The paper which follows is an attempt to compare the analytical procedures of the greatest of British structuralists, the late J. R. Firth, with the procedures of one American linguist. At present, there is rather more than usual confusion and discord among linguists in this country, so that I feel that the only course open to me is to speak for myself alone, though obviously I must also acknowledge that the great majority of the techniques, concepts, and entities which I use have originated with other linguists. I have been motivated by the belief that when there are two differing approaches to the same body of phenomena, with important differences in analysis and conclusions, the most useful discussion is detailed comparison to discover where there are agreements and what sort of disagreements there are, and, if possible, to remove some of the disagreements by showing that they are merely verbal rather than factual.

The first important statement made by Firth is one with which most Americans would immediately agree.

-The facts of the phonological structure of each variety of English, Hindustani, Telugu, Tamil, Malay, and Nyanja are most economically and most completely stated on a polythetic hypothesis. (111)

I should go further, and propose that it is not merely more economical and complete to set up more than one phonological level, it is necessary, and even universally necessary.

Firth's main division is into sounds (phonetic entities, or phonemes) on the one hand and processes on the other. This is made plain by his title Sounds and processes, though it is perhaps not immediately clear that he also equates phoneme and sound. The equation is demonstrated by the following.

I have purposely avoided the word 'phoneme' in the title of my paper, because not one of the terms in its present wide range of application suits my purpose and 'sound' will do less harm... I would restrict the application of the term (phoneme) to certain features only of consonants and vowels systematically stated of one language. (222)

This passage is further clarified by the example of phonological analysis of English which closes the paper. The word features is slightly confusing to the American reader, and I hasten the guess that Firth does not here mean distinctive features in the usual sense, but rather that some things ordinarily called

1 My source for Firth's ideas is his article Sounds and Processes, Papers in Linguistics 1941-1949 121-38 (Oxford, 1957); the article was originally published in TSF 1294. In the interests of unity I have avoided references to followers or modifications of Firth's theory. References are to pages of the 1957 volume.


587
consonants or vowels are phonemes, others are not. All phonemes are consonants or vowels, but not all consonants and vowels are phonemes.

In this position, Firth is close to that taken by many other scholars, perhaps most interestingly that expounded by Einar Haugen in his article Phonemes or Proseemes, in Language, Vol. 37, Number 4 (1961). They, among, pitch, [note], have different domains from that of the more conventional phonemes, and it would be a great advantage procedurally if we might set them off from the phonemes in another way. Among other advantages it would permit us to abandon Bock's Postulate 14 to the effect that 'the order of phonemes is either consonant or stress sequence'. It should be objected that this would make it impossible to say e.g. that stress is phonemic, I should reply that this is probably so great a loss.

There is, however, one important difference between the position that Haugen was taking in 1948 (I doubt if he held it today) and that of Firth. For Haugen, all successive sounds (i.e. roughly all consonants and vowels) are phonemes, all others are proseemes. Firth wishes to deny some consonants and vowels the status of phonemes. For Haugen the dividing line was successive order versus simultaneous order. For Firth, the dividing line remains to be investigated. It is also to be noted that Haugen perhaps clearly thinks of the difference between phonemes and proseemes as largely one of terminology; he does not deny that contrasts are accomplished by stress, or more exactly, by stress together with timing.

Unfortunately Firth has not, to my knowledge, given a clear and inclusive definition of proseeme; it is necessary to work out by comparison and by listing his examples. Though I cannot find in Firth's writings any explicit statement of the relation of proseumes to musical qualities, it is clear from a reading of page 128, together with a good many other passing references to music, that Firth thinks of the basic musical qualities as the core of the class of proseemes. Thus,

We can tentatively adopt this part of the theory of music for the purpose of framing a theory of the procedure. Let us regard the syllable as a pulse or beat, and a word or phrase as a set of beat length or grouping of pulses which bear to each other definite interrelations of length, stress, tone, quality—including voice quality and nasality. (228)

In connection with this statement, it is necessary to look at the example of prosodic and phonetic analysis on one more. In a set of symbols set off from the rest by heavy lines (as in the above), the following shows some stressed syllables, and indications of pitch consisting of dots or dashes at varying heights, and three lines which curve downward from the highest level to a lower one. The various levels which show falling pitch are by perpendicular lines before the stressed syllables, and in addition the dotted symbols show three grades of length, the longest being thick, the shortest such marks as the or 1, and the middle grade forms like why, has, and one. It is also possible that Firth intended to represent four grades of length, since the three curves which show falling pitches are longer than the longer line in thick.

For these various qualities, there is a varying amount of convergence with American practice. Most (though not all) American analyses pitch into four contrasting levels, and most Americans would agree with the distribution of the levels as indicated by Firth. The principal disagreement that I should expect is that one or more of the three falling pitches might be recorded as beginning on the next-highest pitch instead of all on the highest as Firth records them. His notation is clearly possible, however. Even less important is the detail that in my own idiolect utterance normally begins on the next-highest pitch. But many American dialects have pitch 1 as given by Firth.

About stress there is less agreement. First of all, American linguists are still not agreed on the number of stressing categories. My own position, that there are three, must be taken as an individual opinion, though supported by others. Firth seems to record only one stress contrast, stress and its absence. Yet he shows instances of stress elsewhere than under the pitch peak, so that these may be equated with an at least phonetic secondary stress. His example, relatively short as it is, does show cases of such phonetic secondary stress is allophonic or phonemic. Those who have followed the American war over stress will remember that the recognition of a secondary—primary contrast independent of the pitch peak comes much later than the publication of Firth's article, and then only when James Simpson et al. published examples from British phoneticians. Tertiary stress can also be discovered within phonemes and proseemes by resembling Firth's analysis. Since Firth records syllable length, all his long and half-long syllables shown without a stress mark can be described as having tertiary stress. Short syllables, such as the and I and the first and last syllables of accepted, are weak.

The three (or four) grades of syllable length are qualities which are left unrecorded in American phonemic analysis. Yet we are by no means unconscious of their existence or of their very real importance in many contexts. For many Americans, syllable length is something that needs to be described in dealing with differences between languages or in the learning situations which depend upon contrasting statements. Thus the sharply varying grades of length of English syllables have to be explained to Japanese learners of English, since their language is one which is based in each case on a sharp distinction between stress, the sharp varying grades of length of English syllables have to be explained to Japanese learners of English, since their language is one which is based in each case on a sharp distinction between stress, tone, and quality of syllables as in the case of the word music. The American system leaves syllable length out of account because the contrasting function is assigned to stress; the syllable lengths are regarded as non-contrasting. It is not clear to me whether Firth regarded them as contrasting entities, or only as entities which it is necessary to note because they are striking structural characteristics of the language. If the latter was Firth's position, it would help to make clear the reason for some statements which are otherwise puzzling. I have in mind such statements as this (122):

[The above text continues with further discussion on phonemic and prosodic analysis.]

That is to say, syllable length (alone among the group of prosodic features) may be considered a noncontrasting set of differences. By virtue of including such a set,
the core procedures are seen to escape the application of the principles of contrast and complementarity which apply strictly to phonemes proper, the vowels and consonants.

The American position that there are four stresses certainly has difficulties. It is usual to assume that the nature of stress is loudness or intensity—ultimately the amount of energy used. Bolinger, and more recently Pegg, have insisted that such statements are unassailable to the last, since loudness is much less audible than pitch, duration, and vowel or consonant quality. To insist that stress is loudness requires that we assume that there is a difference between distinctive features and distinctive organs of audibility. They insist, of course, that the physical features must be audible. The true fact as we will see is that a word contains /st/ or /st/ in the audible features. This is a position which does not make us unresponsive to the causes of audible cues. This is a position which does not make us responsive to the audibility of /st/ or /st/ in those cases. We have no hesitation in assigning articulation as the distinctive features of the two phonemes, and reducing the difference in the surrounding sounds. Yet since the articulatory differences between /st/ and /st/ are kinds of consonants, we have no hesitation in assigning articulation as the distinctive features of the two phonemes, and reducing the difference in the surrounding sounds. The advantage in this great, but for my personal taste in this overbalancing disadvantage.

This is that since stress must be recorded every time it occurs, and since the duration of every syllable must be shown if the system is to be consistent, there is an inevitable lack of economy. Such a syllable as much is recorded is a stress mark, a mark for a half-long syllable, and no curve to indicate a pitch mark, an aspect of the order of /st/ or /st/ and no curve to indicate a pitch mark. The length mark is redundant. Similarly, since the pitch peaks are the definition primary stress, the stress marks on these syllables are redundant also. Whether the analyst prefers a needy consistent system, or one which sacrifices some neatness for the sake of making cues and distinctive features coincide, is perhaps unimportant. I think what is important is that each analyst should know what decision he has made, and why he has made it.

Firth shows a second line of prosodic features, which can be called secondary or constructions, several kinds of things go into this line; I shall do my best to construct, and perhaps separate them. First, there are two kinds of words summed under the term 'junctive' (125–3).

Similarly we may abstract those features which mark word or syllable initials and word or syllable finals or word junctures from the word, piece, or sentence, and regard them syntagmatically as procedures, distinct from the phonemic constituents which are referred

to as units of the consonant and vowel systems. The use of spaces between words only delineated and identified is, in a punctuation mark or space, a prosodic symbol. Compare the orthographic example 'is shut' with the phonetic 'iz shut'. The matter of prosodic signs.

The interword space of the orthography is replaced by a juncture sequence symbolized in general phonemic terms by /st/. Such a sequence is, in modern street English a much of juncture which is heard regarded as a prosody. If the symbol is used for word initial, and /st/ for word final, /st/ is θ. (symbols) which generalize beyond the phonemic level.

When we turn to the example (135), we find that the unanalyzed phonetic notation shows spaces which correspond to the word boundaries of ordinary orthography throughout. When these are shown on the line of constractive procedures the word spaces are preserved, but for three of them, there is a half-circle below the space, linking the symbols on each side of it. The pertinent passages are these:

<table>
<thead>
<tr>
<th>Word 1</th>
<th>Word 2</th>
<th>Word 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>cau</td>
<td>mull</td>
<td>bea</td>
</tr>
<tr>
<td>waz</td>
<td>mat</td>
<td>beta</td>
</tr>
<tr>
<td>and</td>
<td>liz</td>
<td>flop</td>
</tr>
<tr>
<td>liz</td>
<td>liz</td>
<td>flop</td>
</tr>
</tbody>
</table>

I think it can be said that the half-circle link is Firth's symbol for the kind of juncture that has been described (135) as θ. Such junctures are essentially Trubetzkoy's Gennadite, like sequences of /st/ or vowel, which do not occur unless there is a boundary of some sort (other than a phonemic boundary) between them. It should be emphasized that this is not what is meant by juncture among linguists of my generation and school. The other type of juncture is represented by a space with no half-circle link. I presume that these are grammatical or morphological boundaries which are assigned to pitch of sounds. The justification for them is presumably Firth's concept of the 'institutionalized word'.

Thus Firth's concept of juncture is twofold. One kind of juncture is a sequence, the other kind is a nonphonomological grammatical boundary, not audible except as we recognize words composed of audible material. Neither kind of juncture is a phoneme, and as long as juncture thus defined, Firth was quite right in keeping them out of the 'phonemic structure'.

As for agreement or disagreement with American practice, the situation is still confused. The kind of juncture represented by American practice, American practice commonly, though not universally, relies on phonotactics—the study of sequences of phonemes—there states the correlations of such sequences with morphological boundaries as a matter of rule. We do not usually write symbols to indicate such phonotactic boundary signals, either in the segmental or in the suprasegmental plane. As for writing nonphonological boundaries in phonological notation, this practice followed by Harris,

4 It is especially helpful that there are words calling English words and Arabic words. They are so called by authoritative bodies indeed English words and Classical Arabic words are firmly institutionalized (122).
systems, which work upward from small units to larger ones. Firth's system, however, works downward from sentences to words and smaller units. In such a system, there is less need for taking account of phonological junctures; the boundaries of 'institutionalised words' are the important facts. The downward approach of prosodic analysis of Internal Downward analysis practised by Fiske, and the fact that Firthian analysis of-day parallels much that is done by Harris and Chomsky.

Another component of the line of prioduction is the introduction of the use of combinations of prosodic phrases. These are written with the generalised symbols e and v (for consonant and vowel). Thus the phonetic transcription [fekik] is represented in constructed forms as evve, and the transcription [weak] is represented as evc. Firth says of these symbols (122):

By using the common symbols e and v instead of the specific symbols for phonemic consonant and vowel units, we generate syllabic junctures in a new order of states, without making the specific paradigmatic consonant and vowel systems as such, and without making the syntagmatic word structure of syllables any more, and differences in it semantically.

This particular sentence involves one of the points at which I find Firth's presentation hard to follow. It is certainly true that writing sequences of c's and v's is a good way of making phonetic analysis of phonemes in larger constructions. But are these constructions words, or something else? Firth seems to imply that they are syllables primarily, and words only because words are made up of syllables. However, all that his symbols e's and v's are in many instances an institutionalised word boundary. If this is so, I do not see how the result can describe the structure of anything except the institutionalised word. Were Firth using a more phonological syllable boundary, then I believe his c's and v's would indeed describe the structure of syllables.

Yet when one makes this sort of criticism, one reads further and finds a much clearer statement of the relation of syllables to the words in which they are contained. This is found on page 100, where eight of the features of Arabic words are listed. The first two of these are the number of syllables and the nature of syllables as open or closed. That is, before syllable structure can be given in terms of c's and v's, the boundaries of the syllables must be known, as is whether a c goes with a preceding or a following v. It is precisely the absence of this information that makes the following bit of English transcription vague as a statement of syllable structure, though it is clear enough as a statement of the structure of the word (138):

\[
\text{[new [skepted]}}
\]

Firth does not tell us whether the first syllable division is after the /k/ or after the /c/, just as he does not tell us, except in terms of word division, that the sequence [fekik] has a boundary after /k/. After all, the sequence might have been [fek kwat], with a boundary in a different position. The difficulty in separating syllable structure from word structure is greatest in Firth's short English example of prosodic and phonetic analysis. I suspect the example of having been worked up somewhat hastily, since there are a num-
ber of inconsistencies which I am sure would have been corrected had the analysis been more careful. For instance, the notation of syllabic functions for assorted new up a dash and three dots, or four syllables. In stating the consonant and vowel structure of Arabic words is Cairene colloquial. Firth's results were much more fruitful, and the formulations of five syllabic types have been used by many later students. And it is certainly true that statement of syllabic structure in consonant and vowel sequences, together with the necessary statement of phonological syllables by mixing up its own compendium of descriptive statement.

Into the lines of constructional features Firth put certain consonantal and vocalic units which also have prosodic function. Such sounds appear, therefore, in two places. Firth was explicit about this overlapping (121):

"Almost any type of 'sound' may have prosodic function, and the same 'sound' may be used in one way as a consonant or vowel unit and as a prosody."

An example of such two-valued sounds can be found in the analysis of the definite article to which the phonetic transcription is [ha] [f], (the article indicates items which in one way or another have some prosodic function or feature). The phonetic structure of these two words is [ma ra] and the constructional prosodic sequence is [ma 1]. That is, the sequence is of a phonetic 'junctur...'

In Firth's terms, these two phonemic units "generate a prosody" when they occur in sequence. At this point, I would like to draw a small criticism of the practical extension. For entities like this, Firth's treatment on page 123 he speaks of a similar phonetic 'junctur' as composed of a final and an initial, of í, t, r, h. There would be a gain in consistency, and incidentally less of the apparent overlap, if the final and initial consonants of ha and ha were similarly written f and í. Since the intention was also to divide sounds into the two classes of vowels and consonants, a further refinement would be to write f and í for consonants, f and í for vowels.

I cannot leave these sounds, which are both phonemic and prosodic, without saying that for me-as at any rate, Firth's statement has been extremely suggestive. Together with the practice of putting some items ordinarily thought of as phonemes into the prosodic class for reasons of linguistic convenience, this is the part of his theory on which I have found most profitable to build.

Nevertheless, the sequential "junctural" of the one in [ha ha] has phonemes that I prefer to handle in terms of junctures of events or as phonemic rules.

The remaining items in the line of constructional prosodies are normally thought of as vowels and consonants, but are assigned by Firth altogether to the prosodies. The reasons for this assignment are not given in explicit detail, so that it will be necessary to begin by listing the items.

Firth lists (h) and (x) prosodies in "a variety of languages" (124), and later (131) adds (d). The whole group he calls laguyrana. The glottal stop as a prosody is discussed (132-3) for dialectal English, English (h) is said to have phonetic value in such 'paradigms' as eating/dreaming, but it is also a prosody, où, it is an initial [ha] in stressed syllables of full words having no weak forms. It is thus a sound on the borderline with the non group described, phonetic items which on occasion have the characteristic of some. Firth shows that the prosodic function of h outweighs the phonetic. He remarks (134), 'In English dialects phonetic [h] [if there is such a thing] disappears, but prosodic [h] is sometimes introduced by mixing up its own compendium of descriptive statement.

The list of items especially liable to prosodic classification is completed by the enumeration (131) [l] ( liquids and semi-vowels, l, r, a, ar (and other nasals))... Yet Firth appears to have made no final decision as to whether /h/ and the nasals in English were phonemes or prosodies or both. His statistical example lists six nasals in the phonemic structure, only one of them has any prosodic function. This is the /m/ of much, which enters into a phonetic juncture because it is initial. The example contains no occurrences of /l/; it is not discussed in relation to English. The nasals are briefly discussed (136), but without special reference to English; it is mid that miscallion occurs in [ly] [a] [n] [s] [m] [n] [n] [n] [n] [n] [n] [n] [n] [n] [n] [n] [n] [n] [n]

The statement continues: 'Apart from the fact that this class such as m, s, t, r, s, are often sonants—that is to say, have syllabic function—they are also quite frequently initial or final signals.' All three of these statements apply to English, where nasallion often spreads over syllables and words of syllables, where nasals are very often syllabic, as in [ly], and where at least is always a final signal, as least in the morpheme. I can find little that clearly unifies all these items into a single group. Cohen, in summarizing Firth's position, makes a clear statement:

"By 'sonants' are meant all phonemes touching under the influence of stress, length, and pitch (prosographic in American terminological terms) as well as those resulting from juncture, both linking and separating.

Unfortunately, Firth himself is not so clear. Of the following three passages, the first (123) reads like a definition, the second (126) adds to this, and the third (130) lists the prosodic features of Arabic words.

Looking at language material from a synchronic point of view, any phonetic facts characteristic of and peculiar to such positions (initial, medial, intervocalic, final or junctural) can just as profitably, and perhaps more appropriately, be stated as prosodic ones or word.

The same of these translate to English, where nasallion often spreads over syllables and words of syllables, where nasals are very often syllabic, as in [ly], and where at least is always a final signal, as least in the morpheme.
The third type of American suprasegmental, the juncture, does not appear in Firth's system, though two somewhat similar phenomena appear below.  

Firth has a second group of prosodies, which for convenience I have called consonsensual. These are written on a separate line, often accompanied by the syllables of a generalized c and v, and with a special symbol for the occurrence of characteristically final and initial consonants. Both these segmental types of prosody belong to the American area of phonetics, the sequence of final and initial consonants being a phonotactic boundary signal.

Firth presents a final-initial sequence as a 'juncture', and on the same line gives blank spaces which are also junctions. Thus there is no equivalent of an American phonemic juncture, since the blank-space junctions are the boundaries of institutionalized words, with no accompanying physical event. The junctures appear to lie outside the American phonemic system, either in the phonological description or in phonetics.

The remaining prosodies, which also appear on the construational level, are sequential sounds which are intimately connected with rhythmic patterns, and which are at best very hard to define. These sounds appear as segmental phenomena to count discrete areas.

When American analysts have worked under the influence of the prosodic-phonetic approach, sequential sounds have usually been excluded from the prosodies. A typical example is Haugen's analysis, already cited. After some discussion, Haugen reserves the same phoneme only for those items among those now as called which occur successively. Thus, he separates stress and pitch from phonemes proper on the ground that they occur simultaneously with other phonemes. The definition gives him trouble with juncture, which does not occur thus simultaneously, but still is usually accompanied with the suprasegmentals. To rely on simultaneity as the dividing line between prosodic and segmental entities is to set up a universal phonetic distinction—in general, a procedure of which we have learned to be suspicious. We have long learned that there is no universal phonetic defining characteristic for such classes as consonant and vowel, and we ought to be striken by the most confusing part of Firth's approach. When his followers express a desire for greater rigor in prosodic analysis, I believe it is this confusion which is meant. On the other hand, if prosodic quality is described loosely as the rhythmic characteristics of speech, which can only be derived from a study of sentence, it must be admitted that Firth has done a great service in emphasizing that all sounds make some contribution to rhythmic patterns, and that some contribute more to rhythm than to the identification of small isolates.

As a summary I shall try to equate the parts of Firth's prosodic-phonetic system in detail with an American phonemic system (following my own practice only), it has become something of a commonplace to say that Chichewa prosodies are American prosoundals. The statement is quite accurate. Here are the equivalents:

1. Firth's core prosodies are stress, pitch, and syllable length. Two of these, stress and pitch, are American phonemic phenomena. The third, syllable length, is outside the American phonemic system, and appears only in our phonetic analysis.
morphemes can be spoken of primarily as prosodic-suprasegmental or as phonemic—segmental. Whether a given sound is one or the other depends on its morphological associations. Further, morphemes are prosodic-suprasegmental or phonemic—segmental in a special and revealing sense. The prosodic-suprasegmental morphemes mark or accompany stresses, clusters, and phrases on the uppermost level, and words and phrases on the middle level. The phonemic—segmental morphemes are, on the other hand, the blocks used in building words and pieces. It is too soon to apply this kind of reasoning to large numbers of languages, particularly without the wide firsthand knowledge of languages that Firth possessed. Yet certain things are immediately clear. In many languages, pitch phonemes are an integral part of morphemes the rest of whose phonemes are segmental. In such languages it is proper, therefore, to classify pitch in the phonemic—segmental structure. In Arabic there is the well-known phenomenon of emphasis, which, as Firth remarked, phonetically like vocal harmony. Since emphasis or nonemphatic consonance is the property of individual phonemic—segmental morphemes in Arabic, emphasis would also seem to belong to the phonemic—segmental structure.

In short, Firth's statement that 'what is a phonetic constituent in one language may be a prosody in another' must be taken seriously as the two-way street it is. Firth happened to be concerned with trying to prove that many things called prosodic-suprasegmental ought to be called in given languages prosodic-suprasegmental. This is clearly true for sounds like the glottal stop, which often figures among the consonants as a member of phonemic—segmental morphemes—for instance, in American diabetes that have /b/ or /d/ or /g/ or /k/. In other languages, even in other dialects of English, [?] is an allophone of /h/ or /w/ and belongs with the prosodic-suprasegmental morphemes of stress. If we extend the principle to the occurrence of pitch or intonation or emphasis as parts of phonemic—segmental morphemes, we have not, I think, done serious harm to the spirit of Firth's proposals. Instead, we have given ourselves a way of reaching the goal which Firth set for himself, by a path capable of being clearly marked. We have also, I suggest, defined a set of classes which we are at liberty to call prosodies or phonemes, but in which the distinctions are four-fold:

1. Successive sounds, members of successive morphemes. These are phonemes, or segmental phonemes.
2. Simultaneously occurring sounds, members of simultaneously occurring morphemes. These are prosodies or suprasegmental phonemes. Examples are pitch and stress in English.
3. Simultaneously occurring modifications of sounds—phonemes with domain—which belong to successively occurring morphemes. Examples are pitch in tone language, emphasis in Arabic.
4. Successively or near-successively occurring sounds, which belong to prosodic-suprasegmental morphemes. An example is English juncture.

ON THE FORMATION OF THE INDO-EUROPEAN DEMONSTRATIVE

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1. In spite of the common practice of speaking of 'pronouns' I shall be called in various Indo-European languages, and, in particular, when discussing the derivation of adjectives in Germanic, it is generally recognized that the formation of the pronouns of all the categories of sentence forms with which we have to deal in Indo-European grammar, is the most elementary and least treatable to reconstruction by the comparative method. It is indeed probable that there was no fixed phonetic declension in the parent speech—fixed, that is, to the same extent as the declension of the noun. This too is generally recognized, especially in the instance of the personal pronouns of the first and second persons. However, the same thing is only slightly less true of the demonstratives of the third person, and indeed of the demonstrative pronoun, e.g., Ar. ast, Gr. ta, Goth. se, se, J. J. B. The lack of agreement between the stems of the oblique cases of this pronoun in these three languages, especially between Greek and the one hand and Sanskrit or Gothic on the other, would seem to indicate clearly enough the striking lack of a settled inflexion without need for further evidence—for example, the dative singular feminine, Gr. st, Skt. sa, Goth. sa, J. J. B. The case endings to be seen are in agreement (and also with the fem. 1-st stem, for that matter), but the stem is f- /s/- /s/. Even within such a unified dialectal group as Germanic it is often impossible to reconstruct a Proto-Germanic form which will satisfy the testimony of the different historical forms, e.g. the dative singular case, and so on. Goth. J. J. B. with and with OE Gw, Gw. J. J. B. and with OE Gw, Gw. J. J. B. with a diphthong stem, Pode, etc., etc., the simple of the form.

2. The variety of stem formation and of case ending an of course to some extent be attributed to developments and recombinations in the history of the several branches of Indo-European, but the result is the same as far as our reconstruction of the forms of the parent speech is concerned: we see eventually left with a few bare stems and recurring 'pronominal element' attached to the stems, optionally it would seem, and a few case endings actually characteristic of the gerund as opposed to the noun.

3. Significant for the prehistory of the Indo-European demonstratives is the documentary history of demonstratives in modern languages. It is well known that by use a demonstrative tends to become weaker and weaker in its deictic force, and is therefore continually reinforced by being compounded with itself or with other demonstratives or with adverbs. These compound forms furnish the