and his collaborators,² there have been very few phonologists, who were prepared to give proper attention to the significance of determinant phonetic elements. Professor Firth – somewhat misleadingly – called them "prosodies", and he spoke at times, as if a study of these elements were a preferable *alternative* to phonemic analysis. This, I think, was unfortunate. The study of determinant elements is not an alternative to phonemics; it is *complementary* to it.

The two kinds of phonological value are clearly connected in the fundamental analytic technique of commutation, and in the notion of linguistic function, with which it operates. Once this is seen, we may hope to avoid some common aberrations. We shall not chase for elusive oppositions, say, of some stress-beats or pitch-levels, in order to establish contours whose principal relevance is not "distinctiveness" but lies in their determinant power; nor shall we ignore important phonetic elements, merely because we find it difficult to establish diacritical value for them. And, most important of all, we shall have found a way of establishing much closer links between the different levels of linguistic analysis – close links, without confusion, between, on the one hand, the speaking noises we make and, on the other, their grammatical and semantic functions.

University of Manchester
England

² Cf. J. R. Firth, *Papers in Linguistics, 1934–1951*, and R. H. Robins, "Aspects of Prosodic Analysis" (in *Proceedings of the University of Durham Philosophical Society*, 1957) and their bibliographies.