Intonation and grammar in British English. By M. A. K. HALLIDAY. (Janua linguarum, series practica, 48.) The Hague: Mouton, 1967. Pp. 62. $6.00.

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This book consists mainly of reprints of two of Halliday's previously published papers (1963a, b). Both have been slightly adapted, to make them more suitable for publication (insertion of bridge passages, section numbers, etc.), and there are a few corrections and additions. To these have been added a short piece of conversation transcribed in Hallidayan notation, two tables summarizing the phonological and grammatical systems described, two displays illustrating the interrelations between the intonation systems and between the clause systems expounded by intonation, a short bibliography, and a fairly large number of misprints. (Two to beware of are $\setminus$ for $/$ in the visual symbol for tone B2 on p. 17, and 'Jack' for 'Jack' in the example at the end of the section on p. 26.)

Halliday has not changed his views on intonation in any serious way since his material was first published.[1] His basic aim is still 'to suggest how intonation patterns may be described in such a way as to integrate them within the description [of spoken English] as a whole' (7). In order to follow his approach, therefore, one has to be aware of the principles underlying this general description —namely, those presented in Halliday 1961. Most of the criticisms I would level against the view of intonation presented in this book are, in fact, intelligible only if they are seen within the context of his general theoretical position. It is unfortunate that insufficient background information is provided in the present volume to allow the general reader to make complete sense of it (despite Halliday's claim to the contrary, 8); consequently a digression to provide some theoretical perspective would seem to be necessary at this point. Readers who are well-steeped in Hallidayan lore will find the next paragraph unnecessary: they may pick up the trail at the one after.

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[1] The deliberate alterations can be reviewed fairly briefly. Certain points which do not appear in 1963a, but which do in 1963b, are retained: the two important changes are the

The keynote of Halliday's position is that 'English intonation contrasts are grammatical: they are exploited in the grammar of the language' (10). What then is meant by 'grammatical'? The classical Hallidayan position is to consider phonology as the 'bridge' between phonic substance and linguistic form: 'In phonology we make a separate abstraction from phonic substance, and represent this in statements which show how the given language organizes its phonic resources in such a way as to carry (or "expound") its grammatical and lexical patterns' (9; cf. 1961:244). 'When we describe linguistic FORM, ... we are describing the meaningful internal patterns of language: the way in which a language is internally structured to carry contrasts in meaning. The problem is to recognize and account for all those places in language where there is a possibility of meaningful choice; and to state the range of possibilities at each place' (Halliday, McIntosh & Strevens 1964:21). 'All CONTRAST in meaning can be stated

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insertion of an extra term, 5, into the secondary system of tone at tonic position, distinguishing a fall-rise-fall which rises to a high level from one which rises to a mid (16), and the conflation of two secondary systems at pretonic position for falling tone (17). There is the substitution of $-1+$ for -1 as a term in system 11 (p. 29), i.e. a higher beginning point for the falling tone. And it is made clear in this book that most of the illustrative examples in Part II are not taken from the data (see p. 32), though this point might have been made more clearly in the preface. Otherwise, there are no substantive changes. (I cannot decide whether the change in formula 18, calculating the number of tonal possibilities in any tone group—$5n(2 + (n-1)/2)$ for earlier $n(2n+7)$—is a point of substance or not!) There is one notational addition to the display of intonation systems on p. 17 (:, to indicate tonic/pretonic boundary, which is helpful); and where there is a difference between the two earlier papers, the notation of 1963a is retained (viz. $\wedge$ indicates a silent ictus, and the pretonic mark is —). The remaining modifications comprise twenty or so relatively trivial matters of clarification and changes in terminology. As some of the latter may confuse readers familiar with the earlier version of this work, it may be useful to list the more important alterations here (the arrow should be read as 'the item in quotation marks has been altered to'): 'strong' syllables → 'salient' (12 ff.); 'affirmative' → 'declarative' (21 ff., except on p. 25, where 'affirmative' is kept in error as the heading for system 1); 'moodless' → 'minor' (25 ff., but with 'moodless' retained for earlier 'with no predicator', p. 24, this reflecting the change from a mood system involving four terms to one involving three, 'moodless' being excluded); information-'point' → 'unit' (21); 'cline' → 'gradient' (30); 'information' → 'information distribution' (33); 'WH-' → 'relative' (35); 'contrast' → 'co-ordination contrast' (35); 'recursive' → 'hypotactic' (37); information 'sub-system' → 'distribution (one unit)' (37); 'echo-subject' → 'substitution' (42); 'transitive' → 'substitution structure' (42); 'spiky' → 'bouncing' (42); 'warning' → 'deliberate (warning)' (34); 'non-finality' → 'address' (47). In addition, a number of the descriptive labels for secondary systems at tonic and pretonic have been changed (18-9), largely to get away from the label 'neutral', which is replaced in A1 by 'medium (neutral)', in A4 by 'high', in B1 by 'even (neutral)', in B2 by 'high (neutral)', in B3 by 'mid', and in B4 by 'high'.

I find the absence of any major development in the description odd, in a way. On p. 11, Halliday replaces an earlier statement about the comprehensiveness requirement of a grammar by the claim that 'the analysis of intonation has been carried to that degree of delicacy which has been reached at the grammatical level in the description of Modern English of which this work forms a part.' This was presumably added during 1966. But in view of the fact that the degree of delicacy of the intonation analysis has not changed since 1963, I am not clear how this tallies with the 'considerable modifications' (7) which the description is said to have undergone since it was first presented (Halliday 1961), which do involve a more delicate analysis of many of the grammatical concepts that are here regarded as requiring intonational exponence (cf. Halliday 1967, for example).

either in grammar or in lexis' (10), and grammar is 'that level of linguistic form at which operate closed systems' (1961:246 ff.), 'closed' being used here simply as a mnemonic label to remind one of the essential characteristic of a system. This notion of SYSTEM is central for an understanding of the present work. For Halliday 1961, a system is a set of terms such that (1) the number of terms is finite,[2] (2) each term is exclusive of all the others, and (3) the addition of a new term changes the (formal) meaning of all the others. SYSTEM is set up as one of the basic categories of the theory of grammar, along with UNIT, the category which defines the varying stretches of utterance that carry patterns; STRUCTURE, the ordered repetition of like events that makes up these patterns; and CLASS, the (abstract) grouping of like events by their occurrence in patterns. SYSTEM then is said to account for 'the occurrence of one rather than another from among a number of like events' (263–4). In the present volume, 'a system is a set of classes whose members contrast in respect of a single property' (32). One thus talks about a system of number, tense, mood, etc. In later formulations of the model, the term SYSTEM has been upgraded, and currently describes the whole grammatical approach ('systemic' grammar). A convenient summary is Halliday 1967, where grammar is described as taking the form of

a series of 'system networks', each such network representing the choices associated with a given constituent type: clause system network, nominal group (noun phrase) system network and so on. A system is a set of features one, and only one, of which must be selected if the entry condition to that system is satisfied; any selection of features formed from a given system network constitutes the 'systemic description' of a class of items. Such a 'selection expression' is then realized as a structure, the structural representation being fully derived from the systemic ... (37).

(A more detailed discussion of this position is Halliday 1966c.) The remaining theoretical preliminary to note here is that grammar must be distinguished from lexis, which is also a level of linguistic form, at which open set patterns operate: the possibility of meaningful choice is from an indefinitely large number of single items (see Halliday, McIntosh & Strevens, 21–2), and the task is to describe the tendencies of such items (as opposed to classes of items) to collocate with each other (see Halliday 1966a, Sinclair 1966). 'Closed systems lend themselves to more abstraction and generalization than do open sets ... Since the purpose of the theory is to account for the largest number of events as simply as possible, this means that the theory of grammar is more powerful than the theory of lexis. So in making a description of any language we try to bring as much as we can within the framework of the grammar' (Halliday, McIntosh & Strevens, 23).

Halliday's view of intonation then follows logically from this position. 'If we regard intonation in English as meaningful—if, for example, the choice between two possible utterances which differ only in that one has tone 1 [a falling tone] and the other has tone 4 [a rising-falling-rising tone] is a true choice between different utterances—then we should seek to state the place which such choices occupy relative to the total set of formal patterns in the language; and there are

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[2] In a very restricted sense, of course; cf. Halliday, McIntosh & Strevens, 30: 'Wherever we can show that, at a given place in structure, the language allows for a choice among a SMALL, FIXED set of possibilities, we have a system.'

only two kinds of formal pattern: grammatical and lexical' (10). English intonation contrasts are 'clearly not lexical[3] ... they are exploited in the grammar of the language. The systems expounded by intonation are just as much grammatical as are those, such as tense, number and mood, expounded by other means ... There is no difference IN THE WAY THEY WORK IN THE GRAMMAR between systems with direct phonological exponence, such as those carried by intonation, and those expounded indirectly through a long chain of grammatical abstraction' (10). Halliday thus treats intonational and non-intonational systems in the same way; and as the former operate at many different places in the grammar, they must be incorporated throughout the description wherever appropriate (10–11). The phonological statement of intonation is made only as detailed as is needed to define those sub-systems of each tone required for the grammatical description, and Halliday claims to have provided a description which has reached the same degree of delicacy as the syntactic part of his description (11).

The assumption underlying the analysis is that conversation in British English can be represented as involving continuous selection from a system of five TONES (analogous to what other scholars have called TUNES or CONTOURS, and NOT to be equated with any sense which restricts it to a single syllable). It is postulated that

connected speech can ... be analysed into an unbroken succession of tone groups each of which selects one or other of the five tones. For purposes of analysis, the selection can be regarded as discrete on both axes, both syntagmatically and paradigmatically: we can make a good description, that is, if we postulate that each tone group begins where the previous one ends, with no overlap and no hiatus, and that each tone group can be unambiguously assigned to one tone, this assignment thereby excluding all the other tones (9).[4]

Halliday distinguishes four hierarchically related phonological units, TONE GROUP, FOOT, SYLLABLE, and PHONEME (12), each tone group consisting of one or more complete feet, etc. (The introduction of the phoneme seems a move into a

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[3] The basis for this distinction is that English is not a tone language, viz. 'one in which intonation carries lexical meaning' (10—as well as grammatical meaning, in his sense, presumably?) However, in view of this position, it is difficult to see why Halliday worries that 'intonation features characteristic of specific items have not been taken into account' in his grammar (47). Why should they be? For a further comment on this distinction, see fn. 18 below.

[4] This means that Halliday must allocate such phenomena as false starts and stammering (see Blankenship & Kay 1964 for a description of the more important of these phenomena), and, presumably, inter-tone group pauses, to a tone group. But surely, in such an utterance as *the men were certainly there* // *. and howev . and whatever you thought at the time* // ... (where // indicates tone group boundaries, and single periods pauses), it makes little sense to see the *and howev* as included in either of the adjacent tone groups. Performance features of this type should be excluded from the description of the underlying system, and indeed Halliday does not deal with them in the rest of the book. But of course it all depends on what he means when he talks about the 'best description' (19) which is produced by defining tone groups in this way. He does not in fact go into the criteria for evaluating descriptions in this book; but I would have thought that to make the second tone group begin after 'there' would only make the specification of tone-group structure in grammatical and phonetic terms much more difficult and complex ('phonetically', because of the rhythmic break and the tempo and loudness variations which are generally introduced after hesitation phenomena).

different dimension of description, requiring the specification of a quite distinct set of features. Nor does a syllable 'consist of' phonemes in the same sense as feet consist of syllables or tone groups of feet: one cannot account for the various prosodic features which characterize syllables simply by referring, in some additive way, to a sequence of individual phonemes. In fact the syllable/phoneme relationship plays no further part in Halliday's description of intonation, and is omitted from his summary on p. 31.) The possibility of further units is not discussed, e.g. a unit between tone group and foot, or (more important) a unit higher than the tone group. The concept of the foot Halliday takes over, uncritically, from Abercrombie (1964, and elsewhere). The foot is the unit of rhythm in English, and has a syllable structure of two elements, an obligatory ICTUS (where the strong, or SALIENT, syllable operates) and an optional REMISS (where one or more WEAK syllables operate), in that order. The ictus may however have zero exponent if the foot follows a pause or has initial position in the tone group. This zero-element, sometimes called a 'silent stress', and marked in the transcriptions with ∧, is of very dubious status. In the majority of examples in this book, it is either unnecessary or very difficult to read a rhythmic equivalent to an ictus into places where a silent stress is marked in the transcription. But this is all part of a more general criticism of the view that 'the foot is characterized by PHONOLOGICAL isochronicity' (12). The emphasis is Halliday's, and is presumably intended to suggest an opposition to PHONETIC. But this does not tally with his explanation for this phrase—'there is a tendency for salient syllables to occur at roughly regular intervals of time' (12)—or with the comment following, that in a small sample of loud reading, average durations of various feet could be shown 'instrumentally' to be such-and-such. Apart from the irrelevance of a sample of loud reading to conversational data (which is very different rhythmically), of what relevance is instrumental study to a phonological definition of isochronicity? Surely it is about time that the whole psycho-acoustic basis of isochronicity be given some experimental verification for English, instead of being impressionistically asserted, which is all that its supporters have done for it so far. Until the conditions controlling the qualifications 'tendency' and 'roughly' in the definition are specified precisely (e.g., relating stress to the occurrence of general prosodic tempo and pause variation), the statement is vacuous. What little evidence IS being accumulated does in fact throw serious doubt on the whole hypothesis (cf. O'Connor 1966, Shen & Peterson 1964). And there are a number of disturbing side-effects from adopting this view; e.g., 'optional pause' is allowed into the exmaple of tone −1, a tone which is claimed to be 'pedagogically very useful for demonstrating the rhythm of English speech' (42). But surely a concept of optional pause must reduce any principle of isochronicity to absurdity.[5]

There are two elements of structure in the tone group, PRETONIC (which is optional) and TONIC (which is obligatory), in that order, the pretonic containing at least one non-silent ictus (12–3). All primary tone contrasts are carried by the tonic, and some secondary contrasts are carried independently by the pretonic.

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[5] Pause is defined as 'silence which effects a break in the rhythm' (15). But what then is silence which does not effect such a break, e.g. a pause equivalent in length to one foot?

When there is more than one foot in the tone group, selection of primary tone is normally made only once, but on some occasions (tone groups with DOUBLE TONIC—fall-plus-rise, and rise-fall plus rise) it is made twice. The status of the double tonic groups is not completely clear, however. What are the criteria for deciding when a sequence of two tonics (say, a fall and a rise) should be considered to be two tonics or one? According to Halliday, it is not possible for a pretonic to the rising element (tone 3) to occur after the fall or rise-fall (13). But it IS possible. The pretonic to tone 3 is a mid or low level tone (17), which, in view of the fact that for Halliday all cases of tone 1 end low (16), would produce double tonics with the contours 'fall to low—low level—low rise' and 'fall to low—mid level—low rise'; but the first of these at least is quite common in British English. Again, I doubt whether there is a criterion which allows fall-plus-rise as a double tonic, but which excludes rise-plus-fall. It seems to me that some alternative criteria are necessary in order to support the analysis we are given here.

For Halliday, then, there are three distinct meaningful sets of choices which would be covered under the heading of intonation in English, and these are labeled in different ways: the distribution of an utterance into tone groups is called TONALITY, the placing of the tonic syllable in a tone group is called TONIC-ITY,[6] and the choice of primary or secondary contour is called TONE (18). These systems are independent of one another (though there is a suggestion, p. 21, that the establishment of a tone group is in some sense dependent on the prior recognition of a tonic). The tone system is described using four devices—a numerical label, a visual symbol (not reproduced here), a tonic movement label, and a terminal tendency: 1, falling, low; 2, rising/falling-rising, high; 3, rising, mid; 4, (rising-)falling-rising, mid; 5, (falling-)rising-falling, low.[7] There is no separate category of level tone recognized, and no indication of how tonics with level pitch movement would be handled. The double tonics are 13 and 53 respectively—combinations of the relevant single tonics. Halliday claims that in these cases the first of the tonics is 'major' and the second 'minor' (p. 22), though this point needs to be justified, as there are grounds for considering the final element of compound tones to be the primary functional constituent (Quirk & Crystal 1966).

The secondary systems may be illustrated by reference to the contrasts at

[6] If the hierarchical principle is maintained consistently, it is misleading to refer tonic syllables directly to tone groups, since an element of tone-group structure cannot be expounded by a syllable as such. Halliday does not seem to maintain a clear distinction between a tonic syllable—the 'first (salient) syllable in [a] tonic foot' (13)—and a tonic foot—the 'first (complete) foot in [a] tonic' (13). On p. 30, tonicity is said to mark the focal point of a tone group, 'shown by the location of the tonic syllable'; but on p. 31, it is said to be 'concerned with ... the operation of feet in tone group structure'. (And on p. 13, BOTH are equated, in passing, with the term 'nucleus'.)

[7] Halliday claims that the underlined elements indicate the part of the movement carrying the greatest intensity. Why this point is made is not clear, as it seems to be irrelevant to the phonological discussion (cf. below). But in any case it oversimplifies the phonetic picture, as it is quite possible to have a rise-fall-rise with the first rise the most intense movement. Again, the parentheses are supposed to show optional on-glides; but why are none shown for the fall-rise in 2, or the simple falls and rises in 1, 2, and 3?

tonic position; I shall be referring to certain of the pretonic contrasts below. At tone 1, there are three types of falling contrast: high to low, referred to as 'wide', and transcribed 1+; mid to low, or 'medium (neutral)', transcribed 1; and mid-low to low, or 'narrow', transcribed 1−. At tone 2, there are two contrasts: rising to high, or 'straight (neutral)', transcribed 2; and high falling-rising to high, or 'broken', transcribed 2̲.[8] At tone 4, there are two contrasts: falling to mid, rising ('high', transcribed 4), and falling to low, rising ('low', transcribed 4̲). At tone 5, there are also two contrasts: rising to high, falling ('high', transcribed 5), and rising to mid, falling ('low', transcribed 5̲), this last also being glossed, rather anomalously, as 'breathy'. The only comment I would make about this presentation, in passing, is that the functional relationships between the tones is not made clear: the high fall-rise seems to be taken as a 'marked' form of rise, judging by the gloss 'neutral' for the latter; but the fall-rise which ends in mid position is not given any similar formal relationship to tone 3. Again, why is the rise-fall not set up as a marked form of fall, or the rise-fall-plus-rise as a marked form of fall-plus-rise? A broad distinction between falling-type tones and rising-type tones is helpful in the study of English intonation: I should like to know why Halliday does not introduce such a distinction here.[9]

Each of the tonic and pretonic contrasts is illustrated by various examples taken, for the most part, from the corpus. After the exposition of the intonation system, the rest of the book (Part II) summarizes the various grammatical contrasts which intonation is said to expound: forty systems are illustrated in all, and given such labels as 'information distribution', 'negation type', 'co-ordination contrast', 'reservation', 'commitment', 'agreement', 'request type', and 'vocative function'. Each system is given a general label of this kind; the terms in the system are then listed; and each term is followed by an indication of its exponence, with one or more examples of its use. Occasionally, glosses are added to clarify the sense of a given contrast; and in most cases, Halliday discusses various descriptive and theoretical problems associated with the different systems. I quote three examples of this method of presentation—one of tonality, one of tonicity, and one of tone:

(1) *Information Distribution*: one information unit—tonality neutral //I saw John yesterday //; two information units—tonality marked (two tone groups) //I saw John//yesterday//. (33)

(13) *Focus of Contrast*: polarity contrast—tonic on finite element //[10] ʌ he / h̲a̲s̲ been/ asked// (= 'it's not that he hasn't'); tense contrast—tonic on non-finite element// ʌ he's

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[8] It is not clear what is 'secondary' about this system, since symbols for both these contrasts are given in the outline of the primary system; and no additional, 'more delicate' information seems to have been provided.

[9] One example of the way in which the fall vs. rise typology can help matters occurs later in the book (35). In discussing relative clause status, Halliday states that the dependent clause takes the tone of the preceding clause, and he illustrates using tone 4. But this is not as general a statement as might be made, for 'tone concord', as he puts it, would still operate in this case if any rising-type tone were used: it is not essential for the concord to be restricted to sequences of absolutely identical tones.

[10] The boundary mark is //, and not /, which is what is given in the text.

/ <u>been</u> asked// (= 'it's not that he's going to be'). (39)

(15) *Reservation*: unreserved—tone 1 //1 ∧ I'd / <u>like</u>/ to //; reserved—tone 4 //4 ∧ I'd / <u>like</u>/ to // (= 'but I daren't'). (41)

This has been a very potted, but I trust not too misleading, version of Halliday's view of intonation. What it omits mainly is illustration of the degree of detail with which some of the contrasts are discussed. One thing which does emerge clearly, however, is that the validity or otherwise of this approach is based almost entirely on the notion of SYSTEM which underlies it: if it can be shown that the recognized intonation patterns function systemically in the same sense as grammatical patterns are said to function systemically, then Halliday's case can stand. The operative words in this sentence, though, are 'can be shown', as opposed to simply 'asserted'. My main criticism of the present approach is that he nowhere 'shows' that intonation functions in this comparably systemic way, and in addition he ignores a great deal of evidence which goes against this assertion. Despite his claim to 'make explicit whatever general considerations were necessary to the understanding of the description' (8), there is no discussion of the theoretical status of the term 'system' in relation to intonation, and its meaning and range of application in the book is by no means clear.[11] This is a pity, as it is precisely the question of the systematicness of intonation and related features in language which has been a central point of controversy for some time (see, e.g., the discussions in Crystal 1966b and in Sebeok, Hayes & Bateson 1964). It certainly cannot be taken for granted that intonation is systematic in any a-priori (grammatical) sense; but this seems to be what Halliday is doing.[12]

[11] I am not referring here simply to the extent to which the various examples of contrasts do not all illustrate a consistent sense of the term 'system'—this I shall discuss further below—but rather to a general looseness in the way in which this term is used; e.g., on p. 11, Halliday argues that English intonation should be considered as 'a single independent phonological system', but later (29) he talks about intonation as a 'set of phonological systems'. (Perhaps his use of the phrase 'systemic variables', 31, is an attempt to get round this, but it is not clear.)

More fundamental objections to the opposition between SYSTEM and SET have been made elsewhere (see, for example, Crystal 1966a:39–40): it is doubtful whether many of the so-called grammatical systems are 'systems' in the relatively tight sense of Halliday 1961 (especially if the question of 'value' is considered central), and it can readily be shown that all kinds of closed systems operate in what he would call lexis. Halliday himself does not maintain a rigid distinction between set and system in this book: 'Under the heading of "systems" are included, for purposes of this discussion, not only grammatical systems properly so-called, but also a few other sets whose members are differentiated by intonation' (31–2). And he talks (28) about 'a small set of adjuncts including *anyway, in any case, of course*' which implies a listable, finite series, and presumably a system.

[12] The only reason which is provided with any consistency is a rather vague pragmatic one: 'it is perhaps useful to recognize a distinct system here ... ' (39); 'It may be worth while recognizing a distinct system for minor clause vocatives ... ' (47); ' ... which should perhaps be regarded as forming separate systems' (39); 'Within "information point marked" it is useful to recognize a sub-system' (38). Indeed, the whole notion of 'information unit', on which so many systems are based, seems no more than a descriptive convenience—no experimental verification is provided for it. Phrases such as 'it seems preferable' are often used in this book. I am not against such expressions in principle, as long as they are supported by something verifiable; but I want to know WHY a thing is useful, preferable, etc.—and I do not want the answer 'because English is like that' (Halliday 1961:248).

Halliday emphasizes at a number of points that his description is not complete: he is presenting only those contrasts which have already been incorporated into his grammatical description; and when other contrasts are 'systemized' (7), they can be brought into the description without difficulty. What are the criteria for systemization, then? How does one show that a number of contrasts is a system, and what ranks as a contrast, or as an exponent of a contrast, in the first place? 'Systemizing' presumably involves defining the relationships which obtain between the contrasts one has not already accounted for, and between their exponents. Now, looking at the question of exponence first, if one is starting with a concept of meaningful contrast, and then moving on to see how this is expounded, on what grounds are the exponents restricted to pitch movements? Halliday does not in fact completely exclude non-pitch exponence—he does talk about 'systems with direct phono-logical exponence, SUCH AS those carried by intonation' (10, my emphasis)—but this is in-troduced in a very sporadic, unsystematic way. He mentions two voice qualities ('breathy', pp. 16, 46, and 'creaky', p. 45) and rhythm (38); but even these features are not brought in at all places where one might expect them: creaky voice, for instance, often accompanies tones 3, 4, and 4, as well as 13; and breathiness is by no means restricted to tone 5. Most of the other non-segmental phonological contrasts in English, such as those of pitch-range, loud-ness, tempo, and supraglottal tension (see Crystal & Quirk 1964) are not mentioned at all, although many of these can be shown to have grammatically relevant roles in Halliday's sense—there is the use of low pitch-range, decreased loudness, and increased tempo as exponents of parenthetic utterance, for example. Again, whether //1− ∧ I / don't / know// is 'mild' or not (42)—Halliday glosses this as 'sorry!'—depends as much on the degree of supraglottal muscular tension and over-all loudness as on anything else. The systemic status of contrasts such as these also needs to be discussed, of course: it is very doubtful if creaky voice displays the same kind of systemic relationship to breathy voice as does a falling tone to a rising tone, let us say. At a still more general level, Halliday also fails to relate his observations to exponence in co-occurring modalities of communication, particu-larly the visual modality. There is no mention of kinesic contrasts, and as a result too much 'meaning' is attributed to many of the intonation contrasts described. For example, he claims that his tone 4 is 'the tone of which the native speaker feels "there's a 'but' about it" ' (41), whereas this depends to a very great extent on the accompanying facial 'set'; or again, tone 3 is glossed as 'disengagement, unconcerned, discouraging' (26), though a smiling countenance can produce quite the reverse interpretation. Systematic body motion of this kind can control one's interpretation of an utterance to the extent of making one use different descriptive labels as glosses for the utterance's 'meaning'—in which case, this also should surely be discussed in terms of grammatical systems, in Halliday's sense. The point is too important to be passed over in silence. And why should one not continue the argument a stage further, and set up a system of PLEASURE (let us call it) to ac-count for the contrasts +PLEASURE, NEUTRAL, and −PLEASURE, expounded solely by facial expression, all else (i.e. the vocal part of the communication) being equal? To exclude kinesic phenomena from language by definition is of course one answer, but to do this is to produce a vastly complicated and sometimes falsifying semantic statement for intonation—unfortunately, the kind of statement which is perfectly normal for this field, for kinesics is generally omitted in this way.

A more important constraint governing Halliday's decision as to what is allowed into the description is that 'the phonological contrasts treated here have been presented as systems of discrete terms' (30). This is justifiable on the grounds that in present-day linguistic theory we can handle discreteness more effectively than non-discreteness, at least at the level of grammar'. But IS this a justification, under the circumstances? Halliday allows that 'this discreteness is, at least in some cases, arrived at by a more or less arbitrary cutting of the continuum' (30); but he does not raise the question of how much distortion such arbitrari-ness can cause, and he considerably underestimates the number of cases involved. His example at this point in the text is as follows: 'It is useful [sic] to recognize a three-term secondary system at tone 1, having the terms 1+ 1 and 1−, because by selecting a criterion which yields clearly differentiated exponents we keep the terms discrete' (30). But how does

this criterion work, really? And how does one assess clarity of differentiation? If 1 is neutral and 1+ is forceful, then why is there no term 1++, with a higher beginning-point, which might be labeled 'extremely surprised' (or the like—the exact choice of label is not the point at issue)? There seems just as much justification for splitting the phonetic and semantic continua into four units as three, in order to handle this possibility; and a case can be made for recognizing other contrasts here besides. (Of course, not all of these contrasts are equally obvious and important; but grading the contrastivity of intonation contrasts is quite a separate issue, and one which Halliday does not go into at all.) In other words, this is not a question of whether intonation should be described in terms of continua or discrete units, but rather, if one adopts the latter position, of how to decide how many units there are. If there is no procedure provided for deciding the number and nature of these units, which will ultimately become terms in a system, how does one demonstrate the finiteness, exclusiveness, and homeostasis that each system is supposed to have?

Most of Halliday's systems raise problems of this type, it seems to me; and the issue should have been given much more prominence and discussion than it in fact gets (one paragraph on p. 30). In some cases the semantic labels are too vague and nominalist to be given any consistent interpretation: cf. the terms in the system of 'commitment', which are 'neutral', 'committed', and 'uncommitted'; but if one asks, 'What does "committed" mean?', the answer covers such a wide range of different types of example that the label becomes vacuous—even the 'neutral' example (44) could be read with one sense of commitment, namely concern; or cf. the contrasts in systems based on the concept of 'information', whose values can hardly be defined in any precise way. In other cases, the phonological terms are not as discrete, stable, and exclusive as they are made out to be; e.g., there is overlapping between tones 2 and 3 in WH-questions (p. 25, where 'mild' could be 3), and in tag questions (p. 26, where 3 could replace 2), and between 4 and 4 (p. 29), which are claimed to be neutral and contrastive respectively, whereas both can be contrastive. Problems of this kind turn up on almost every page. A positive imperative with 2 is not only a question (25): it may be still a (rather impatient) command, or, with 2, a jolly or warning command (depending on the kinesics), as in //2 *come here*//, said to a child ('and see what I've got for you'). In the outline of pretonic systems with tone 1 (29), −1 (= each salient syllable low, foot movement rising) is said to be 'forceful', ... 1 (= each salient syllable mid, foot movement rising) is said to be 'listing'; but the former could be 'listing' also, albeit with a more forceful overtone. A good example of emphasizing one interpretation at the expense of another is on p. 36, where //1 ∧ *I'll* /*ask my* /*brother the* // 1 *heart specialist*// is glossed as 'my brother already identified'; but it could for me equally well take the meaning 'my brother NOT already identified'. Again (37), //1 ∧ *I'll*/ *come to*/*morrow*//1 *after the* / *meeting*// does not necessarily mean 'the meeting is today'. Even laying aside the question of kinesics, tone 4 is NOT always to be interpreted as 'there's a "but" about it' (41): most of the time when it occurs on non-final elements of structure, it does not have this implication. 'Statement (strong assertion)' in the sentence function system (44) could be tone 4, or even 2, as well as 4. And so on.

It is not as if there were clear phonetic correlates always on hand to help resolve this confusion. Halliday claims that all the occurrences of a term in the phonological system are 'phonetically identical' (11). Despite its gloss ('has the same range of phonetic variety'), this is surely a ridiculous claim. Acoustically identical? Hardly. Auditorily identical? Perhaps; but if so, to whom, and how are these judgments checked? People with experience in transcribing intonation in connected speech know how difficult it is to convince themselves that they are hearing a pattern consistently, or others that an identical pattern is recurring. And can one seriously talk about phonetic identity when so many phonetic parameters have been ignored, e.g. width of movement, height of unstressed syllables? The theoretical status of the various phonetic observations which turn up sporadically in this book is quite unclear, and the problems of phonetic indeterminacy are not raised.[13] To take some

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[13] Nor am I happy about some of the empirical phonetic statements. For example, the pitch movement of a tone is said to fall 'largely on the first syllable of the first foot of the

cases of the latter: Halliday's distinction between the three types in tone 1 runs as follows: 'in 1 (neutral), the tonic starts on the same pitch as the final syllable of the pretonic (or proclitic weak syllable); in 1+, it starts at a higher pitch and in 1— at a lower pitch' (16). The assumption implicit here, that one can consistently tell sameness of pitch on adjacent syllables, especially WEAK syllables, is false, in my experience. It certainly does not bear the weight of such a major contrast as between 'new non-contrastive' and 'given' (28), for example. Other equally suspicious cases can be found, e.g., 'the pitch of *back* is likely to be as high as, or higher than, that of the final point of the rise on *tomorrow*' (41); 'If the listed item contains more than one foot, pre-final salient syllables are level, at a pitch level with or above that reached by the end of the final foot' (43); see also fn. 6 on p. 14, and fn. 11 on p. 11, for further examples. Again, how confident is Halliday that he can always and consistently PHONETICALLY distinguish between the high-, mid-, and low-ending fall-rises? Or between 'bouncing' and 'listing' pretonics, where the phonetic distinction is between a low and a mid beginning-point to the rise (17)? I would have thought that there are numerous cases in English connected speech where it is NOT possible to be sure—where, in other words, it is not possible to set up phonological systems disregarding the roles their terms have in different grammatical contexts (cf. p. 11). The intonation transcription in such cases is not autonomous, as it ought to be: one has to know the contrast intended before one can decide on the tone to be used (cf. Lieberman's 1965 conclusion on the Trager-Smith transcription). In this sense, many of the alignments suggested in Part I by Halliday are hardly 'pregrammatical' (30).

This ignoring of the very real problems of phonetic indeterminacy is one aspect of the unclear status of phonetic observations in this book. A second aspect is the way in which phonetic considerations are sometimes subordinated to other principles in too artificial a way. For example, the boundary between tone groups, Halliday insists, is a theoretical decision, and no reference is made to the phonetic features which occur there (e.g., types of juncture, duration, and pitch range variation). But on many occasions the boundary is placed in a position which seems to contradict the probable phonetic facts about the utterance, so that the transcription becomes unspeakable. There seems little PHONETIC justification for the breaks after 'the' in the sentences //1 *this of course de/pends on the* //1 *country where they /live//* (19) and //1 ∧ *there's a/nother one in the* //1 *kitchen//* (24). This flexibility may not be a problem from the point of view of the grammatical description—cf. p. 19: 'The fact that a tone group boundary does not necessarily coincide exactly with the boundary of the clause is immaterial ... '—though even here it is important to know how far it is permitted to extend beyond the grammatical boundary of a clause before it is interpreted as not being co-extensive with it. But serious difficulties arise when one takes into account, as one ultimately must, the question of specifying the 'morphotonemics'. There is also the question of ambiguity; explicit criteria for boundary placement are needed in order to handle such cases as the following: if a tone 1 is followed by a tone 2, and intervening is a complete foot (or a number of complete feet) at a low pitch level, so that it could be either posttonic to 1 or pretonic to 2, where does one place the boundary? These cases are quite numerous in English. But apart from the constraint which is a side-effect of the isochrony principle (that tone group boundaries must also be foot boundaries), no criteria for placement are specified.

So far, I have been discussing some of the problems which arise due to the fact that we are not given any procedure for determining the number of terms in a system. The status of

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tonic, this syllable being almost always by itself sufficient to permit the tone to be identified correctly' (13), though the frequency of short vowels in stressed syllables, especially with rising tones, suggests that 'almost always' is a bit strong. Halliday defines degrees of stress as 'structurally identified syllable classes whose exponents are marked by contrast not only (or indeed at all) in intensity but also in pitch and duration' (14): but the parenthesis is unnecessary—the position which excludes intensity from the analysis of stress (taken, for instance, by Mol & Uhlenbeck 1956) is as extreme and unrealistic as that which insists on intensity always being present.

the terms we ARE given, moreover, seems to vary a great deal as one works through the description. In some systems, the terms are either generally recognized grammatical categories or categories of Halliday's own theory of grammar (e.g., defining vs. non-defining relative clause, extensive vs. intensive complement), and here there are usually clearly definable syntactic relations obtaining between the terms. In many other systems, the terms are given a purely theoretical status, the values being established by definition (e.g., major and minor information points, unmarked vs. contrastive in system 5, non-contrastive vs. contrastive in system 12). Again, there are systems where the terms are more akin to the attitudinal labels of traditional intonation study, where the contrasts are more of the 'gradient' type (e.g. 'neutral', 'strong' and 'mild' in system 22, 'neutral' and 'insistent' in system 23). There is some overlapping between these types; e.g., in system 36, one of the terms is labeled 'major plus minor (plea)'. Most of Halliday's systems can be illustrated using examples of the 'minimal pair' type; that is, the segmental part of an utterance is held constant and the intonation is varied to produce the contrasts described. But in some systems, this procedure does not work, the best example being system 14. Here, tonicity is said to expound the contrast in 'head structure' between 'simple head' (as in *army officer*) and 'compound head' (as in *shop assistant*), but there is no 'minimal pair' basis for this distinction. Examples such as *'army officer* or *shop assistant'* are considered cases of 'marked information point', i.e. the use of system 8 ('information focus'), and have nothing at all to do with system 14. This is another indication that the concept of 'system' is not being used with much consistency in this book.

Nor are we told how the terms in a system come to be interrelated. I have already mentioned the absence of any reference to the question of grading the contrasts between terms in various systems, and how there seems to be an assumption that all the contrasts have an equal value, though it can be shown that some (e.g. tonic) oppositions are more contrastive than others.[14] Another troublesome concept which is frequently used is that of MARKING. Most of the systems have a 'neutral' or 'unmarked' term (these labels seem to be synonymous on most occasions). How is this arrived at? Some of Halliday's decisions as to marking seem to be based on statistical reasoning—e.g., 'There is a high correlation ... , so that ... "major plus minor" can be regarded as the unmarked term' (37); 'The point is that here [in the system of coördination contrast], as regularly with intonation choice,[15] there is a probabilistic correlation but the choice remains: this is the significance in such cases of regarding one term as grammatically unmarked' (36). It is a pity, then, that we are given no information about the size of the corpus, and no actual statistics so we can judge for ourselves whether the decisions as to markedness are all clear-cut.[16] On the other hand, marking is sometimes used in a semantic sense also: the discussion of information marking (38), for

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[14] See Quirk & Crystal. Halliday (1966b:113) does say that some choices are more 'specific' than others, but does not amplify this. His whole concept of 'value' could do with clarifying, in fact: cf. the use of this term on pp. 36–7, and also 42, where a 'high probability correlation' is said to produce an 'additional value' for the system.

[15] 'Regularly' = 'normally' or 'always' here? This term, along with 'invariably', 'clearly', and a few others, could well be banished from linguistic metalanguage for a time.

[16] General experience of statistical analysis suggests that it would be odd if they were. Halliday does nearly mention one statistic, but this is an unexpected one. He says that the next most frequent tone after 1 was 4, which runs counter to other statistics accumulated about conversational English, which suggest that the fall-rise is somewhere between the third and fourth most frequent tone. Compare the following percentages: `52.5, '24.7, '+' 9.3, ˅6.9 (Quirk et al. 1964); `51.2, '20.8, ˅8.5, '+' 7.7 (Crystal 1969); `58.7, '16.1, −8.0, ˅7.4 (Davy 1968, for conversation); `50.2, '24.6, ˅11.1, −5.5 (Davy, for reading aloud). In view of these results, I wonder whether Halliday has allowed for the idiosyncratic use of tones in his data. It does happen that the fall-rise is particularly prone to idiosyncratic variation in British English, there being a tendency for individuals to use variants of this in place of the rising tone. There is no evidence that Halliday differentiates between idiosyncratic and

example, makes little sense in statistical terms, nor do such phrases as 'by the usual reversal of marking' (39). And in the analysis of tone 1, to take a specific case, semantic considerations seem to take precedence over statistical ones. Here Halliday argues that the neutral tone is the one where the tonic starts on the same pitch as the final syllable of the pretonic (16); tone 1—, where the tonic starts lower, is marked. But this is certainly not the most frequent tone 1 contrast in any data I have been through: the step-down is far more common. (Nor, in any case, is it neutral attitudinally. For me, 1 is generally more 'insistent' than 1—.) Again, no one has accumulated any statistical evidence supporting the decision that WH-questions generally have falling tones, general questions rising ones (cf. 25, 43). What few statistics ARE available in fact state the contrary (cf. Fries 1964). But if semantics is primary, then what justification is there for saying that either of the tonal possibilities for WH-questions, let us say, is neutral, in view of the absence of any clear relationship between the two contrasts? The falling tone carries with it a basically 'serious' implication (again, the precise choice of label is not the point at issue); the rising tone has a basically 'interested' implication. It makes no sense, semantically, to say that the former is the unmarked form of the latter, rather than vice versa. Similarly, I do not see how one decides neutrality semantically in the case of imperative clauses; and indeed Halliday himself is not very clear about it: 'In positive imperative tone 1 is perhaps "neutral" ' (45—though this qualification is not mentioned again, e.g. in the summary). In any case, how can one decide this matter without reference to the other tones that can occur with imperatives to produce different meanings, but which are not referred to here?—e.g., —2, as in //be / careful// (= 'I'm warning you, but I doubt whether you'll take any notice'), or 5 as in //be/ careful// (= 'I shan't tell you again').[17]

To sum up, there seem to be very great difficulties in applying the notion of grammatical system to intonation in English, and these are largely due to the differences between 'contrasts' and their exponence in them. These differences are so great, I would argue, that one can hardly use the word 'system' to refer to sets of both. Intonation patterns are on the whole far less discrete formally and semantically, are far less finite, are more difficult to identify, and so on, than grammatical patterns. It is usually relatively easy to demonstrate the finiteness and exclusiveness of genuine grammatical systems, to identify and define the contrasts involved. On the other hand, it seems impossible to show how the values of the various contrasts in intonation could alter, in view of the impossibility of defining a stable set of values in the first place, and the absence of ANY

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systematic use of intonation; but such a distinction has to be made somewhere, as part of the prolegomena to one's description.

Another statistical claim is made in connection with the relationship between tone group and clause (32–3). Halliday states, rightly, that the tone group bears no fixed relation to any of the grammatical units of spoken English, but claims that there is a 'tendency' for it to correspond in extent with the clause, and therefore considers one clause / one tone group the neutral term in the tonality system. This decision is 'a postulate which simplifies the descriptive statement'. He does not state the precise extent of the tendency, however, and this is unfortunate, as there is some evidence to suggest that it is not very general (my own data showed that only 28% of all tone groups were co-extensive with a clause, using a not too dissimilar definition of clause, and 46% of all clauses were co-extensive with a tone group), and there may be rather better support for a solution which sees ELEMENTS of clause structure as the neutral correspondence (see Crystal 1969, ch. 6).

[17] Note the theoretical implication here: if one DID allow these other tones into the system, presumably the values of the terms already present would have to change. But I do not see in what way tone 5 affects the 'meaning' of 3, and vice versa, or how one would in fact demonstrate any changes in tonal 'value'.

completely predictable co-occurrences.[18] Intonation 'systems', in short, are
NOT 'just as much' grammatical (10) as are those of tense, number, etc.: Halliday
is too optimistic about the predictability and stability of intonation contrasts.
He says in an earlier paper (1966b: 111) that 'the use of a given pattern, such
as a particular pitch contour, will mean one thing under certain circumstances
and another thing under other circumstances: moreover these circumstances
are definable in such a way that we can say in a given instance which of its pos-
sible meanings the contour in question will have.' This is true, in principle, as
long as one remembers that 'circumstances' here must include kinesics, immedi-
ate extra-linguistic context, awareness of one's interlocutor's past states of mind
toward one's subject matter, etc. It is NOT true, if the circumstances are consid-
ered to be simply grammatical; and what we want, of course, is a more general
semiotic theory which will recognize and try to account for the relevance of these
other factors.

It makes an interesting hypothesis to try and treat intonation discretely, and
it is very difficult to see how else one might approach it; but so far no one has
been able to balance the pressures of a preconceived notion as to what this dis-
creteness is (phonemes? morphemes? systems?) with the phonetic and semantic
realia about what intonation is; and there comes a time when the discreteness
has to stop. One may end up with a neat description which will integrate well
with one's other work; but a well-constructed system is no compensation for
excessive artifice and oversimplification. And here, as with Trager et al., it is the
EXTENT of the artificiality which ultimately invalidates the approach. No one
objects to postulates which simplify the descriptive statement a little, but it
seems to me that there is too much simplification in Halliday's description for it
to be viable.[19] At one point, he says 'it is natural that we should wish to seek

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[18] Halliday's claim (about an example on p. 17) that the probability of a specific pretonic
and tonic co-occurring is 'equal to certainty' can be disproved. But of course I am denying
predictability only to contrasts of intonation in the general sense in which this term is
usually applied to English. I would allow as a genuine example of a grammatical function
for intonation the kind of co-occurrence between tones and grammatical categories which
takes place in, say, Twi, where a non-low fall is the wholly predictable exponent of past
tense. But if this kind of contrast, which does not occur in English, is a grammatical func-
tion of pitch, the kind which English does display can hardly be called 'grammatical', in the
same sense. Incidentally, would Halliday have any other grounds for denying 'tone lan-
guage' status to Twi (in respect of this example, at least) OTHER than those based on the
theoretical distinction between grammar and lexis (cf. fn. 4 above)?

[19] There are a number of points of detail, not mentioned so far, which could be added to
support this statement. For example, Halliday maintains that, syntagmatically, 'there are
only two places in the tone group where tone contrasts can be made' (15), referring to tonic
and pretonic. The pretonic weak syllable, not preceded by a salient (i.e. in a foot with silent
ictus) is said to have no contrast, and he calls it 'proclitic'. This means, then, that if one
wants to account for the distinction between the emotional involvement of the exclamation
the fool! (with *the* at a high level) and *the fool* (with *the* low), one has to postulate a silent
stress preceding the word 'the'. But in view of the absence of any feeling for a silent beat
occurring on most occasions, and also in view of the fact that weak syllables within the tone
group operate in a similar way to produce similar contrasts, it would surely be better to
admit the positive value of weak syllables here, and not make the contrast dependent on a
theoretically shaky silence. Again, Halliday maintains that 'in no case is a separate contrast

"the general meaning" of English intonation' (48), even though 'no very precise statement' (30) can be made of this. I personally do not find such a task natural, or even interesting: it seems to be a red herring which can only result in such vague and partially true formulations as 'If polarity is certain, the pitch of the tonic falls; if uncertain, it rises' (30). Such statements may be useful as pedagogical guidelines, but they are too ambitious to be allowed, without much qualification, as part of a non-pedagogical description.

In all this, I am not, of course, denying that intonation can be shown to have some kind of grammatical role in English: I think that many of Halliday's examples prove this beyond any reasonable doubt. But the extent of this role is much less than he supposes, and its description must take place in rather different terms. Moreover, I think that before any attempt to integrate intonation with the rest of a description is likely to succeed, various preliminaries have to be gone through, and so far no one seems to be attacking the roots of the problem, the sources of difficulty. What Halliday, and indeed all of us, should be doing is not simply imposing discrete categories, but looking at how we distort intonation by imposing such categories; not just labeling meanings, but looking to see how we distort the meanings by labeling them, and making ourselves aware of the danger due to the use of such labels. As I have argued elsewhere (Crystal 1967), one cannot assume that everyone means the same thing by such labels as 'confirmatory', and this is probably why some of Halliday's glosses seem contradictory; e.g., his glosses for 'non-committal answer' are 'disengagement, unconcerned, discouraging' (26). Again, one has to beware of lexical interference in allocating meanings to contours; for example, Halliday's illustrations of 'confirmatory' and 'contradictory' in his system of 'agreement' are //3 *yes I'll be /back to/morrow//* and //2 *but I'll be /back to/morrow//*. If the words 'yes' and 'but' are omitted, however, the contrast in meaning begins to break down.

It is a pity that there is so much inexplicitness in the present book, as this tends to hide many of the good ideas which are present. There are a number of stimulating hints for further research, e.g. the extent to which co-occurrence between sets of lexical items and specific contours can be plotted. For the first time, an attempt has been made to study intonation thoroughly in the light of some independently formulated theory. I do not think the approach succeeds, because I do not think that any theory designed primarily to account for grammatical contrasts can be applied without drastic modification to intonation analysis; but it is undoubtedly instructive, and raises issues of a fundamental

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carried by any feet AFTER the tonic foot' (14); everything following 'has its pitch movement determined entirely by the tonic' (15). This is a traditional but false view about English intonation. The pitch of a falling tone, let us say, can continue in a downward direction without flattening until one reaches the lower limits of one's voice range, or it may flatten well before this, in which case the meaning becomes one of irony, boredom, repressed anger, or the like. And for another example, surely it is about time that the myth of systematic contrasts of the type *English teacher/English teacher* in the nominal group was exploded (cf. p. 40). This opposition may well be POTENTIALLY present, but on most occasions in natural conversation—in British English at least—the accentual difference between the two is negligible.

nature that would otherwise be—and which in fact generally have been—ignored.

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