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Review Article

LINGUISTIC STRUCTURES

W. HAAS

After years of vigorous development in linguistic studies, there seems to be a feeling abroad amongst American linguists that the time has come for taking stock, and even, once more, for the writing of comprehensive text-books. We have had three such books in quick succession: *An Introduction to Descriptive Linguistics*, by H. A. Gleason in 1956, *A Course in Modern Linguistics*, by C. F. Hockett in 1958, and, finally, the present *Introduction to Linguistic Structures (From Sound to Sentence in English)*, by A. A. Hill.¹ These three studies have had their scope defined in different ways; but they naturally overlap over wide and central regions. Hockett's study, as is indicated by its title, is the most comprehensive; and the two works which have limited themselves to descriptive linguistics differ in intention.

Hill's book, as the *Foreword* informs us, is intended to serve two purposes at the same time—on the one hand, as a text for a course in Descriptive Linguistics (which is also what Gleason aimed at), on the other hand, as a text for a course in the English language. This combination of two tasks may, at times, try the patience of either of the two types of reader envisaged by the author: the student of Linguistics may feel that he is given more about English than he requires for his purpose, and the student of English that he is asked to give too much attention to a "step-by-step exposition of analytical procedure" (VI). But if patience and perseverance are needed from both in taking in more than is strictly required, neither can complain that he is given more than is good for him. The English-speaking student of *Linguistics* can hardly do better than apply the general techniques of his discipline to a detailed study of his own tongue. The student of *English* should welcome the opportunity of following the actual course of analysis, which yields the description of the language he is interested in; he might well agree with the author that "the results of linguistic investigation since 1933 have been so considerable" that the general task of "redrawing the broad outlines of language study on newer lines" (VI) had to come first even for the purpose of a description of

¹ Archibald A. Hill, *Introduction to Linguistic Structures: From Sound to Sentence in English*, 496 pp., New York, 1958.

English. The question is really not, whether the author has given us too much but only whether he has given us enough to satisfy both types of interest.

Whatever his attitude to the general plan of the work, the student of English will find that its 500 pages of close print are devoted almost entirely to providing him with a full and meticulous analysis of the English language—and an analysis which is worth his attention, because it is, in many ways, new. Even the structural sketches of the two appendices—some twenty pages on Eskimo and forty on Latin—are intended to throw “a little further light on the structure of English” by contrast with these other languages. The two sketches are of course intended also further to illustrate “techniques and attitudes which should be useful for all languages, or for none” (418). However, what the student of General Linguistics may miss in the main body of this book is not so much an application of general techniques to non-English material as rather a clear and connected statement of these techniques. Methodological remarks are dispersed throughout the text. Many appear in the form of justificatory asides, and it is not always easy to see their systematic connection. The work as a whole will have to be regarded as primarily a massive contribution to the study of English. But Professor Hill does adhere to a clear-cut procedure of linguistic inquiry; and for a general survey of the work, it might perhaps be best to view it as an application of that general procedure. This would seem to meet the author’s expectations.

I am in fundamental disagreement with Professor Hill. It is therefore right to say at once and emphatically, that even if all the objections I find I have to make, to Professor Hill’s general procedure, were considered valid, they could not detract from the excellency and usefulness of many of the specific results which he has obtained by applying that procedure. This procedure may be found to break down at critical points, but it certainly does not reveal its weakness at every point.

COMPLETENESS, CONSISTENCY, SIMPLICITY

The significance which attaches to any work of stock-taking is that it reveals gaps. Having undertaken to proceed step-by-step “through the hierarchy of English structure, from the smallest elements, sounds, up to the largest elements, sentences,” Professor Hill has aimed at giving “a balanced amount of attention to each level, so that the result is unified” (p. V). In this, he may rightly claim the book “differs from previous attempts to apply newer techniques to English”—most notably from C. F. Fries’ *The Structure of English* which deals with syntax only, and from the Trager-Smith *Outline of English Structure* which, though most congenial

to Professor Hill's approach, is primarily a treatment of sounds. His own main task, Professor Hill says, has been a work of "unification"—an attempt, then, to fill the gaps.

There are various methods of filling gaps. One is the *eclectic* method. It consists in freely multiplying and mixing principles of analysis. Whenever one approach is found wanting, another is adopted. An example is Mr. Gleason's procedure. It consists mainly in giving American linguistics an occasional sprinkling of Glossematics, and offering alternative definitions of fundamental terms (unless, indeed, they are left undefined). This is a way of securing empirical completeness at the expense of consistency. Such a book can be a lively help for teacher and student—and this is one of the great virtues of Gleason's book—but it will hardly advance linguistic thought. It will be apt to stimulate the student's interest, but at the risk of blunting the point of his theoretic energy.

Another way with gaps is to fill them in an *informal* manner, as did Bloomfield for example, when he confessed to having no precise technique for dealing with meaning, and yet proceeded to "presuppose a knowledge of meaning" (*Language*, pp. 137ff.). Hockett, in his comprehensive *Course*, proceeds in such fashion. It is a kind of approach which aims to be empirically adequate—keeping in touch with the rich concreteness of our experience of language—without offending our intellectual conscience. The *system* of description is explicitly declared not to be exhaustive; it relies on information drawn from outside. As far as it goes, it remains consistent, and free of theoretical confusion. But we are left with some loose ends. This will do no harm, so long as we preserve our theoretic ambition, i.e. continue to regard the incompleteness as a challenge, and every informal bit of outside information as a demand for formal inclusion.

No one could accuse Professor Hill's analysis of showing "loose ends." For him, *completeness* of systematic description is the most important of the three criteria by which he judges the "rightness" of an analysis (48, 53). Only in the extreme case will he permit himself to say either that reliable data are not available, or even let himself go so far as to say that he has no precise method of dealing with the facts. Generally in such a case, he prefers to leave the gap. He will conscientiously mark it, rather than offend against *consistency*—this being his second criterion of adequacy. Real gaps in his description are few. The question, however—as in the case both of the eclectic and the informal remedy—must again be: at what price? If his treatment is as complete as the eclectic and as consistent as the formally incomplete, will it then only be at the expense of *simplicity* that he allows himself to deal with the exigency of gaps—'simplicity' being his third criterion? This would, perhaps, be more than we can rightly expect.

We find, I think, that a higher price has to be paid. As Professor Hill aims at making the framework of his system inclusive, he seems to be forced, at times, to put up with worse than a complicated description: he has to tolerate, and he must ask us to tolerate, a certain amount of distortion as well. What is complicated, elusive, and insignificant will at times be substituted for what is in fact simple, obvious, and important. As the chosen principles are kept pure, and their exhaustive adequacy is insisted on, some 'hocus-pocus' appears to be unavoidable. When the interpretative principles are not quite adequate, and are yet not allowed to yield, the facts have to. But this, precisely—irritating though it must be at times—is the reason why this is a book of great theoretical interest. Nothing is more stimulating for the advancement of linguistic thought than this constant invitation of clash between principle and facts. There can be no better test of principles of analysis than an application of them so extensive and rigorously consistent as not even to flinch from absurd consequences. As the author says: "In a structural description, rigorous analysis occupies much the place of experimentation in laboratory sciences" (p. vi). The experiment will indeed be rather hard going for the student who is supposed only to be *introduced* to linguistic structures; and for the student supposed to be introduced to the structure of English, even harder. But anyone who approaches this book with a certain fund of experience in the two fields of study, will recognise the theoretic passion behind its rigour, and appreciate the intellectual energy behind its meticulousness and self-imposed restrictions.

A MINIMUM OF MEANING

What then are the principal theoretical restrictions which the author has chosen to impose upon himself? As one may have expected after reading his acknowledgements in the *Foreword*, they concern the problem of meaning. It all looks simple enough, at first. "The description and analysis of language must begin with description of the sounds and their patterning." If we wish to proceed "from the more knowable to the less knowable," then "description of meaning must be put off" (p. 3).

These remarks might suggest that Professor Hill is proposing to carry out the whole task of linguistic analysis without referring to meanings at all. The very first pages of the following phonological analysis (pp. 15ff.) raise doubts of this. They are crowded with references to semantic contrasts. Are these contrasts, then, no part of a "description of *meaning*?" Or are they, contrary to appearance, not really part of the *linguistic* description? The puzzled student must wait for an answer. On p. 90, he will read that

“analysts . . . make use of meaning in spite of the danger.” What they are warned against is only “reliance on meaning as a primary tool of analysis.” In dealing with the elements of language, “identification and classification must rest firmly on formal and distributional characteristics rather than on meanings.” What then *is* the role of meaning within linguistic analysis? Some kind of an answer seems to be given further on: “. . . even if an analyst has used meaning as an *initial guide*, he should *back up* his decisions by distributional statements. Meaning should be no more than a *hint of what to look for*” (p. 94). No part then, of the final linguistic description? No more than a preliminary heuristic help? This seems clearly suggested. But it is contradicted throughout the book. The distributional statements which are intended to “back up” the linguist’s guiding intuitions of meaning, contain themselves constant references to meaning: to “sameness” or “difference” of meaning, to what is a “possible” or “impossible”, a “normal” or “unnatural” utterance—this, as an integral part of the whole “backing-up” operation. *Some* references to meaning seem to be centrally involved in linguistic description.

To cite a few examples: A central notion in the phonemic classification of sounds is ‘contrastive distribution’—a notion which implies “*difference in meaning*” (pp. 50ff.). Again, morphs—like ‘yes’ and ‘no’ for instance—are said to be members of different morphemes, if they contrast in the same environments (p. 96). Similarly, “*sameness of meaning*” is accepted as of central importance; for establishing ‘free variants’ in phonology (p. 50), or morphology (pp. 92, 97, 117); or again, for recognising “possible” junctures in fixing the boundaries of ‘phrases’ (pp. 124, 185), ‘sentence-elements’ (pp. 201, 259), sentences (p. 363); or even for recognising a ‘part of speech’ (‘sentence-element’) in particular forms (e.g. by free variation of verb forms, p. 274, or of order, p. 333).

And there is one further type of semantic statement, also appearing as an integral part of a structural description. In order to see that it is a further type, we need only realise that to say two utterances do *not differ* in meaning does *not* amount to saying that they have the *same* meaning. Both utterances, or one of them, may have no meaning at all. The third type of semantic statement we require in linguistic analysis is implied by the two others, but says less; it is to the effect that an utterance ‘has meaning’ (no matter what meaning). In the many cases, in which we are told, for purposes of structural definition, that a certain element *can* be replaced or omitted, or that an utterance *can* be expanded or otherwise transformed, we are obviously supposed to recognise that these operations result in meaningful and correct utterances; whereas in other cases (in those expressions which are marked with an asterisk) they don’t. Examples

are the definitions of noun-phrase (p. 175), verb-phrase (p. 218), determinative phrase (p. 187) adjective (pp. 179, 186), or again, decisions as to an element's class-membership: noun *versus* adjective (p. 176), adjective *versus* participle (p. 203), conjunction *versus* adverb (p. 400), and many more.

It is strange that these statements about the 'possibility' or 'impossibility' of utterances are not explicitly recognised as implying semantic considerations; even more strange that they are sometimes explicitly declared not to imply such. (For example, having made use himself of a "test of expandability" which requires him to distinguish possible from impossible expansions, Professor Hill tells us that "throughout" there has been "no attention to meaning or function" (pp. 123, 203, 205). Such a claim might conceivably be justified, if we confined our description to a finite text, and if instead of asking whether an utterance was "possible" or "impossible," we confined ourselves to stating that certain utterances did in fact occur in our text, while others (though, perhaps, possible) did not. Description of a 'dead' language might conceivably work under such restrictions. I am not acquainted with any example. Even here, it is surely general practice to go beyond statements of actual occurrence, and to 'predict' (as it is the fashion to say) what was possible. To treat a text as if it were incapable of being extended would be to ignore the essential 'openness' of language, and therefore to give an incomplete and distorted account of it. Being concerned to state what restrictions are imposed on any speaker's freedom of utterance, Linguistic Analysis must be concerned with 'possibilities'—i.e. possibilities of meaningful utterance.

How does Professor Hill succeed in hiding from himself this minimal implication of meaning? Could it be by the mere avoidance of the word? He tells us: "Statements that so-and-so does not or cannot occur mean that the informant rejects them as foreign to his habits." And also: "I have had to use myself as the informant" (p. 13). This is, of course, quite unobjectionable. What the linguist can tell us about his own habits is no worse than what other informants might have told him about theirs. But, those habits? We ought to be more explicit about them. *What* habits? Obviously concerning the use of linguistic material—a habit, mainly, of accepting uses which "make sense" and rejecting others. If 'correctness' were here appealed to, rather than 'meaning', this would ask for more rather than less. For any 'correct' utterance, even the most abstruse—such as Mr. Chomsky's "Colourless green ideas sleep furiously" or Bertrand Russell's "Quadruplicity drinks procrastination"—is meaningful at least potentially. It carries a presumption of meaning, which can always be realised in a suitable context.

The first fleeting indication of the author's real position, with regard to the cardinal problem of meaning, may be found on p. 95, when he speaks of "*minimising* the reliance on meaning." For a fuller statement we must turn to the very end of the book. There, we learn that, within Linguistic Analysis, "only what has been called '*differential meaning*' is relevant" (p. 409). This minimum of 'microlinguistic meaning' (as G. L. Trager called it) seems to be incapable of being exorcised. The whole book provides illustrations of this fact; but it is only on the last pages that Professor Hill comes near to explaining, how exactly linguistic analysis takes account of meaning. The crucial passage, as simple as it is fundamental, runs as follows:

"The identity-difference which constitutes microlinguistic meaning can be studied by the process of observing whether substitution of one item for the other produces *identity or difference in a larger structure*. That is to say, in studying phonemics, we substitute one sound for the other and observe whether the substitution produces identity or difference in morphemes. In studying morphemics, we substitute entities which produce identity or difference in words and fixed phrases, and so on through the hierarchy" (p. 410).

Clearly, the 'identity or difference', which may be produced in the 'larger structure' by replacing a part of it, must be identity or difference in *meaning*. As to its *form*, the whole is bound to be different if we replace a part; and nothing could be studied by 'observing' a foregone conclusion. It follows that what is meant, here, by 'a larger structure' is always a *meaningful* structure, and that criteria or plain intuitions of "having meaning" are presupposed by the 'substitution-test'. Could we assume that Professor Hill has omitted to mention these implications, because regarding them as too obvious? There are doubts about that. Here is the place in linguistic theory which requires to be filled by a minimum of semantic intuition. Bloomfield expressly acknowledged this 'gap' in the theory. Professor Hill seems to be strongly tempted to plaster it over. "Differential meaning," he says, means "no more than identity and difference." In linguistic analysis ('microlinguistically') we are supposed to be able to say simply "that two items are 'sames' or 'differents' and nothing else" (pp. 409ff.). This, surely, won't do: some distinction between meaning and form, and between 'differential meaning' and 'differential form', needs to be made. Throughout the hierarchy of language, what counts in substitution-procedures of analysis is 'commutation' (to use Hjelmslev's term), i.e. mainly, a correlation of *form-differences* (between exchanged constituents) with *meaning-differences* (between the larger structures).

To obscure the way in which, here, considerations of meaning enter linguistic analysis, is detrimental to the analysis. For the study of meaning it is fatal. This is how semantic theory is being deprived of what must be its most promising growing-points. Those who seek to make semantic studies lose their foothold within the field of linguistics, do in fact promote the very kind of uncontrolled and obscure semantics which they are trying to avoid. It is unfortunate that, in recent American linguistics, the term 'semantics' has come to be used exclusively for non-linguistic treatments of meaning, most of them vague and anecdotal, while all sorts of substitutes—native response, habit, hearer-speaker-behavior, etc.—are used to hide the implication of meaning in linguistics. Professor Hill describes as 'semantic' only such of his observations as constitute optional additions to his analysis. Moreover, though helpful on the whole, they are supposed to be about a dubious kind of entity, 'semantic components' (pp. 205ff., 219–220); while the semantic characteristics of plain *linguistic* components—the distinctive values they have among others, the roles they play within larger structures—are not recognised for what they are.

The 'meaning' of a linguistic expression is still supposed to be dealt with primarily by definition, conceptual or referential—that is, either of an idea in the mind or of a range of external things (pp. 90, 152, 410). We may well agree with Professor Hill that this way of treating meaning is only of marginal interest for linguistic analysis. We may think the same of attempts to define 'semantic components'. The semantic value of an expression, on the other hand, viewed as its *uses*, its 'privileges of occurrence', is the linguist's concern, and is of central importance for him.

Only the very last section of the book (not more than four pages) deals explicitly with linguistic meaning. We are given some indication, here, of how it can be 'backed up' and controlled. "Meaning," we learn, "can be defined as partial predictability" (p. 413). The link with 'commutation' is obvious; though, curiously, it is not mentioned. For the point is that a contrastive element which occurs within the frame of some larger structure, and is *itself not* determined by the frame (i.e. which is to that extent unpredictable), may be looked at as chosen from a certain *range* of elements which *is* so determined. As long as the frame is not larger than a sentence, we are said to be dealing with meaning on the 'linguistic' level; if we expand the frame to a larger piece of text, or even to the context of a situation, we would be said to be moving on to 'stylistic' and 'extralinguistic' considerations of meaning (p. 414). Professor Hill does not say it, but these are obviously the facts which are investigated by the procedure of contrastive substitution; and this is how linguists who apply the procedure "make use of meaning" as "a hint of what to look for." What can be regarded as

chosen from determined ranges of linguistic items is linguistically significant ('non-redundant') and—as we should add, though it is a point often ignored—what *regularly determines* such specific ranges of choice is also important (even if it has little contrastive value or none at all).

Ever since Saussure, linguists have been clearly aware of the central importance of these techniques. The question arises why, more recently, some American schools of linguistics have been feeling uneasy about them; why Professor Hill, for instance, though using them sporadically throughout his analysis, and otherwise intent on giving a "step-by-step exposition" of his procedures, should have kept this one obscure to the last. The answer seems to be that a timely and full appreciation of it would have threatened his whole programme of analysis.

FROM SOUND TO SENTENCE IN ENGLISH

—this is the programme, as announced by the sub-title of the book. It is declared clearly to be a programme of *analysis*, not merely an 'order of presentation' (pp. 13–17). The techniques by which "microlinguistic meaning can be studied," and needs to be studied, are diametrically opposed to it. At every level, as we try to make the proposed ascent through the 'hierarchy of language', contrastive substitution is one step ahead; it implies that we are already acquainted with units of the *higher* levels. Substitutions are made within the frames of 'larger structures'—in 'functions' (to use the terminology of logic). Sounds are found to contrast in morphological functions, morphs in lexical or phrasal functions, and so on. The same requirement holds for the investigation of syntagmatic dependencies; they can only be stated *within* determinate structures. The use of these analytic techniques would accord with a *reductive* order of inquiry, from sentence to sound; but they contravene Professor Hill's *expansive* order at every step.²

It is not necessary, of course, and does not seem to be advisable, that a reductive order of analysis should be adhered to throughout. Necessary, is only that *some* larger structure should be available at every successive level. This is assured, if we *begin* with sentences. The decision that, for the

² I am using the terms 'expansive' and 'reductive' for the two kinds of procedure—in preference to the distinction between 'working up' and 'working down' through 'the hierarchy'. The latter terminology would suggest that the opposed procedures share one and the same notion of linguistic hierarchy—which, as we shall see, is patently false. The so-called hierarchy of language is not just 'given'. It is the product of linguistic analysis; and each of the two procedures produces another. Either may be said to 'work up' to *its* top-level. The decisive question is what to take for the ground-level of the hierarchy—sentences or sounds.

purpose of a strictly linguistic analysis, we do not go *beyond* the sentence, but *begin* with it, immediately commits us to a minimum of primitive semantic intuitions—namely, *that* sentences have meaning (no matter what) and that they *differ* in meaning. With this, we can move freely from level to level within the sentence, and substitution-techniques can provide us with a test of relevance throughout.

On the other hand, if we tried to keep strictly to Professor Hill's programme—ascending from sound to sentence, and never looking at any higher level before we have reached it—then, we might travel but surely could never arrive. Reductive analysis has arrived from the start; it looks back at familiar country—total meaningful utterances—and reduces it to a linguistic map. By the expansive procedure on the other hand, we are supposed to reach lands unknown—and this without a map, even without being allowed to look ahead. It would only be by keeping our eyes turned backward that we could claim to be advancing to higher levels of analysis. This is the paradox of trying to analyse language while building it up.

Professor Hill, we have seen, does not keep strictly to a backward-looking procedure. In order to climb his hierarchy, he is prepared at times to look ahead for the right direction. "The method of work," he says at the very beginning, "has been to try to group my utterances into those which are the same and those which are different," and "attention has been focused on the differences—the contrasts" (p. 14). We have here, it is true, the fatal ambiguity of 'same' and 'different', and also of 'utterance'. Nothing yet of *meanings* being same or different, and nothing of *larger structures* of utterance. But we have seen that, in fact, neither of these two is "put off." In fact, they are made use of at every stage. How is this to be reconciled with Professor Hill's programme of analysis? How does he justify a 'method of work' which is always at least one step ahead of schedule? He does not tell us, and we can only guess. But his remark on using meaning as an informal "hint of what to look for" suggests what his justification might be. In some of its applications, at any rate, Professor Hill would seem to regard his 'method of work' as something like an informal trick of the trade; a device for obtaining the occasional glance forward which is needed for making progress in the formal backward-looking way. That is to say, reference to his 'higher' levels would be confined to playing an informal 'catalytic' role; would serve to *assist* the process of description, to start it or to speed it up; but it would never enter its end-product. The *description* or *definition* of a linguistic unit would then be given in terms of its *constituents*, not in terms of its *functions*.

Can even this lesser restriction really be upheld? Can functional state-

ments, if not excluded, at least be kept to a purely catalytic role? We have seen that a similar restriction cannot be imposed on references to meaning. It is not surprising then to find that it cannot be imposed on references to 'larger structures' either. For it is precisely by referring to an element's occurrence in 'larger structures' (to its 'functions') that we refer to its semantic value.

The catalytic view of the role of meaning and function, in linguistic description, may have a certain plausibility, so long as we are in the early stages of the expansive, combinatorial ascent 'from sound to sentence'. For example, at the phonemic level, we might claim to be using contrastive substitution only for selecting the relevant phonetic units, while their formal description was given in terms of their constituent articulatory features. Or again, at the beginning of morphological inquiries, the contrasts and syntagmatic relations of whole sequences of phonemes may be said to be used merely for the purpose of picking out the morphologically relevant amongst them, the morphs; while the formal description of the selected morphs is given in terms of their constituent phonemes. Such descriptions would be precarious, and not very informative. But even if we found them wholly acceptable, we should have to admit that we can go no further in this way. In order to be able to say, for instance, that the *-s* of *cats* is 'the same' as the *-es* of *horses*, or that the *yes* of *yesterday* is not 'the same' as that of *Yes, Mr. Jones*, the description itself of what is or is not the same must take account of the similarity or dissimilarity of the 'larger environments' and 'constructions, which contain the morphs in question' (pp. 96–97). Similarly in all the cases already mentioned where the various operations of substitution, expansion, omission are performed on *functions* of linguistic units, i.e. on structures which contain them; and where the units are not merely selected by these operations, but are *characterised* by the corresponding distributional relations. They are formally described as occurring in the type of function which admits, or does not admit, of those operations. Here belong also those 'order classes' which are defined with reference to a 'model-phrase' (pp. 175ff., 230ff.); or the extension of formally established 'core-groups' (of 'adjectives' or 'adverbs', pp. 167ff.). Professor Hill speaks of units "defined by their syntactic characteristics" (e.g. pp. 180, 218, 240) or by their "distributional characteristics" (e.g. pp. 168, 173).

Students of General Linguistics may well be puzzled about the status of these 'characteristics' in Professor Hill's general plan. For to introduce them is clearly contrary to it, and there is nothing one can do about it. To define a linguistic unit by its functional relations (by distributional relations in larger structures) would remain contrary to the expansive

(combinatorial) procedure of analysis, even if one chose to introduce such definition by way of subsequent revision—the familiar ‘re-phonemicising’, ‘re-morphemicising’, etc. This would assure that the larger structure is introduced according to schedule; but the revision itself, in defining a unit by appeal to units of higher level, would still run counter to the general direction of the analysis. Professor Hill occasionally has recourse to similar revisions and calls some of them, strangely, “removal of ambiguities” (pp. 182, 203). Ambiguity of what?—of the text, or of a previous analysis of it? But generally, in such cases, he does not worry much about the schedule. That is, if there is no alternative, he boldly and immediately refers to relations in ‘larger structures’, even if the latter are strictly “out of order.” The need arises often enough. Deviation from his general programme of analysis is almost a regular feature in the later stages.

What, then, is the practical effect of the programme? Is it effective at all—since it is *not* to exclude techniques which work in the opposite direction, not even always to relegate such techniques to a purely catalytic role? We find that it is. Indeed, our main criticism of Professor Hill’s description of English will be that those semantic and functional criteria which we have seen he cannot entirely avoid are yet not nearly given their proper weight. The decision to proceed ‘from sound to sentence’ is against it. For the decision does provide a powerful directive for the whole course of the analysis. Its effect has been, on every level, to reduce appreciation of functions to a minimum. Only as a last resort, a unit may be defined or ‘characterised’ by its relations ‘in larger structures’. What for European structural linguistics—from Saussure to Hjelmslev—has been the very hinge of linguistic structure: namely, the ‘syntagmatic’ and ‘paradigmatic’ relations of items in their functions—is here reduced to a subordinate role. We are supposed to avoid using relations for defining their terms. In describing or defining any linguistic unit, we are asked to refer primarily to its *parts* and *their* relations, not *its* relations, *as a whole*, to other units. We are asked to examine primarily the parts it contains, not the “parts it plays.” If at a later stage we happen to come upon its relations, the unit itself is supposed to have been described or defined already and without reference to them. What is laid down by the programme of expansive analysis is a strict *priority* of description in terms of constituents, over description in terms of functions—a priority, as one might say, of *componential* description over *functional*.³ In the end, Professor Hill would

³ I once distinguished, in the same sense, between ‘analytic’ description and ‘synthetic’ (*On Defining Linguistic Units, Transactions of the Philological Society, 1954*); but this use of two rather overburdened terms does not seem to have found much favor.

appear to demand no more. But even this is a very considerable demand to make. It gives the work its peculiarly insular character. It is responsible for its theoretic interest, and also the source of its most serious shortcomings.

THE HIERARCHY OF LANGUAGE

What I have called componential description may of course refer to any type of simpler unit—in an expansive procedure, to *any* of its lower levels, not necessarily the lowest. Professor Hill, however, has a distinct preference for going further than is necessary. “It has been our practice,” he says, “to grant priority to phonological signals . . .” (pp. 356, 115). This bias certainly leads to some interesting discoveries. The phonological information we are given on every kind of English construction is both abundant and meticulous. But the *priority* which is granted to it is what raises doubts. It would appear to produce a distorted picture of the language as a whole.

The semantic or functional values of linguistic elements are pushed into the background. This creates a paradoxical situation. On the one hand, the importance of meaning and function is acknowledged as a heuristic aid; on the other, it is minimised in the subsequent ‘formal’ description. Having recognised and selected what are relevant elements by noting their functional characteristics, we are then required to describe them as far as we can without reference to what marks them as relevant. Such description may well fail to accomplish its purpose; it may not succeed in identifying and distinguishing all those selected elements by means of their internal features only. Functional characteristics will then be invoked as a kind of stop-gap. But—what is worse—even if a purely componential description succeeds, it can only do so at the price of distortion; it suppresses what is of primary importance.

The most important fact about the vast majority of linguistic elements is their instrumental value—their capacity of being chosen from determinate ranges and for determinate functions. To neglect this in their ‘formal description’ is much like trying to describe a monetary system without referring to the uses and values of notes and coins. It might be done; and componential features—like dates of issue, being more or less soiled, folded or flat, etc.—may then acquire tremendous importance. But could we be content with this kind of description? Is it not clear that, in such systems—technological, social, biological—internal ‘markers’ are of interest only in so far as they are *correlated* with characteristic functions? There is no reason why the essential distinctions should be made purely in terms of markers.

It may perhaps be claimed that, in proceeding from sound to sentence,

the functional value of an element, though not appearing in its description, will yet be recognised at a later stage—namely, when the element comes to be treated as a constituent of larger units. But this is not so. The larger units, in turn, are introduced without any clear notion of *their* functional significance, and are therefore incapable of imparting significance to their constituents.

A general lack of rational motivation is in fact the most unnerving feature of the present procedure. As we move along, working from smaller to larger units, we are puzzled at every step why we should go on with it. Thus, having finished with phonology, we are simply told: "The morpheme is the unit we encounter after the phoneme" (p. 89). Not a word of why we should care to make its acquaintance. Not, we are warned, because it has meaning (pp. 90, 100) nor because of its distinctive function in forming sentences (p. 92). Then why? We are not told at all. We are just invited to describe it; as far as we can, "in terms of phonemes" (p. 115). This is how we have to go on—always trying to maintain our interest in what is being described by simply at every step trusting the author that he is guiding us towards a final goal which is worth coming to. The test is "all the material which follows" (p. 93). "Beyond the morph and morpheme units, the only[!] larger units which can be observed and verified are phrases and sentences" (p. 115). Surely, a surprising statement. As it stands, it could hardly be true. And even if it were, if there were really nothing else to be "observed and verified" amongst the sequences of phonemes than just this, we should still be entitled to know why we should want to observe it. Why have them—the 'minimal words' 'inflectional paradigms', 'fixed phrases', 'free phrases', etc.—those many 'entities' between morph and sentence? That they "can be defined" and that "a phonological basis" can be laid "for definition and distinction" is surely no good reason for actually doing such things. Reasons for doing what we are asked to do are not easy to find in this book. References to meaning or function are used so sparingly or so inexplicitly, even as a heuristic aid, that the student is left unenlightened about the structural significance of the units described.

Some scholars, though working with the same general programme of analysis, have been able to avoid its worst drawbacks. They do it by being less insistent on the completeness of a componential description; allowing themselves to refer to meaning (almost invariably, when passing from phonology to morphology) or to refer to function (for example, Z. S. Harris in his *Methods in Structural Linguistics*, where every new step in the procedure is introduced by a statement of its purpose, i.e. inevitably, a statement about the distribution of the units to be described). Such deviations from the set direction of the procedure have great advantages.

Not only do they make for a more inspiring treatment of the subject—a point of some consequence in a student's text-book; what is more important, they result in a far less lopsided picture of the language.

It should be acknowledged, on the other hand, that the lopsidedness of Professor Hill's description is not of a capricious sort. It is entirely due to his consistency—consistency in pursuing a procedure once adopted “until its possibilities are exhausted.” This was the promise at the beginning (p. vi), and it has been kept. All the more important is to examine the result with care; it is the test of a procedure.

Consider, first, the picture it offers us of the language as a whole. What do we make of its hierarchical structure? We have seen how weakly motivated the transitions are, from level to level. The link which connects any one with the next is tenuous in the extreme—a true bottleneck for the ‘ascent’. Thus, it is only by noting junctures, especially the elusive internal ‘plus-junctures’ (+), that we are supposed to find our way from sequences of mere phonemes to morphs and morphemes (pp. 91ff.). It is, again, essentially by noting terminal junctures and certain stress- and pitch-features (here called ‘morphemes’ in a very peculiar sense, in pp. 102ff.), that we pass on to words (pp. 115ff.); and it is by seeking out certain stress-pitch-juncture constructions (‘superfixes’ and ‘contour-linkages’) that we finally reach phrases (pp. 125ff., 173), ‘sentence-elements’, and sentences (p. 259). What a narrow escape from being left ‘grounded’ with nothing to entertain us but phonemes! If we did not succeed in passing the sequences of phonemes through a process of ‘junctural cutting’, we should have no morphs, no morphemes; and if we did not establish those very queer stress- and pitch-morphemes and their ‘constructions’, our formal description of English would be without words and phrases. In this description, the *raison d'être* of units of different levels appears to consist almost entirely in various occurrences of features of stress, juncture, and pitch. Appropriately, these features are brought in with the first descriptive chapter of the book (pp. 13ff.). But for them, there could be no ‘formal’ linguistic hierarchy at all. They provide the narrow passage which separates and connects the successive levels. This is what it means to “grant priority to phonological signals.”

In this connexion, it is curious to note that the phonology itself suffers from being granted priority. As it is made the foundation of the whole hierarchy of language, its own status is made much more precarious than it would otherwise be. Especially that triad of stress, juncture, and pitch, which is to provide the backbone of the hierarchy, appears as highly problematic. Every feature of these three types only just scrapes through a test of phonological relevance. There seem to be two reasons for this:

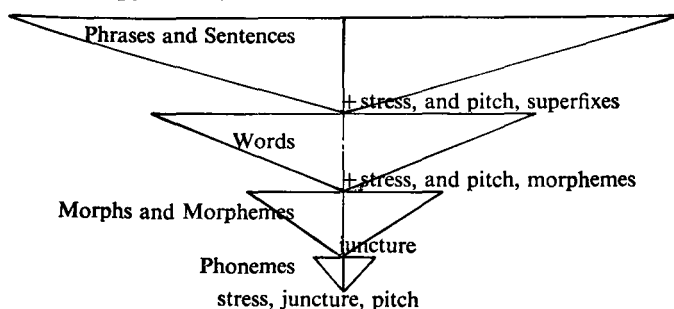
(i) that Professor Hill confines himself to a single criterion of phonological relevance—namely, contrastiveness, and (ii) that he applies this criterion to isolated stress-beats, individual pitch-levels, and single juncture-points. He frankly admits that he has experienced great difficulty in making even the native English speaker perceive such contrasts. “It is necessary to advise the reader,” he says, “that if he still has trouble . . . after having worked through the possible distinctions which have been given, he should consult a competent analyst, and let the analyst sort out contrasts for him” (p. 18). A sign, surely, of having come to the very margin of normality, and therefore of linguistic significance.

Is it really necessary to get into such straits? We seem to have found two reasons for this particular predicament, and there seem to be two remedies: (i) the few phonological contrasts of stress or juncture or pitch that there are, may be accounted for more easily in terms of prosodic ‘*contours*’ than in terms of phonemic point-features; (ii) the primary phonological relevance, even of these contours, should be found in their frequent occurrence as ‘*markers*’ of types of syntagma, and of position-classes within such types, i.e. in their providing a regular frame for *other* units contrasting, rather than in their contracting contrasts themselves.

No one can accuse Professor Hill of ignoring prosodic patterns or contours. He mentions them at the very beginning (pp. 20–21, 26–27); and they are conspicuous and carefully treated at all levels of analysis. He describes the stress-patterns of noun-phrases (pp. 181–182) and verb-phrases (pp. 193ff.), the pitch-contours or ‘linkages’ of ‘sentence-elements’ (pp. 259–260), and of sentences within sentences (pp. 353–354). These patterns or contours are seen primarily to mark regular frames for the contrast or choice of *other* elements. Particularly interesting are some passing remarks on juncture as a marker of maximum ranges of choice (referring to work by G. A. Miller and H. L. Smith Jr., pp. 341–342). Constant concern with prosodic markers is one of the characteristic features of this book. The snag is only that the descriptions are ultimately all based on those elusive prosodic ‘points’ which are so hard, and so unnecessary, to track. Why, for instance, should we be asked to distinguish 4 stress-patterns in modal-verb phrases: weak-primary, tertiary-primary, secondary-primary, weak-secondary (p. 193)—and are we really sure that there occurs no tertiary secondary—if all these could be described, and easily recognised, as ‘rising contours’? The answer is that if we wished to avoid ‘prosodic points’, and decided to treat prosodic features only as contours, and mainly as frame-markers, then we should be required, at the start, to state their grammatical scope, and thus to use the kind of information which is simply not available for a ground-level phonology.

Prosodic elements need not be phonologically elusive or marginal. As contours, they are easily perceptible; and as markers, they are centrally important. But it is impossible to introduce them as such, if we adopt an expansive and combinatorial procedure of linguistic description.⁴ Once committed to such a procedure, we find ourselves in a paradoxical situation: while the greatest possible burden is laid on prosodic markers, these markers themselves can have only the most precarious phonological foundation. As elusive and utterly marginal 'phonemes', they are made to carry the whole hierarchical fabric of the language.

As we proceed from sound to sentence, the hierarchy of language presents itself as a peculiarly acrobatic structure. If the smallest 'list' of simple items is succeeded by ever larger lists of ever more complex items, the hierarchy of the successive 'lists' must appear like an inverted pyramid. And Professor Hill's hierarchy is even more fanciful. As he insists on priority for phonological signals throughout, he provides no more than a single narrow channel to connect the successive levels; nothing but stress, juncture, pitch—all the way from the apex on the phonological ground-level to the very broad base at the top. A pictorial representation of this would be a structure of a number of pyramids, all inverted, the smallest on ground-level, and ever larger ones rising above it. Not more than pin-point contacts between them to let phonemes pass into morphemes, and morphemes into words and phrases—something that may be represented by the diagram below. (A more exact representation would contain a larger number of pyramids).



Surely a precarious structure; the slightest flaw anywhere brings it down in ruins.

⁴If treatment of prosodic features continues to be the least satisfactory part of phonological analysis, the reason seems to lie in what Professor J. R. Firth has described as "the misapplication of the principles of vowel and consonant analysis to the prosodies" (cf. "Sounds and Prosodies" in *Papers in Linguistics*, 1934-1951, pp. 121-138). It is significant that the most helpful contributions in this field have come from scholars who would not comply with the schedule of a combinatorial analysis.

It is a very different kind of hierarchy that emerges from a reductive procedure of analysis. Reductive analysis, whether it advances in a continuous fashion or not, *begins* on the broad basis of unit-utterances; and the hierarchy of language, when it finally has taken shape, is erected on the basis of this minimal abstraction from the given facts of speech. The units at every successive level emerge as a selection from the preceding; they are solidly embedded in units of lower level—every phoneme in morphs, every morph in words or phrases, and, ultimately, all in the common ground of unit-utterances. What distinguishes elements of different levels is primarily not a phonological badge they wear but different restrictions upon their ‘freedom of occurrence’.

This situation is, of course, familiar from applications of Immediate Constituent Analysis—which is one of the principal techniques of a reductive procedure of linguistic description. Not surprisingly, Professor Hill has little use for it. In this respect, his treatment differs greatly from both Gleason’s and Hockett’s. He refers to IC-analysis only incidentally—mostly, when he suspects that it might run counter to results which he has obtained without making use of it. He then betrays a rather rigid notion of the procedure. A sentence or phrase is viewed as a strictly linear structure, and only single cuts between ‘before’ and ‘after’ are admitted. When this does not work, when the resultant description turns out to have separated what belongs together, such inadequacy is glossed over by subsequent devices of ‘re-assembly’ and ‘transcription’ (pp. 279–280, 289–290, 350, 405). But these are only casual excursions from the main course of Professor Hill’s procedure, where IC-analysis—like meaning—is never used as a ‘primary tool’. Indeed, he tends to ignore it precisely where it might have been most helpful for supporting and expanding his own descriptions (e.g. in the treatment of noun-phrases, verb-phrases, modifying phrases, or—most conspicuously—in his discussion of ‘downgrading’). Of course, if he had tried to avail himself of such support, he would have had to modify his picture of the hierarchy of language, and—consistent as always—he abstains.

It might be suggested—it certainly has been—that ‘the results’ may be ‘the same’ after all; that there may be one-to-one correspondence between the elements of an expansive and those of a reductive hierarchy. Certainly; and so there may be between the parts of two pyramids, one standing on its base and the other upside down. To climb the one is very different from climbing the other. This, no doubt, brings in extraneous facts. Upside down, we must ask, with regard to what? Necessarily, with regard to something outside the object of description. But to judge ‘results’, that is, to view the description of a language as a whole, *is* to view it against a

background of other facts, and to apply 'extraneous' criteria such as rational coherence, systematic density, adequacy. Thus viewed, the expansive hierarchy is a fanciful structure, rising strangely and precariously from just a mouthful of articulatory features; while the reductive structure is firmly rooted in the behaviour of people talking and listening, and emerges as a gradual analysis of their meaningful utterances. At every step, we know the value of what we are looking for—even when peering into a speaker's mouth or examining a spectrogram. The expansive hierarchy may contain the 'same' elements in the 'same' combinations; but as we meet them on our miraculous climb, they are all deprived of their values.

SYNTHETIC STRUCTURES

The most serious result of a bias for componential description is the loss of perspective it entails. It is as if a living organism were described in great anatomic particularity, but in almost complete disregard of physiology; or if a machine were described by meticulously listing parts, without reference to how it works. The greater the profusion with which component parts, and parts of parts, are spread out before us, the harder we find it to appreciate their significance. The significance of a linguistic unit is not found in its components.

This tendency which it has to deprive us of a proper sense of orientation, is a general drawback of the expansive procedure of componential description. There are also more specific difficulties—difficulties concerning the description of *particular* structures. A componential description which is not strictly controlled by criteria of functional value is liable to give us both *more* and *less* than we want.

We are given *more* than we want, when the component 'marker' of an important distinction turns up either (a) in something that is not worth marking (as when the *-ly* of *proudly* occurs in *silly*) or (b) in something that should indeed be marked but for different reasons (as when that same *-ly* turns up in *manly* or *sickly*)—of course, a very common kind of difficulty. What is to be done about it? Simply pretend that what is marked *is* important, and always important in the same way? Would it not always be wiser to correct the bias for 'markers'? In the case just cited, Professor Hill decides between adjectives and adverbs by supplementing the componential criterion, presence of *-ly*, by distributional criteria, and also by simply listing exceptions (pp. 170–171). But he treats functional criteria always as subsidiary, and tries always to avoid them—especially in identifying the more basic units. This can be troublesome. What, for example,

shall we think of a procedure which analyses *potato* into 5 morphemes: {ʌ} {pə} {+ʌ} {teytə} {231#}? This is Professor Hill's analysis (p. 120). And he is only consistent in proposing it. When juncture is treated as the primary and regular signal of a morphemic boundary, we must be prepared to find ourselves flooded with synthetic elements of this kind; which—as Professor Hill admits—“are not required by analysis of larger entities” (p. 92). They are, in fact, not required by anything or anybody.

This unwanted influx is something Professor Hill would make light of. He does not seem to mind if important functional distinctions are blurred, so long as they do not prevent him from going on to ‘higher levels’ (p. 92). He can put up with two segmental morphs *dam* and *nation* appearing in *damnation*, or with *at all* being analysed as /ə/ + /təhl/ (p. 92); for, queer though they are, these elements are excused on the ground that they come to join up in a proper way, when we meet them later as parts of larger structures. But this is strange argument. To allow it would be to abandon all check on the adequacy of analysis on any level; there would only be one requirement—namely, that an element should be part of a sentence. It is as if in describing a furnished room we allowed ourselves to pick out, say, a floorboard supporting two wooden poles as a ‘piece of furniture’, seeing that “nothing on the higher levels prevents such cutting.” Is it not true, after all, that in the ultimate description of the room, the two floorboard-poles will join up with two others, and with a table-top, and with other floor-boards? And when this happens, will not our procedure have been tested and declared adequate “by its final results?” Is there nothing wrong with it then? Shall we say that it just uses the term ‘piece of furniture’ in a novel sense? Shall we say of Professor Hill's use of the terms ‘morph’ and ‘morpheme’ that it is just unusual? I think, our objections must be more serious. For the new use sponges on the old. The whole justification of proceeding with a morphological analysis—Professor Hill's as much as any other—derives from the old sense, which is here perverted. The reason why we describe a room in terms of ‘pieces of furniture’ is that these are the more stable units with which we find we have a certain freedom of operating within the room, as we have with ‘morphs’ and ‘morphemes’ within a sentence. If we try to distinguish morphs primarily by the presence of ‘junctures’, just as if we tried to mark off pieces of furniture by the presence of cracks and empty spaces, we find ourselves inundated with ‘pieces’ we have no use for—though they are all pieces, ultimately, within our universe of discourse. Such elements do not modify morphological analysis; they make it pointless.

To ‘build up’ linguistic units that are not wanted is, then, a serious flaw. Equally serious, of course, would be a failure to supply linguistic units

that *are* wanted. Here, however, Professor Hill is often prepared to correct the deficiency of a componential description. We have seen that he makes use of contrastive distribution and of syntagmatic relations, whenever the progress of his analysis requires it. "Sounds are grouped into phonemes primarily in terms of their distribution, not in terms of their physical similarities and differences" (p. 47). The same is said of grouping morphs into morphemes (p. 94). Distributional parallels are also required for establishing morph-boundaries by 'second cuts', i.e. "where there is no /+/[juncture] to mark them" (pp. 94, 97-98). And an appeal to 'syntactic characteristics' becomes ever more frequent in the second half of the book. Even so, distributional criteria are kept to a minimum, and always to a subsidiary role. If it is at all possible, they are stopped short of developing into semantic criteria. This, again, tends to keep them too lax, and unwanted 'elements' rush in, or distinctions which are needed are not made. I cannot see, for instance, how Professor Hill's criteria for 'second' cuts can prevent us from analysing, say, *stable* into the 'morphemes' {s} and {table} or *stone* into {s} and {tone}, in much the same way in which *tables* are analysed into {table} and {z} and *tones* into {tone} and {z}; or why, on his criteria, we should object to analysing *battle*, *cattle*, *handle* into {bæt} + {1}, {kæt} + {1}, {hænd} + {1} (cf. pp. 96-97). "Phonemic similarity," says Professor Hill, "is a necessary criterion; meaning is not." In order to recognise a morph (such as *table*, *tone*, *cat*) as recurring, he asks only for phonemic similarity and for similar grammatical distribution (such as we find in the utterances *I saw the cat|the cats|the cattle*). Hence *foxglove* is said to contain allomorphs of the same morphemes as occur, say, in *foxhunt* or *silkglove* (p. 100).

Generally, distributional criteria will be kept to a minimum, with the result (i) that Professor Hill's English has surprisingly few homonyms, and (ii) that his description does not seem to have any place for 'idioms'. This causes grammatical difficulties at times: When idioms get mixed up with genuine constructions, the latter, and their elements, may not be easy to classify. The following is a characteristic case: *He ran up a hill* and *He ran up a bill* are found, in many dialects, to have the same characteristics of juncture and stress—namely, those which Professor Hill regards as a marker of prepositional constructions /əpə+/. The second sentence, *He ran up a bill*, can also occur with what he calls adverbial stress /əpə+/. What is it then, preposition or adverb? "If we assume . . . that stress difference is always distinctive, then we are forced to say that either adverb or preposition can occur in this particular sentence." This is what Professor Hill does say, "since otherwise we are ultimately making an appeal to meaning" (pp. 284ff.).

Such blind reliance on markers raises doubt. If distributional criteria were used more extensively, the whole question would not arise. The conundrum would be solved by finding that the idiomatic *up* of *ran up a bill* is neither preposition nor adverb; it is not to be identified with either the preposition of *up a hill* or the adverb of, say, *the balloon went up*. Similar difficulties recur quite frequently. Is it satisfactory to describe *to* as a 'preposition' in *He wants to go* (pp. 245, 250), and as an 'adverb' in, say, *When Mary came to, I comforted her* (p. 255), or to describe *daggers* as a noun-complement to *looked* in *John looked daggers at Mary* (the pattern being that of *John saw daggers*, p. 326–327)? These seem to be cases of distinctions needed but not made—distinctions between homonyms, or between idioms and constructions. But we must acknowledge that no really satisfactory way of dealing with either seems to be available at present; and, as always, Professor Hill prefers formal surgery to informal patching up.

There is perhaps some justification for judging a procedure by its excesses. The occasions for excesses are different for different procedures. Professor Hill's favorite occasions are those cases of asymmetry, where functional distinctions or classifications, though themselves unavoidable, fail to correlate with componential. Here, the search for components is to be seen at its highest pitch of ingenuity; it may even go so far as to conjure up what is inaudible to human ears.

All of this is pseudo-analysis: the attempt to provide diacritical components where there are none. Familiar amongst such devices is the introduction of *additive* zero-elements (as distinct from that legitimate element zero which marks the contrastive *omission* of some overt element or elements). For example, instead of being content to state that a word like *sheep* shares its grammatical functions partly with words like *ox* and partly with words like *oxen*, we are invited to locate this difference of functions in a difference of indiscernible components, i.e. to contrast *sheep* with *sheep* as 'zero absent' and 'zero present'. Again, instead of merely stating that /bøyz/ shares the functions of *child's*, *children*, *children's*, we are supposed to distinguish by components /bøy –z, bøyz –, bøyz ø/ (pp. 138ff.). If these diacritical symbols were recognised as purely functional marks—mere class-indices—all would be well. But they are not. They are made out to mark components. 'Zero' is described as an 'allomorph', and even said to contrast "only with its absence" (p. 143). It is never clear, how far we may go in fabricating such ghostly components. The contrasts *am ÷ are*, *was ÷ were*, or the numerous contrasts of the kind *drank ÷ drunk*, *drove ÷ driven*, are not made the basis of zeros in other paradigms (although such zeros would satisfy the 'alternation-rule' (p. 455)); while contrasts

like *drink* ÷ *drank* are supposed to justify a distinction between *cut* and *cut* \emptyset , or again, (I) *drink* ÷ (he) *drinks* is supposed to justify a distinction between (I) *can* and (he) *can* \emptyset (p. 161). *Who* in *Who are they?* is supposed to have “a zero allomorph of the plural suffix” in concord with the verb (p. 263). The great danger of the procedure is that it can be applied very much more widely than even Professor Hill has cared to apply it. If zero were used here as index of a purely functional classification, it would mark the componential *defectiveness* of a paradigm, and thus indicate important asymmetries of the language. But if we use it as a component element, we pretend to supply the defectiveness, and we disguise the asymmetry which we ought to mark.

The most spectacular and most ingenious of these pseudo-analyses of Professor Hill's is perhaps his treatment of the personal pronouns (pp. 145ff.). Again there seem to be good reasons for establishing the ‘paradigms’ themselves, i.e. for collecting the forms in parallel sets of maximally four distinctions (*I, me, my, mine; he, him, his; etc.*). The distinctions and parallels can be justified on functional grounds. Professor Hill admits that this might be all that “a teacher of English as a second language” requires. But he thinks that “from the point of view of the analyst,” the forms of the different sets should be shown to *contain* those parallel distinctions, and contain them as inflectional endings. Now, of the seven sets, only one (*they*) shows anything like a full inflection with a more or less constant base—namely, /ðey, ðe-m, ðe-r, ðe-r-z/. It takes great ingenuity to extend the same kind of inflection to the other six sets. In three of them, a second basis is required (*I, me; we, us; she, her*); in many cases, we have syncretisms (*you, his, her, it, its*); in some, zero-allomorphs of suffixes (*me, us, his*); and, in two, even portmanteaux: “{miy} plus {-r} equals {may},” and {may} plus -n, which is taken to be an allomorph of {-z}, brings {may-n} into line with /ðe-r-z/. When this ‘practical’ part of the analysis, as it is called, is completed, the given 23 units appear as built up in complicated ways out of exactly 23 morphs. Nor is even this the end. Further analysis—“complete, nonpractical and abstract”—of the basis (*I, we, they, etc.*) would seem to add another 11 morphs (pp. 148ff.). (*It*, for instance, would seem to “contain” three morphs: transposed “initial” {t}, transposed {i}, and zero-allomorph of {y}.) In the final analysis, then, 23 units appear to be analysed into 34 morphs, of which none has any use except that of analysing the 23.

This kind of description is a long way off the general reductive purpose of analysis; and Professor Hill tries to justify it on other grounds. His analysis, he wishes to claim, reveals internal formal parallels, where otherwise we should have only syntactic similarities (pp. 148ff.). It will be

acknowledged that an analysis of different forms may be worth while for the sole reason that it shows the forms to be of similar structure. Even if we do not succeed in reducing the number of elements, something will be gained if we succeed in discovering mutually corresponding components in the different forms. The trouble with Professor Hill's procedure is only that it could hardly fail. His operations of "consistent cutting and statement" are such that they can extract different components from identical forms, and similar components from utterly different forms. (I cannot even see, why he thinks he would have to abandon his analysis of pronouns, if his material contained the pronominal forms *thee* or *hit* (p. 150). He could surely succeed in 'normalising' these two, as he has succeeded with others.) The search for components has almost succeeded, here, in freeing itself from the control of given facts. The elements we obtain are so elusive that no speaker of the language could be credited with the power of operating with them, and no hearer with the power of responding to them. Would it not be better to regard such elements, and their supposed correspondence, as illusory, precisely because they are "non-practical"? They seem to add nothing to that similarity of syntactic function which they were invoked to support. Our concern with language is, after all, concern with a pattern of human behaviour; what no one can react to, cannot be part of it.

The magic of pseudo-analysis has a certain fascination for some linguists; however irritating it may be for others. Of the latter, many might be tempted to put this book away before they have finished with it. For them, the section on pronouns might well be the last straw. It would be a pity. For when they have reached chapter 9 on the inflection of nouns, pronouns, and verbs, the most useful part of the book is just to come. This part—not surprisingly—is its syntax (chapters 11 to 20). It is here, in the exploration of larger structures, that a componential description of English can begin to be really informative—even if an excessive bias for this type of description can still be seen to be a drawback.

We have found (pp. 255, 261 above) that, in entering upon his analysis of phrases and sentences, Professor Hill begins to make extensive use of distributional criteria. It is only at this stage that an expansive procedure *can* use them more extensively. Though the basic elements have been defined already and defined mainly by their components, *classes* of these elements will now be defined frequently by "syntactic characteristics." There is a variety of such characteristics, corresponding to the variety of analytic operations by which they are obtained. Professor Hill has a distinct preference for one type—namely, 'order-classes'. His favourite procedure, here, is to set them up for the maximum of a particular type of

construction—a maximum noun-phrase, for instance, such as *all the ten fine old stone houses* (pp. 175ff.), or for a maximum modifying phrase (pp. 232ff.). Shorter constructions are then derived from the maximum model. (Indeed an analogous technique has already been used in Professor Hill's phonology—in what is perhaps its most interesting section, entitled 'phonotactics', which deals almost exclusively with consonantal clusters (pp. 69ff.)) In analysing verb-phrases, Professor Hill finds it more convenient to begin with three simple types (chap. 12) and to obtain larger phrases by expanding the basic (chap. 13); but again, he will give close attention to limitations of order (pp. 222–223).

What we find in these chapters on English syntax, will, it seems to me, be appreciated by every one. It remains valuable, even if we are not content to rest in it. We may well wish our syntactical investigations to be less confined to considerations of linear order; we may wish them to be kept open to a greater variety of analytic techniques. With Professor Hill, it happens only once—in a rather desperate case (p. 401)—that he has recourse to 'diagnostic frames' of the kind used so extensively by Harris and Fries. Again, 'selection' (concord, government), supremely important for Bloomfield and for European linguists, is used only twice (pp. 222, 260). Operations of transformation (such as have lately been stressed by Chomsky) are not explicitly used at all. (They would have helped formally to distinguish what for Professor Hill are utterances of the same type, e.g. *This seems a big price* from *This brings a big price*, p. 293; similarly, p. 323.) We have seen that Immediate Constituent Analysis has been assigned a very minor and subordinate role. Had it been applied more freely, a more significant hierarchical organisation would have been found in what appears here often as purely serial order.

A definitive English syntax seems to be beyond anybody's reach at present. Professor Hill's study, however, is an important step towards it. Even the most controversial of his interpretations provide an impulse for fruitful development. I only regret that it is impossible within the limits of a review—even of a review-article—to illustrate by specific examples how much there is to be learned from Professor Hill's English syntax. Though the topics themselves are traditional, the treatment of these topics cannot be discussed by just holding it against the tradition and noting a few deviations. We are dealing here, in other words, with an original work—original in an important way.

This may well be a book that had to be written, an experiment (as Professor Hill would call it) that had to be made. It will furnish students of the English language with enough to occupy them for a long time to come. For there is nothing in it that does not deserve their interest and scrutiny,

and perhaps nothing, either, that would strike them as final. We shall have to pass beyond this book. But there can be no doubt that it gives us valuable, perhaps indispensable, help for doing just that.

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