Chapter 7: Paratone-Group Features

7.1 Introduction

The assumption made in most studies of intonation is that the tone-group, or its equivalent, is *the* unit of intonation, and that this unit, with its constituent parts and their pitch features, contains all that is necessary for an adequate phonological description of intonational phenomena. Different writers and 'schools' do, of course, analyse the structure and the pitch features of the tone-group in different ways, as discussed above (chapter 2), but the tone-group, in its various terminological guises, appears to be recognised by most as the largest phonological unit to which these structures and features may be assigned.

For the majority of writers on intonation, therefore, the tone-group is in some respects analogous to the sentence in syntactic description: the sentence is taken to be the largest grammatical unit, and 'grammaticality' is a question of sentence structure. Utterances larger than the sentence can in principle be divided up into an integral number of discrete sentences. Though there are relationships between sentences, these are not to be construed as grammatical relationships, but must be referred to some extra-grammatical principle such as textual or contextual appropriateness. Similarly, phonological 'grammaticality' stops at the tone-group; though there may be 'inter tone-unit relations' (Crystal, 1969a), these are of a different order from the structural relationships holding between different parts of the tone-group.

So much for the orthodox view. It has been suggested above

that it is possible to establish a larger phonological unit than the tone-group, of which tone-groups would form a part. Such a unit is here referred to as the <u>paratone-group</u>. It was argued that this unit could easily be accommodated within the hierarchical phonological framework adopted here (cf. 2.3 above), and could also be subjected to the same kind of systematic functional variation as the tone-group and its related systems. We could thus recognise <u>paratonality</u>, <u>paratonicity</u>, and <u>paratone</u> 'systems' to parallel the 'tonality', 'tonicity' and 'tone' of Halliday (1967a).

It should perhaps be noted at this point, however, that nothing in the analysis of English and German intonation presented above depends crucially on the recognition of such a unit. The tone and pretonic systems of the two languages given in chapters 5 and 6 respectively could stand whether or not the paratone-group is recognised (though it might be necessary to add 'compound tones' to the English system, as Halliday does, if it were <u>not</u> recognised).

The purpose of the present section is to examine in more detail this proposal to extend the phonological hierarchy of English and German by adding a unit above the rank of the tone-group. Some of the evidence for (and also against) this proposal, especially the evidence from the data examined in this study, will be presented and assessed. The paratone-group is thus being put forward here not as a proven fact, but as a hypothetical construct whose status and value remain to be established.

7.2 Justification of the paratone-group

We may begin by stating the hypothesis in its basic form: it is proposed that we may recognise a higher-ranking unit than the tone-group, within which the latter 'operates'. By 'operates' is meant that it stands in the same relationship to the paratone-group as the foot does to the tone-group. It does not mean that the tone-group itself is an 'element of structure' of the paratone-group, but rather that any such elements of structure will consist of one or more tone-groups. The elements of structure that appear to be potentially needed in this framework are the paratonic, the preparatonic, and the postparatonic, of which the first is an obligatory element and the last two are optional elements which may precede and follow it respectively. The evidence for these elements of structure will be presented shortly.

There are several reasons why such a unit could be useful. In the first place, it is well known that many so-called paralinguistic features of speech extend over longer stretches than the tone-group, and the paratone-group might be a possible domain for at least some of them. Some such features evidently characterise whole discourses rather than any component parts of them, while others (for example rhythmical features) may be limited to the tone-group. But a number of these features might nevertheless be assigned to the paratone-group. These would include some features of pitch range and height; it is notable, for example, that tone-groups in sequences may differ in their overall pitch level, the first tone-group beginning, say, high, the next slightly lower, the third lower still, and so on. This

pattern has been recognised by a number of writers in connection with the intonation of connected texts, e.g. Brazil (1975), Rees and Urquhart (1976). Brazil, for example, postulates a three-term system of 'key': High, Mid and Low, so that a sequence has the structure (High 1... n) Mid (Low 1... n). Such a pattern does not always emerge, of course, but where it does it would seem reasonable to consider the general drift of pitch level as a property of the paratone-group.

A second, and more important, justification for the paratone-group is the existence of apparently structured sequences of tones. That is to say that utterances do not just consist of an arbitrary and unpredictable string of unrelated tone-groups, but that these may be joined together into larger structures where the tone of a given tone-group is to some extent predictable from the position of the tone-group in the sequence. The possible nature of this structuring will be considered in detail shortly, but it is worth remarking here that there are elements of this even in traditional descriptions of intonation, where it is customary to recognise a distinction between 'non-final' and 'final' tones. A sequence of 'non-final' and 'final' could thus be regarded as a unit within which there is some structure and predictability of tone.

Further justifications for the paratone-group come from considerations of meaning. It was shown above (3.3.2) that important generalisations about the 'textual' function of intonation can be made if we invoke the concept of <u>subordination</u> of information

units to one another, with 'major' and 'minor' information units and focuses. Such a relationship can most satisfactorily be achieved by establishing a more complex information unit. Since 'information structure' and 'intonation structure' are parallel, we may see this as evidence for a more complex intonation unit than the tone-group, where the subordination of minor to major information units is reflected in the subordination of minor to major tone-groups.

The usefulness of a larger unit is also clear from the other types of meaning associated with intonation (cf. above, 3.5): the 'modal' or 'attitudinal' meaning. This type of meaning is most satisfactorily assigned not to individual tone-groups, but to longer stretches. For example, the 'open' or 'questioning' implication of the high rising tone (which, as explained above in section 3.3.5 , should not be construed as a 'sentence function' as such) cannot necessarily be restricted to an individual tone-group, even though the characteristic tone is so restricted; the implication is a property of the whole utterance, regardless of the number of tone-groups it contains.

In this connection, too, we may consider the syntactic units in terms of which a number of writers (especially Halliday) consider the functions of intonation. Halliday takes the clause as the basic syntactic unit with which intonation is correlated. In the neutral relationship, with most types of structure, 1 tone-group = 1 information unit = 1 clause. But the clause is not the largest unit of Halliday's grammatical hierarchy; above it is the sentence. It seems strange that clauses may form part of larger structures, but

information units and tone-groups cannot. We would expect to find a more complex information and intonation unit corresponding, in the neutral case, to the grammatical sentence. There is thus a gap in the framework which could be filled by a 'tonal sentence' (i.e. a paratone-group) above the rank of the 'tonal clause' (the tone-group).

The introduction of a higher-ranking unit than the tone-group is thus amply justified by a variety of factors, phonetic, phonological, syntactic, and semantic, and this unit is also perfectly reconcilable with the kind of hierarchical framework set out earlier. Of course, an additional unit is a complication, but against this we must set the possible simplification that this addition might bring about, by integrating a number of otherwise disparate elements, and also the greater explanatory power that might be available.

There are, however, a number of problems here. As will be seen in what follows, the case for this unit is not quite as clear as the above remarks might suggest, principally because the structures involved are by no means as stable as those of grammatical units. The more simple scheme put forward by the present writer in a published article (Fox, 1973), must be somewhat elaborated if we are to do justice to the complexity of intonation structure, and these elaborations bring with them the danger of losing sight of the basic structures. All these remarks will be clarified in the course of the discussion.

The evidence to be considered in this section will relate only

to the phonological features of the paratone-group, i.e. to possible tonal structures within the unit. Questions relating to paralinguistic features associated with the paratone-group will not be considered here, and questions of meaning will be deferred to a later section except in so far as they are immediately relevant to phonological matters.

7.3 Previous treatments of larger units

Before examining the relevant evidence, we may consider the approaches to larger intonation structures in the literature on the subject. As mentioned above, it has long been customary to distinguish between 'non-final' and 'final' intonation patterns. Klinghardt, (1920) for example, calls his two patterns 'weiterweisend' and 'abgeschlossen', and other German writers have followed his lead. Kuhlmann (1951) distinguishes 'weiterweisend' from 'abschliessend', and von Essen (1956a) has 'weiterweisend' and 'terminal'. In all these cases it is assumed that the final tone-group will regularly have a <u>falling</u> and the non-final a <u>rising</u> or <u>level</u> pitch.

The basic structure recognised by these writers in thus rise/level + fall. This will indeed account for many utterances, but it does not really get us far enough. In particular, of course, this scheme does not cater for cases where the final tone of a sequence is not falling, or cases where a falling tone is not final. Even the earlier writers recognised that, for English at least, such cases do exist. Klinghardt (1920) gives, for example, utterances like the following:

/ / \ Yet, as every German knows, they are not identical terms

\ \ Yet they are not identical terms, as every German knows

The structure rise + fall accounts for the first version, but not the second.

Similar remarks are made by many other writers. Kuhlmann (1951), for example, notes that the 'weiterweisend' tone, though usually rising, may also be falling, and Schubiger (1946) draws attention to the frequent use of a final rise after a fall in English. There is also a suggestion that English may differ from other languages in its sequences; according to Schubiger (1953), "contrary to German and French, English has a marked preference for the fall in non-final sense-groups".

Most of the standard handbooks attempt to do justice to the complexities involved here by listing possible, or usual, sequences of tones. Armstrong and Ward give three different combinations of their two 'tunes': I + I (=E1 + E1), II + I (=E2 + E1) and I + II (=E1 + E2). Here, then, we have not only the simple sequence rise + fall, but also fall + fall and fall + rise. The occurrence of these sequences is said to depend on the relationship between the sense-groups: I + I occurs in "for the most part co-ordinate sentences or phrases with a logical, though not necessarily grammatical, dependence on each other"(p. 26), "but if in the speaker's mind the logical connection is very close, the first intonation group may be said with the second tune" (ibid.). The sequence I + II is said to be uncommon, but it occurs with specific sentence structures such as main clause followed by subordinate clause.

Palmer (1922, 1924) recognises a greater variety of tones (see above), and he is more explicit as to the sequences that occur. For him, "any pair or more of tone-groups in one sentence constitutes a tone-sequence" (1924, p. 21). He distinguishes between 'co-ordinating' and 'subordinating' sequences, the criterion for the distinction being the identity or otherwise of the tones. Co-ordinating sequences are 1+1, 2+2, 3+3 (= E1+E1, E2+E2, E4+E4); they occur "in sentences containing equally prominent alternatives". Subordinating sequences are 1+2, 2+1, 1+3, 3+1, 2+3 (= E1+E2, E2+E1, E1+E4, E4+E1, E2+E4). These are used "in sentences containing two prominent elements, the one expressing the more important and the other expressing the less important fact. The former has the falling, and the latter the rising or falling-rising nucleus". Thus Palmer recognises not only more sequences than Armstrong and Ward but also the <u>subordination</u> of tones to one another.

Until the appearance of the systematic pedagogical handbooks on English intonation in the late 1950s, little advance was made in the treatment of sequences in the literature. Indeed, in some ways the discussions of this topic constitute a backward step. For Palmer, the sequences described are in a sense independent phonological entities which may be used in appropriate cases according to the relative importance of the "prominent elements". Most of the later writers, on the other hand, begin with specific <u>grammatical</u> constructions, and describe the different sequences of tones through which the grammatical relationships may be realised. This approach through grammar makes it difficult to generalise beyond specific

constructions, so that the role of the tone-sequence is too restricted. It was shown earlier (3.3.3) that many of the so-called 'grammatical' functions of intonation are in reality simply the result of the interaction between very general intonational functions and specific grammatical constructions. It is only possible to find such general functions if one is prepared to recognise structured tone-sequences independently of the grammatical constructions in which they are used.

Typical cases of apparently grammatically determined sequences are found in Lee (1953, 1955, 1956b, 1960). The distinction between 'choice' and 'exemplification' questions, for example, is related to the sequence of tones: ◟◝ for the former, ◟◟ or ◝◝ for the latter. A comparative using ◟◝ may be complimentary, while one using ◝◟ may be sarcastic, and so on. Similar points are made by Schubiger (1946, 1953, 1958). A popular type of construction for this kind of approach is the tag-question (cf. especially O'Connor,1955). In a statement followed by a tag with reversed polarity we may get fall+fall, fall+rise, rise+fall or rise+rise. If the tag has the same polarity we may only have fall+rise and so on. Again this does not even permit us to raise the question: "does the sequence fall+rise, or rise+fall etc. have a specific connotation?"

Most of the later handbooks, however, attempt to give regularly occurring sequences of tones, independently of the grammatical constructions with which they occur. Kingdon (1958) explores systematically some of the combinations available. He lists the

following combinations of two tones (the numbers are those of the present analysis,not those of Kingdon, though the prefix 'E' has been omitted for ease of reading):

2+2 3+2 1+2 4+2

2+3 3+3 1+3 4+3

2+1 3+1 1+1 4+1

2+4 3+4 1+4 4+4

As can be seen, all possible combinations of tones E1 to E4 are listed. With sequences containing three or more tone-groups, Kingdon is more selective. 'Typical combinations' of three tone-groups are the following:

2+2+2 3+3+1 1+3+1 1+4+1 4+4+1

2+2+1 3+1+3 1+1+3 4+1+3 4+4+4

3+3+3 3+1+1 1+1+1 4+1+1

The following combinations of four tones are given:

3+3+3+1 3+3+1+3 3+3+1+1 3+1+3+1 1+2+1+2

1+3+3+3 1+3+3+1 1+1+1+1 1+2+4+1 4+2+1+2

4+2+4+2 4+3+1+3 4+4+1+3 4+1+4+1 4+4+1+4

and similarly with five, six, and seven tones, and so on up to the following two combinations of fourteen tones:

3+3+4+4+3+3+3+3+3+3+4+3+3+1

4+1+3+1+1+4+1+3+4+1+1+3+1+1

Despite this long list of possible sequences, however, Kingdon fails to provide any serious principles of structuring which will determine which particular sequences are permissible and which are not. In short, he completely fails to define the notion 'sequence'. The longer sequences, especially, and also some of the

shorter ones, clearly do not have any coherent structure at all, and they are treated as sequences only because they are grammatically, or, in several cases, merely orthographically, connected. The last of the above sequances is the following utterance (Kingdon's tone-group boundaries and nuclei are indicated):

/There were canoes on the shore,/and we made signs and halloed that they should fetch us;/but they either did not understand us,/or thought it impracticable,/so they went away,/and night coming on,/we had no remedy but to wait till the wind should abate;/ and in the meantime,/the boatman and I concluded to sleep if we could;/and so crowded into the scuttle with the Dutchman,/who was still wet,/and the spray beating over the head of our boat,/leaked through to us,/so that we were soon almost as wet as he./

Clearly, by no stretch of the imagination can this be regarded as a single intonational unit. It is presumebly treated as such because it is orthographically one sentence, since it has no internal full stop.

Nevertheless, Kingdon does make a few interesting observations on tone-sequences. He writes (p. 68): "some tune combinations are well-established and therefore sound natural; such combinations are welded closely together and form a harmonious whole. Other tone combinations are less intimate, and there is a feeling that where the tune changes there is a sudden break in the utterance... Changes of tune of this type generally suggest that the speaker's mood has changed or that a new idea has occurred to him." It is a pity, however, that Kingdon's treatment obscures the difference

between the two types of sequence, and that he does not tell us which combinations "form a harmonious whole". A significant exception to this is his discussion of tone 'II' (≠E3), to which he accords three rôles: it may be 'independent', 'prelusory' or 'conclusory', i.e. it may occur as the main tone of a sequence, preceding this main tone, or following it. He suggests that "when tune II enters into combinations with other tunes it is usually pr elusory in an initial group and conclusory in a final one, but when the utterance consists exclusively of Tunes II these are usually all of the independent type" (p. 90). This statement is only interpretable in a non-tautologous manner if 'prelusory' does not equal 'initial' and 'conclusory' does not equal 'final'. Some notion of structuring of the sequence with a principal tone-group not restricted to a specific position is thus implicit in Kingdon's analysis. Unfortunately, he does not make this notion explicit, nor does he develop it beyond these remarks.

Schubiger (1958) lists far fewer sequences, but her approach is much more revealing than Kingdon's. The following passage, in particular, is highly significant: "The tone-patterns that make up a sequence are combined in such a way as to form as near as possible a replica of the simple pattern that would be used if the sentence were not divided. That tone-group which contains the nucleus of the corresponding simple pattern is the decisive one. Its nuclear glide, falling or rising, characterises the sequence as a whole. Just as the nucleus of a simple tone-group can occur early, midway, or late, the <u>nuclear tone-group</u>, as it will be called here, can be at the beginning, in the middle, or at the end of the sequence. What

precedes corresponds to the head and body of the simple pattern. Normally it is a type R (or FR) group. But with some speakers type F is quite frequent... What follows upon the nuclear tone-group corresponds to the tail, and is in consequence a type R pattern, or several type R patterns, with a low head ... Sometimes the two elements of a sequence are of comparative independence... Here there is a sequance of two nuclear tone-groups, mostly Type F + Type F. The first group sometimes has a rise in the tail" (p. 86-7). To this we may add the footnote (p.86): "In German, too, the sequence is a replica of the simple tone-group".

It is evident from these highly perceptive remarks that Schubiger not only recognises coherent sequences of tones, but also sees various kinds of structural relationship between the tones in a sequence. Of particular interest here is the suggestion that these relationships are analogous to those obtaining within the tone-group. This supports the analysis adopted in the present study, where similar kinds of relationship are recognised at different points in the hierarchical scale, and where the 'tonic' occupies a similar place at the rank of the tone-group to that occupied by the 'paratonic' at the rank of the paratone-group.

Schubiger's approach admits a variety of different structures within the sequence, according to whether the 'nuclear tone-group' is 'early, midway, or late', and according to whether its nucleus is falling or rising. The sequences given conform to this categorisation. With the nuclear-tone-group at the end we have:

a) Type F

R+F

FR+F

b) Type R

R+R

FR+R

F+R

With a non-final nuclear tone-group we have:

a) Type F

F+R

F+R+R

R+F+R

b) Type R

R+F

With two nuclear tone-groups we have:

F+F

F+R+F

... Before considering the more recent handbooks on English intonation, mention must be made of an important article (Trim, 1959) which belongs chronologically at this point, and which explicitly discusses the structure of tone-sequences. Trim proposes two tonal units: the 'minor' and the 'major' tone-group, the latter being higher-ranking than the former, i.e. 'major' tone-groups consist of 'minor' ones. 'Minor' tone-groups are delimited by /, which is used to "mark the end of a tone-group formally characterised as dependent non-final", while 'major' tone-groups are delimited by //, which is "a boundary between successive unrelated independent tone-groups". Thus it would appear that Trim's 'major tone-group' is equivalent to the paratone-group, and his 'minor tone-group' to the tone-group of the present analysis. (In the present study, the terms 'major' and 'minor' tone-group are used differently,

referring to different classes of tone-group.) However, this interpretation is not entirely secure, as the units which Trim calls 'minor tone-groups' appear to be often smaller than the tone-group, sometimes coinciding with the foot of the present analysis. In a later article (Trim, 1964), Trim applies these principles to German. Here we read that "as in English, major and minor tone-groups may be distinguished. Major tone-groups are of about the same length as in English, that is normally co-extensive with the clause, but longer in rapid speech and shorter in a slow deliberate style". Since it has often been observed, especially by Halliday, that the tone-group is usually co-extensive with the clause, this implies that the 'major tone-group' is the 'tone-group' of the present analysis. We also read, however, that "within each major tone-group, certain syllables are stressed, and the remainder unstressed... Of the stressed syllables, some are intonationally prominent and the remainder intonationally non-prominent", and "all prominent syllables in the major tone-group are made the nuclei of minor tone-groups". Thus, contrary to what we might expect from the apparent status of the 'major tone-group', the 'minor tone-group' does not always correspond to the foot, since not all stressed syllables are 'prominent'. Trim also discusses the relationship between 'minor tone-group' and foot explicitly: "The German minor tone-group has affinities with the English foot, but whereas feet consist of a stressed syllable together with any following unstressed syllables and are isochronous, German minor tone-groups correlate highly with syntactic groups, vary widely in length, both as to the amount of textual material included and the time taken. The boundary between one minor tone-group

and the next coincides with the highest level syntactic boundary available - most generally a phrase boundary. It is this boundary, marked by a switch from a post-nuclear pattern to a pre-nuclear one, and occurring often in the middle of a series of unstressed syllables, that necessitates the analysis into minor tone-groups, whereas the English foot requires no delimitation beyond the marking of stress. In those kinds of German in which non-prominent syllables form a smooth unbroken descending sequence from one prominent syllable to the next, the concept of the minor tone-group is superfluous, unless demanded by the presence of some rhythmic or other junctural feature."

It is very difficult to interpret this passage, which has been quoted in full because it seems to contain the nub of Trim's conception of the 'minor tone-group'. The comparison made with English seems to suggest a contrast between the way the two languages structure their intonation. In the present study no evidence whatever was found to support this contention: the foot is just as applicable to German as to English, and although the tone-group may be characterised by different pitch features in the two languages, as discussed in the preceding two chapters, its structure is likewise identical in both.

One further remark by Trim is relevant to the sequencing of tones. He writes that "the nuclei of all minor tone-groups other than the last bear either a falling or a rising tone", the latter being "much more frequent".

We see, therefore, that although Trim's analysis appears to have considerable similarity with the present one, in that it recognises larger and smaller intonation units, it is not always easy to relate the two frameworks, since Trim's 'minor tone-group' is only partly analogous to the tone-group, and his 'major tone-group' likewise only partly analogous to the paratone-group. The basic structure of intonation seems to be rather differently conceived in his framework from that adopted in the present analysis.

Of the later standard handbooks, O'Connor and Arnold (1961) is disappointing in that it does not consider sequences at all. Halliday (1970a) does, but his treatment is rather restricted. One important category introduced by Halliday (1967a) is the 'double tonic', a single tone-group containing two nuclei. Two such combinations are given: tone 1 + 3 and tone 5 +3. These are described as "really sequences of two tones which have, however, become fused into a single tone-group, so that there is no possibility of introducing a pretonic between the two". In fact, the lack of a pretonic before tone 3 in these cases is taken as crucial in distinguishing these 'double tonics' from sequences of more than one tone. Halliday writes (1967a p. 13, footnote): "only the <u>first</u> tonic in a 'double tonic' tone-group can thus be preceded by a pretonic. This is in fact the reason why such tone-groups, having tones 13 and 53, are regarded as si ngle tone-groups with double tonic, rather than as sequences of two tone-groups: the fact that it is not possible for a pretonic to tone 3 to occur here following tone 1 or tone 5. Other very common sequences, as for example

tone 4 followed by tone 1, are not considered as 'double tonic' tone-groups, precisely because any of the possible varieties of pretonic to tone 1 may occur in between the two tonics."

Apart from these special cases, Halliday also describes sequences proper. For him "any tone can in principle be followed by any other tone", but "there are certain sequences which occur with particular frequency" (1970a, p. 12). These sequences are:

2+1, 2+2, 4+1, 3+1, 1+2, 1+1

In the practice material, further sequences are given: 1+4, 3+5, 4+5 and 5+4; elsewhere (p. 114) 4+2 occurs. The occurrence of these sequences is discussed in relation to specific grammatical structures.

Albrow (1968) also gives some attention to sequences, within the framework established by Halliday. Like Halliday, he concludes that "it is probably the case that any combination of tones occurs". In addition to 13 and 53, he gives the following:

4+1, 4+4+1, 3+1, 3+1+1

1+4, 13+1+1, 4+5, 5+4

1+2, 1+1+1, 1+1, 1+4+2

2+2

Neither Halliday nor Albrow pays any attention to possible differences of internal structure in these sequences, however.

In the same tradition is the work of El Menoufy (1969). Like Albrow's, her analysis is basically that of Halliday. She, too, considers sequences principally in relation to grammatical structure,

but she also devotes some attention to purely phonological patterning. Her conclusions do not really get to the heart of the matter, however. She notes that:

a) there is a tendency for less frequent tones to repeat themselves (13 is followed by 3)

b) Tones 1 and 2 tend to occur at the end of utterances, while Tones 3, 4, and 13 generally do not. Tone 2 tends to occur initially.

c) various combinations tend not to occur: Tone 2 before or after Tone 1 or Tone 4, and Tone 5 before Tone 1.

A rather different approach is adopted by Crystal (1969a, 1975). He deplores the fact that "scholars have approached the question of tone-unit sequences from a wholly grammatical angle, first defining a grammatical structure, and then proceeding to an examination of the ways in which this structure carries a restricted range of intonation patterns. There has been no attempt to see whether prior identification of phonologically defined sequences, independent of grammatical considerations, is possible" (1969a, p. 239). Crystal's own approach, however, is unrevealing. It involves a statistical study of the predictability of a tone from its predecessor, which he calls "progressive influence of tone-units on each other". Influence in the other direction ("regressive influence") "does not seem to be linguistically relevant", though this claim is nowhere justified; it clearly rules out <u>a priori</u> the possibility of finding characteristic 'non-final' tones. The only fact of any significance to emerge from this analysis is that there is a tendency to 'tonal

reduplication', i.e. repetition of the same tone. This leads to a 'theory of subordination' (Crystal and Quirk, 1964), which considers a tone subordinate to another if it has the same direction as the superordinate tone, and has narrower range. The subordinate tone may precede or follow the superordinate. Again, this approach seems to obscure rather than to describe the structural patterns; two different tones cannot form a sequence according to this criterion. The obsession with identity of tones in sequence also leads Crystal to put forward a 'di-sequence' hypothesis (p. 242). Since there appeared to be few "non-reduplicative sequences of three or more units length" in Crystal's data, he hypothesises "that speakers tend to work with pairs of tone-units, and that while TU1 has a direct influence on TU2 it has none on TU3; TU2 influences the choice of TU3 but not TU4; and so on". This is a curious theory; it does not seem to be supported by any other observations in the literature, nor by the data examined in the present study.

As a general conclusion from this survey of discussions of sequences in the literature it is probably fair to say that, though there are frequent mentions of sequences, little has really been achieved in practical (or theoretical) terms. Tendencies of various kinds have been observed, but a sufficiently elaborate framework to accommodate them has nowhere been presented. The most promising comments made are perhaps those of Schubiger (1958) and Trim (1959), but the former suffers from a lack of theoretical foundation, and the latter from the difficulty of identifying the entities on which the analysis is based.

7.4 The present analysis: general principles

We may now turn to the more direct evidence for the paratone-group and its structure found in the data examined in the present study. The basic question to which we must address ourselves is: given a text consisting of a string of tone-groups, how can we group these tone-groups into larger units, and what is the structure of these units? The main problem in answering this question is that of finding suitable criteria for delimiting sequences. Since the paratone-group, if it exists, is a phonological entity, we would expect it to be definable, in the first instance at least, in phonological terms, which here presumably means in terms of its internal structure. We should thus look for recognisable, recurrent patterns in the sequence of tones. Just what constitutes a 'recurrent pattern' is difficult to establish, however. One principle that could be used, and for which we might find a certain justification, would be to take each falling tone (i.e. simple fall or rise-fall) to be the major tone of a separate paratone-group, i.e. occurring as its paratonic. This would be reasonable in view of the comments found repeatedly in the literature to the effect that 'final' tone-groups are falling and 'non-final' tone-groups are rising. The structure of the paratone-group would thus be: (rise +) fall.

This approach could certainly be put into practice in the analysis of sequences. Given an English sequence such as 2+3+1+2+1+1+4+1, for example, the grouping, according to this structural principle, would be 2+3+1, 2+1, 1, 4+1. Even on internal grounds, however, it would be hard to support such an analysis. It is

possible to find utterances whose independence is not in doubt (i.e. they may occur in isolation) which end in a rising tone. We could accommodate such cases, and still preserve the principle that a falling tone is 'major' and a rising 'minor', by allowing 'minor' tones to occur in final position in the paratone-group, i.e. with the structure (minor) major (minor), where the major tone is falling and the minor tone rising. This would certainly allow us to accommodate more sequences, but it would also create problems. The sequence 1+3+1, for example, could be analysed either as 1+3, 1 or as 1, 3+1.

The whole principle is further weakened, however, by the existence of independent utterances which contain no falling tones at all. Since it is axiomatic that all independent utterance contain at least one paratone-group, which in turn must contain at least one major tone-group, we must accept that rising as well as falling tones may occur in the paratonic of a paratone-group. The sequence 1+3+1 may now have three possible analyses: it may be 1+3, 1 or it may be 1, 3+1 or it may be 1, 3, 1.

It is clear, then, that consideration of the patterning of sequences of tones will not of itself provide sufficient information to enable us to establish paratone-groups or their internal structure. This does not necessarily mean, of course, that such units cannot exist or that no such structure can be postulated. It simply means that the sequence of tones itself cannot be used as the sole criterion for establishing this unit and its structure.

We must turn, then, to <u>external</u> criteria, i.e. to some characteristic other than the sequence itself. An obvious factor here is the grammatical structure of the utterance, that is, we may be able to find a grammatical unit which can be taken to be coextensive with an intonation unit, and whose intonation structure can be investigated. The natural grammatical unit for this purpose is, of course, the sentence. It will be recalled that Palmer uses the sentence as the criterion for delimiting sequences: "any pair or more of tone-groups in one sentence constitutes a tone-sequence" (Palmer, 1924,p.21). Similarly, Kingdon's discussion of sequences has sections devoted to "sentences containing two tunes", "sentences containing three tunes", and so on.

It is certainly the case that taking the sentence as the unit for sequences would often produce coherent intonation structures, since there is a marked tendency for paratone-groups to be co-extensive with sentences in the same way that tone-groups are often co-extensive with clauses. Unfortunately, there are problems here, too. Firstly, as we saw with one of Kingdon's examples, the sentence itself is not necessarily easy to delimit, notably with co-ordinate clauses or clauses in a paratactic relationship. Secondly, it is not necessarily the case that the sequence we would wish to regard as having a coherent tone-structure corresponds to the sentence. Armstrong and Ward recognise this when they make their sequences dependent not on <u>grammatical</u> relationships but on what they call '<u>logical</u>' relationships. As quoted above, the sequence I+I occurs in "sentences or phrases with a logical, though not necessarily

grammatical, dependence on each other" (1926, p. 26), while the sequence II+I occurs where "the logical connection is very close" (ibid.). Just how we assess degrees of 'logical connection' is, of course, unclear, and hence the criteria for the delimitation of sequences are equally uncertain.

The crux of the problem is, of course, that the intonational structure of an utterance is not a direct reflection of its grammatical structure, but, as discussed above (3. 4 -), of its 'information structure'. The most appropriate unit for the analysis of intonation structure is thus some kind of 'information unit'. It is evident, however, that 'information units' are extremely elusive, and that in any case the only sure guide to the 'information structure' of utterances is their intonation. There are, of course, certain other features of utterances that may assist us in finding 'information units' (one of which is the grammatical structure), but they are not necessarily an adequate indication of the information structure in all instances.

In short, then, it does not seem possible to apply any simple mechanical procedure, whether phonological, grammatical, or semantic, in order to establish the appropriate units for intonation structure. It is not surprising, therefore, that the task has rarely been attempted with any serious commitment, and that the results obtained have been random and unsystematic. But all this does not mean that larger intonation structures do not exist; what it shows is that the task of finding them is not an easy one. In practice it is necessary to use a variety of criteria simultaneously: the grammatical

structure of the utterance, the assumed textual rôle of its parts, and the phonological patterning of tones in so far as this can be discerned. Ideally, the evidence from all these sources should converge.

It is on this multiple basis that the sequences recognised in this study are set up; no single criterion could be adhered to. In practice, however, the difficulties in recognising coherent groupings were not found to be as great as might be supposed. Some of the major points of difficulty or ambiguity will be discussed below in connection with specific structures. Otherwise, the possibility of delimiting sequences of this sort will be taken for granted.

From a methodological point of view it is clearly advisable to proceed from the simplest to the more complex structures. Not only are the simpler ones easier to analyse, but it is also possible to project the structural patterns found in them on to the larger and more complex structures, thus using the simpler patterns as a tool in the analysis of the more complex.

As a first step towards the discovery of tonal structures we may conveniently distinguish between simple and complex paratone-groups, where the former contain only one, and the latter more than one, tone-group. This distinction is of methodological value only, as simple paratone-groups may be considered to be merely special cases of more complex ones, in which the structure is reduced to its minimal form. In this respect the paratone-group is parallel to the

tone-group, where a tone-group <u>without</u> a pretonic is in principle not essentially different from one <u>with</u> a pretonic. In the case of the paratone-group the minimal structure is a single tone-group which constitutes the 'paratonic' of the paratone-group. Tone-groups in the paratonic are designated 'major'.

7.5 Simple paratone-groups

We are relatively well-informed about the tones of simple paratone-groups in English, since this is precisely the kind of utterance that is given in the intonation handbooks to illustrate the function of intonation. Tone-groups whose grammatical and/or textual status was such as to justify their treatment as independent paratone-groups were fairly frequent in the data, in both English and German. In German, all the four tones occurred in such tone-groups, though not with equal frequency. By far the most frequent tone here was G1, which accounted for three out of every four simple paratone-groups. Of the remaining tones, tone G2 was the next most frequent, followed by G4. Tone G3, the level tone, occurred in only a handful of cases, all of which involve the speaker being interrupted, so that the status of these utterances as independent units is not secure. One example is the following:

//$_{\wedge}$ Sie /<u>mein</u>en doch/ nicht dass...//

Even the status of this utterance as a tone-group is not certain; it could possibly consist only of a pretonic.

On the basis of this evidence it would no doubt be justifiable

to exclude tone G3 from occurrence in the paratonic of simple paratone-groups, which would certainly accord with the solely 'weiterweisend' function accorded to it by most writers. Utterances in which this tone occurs in a major tone-group do nevertheless seem to occur, however, though these utterances appear to be largely restricted to short exclamations. Examples are:

// ^ na /ja// , // gut // , // schön // etc.

The situation in English appears to be quite similar. Though the data examined did not provide instances of all six tones in simple paratone-groups, it seems clear that all can occur. Again tone E1 was by far the most frequent, though E2 was also common, and E4 was not infrequent. There were no instances of E3, E5 or E6 in simple paratone-groups, but these gaps can easily be filled from the literature on the subject, at least in the case of the first two. Tone E6, like its German counterpart, occurs in short exclamatory utterances like:

// Fine// , // ^ O./K.//, // Sure // etc.

7.6 Complex paratone-groups: 2 tone-groups

Apart from establishing that all tones may occur in the paratonic of paratone-groups, these simple types do not, of course, provide any information about the structure of the paratone-group. The problems with simple paratone-groups are those of dalimitation rather than structure. With complex paratone-groups, on the other hand, both these problems emerge: we must consider not only what the sequence is but also how the tone-groups in the sequence are related to one another.

We may begin with the simplest of the complex types, containing two tone-groups. Given the six tones of English and the four of German, the number of possible combinations of two tones is 36 in the former case and 16 in the latter. Not all of these occurred in the data, though the extent to which the gaps are accidental rather than systematic is naturally difficult to determine. Nine sequences of two tones occurred in the English data, and seven in the German data. The English types were as follows:

1+1, 2+1, 3+1, 4+1

1+2, 2+2, 4+2

1+3

6+6

Of these, the combinations 1+1, 4+1, 2+2, and 1+3 were the most frequent. The German types were as follows:

1+1, 2+1, 3+1

1+2, 2+2

2+4, 3+4

Of these the combinations 1+1, 2+1, 3+1, 1+2 and 2+4 were the most frequent.

The pattern of occurrence is broadly similar in the two languages, if one bears in mind the differences between the tone-systems. With the simple falling and high rising tones all four combinations were found in both languages: 1+1, 1+2, 2+1, 2+2. Since there is no equivalent of tones E3 and E4 in German, comparison is of course not possible with combinations containing these tones. German has significantly more occurrences of sequences with the

level and rising-falling tones (G3 and G4) than English (E6 and E5); in fact no instance of tone E5 occurred in sequences of two tones, and only one instance of E6.

As far as the structure of these sequences is concerned, the different combinations fall into a number of types. Of crucial importance here is no doubt the basic phonetic distinction between falling and rising-falling tones on the one hand and rising, falling-rising, and level tones on the other. If the first group is designated 'F' and the latter 'R', we find the following sequences:

English

R+F	F+R	R+R	F+F
E2+E1	E1+E2	E2+E2	E1+E1
E3+E1	E1+E3	E4+E2	
E4+E1		E6+E6	

German

G2+G1	G1+G2	G2+G2	G1+G1
G3+G1			
G2+G4			
G3+G4			

In both languages the R+F type is both the securest and the easiest to interpret. The structural relationships here seem to point to the subordination of the first tone to the second, so that the structure is: minor/preparatonic + major/paratonic. Random examples from the data are the following:

E2+E1: //^ I've /nothing a/gainst the indi/viduals who play/
cricket I've // nothing a/gainst the indi/viduals who /play /
/^ rugby/ football //

E3+E1: //^ well this /raises the /question you see // who you
are /teaching //

E4+E1: //^ and /my answer /always is then// why don't you as/sess
what is /valuable //

G2+G1: //^ ich /sehe Sie // haben eine/ganze /Menge er/fahren
In/spektor//

G3+G1: // Übrigens /wäre ein /^ Antiqui/tätenhändler // sicher
nicht mit dem /Omnibus ge/kommen //

G2+G4: //^ selbst/redend ge//denkt sie /dabei /mehrere Interes/
/senten /gegeneinander /auszuspielen //

G3+G4: //^ die /Bauern /wenden sich /nur an /ihn weil er der //
//einziger /Tierarzt im /Umkreis von /fünfzig /Meilen ist //

All the possible R+F combinations of German are included here; the English R+F combinations not represented are E6+E1, and combinations of E2, E3, E4, and E6 with E5 rather than E1. All these seem to be possible, though some are more natural than others.

The R+F type is the most frequent two-tone combination; if we wished to recognise a 'neutral term' in a system of R+F types, on grounds of frequency of occurrence it would be E4+E1 in English and G2+G1 in German (though G3+G1 is also quite common).

A very different kind of combination is F+F. Here an appeal to tone-type is naturally excluded as a means of assigning precedence

to one tone or the other, and the internal structure of this kind of sequence is thus more difficult to establish. Examples from the data include the following:

E1+E1 (i) // Well I agree en/tirely with Doctor /Beard about //
//stating ob/jectives //

(ii) //$_{\wedge}$ well /I take a very /different view // as you would ex/pect //

(iii) // em and /this has be/come more /difficult I /think with the //increase in /numbers of uni/versities //

(iv) // then there's Mr. /Fowler a re//tired /schoolmaster //

G1+G1 (v) // also denn so die /Nachrichten die /ich bekomme aus/ /Heidelberg// aus Briefen //

(vi) //$_{\wedge}$ aber dass sie einen be/stimmten Pro/$_{\wedge}$ Pro/zentsatz des /Geldes /trotzdem be/zahlt kriegen auch // // wenn sie keine/Arbeitstelle /kriegen //

(vii) // ja ich wie es /jetzt ist // also zu/mindest /üblicher/ /weise //

(viii) //$_{\wedge}$ ich /glaube es liegt auch /viel darin //$_{\wedge}$ dass die Stu/denten jetzt /$_{\wedge}$ gewissermassen ge/zwungen sind hart zu /arbeiten //

These sequences produce problems both of delimitation and of structure. Though the two parts are clearly linked in some way (which justifies treating them as one unit), the connection between them is not always equally strong. In examples (i) and (viii) the grammatical dependance of each part on the other is clear: the

second part forms the complement of the first. In most of the other cases, however, the first part is potentially independent and the second part constitutes an addition to it, a qualification or elaboration in the form of an appositional phrase, a subordinate clause, or an adjunct. This is characteristic of F+F sequences.

In many cases of this kind the two parts appear to have a degree of independence from each other, while at the same time being clearly linked. A good example is (ii). Here one might be able to justify treating this as a sequence of two independent simple paratone-groups. If, as is more convincing, however, we treat these sequences as single paratone-groups, then we must consider their structure, and in particular we must identify the major tone-groups. Since the tones are of the same type an appeal to 'F' or 'R' is no help here. We could adopt the same structural principle as with the R+F type and treat the second tone-group as major and the first as minor, but this does not seem satisfactory in view of the relative independence of the tone-groups in some cases. The most plausible analysis here is not to assign any precedence at all, but to regard this kind of paratone group as <u>co-ordinate</u>, with two major tone-groups forming a compound para-tonic with no preparatonic. This is, of course, parallel to certain syntactic structures where we may recognise co-ordinate main clauses in the same sentence. (For further clarification of the notion 'compound paratonic' see below).

The combinations exemplified here are not the only possible F+F sequences that could occur; we could also have combinations with the rising-falling tones E5 and G4. It is interesting, however,

that not all such combinations are equally natural. The next most likely combination after 1+ 1 that could be substituted in the above examples is probably E5+E5 or G4+G4. In other words, co-ordinate structures of this kind seem to prefer 'tone-concord'. A mixture of two different tones, though possible, would probably destroy the impression of a coherent sequence and would imply that we have two separate paratone-groups.

We may now consider the R+R type. Examples from the data are as follows:

E2+E2 (i) //$_{\wedge}$ I /did jolly /well at // Sandhurst //

(ii) // I passed out pretty /high // pretty / high //

E4+E2 (iii) //$_{\wedge}$ is /this in the /last resort // something which / /only the indi/vidual /teacher can can /tackle //

E6+E6 (iv) // everything /does you know // everything /does //

G2+G2 (v) //$_{\wedge}$ die /Küche ist /etwas in den /Hintergrund ge/treten durch die //vielen /technischen /Hilfsmittel die wir / /heute haben //

It must be said that sequences of this kind are not particularly frequent, and that constructed examples do not sound very natural either. Nevertheless, this type does occur. Some of the examples can be interpreted in a parallel fashion to type F+F, namely as co-ordinate paratone-groups with two major tone-groups.

Examples (i), (ii), (iv) and (v) are of this type. If said with the F+F pattern, these would change their implication, but the structural relationships between the tone-groups in each case

would remain the same. Example (iii) appears to be different, however, since it is possible to consider the second tone-group here as major; it appears to carry the main textual implication and the first tone-group gives the impression of being merely a modification or subordinate addition. Furthermore, if we were to substitute another type of sequence for the R+R here the most natural one would be type R+F rather than F+F. Thus, this example seems best interpreted in the same manner as the R+F type, as a <u>subordinating</u> structure:

minor/preparatonic + major/paratonic.

It will, of course, be observed, that the tone-sequence in (iii) differs from those of the other examples in not having tone-concord. Again, therefore, tone-concord seems to be associated with co-ordinating structures and lack of it with subordinating structures.

The combinations exemplified here are not the only possible combinations of R+R. The other possible English types are those with tones E3 and E6 preceding E2, and any of tones E2, E3, E4 and E6 preceding tones E3, E4 and E6 (apart from E6+E6 which is exemplified in (iv)). The remaining German types are G3+G2, G2+G3, and G3+G3. Those English sequences with a final E2, i.e. E3+E2 and E6+E2, are less natural than E4+E2, but they are both possible, and can be substituted in example (iii) without altering the structural relationships. This preference for E4+E2, however, is entirely compatible with the analysis of the R+F types, where E4 was also most common in the first tone-group. E4 seems to be the

the favourite 'subordinating' tone.

In sentences which call for a co-ordinating paratone-group, e.g. examples (i), (ii) and (iv) above, any sequence of two identical tones will produce a convincing utterance: E3+E3, E4+E4, E6+E6. The subordinating types are more restricted. Sequences beginning with E4, i.e. E4+E3, E4+E6, appear to be satisfactory, confirming the use of E4 as a subordinating tone. The other combinations are more forced, however. The sequence E4+E4 could have two possible interpretations, as a co-ordinating or subordinating type; it may well be structurally ambiguous.

The same principles appear to apply in German. Sentences requiring a co-ordinating structure may have G3+G3 as well as G2+G2, though the former is less natural, as G3 is infrequent in major tone-groups. Subordination can be achieved in German with G3+G2.

The three types of combination considered so far, R+F, R+R and F+F, can thus be assigned to two types of paratone-group: a <u>subordinating</u> type, with a structure preparatonic + paratonic, and a <u>co-ordinating</u> type, with a compound paratonic. Tone-groups with a falling or rising-falling tone only occur in the paratonic, thus constituting major tone-groups; tone-groups with rising, falling-rising, or level tones may occur in either the paratonic or the preparatonic, and consequently may be major or minor. These principles apply in both English and German.

The final type of combination of two tones to be considered is F+R. The problems of structure assignment with this type are

more difficult than with the other types, and the solutions are thus less secure. We may begin by giving examples from the data:

E1+E2 (i) //$_{\wedge}$ most/$_{\wedge}$ /praiseworthy/effort// I think //

E1+E3 (ii) //$_{\wedge}$ yes I'm /sure this is // so //

(iii) // I was a //bit like /you //

G1+G2 (iv) // wissen Sie /auch seit // wann sich Mrs. /Richmond dem/

/Trunk er/geben hat //

(v) //$_{\wedge}$ da/für /kann ich von /mir aus / sagen dass ich //

// sehr viel /Zeit für meine kleine /Tochter von

sieben /Jahren aufwende //

(vi) //$_{\wedge}$ wenn du /$_{\wedge}$ fertig /fertig bist mit der Referen/

/darzeit da kriegst du glaub'ich /kein Geld /

/$_{\wedge}$ wenn du nicht /vorher gearbeitet hast /

/$_{\wedge}$ und du bist dann /arbeitslos // oder //

(vii) //$_{\wedge}$ e/norme /Neuerung // eh //

The English type E1+E3 is very frequent (since there is no equivalent of E3 in German a comparable form does not occur there). The connection between the two parts is very close, both tone-groups often corresponding to a single clause. Halliday (1967a) recognises this connection by treating this kind of structure as a single tone-group with two nuclei - a 'double tonic'. The same principle applies with E5+E3, which is much less frequent and is not represented in the present data. As discussed above, Halliday's reason for not treating these sequences as two separate tone-groups is the lack of pretonic before the second nucleus.

It is, incidentally, by no means certain that no pretonic is possible between the two nuclei. The pitch here is certainly always low, but this could equally well be interpreted as a requirement that any pretonic here must be low rather than that there can be no pretonic. This is the interpretation given (though of course less formally than by Halliday) by Schubiger. In the passage quoted above she states that the 'nuclear tone-group' may be falling, and that "what follows upon the nuclear tone-group corresponds to the tail and is in consequence a type R pattern ... with a low head" (emphasis added).

This low (or non-existent) pretonic is certainly an important characteristic of these sequences. If we were to pronounce example (ii) above with a high pretonic to the second tone the effect would be to convert this into two independent paratone-groups by destroying the connection between the two tone-groups. Despite the apparent anomaly in the phonological structure of these sequences, Halliday's approach will not be adopted here. The acceptance of a larger unit than the tone-group allows such combinations to be accommodated without such a complication of the structure of the tone-group. Further reasons for preferring the present analysis will be given below.

The internal structure of these combinations is reasonably clear; the first tone-group is, as suggested by Schubiger, the more important (the 'nuclear tone-group') and the second is in consequence subordinate. Substitution of a R+F or F+F sequence here would therefore affect the structural relationships, shifting the major

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focus in the first case and producing two such focuses in the second. We must therefore recognise a third structural type for the paratone-group here:

major/paratonic + minor/postparatonic.

It must be emphasised that we are here considering only a restricted type of F+R sequence, namely a combination of E1 or E5 with E3. Since German does not posses a tone with the characteristics of E3 these remarks apply only to English.

The other type of F+R sequence encountered in the data has a simple fall and a high rise: E1+E2, and G1+G2. The characteristics of this type of sequence are comparable in both languages though the examples given here show a wider range of application for German than English. In fact a characteristic and well attested use of the 1+2 sequence in both languages is the tag-question (though the syntactic characteristics of the tag are different in the two languages). Other possible F+R combinations (excluding those with E3 just discussed) are E1+E4, E1+E6, E5+E2, E5+E4, E5+E6; G1+G3, G5+G2, G5+G3. None of these actually occurred in the data, but some are certainly possible, especially E1+E4 and E5+E4. Combinations with a final level tone, E6 or G3, sound unnatural.

The interpretation of these F+R sequences is not as straightforward as that of those with a final E3, however. Though these do appear to be genuine sequences, with a connection between the two parts, the relationship between the tone-groups does not seem to be the same as with E3. Both Halliday and Albrow give, either explicitly or in the practice material, the sequences 1+2, 1+4 and

5+4 in addition to 1+3 and 5+3, but, unlike the last two, the fir st three are not regarded as 'double tonics'. As we have seen, Halliday justifies his treatment of 1+3 and 5+3 as single tone-groups solely on the grounds of the lack of pretonic to the second tone. There is, however, an inconsistency in Halliday's analysis: since the other F+R sequences are <u>not</u> treated as 'double tonics' the implication is that a pretonic before the second tone is possible in these cases; yet we read in connection with the E1+E2 sequence in tag questions that "a tag cannot have a pretonic" (1970a, p.13). In fact, this statement is also intended to cover the sequence E1+E1 in tags, which also does not allow a pretonic before the second tone. According to Halliday's criterion, both of these sequences should be classed as 'double tonics', but they are not. In fact, the lack of a pretonic to type R tones following type F in the same sequence seems to be quite general, though this is not noticed by Halliday. It also applies to the sequences E1+E4, E5+E4, and E5+E2. In all these cases it is possible for the second tone to have a high pretonic, but the result is to dissociate the second tone from the first, and thus to destroy the sequence. Thus if we take seriously Halliday's criterion for distinguishing 'double tonics' from genuine sequences, then there is no justification for treating combinations with E3 any differently from the other F+R types: all must be 'double tonics'.

Halliday may nevertheless be right in assigning a different status to combinations with tone E3, even if the reason he gives is the wrong one and even if his particular treatment of these combinations as a single tone-group is not the most satisfactory.

There are a number of differences between the two types of F+R sequence: while tone E3 seems to be unequivocally subordinated to the preceding type F tone, this does not appear to be true in the other cases. The sequences E1+E3 and E5+E3 can legitimately be regarded as extensions of a simple paratone-group with tone E1 or E5, i.e. the structures are E1 (+E3) and E5 (+E3), with an optional postparatonic. Omission of the final tone-group does not seem to affect the basic connotation of the utterance. With sequences such as E1+E2 and E1+E4, on the other hand, the connotation is radically different with and without the final tone-group, so that the latter cannot really be considered as an optional element, and the structure of these sequences cannot be seen as an extension of the simple falling type.

If this is not the appropriate structure for these sequences, however, what are the alternatives? One possible structure here would be the same as that of the R+F type, i.e.:

minor/preparatonic + major/paratonic

This could be justified by claiming that the implication conveyed is that of the second tone rather than the first: tag-questions are 'questions', not 'statements'. However, this is not necessarily true, since there is a difference between the implication of a simple question and that of a tag-question; the latter contains an assertive element that is absent in the former, and this element is attributable to the first part, with its type F tone. Another disadvantage with this analysis is that by allowing type F tones to occur in minor as well as major tone-groups we destroy the last

link between tone-type and structural role: both types of tone can occur in both types of tone-group. There is thus no such thing as a 'major tone' or 'minor tone' as such; there are only major and minor tone-groups. This is an inconvenience, rendering the delimitation of paratone-groups still more difficult, but it does not, of course, constitute a theoretical deficiency or inconsistency.

Another possible structure for these sequences is the co-ordinate type, i.e. both the F and R are major, and the structure is parallel to the F+F type. The chief problem here is that the usual marker of co-ordination, tone-concord, does not apply. Again this is a practical inconvenience rather than a theoretical defect. In support of this analysis we could also cite the evidence of the syntactic structure of these utterances, or at least of the 'tag-question' type. Tag questions are syntactically somewhat anomalous, in that both statement and tag must be considered to be 'main' rather than 'subordinate' clauses, yet they lack the usual attributes of co-ordinate main clauses, such as parallelism of structure. Syntactic evidence is not necessarily relevant to the intonation structure, but it does show that tag questions are somewhat exceptional. In spite of the difficulties involved with this analysis, the 'co-ordinate' solution will be adopted here. Further evidence in its favour will be presented below.

If we accept this analysis, then the four types of combination of two tones can in English be assigned to three categories of paratone-group structure, as follows:

English: A Subordinating (i) minor + major : R+F, R+R

(ii) major + minor : F+R

B Co-ordinating major + major : F+F, R+R, F+R

The R+F and F+F sequences are structurally unambiguous, but the R+R and F+R sequences can be assigned to either of two different structures. The F+R type can be further differentiated according to the second tone: if it is E3 it belongs to A (ii), otherwise it belongs to B. The R+R type belongs to B if the tones are the same, and to A (i) if they are different, though the sequence E4+E4 may possibly belong to either (see above).

The categories required for German are not quite the same. Here there is no tone comparable to E3, and type A (ii) of English, which has this tone as an obligatory component, is thus lacking. We can therefore recognise two structural types for German:

German: A Subordinating minor + major : R+F, R+R

B Co-ordinating major + major : F+F, R+R, F+R

Here, the only structurally ambiguous sequence is R+R, which may be either subordinating (with different tones) or co-ordinating (with the same tone).

This structural difference between the two languages is highly significant, since it affects not only the paradigmatic tone-contrasts but also the whole organisation of the intonation of sentences, and even has repercussions elsewhere. This will become more evident as we examine longer sequences and in particular when we consider the relationship between these structures and other features of the organisation of utterances (cf. chapters 8 and 9 below).

7.7. Complex paratone-groups: 3 or more tone-groups

The sequences we have been considering so far consist of two tones only. Longer sequences, often much longer ones, are quite common, and these pose additional problems. As the sequences become longer, the number of possible combinations increases accordingly: in English, there are 36 possible combinations of two tones, 216 possible sequences of three tones, and no less than 1896 possible sequences of four tones. Since even longer sequences than this were actually encountered in the data, it is evidently not feasible to consider all the possibilities. Fortunately, it is also unnecessary; what we are interested in is not an exhaustive listing of all possible sequences but rather the structural principles underlying them.

The longer sequences increase not only the number of possible combinations, but also the possible structural relationships between the tone-groups. Nevertheless, it will be shown that most of the more complex types can be seen as extensions of the simpler ones.

We may consider first sequences of three tones. Here, again, it is helpful to reduce the tones to two basic types, 'F' and 'R'. This reduces the possible sequences of three tones to eight:

F+F+F, F+F+R, F+R+F, R+F+F, F+R+R, R+F+R, R+R+F, R+R+R

All these types occur in the data, though not necessarily in both languages; all of them seem to be possible in both, however. As with sequences of two tones, the structural relationships are not quite the same as the types of combinations. Here are some examples from the data:

ENGLISH

F+F+F: E1+E1+E1

(i) // ^ and /students have grown far // louder in their //
//protoots//

F+F+R: E1+E1+E3

(ii) // ^ I /think we can /learn a great /deal // from
one an//other//

F+R+F: E1+E3+E1

(iii) // ^ it /doesn't de/pend on /seaso nal // trade // ^ but /
/offers a /comfortable /home to a /number of /residents //

E1+E4+E1

(iv) // ^ and /this is a /difficulty which in/creases // as we
get /more students // coming into the uni/versities //

R+F+F: E2+E1+E1

(v) // ^ the /scientists seem to /take to this quite /well we//
// asked them to /specify in /terms of be/havioural
ob/jectives in // terms of /what the /student should be/
/able to /do at the end of the /course //

E4+E1+E1

(vi) // ^ em it's /all right having a /class of five /people //
// all wishing to /study a speci/ality em // stating
the ob/jectives for /them //

F+R+R: E1+E3+E3

(vii) // yes I could have /told you quite a /lot about //
//Clausewitz // once //

R+F+R: E4+E1+E3

(viii) // ^ now the /arts /people // do er re/sist er /this
sug/gestion // quite often //

R+R+F: E2+E2+E1

(ix) // these /resident /guests //$_{\wedge}$ are pre/sided over by Miss//
//Cooper the manager//ess //

(x) //I went to /Twickenham // peacefully to /demonstrate
s//gainst the /Springboks //

E4+E4+E1

(xi) //$_{\wedge}$ because /one of the com/plaints and you /hear this /
/even to/day from // teachers// or /is that /students
work / only for ex/amin/ations //

(xii) //$_{\wedge}$ and /I want to make the /clearest denunci/ation of
that /evil and // call it as /clearly to /mind as I//
//can //

GERMAN

F+F+F: G1+G1+G1

(xiii) //$_{\wedge}$ die /arme Frau /trinkt tat/sächlich weit // mehr als //
//gut ist//

(xiv) // als ihr/Mann noch /lebte // waren beide /mehrmals //bei
mir//

R+F+F: G2+G1+G1

(xv) //$_{\wedge}$ zum / ersten /Mal // bin ich ihm /kurz nach seiner /
/Ankunft in /Rothbury hier be//gegnet //

R+R+F: G3+G3+G1

(xvi) //$_{\wedge}$ und em /dann haben wir natürlich /Gäste zu bewirten //
// und /em /$_{\wedge}$ an /sonsten ist der /Haushalt ja //
//doch /überhaupt /leichter ge/worden //

(xvii) // sie be/gnügte sich mit Kaf/fee oder //Tee // je nach der/
/Stunde ihres Be/suchs //

C2+C2+C1

(xviii) //^ ich habe /weiterhin er/fahren dass Mrs // Richmond die //
// unerfreuliche Ge/wohnheit hat /^ zu /trinken //

C2+C2+C4

(xix) //^ das Ver/halten einer /^ einer Per/son die //
// trinkt ist // oft /seltsam //

R+R+R: C3+C3+C2

(xx) // ausser/dem // hab'ich aber /auch noch meine /Hobbies
ich gehe // singen //

C2+C2+C2

(xxi) //^ zum /Teil aus /finanzi/eller /Sicht weil die //
// Mieten sehr /hoch sind // und man einen gewissen/
/Wohlstand haben /möchte //

Most of these combinations can easily be accommodated as extensions of the two-tone types. The F+F+F type (examples (i), (xiii) and (xiv)), is evidently analogous to the F+F type, and suggests that we must allow more than two co-ordinate major tone-groups. The R+R+R type (e.g. xxi) has potentially the same structure, though not necessarily; it may be structurally ambiguous like the R+R type. The tones of (xxi) could be replaced by C1+C1+C1 without affecting the structural relationships.

The subordinating types can be similarly extended to allow for more than one minor tone-group forming a compound preparatonic or postparatonic. Thus the sequence R+R+F (examples (ix) to (xii), and (xvi) to (xix))can be assigned the same structure

as the R+F type, i.e.:

preparatonic + paratonic

where the preparatonic contains two tone-groups. The R+R+R type exemplified by (xx) may be of the same structure as the R+R+F type.

Similarly, the English sequence F+R+R (example (vii)) can be assigned the same structure as one type of F+R, i.e.:

paratonic + postparatonic

where the postparatonic contains two tone-groups. Again this type does not seem to be possible in German; here, as with the sequences of two tones, there is no evidence for the subordination of a tone-group to a preceding tone-group, and hence there is no place for the postparatonic as an element of structure of the German paratone-group.

It will be noticed that the examples of subordinating types given here all have the same tone for the two minor tone-groups. This is characteristic, and may be explained by the same principle which governs tone-concord in major tone-groups: tone-groups with identical structural roles in the paratone-group tend to have tone-concord. We must say 'tend' here, since tone-concord, though usual, does not appear to be completely obligatory. (It <u>is</u> obligatory in the postparatonic, since tone 3 is the only tone that may appear here.)

Examples of subordinating types <u>without</u> tone-concord in the preparatonic are the following:

English

E4+E3+E1: //$_{\wedge}$ be/cause I feel /sure if they /did this //er then the /students would /work for // everything that really /mattered //

German

G3+G2+G1: //$_{\wedge}$ was zu/nächst nur als ein Art /$_{\wedge}$ /Heilmittel ge/dacht war ist // schnell zum /Zwang und // schliesslich zum /Laster ge/worden //

// braucht man nur die /Fl- /Fahrt zu be/f- /zahlen und die Ver //pflegung //$_{\wedge}$ und/nicht die /Kosten des / /Hauses //

It is difficult to discern any restrictions on the possible types of such combinations.

One interesting point about the F+R+R type in English is that it confirms the analysis of E1+E3 as two separate tones in sequence rather than as a single compound tone. As example (vii) above shows, the fall in such cases can be followed by more than one instance of the low rise: this structure is in fact capable of further extension by the addition of still more instances of tone E3. To regard E1+E3 as a single tone would mean doing the same in the case of E1+E3+E3, E1+E3+E3+E3 and so on, producing a theoretically unlimited tone-system. This serious problem can be avoided by adopting the present approach.

The types established for sequences of two tones, together with the extensions just discussed, allow the presence of a

preparatonic or a postparatonic in addition to the paratonic. Preparatonic and postparatonic are, of course, not incompatible with each other, and by allowing both to occur simultaneously in the same paratone-group we can accommodate a further English type: R+F+R. The characteristic tones here are E4+E1+E3, as exemplified in (viii), though the first and second tones can in principle be any of the R and F types respectively. The final tone must, of course, be E3. The structure of this sequence is thus:

minor/preparatonic + major/paratonic + minor/postparatonic

Again, this type of structure is not found in German.

A further combination of structural types would allow para-tone-groups which are both subordinating and co-ordinating, i.e. they have more than one major tone-group as well as a minor tone-group. This is the case with the R+F+F type in both languages (examples (v), (vi) and (xv)), and with the F+F+R type in English (example (ii)). The R+F+F type has the same structure as the R+F type, but with two tone-groups in the paratonic; the F+F+R type has the same structure as the F+R type, again with two tone-groups in the paratonic.

One further type, exemplified by (iii) and (iv), seems to call for a more radical extension of the existing types. These cases are of the type F+R+F. They resemble the R+F+F and F+F+R types in having both co-ordination and subordination, but in this case the minor tone-group occurs between the two major ones. Here it is naturally no longer possible to see the structure of the paratone-group in absolutely linear terms. The relationship between the minor tone-group and the major ones may be of two kinds, depending

on whether the minor tone-group is subordinated to the preceding or the following major tone-group. Since German does not allow following subordinate tone-groups, only one possibility exists here: subordination to the following tone-group. In English, both possibilities exist: the minor tone-group may be subordinated to the preceding major tone-group, forming a postparatonic and consequently having tone E3, or it may be subordinated to the following major tone-group, forming a preparatonic and having any of the type R tones. The different structures can be represented as follows, where subscript braces indicate subordination and superscript braces indicate co-ordination:

$$\overbrace{\text{Major} + \underbrace{\text{Minor}}} \quad \text{Major}$$

$$\text{Major} \quad \overbrace{\text{Minor} + \underbrace{\text{Major}}}$$

The first type is exemplified by (iii), the second by (iv).

Structures like this are quite complex, but not implausibly so; by the standards of syntactic structure they are still quite simple. The main difficulty here is that once we allow embedding of this sort, then the linearity of intonation structure disappears, thus permitting a much wider range of structural principles, and a consequent loss of generality. With this kind of structure, too, the concept 'compound paratonic' needs some clarification. In such cases it would seem preferable to say that the paratone-group has more than one paratonic rather than that it has a compound paratonic, since the two major tone-groups are not contiguous.

Other kinds of sequences are possible which could further complicate the structure and thus further weaken the structural

principles underlying the paratone-group. Two such types are RFR and FRR sequences where the final tone is E2, E4 or G2. These are comparable, of course, to the 'tag' F+R type discussed above, which presented difficulties of analysis. No instances of these sequences actually occurred in the data but they are not impossible. The following are constructed examples to illustrate the type envisaged and the problems that they could pose:

ENGLISH

R+F+R: E4+E1+E2

(i) // Last year the // weather was /fine // wasn't it//

F+R+R: E1+E3+E2

(ii) // Last year the // weather was /fine // wasn't it //

GERMAN

R+F+R: G2+G1+G2

(iii) //$_{A}$ in /England // waren Sie schon // nicht wahr //

Perhaps the least plausible of these is (ii), where tone-concord of the R types would sound more natural.

As with previous examples it is possible to see these as extensions of a more simple type, in this case the F+R 'tag' type, whose problematic structure was discussed above. One possibility was there said to be the structure:

preparatonic + paratonic

Since the non-final R in (i) to (iii) is clearly subordinate, the above examples could be seen as extensions in which the preparatonic contains two tone-groups. These sequences would thus have the same structure as the R+R+F type. The difficulty here, however, is that the non-final R in these examples appears to be subordinated

not to the final R, but to the F, i.e. in (i) E4 is subordinated to E1, in (ii) E3 is subordinated to E1, and in (iii) the first occurrence of G2 is subordinated to G1. This can be tested by omitting the final tag and examining the structure of the remainder. With the analysis of the F+R 'tag' type as minor + major, we now have subordination of a tone-group to a minor tone-group as well as to a major one; in these sequences the F tone is superordinate with respect of the first R and subordinate with respect to the second. Though this is in principle possible, it results in a scale of dependence within the paratone-group rather than a simple major v. minor dichotomy. This weakens the concept of the paratonic, and the structure of the paratone-group becomes rather more fluid. The analysis of such cases is much more straightforward if we adopt the co-ordinating rather than the subordinating approach to the structure of the F+R tag sequence. This makes (i) and (iii) equivalent in structure to the R+F+F type, with co-ordinate major tone-groups, and (ii) equivalent to the F+R+F type with a 'split' paratonic. This, then, is an additional reason for preferring the co-ordinate analysis of the F+R.

There are, admittedly, further indications that the structure of the paratone-group may not always be as simple as that given here. This may be the case with the instances of subordinating types given above where the minor tone-groups do not have tone-concord, e.g. the sequences E4+E3+E1 and G3+G2+G1. In these examples, too, it would be possible to see a more complex kind of paratone-group structure in which we need more than a simple dichotomy major v.

minor. In the present study this possibility will not be pursued, however, and the adequacy of the analysis into major and minor tone-groups will be assumed.

The paratone-group structures established for combinations of three tones are thus the following:

English

A Subordinating

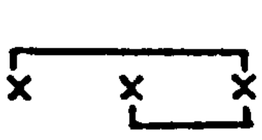
(i) minor+minor+major: R+R+F, R+R+R

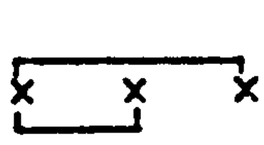
(ii) minor+major+minor: R+F+R;

(iii) major+minor+minor: F+R+R

B Subordinating and co-ordinating

(i) minor+major+major: R+F+F, R+R+R, R+F+R

(ii) major+minor+major: (a)  : F+R+F, R+R+R

(b)  : F+R+F, F+R+R

(iii) major+major+minor: F+F+R

C Co-ordinating

major+major+major: F+F+F, R+R+R, F+F+R, F+R+R

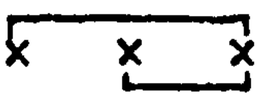
German

A Subordinating

minor+minor+major: R+R+F, R+R+R

B Subordinating and co-ordinating

(i) minor+major+major: R+F+F, R+F+R

(ii) major+minor+major () : F+R+F, R+R+R

C Co-ordinating

major+major+major: F+F+F, R+R+R, F+F+R, F+R+R

This list of structures for sequences of three tones can be further generalised. For English, the three types of subordinating structure under A can be seen as instances of the same basic structure, where the position of the single major tone-group within the paratone-group is variable. Group B shows that there may be more than one major tone-group, again with variable positions, while C shows that minor tone-groups are optional. For German, the same principles apply with the exception that no minor tone-group may follow the major tone-group to which it is subordinated. The generalised structure of the paratone-group with three tone-groups in the two languages is thus as follows:

English

$$(\quad \text{minor}_0 \qquad \text{major}_1 \qquad \text{minor}_0 \quad)_1$$

German

$$(\quad \text{minor}_0 \qquad \text{major}_1 \quad)_1$$

The subscript numerals indicate the minimum number of instances of the item in question; '0' therefore means 'optional', and '1' that at least one must be present. The brackets round the whole structure allow recursion, again with at least one instance.

These structures are intended to accommodate sequences of three tones in the first instance, but it will be evident that they also include all those given above for sequences of two tones (and naturally they also accommodate simple paratone-groups with only one tone). Since no maximum number of instances is given, they also cater for sequences containing more than three tones, and

predict their structure. The longer sequences encountered in the data did, in fact, all conform to these patterns, and it will therefore be unnecessary to analyse them in detail. However, by way of illustration of the variety of permissible sequences, and of the fact that they conform to the structural patterns given here, some examples of longer sequances are given, with their proposed structures.

ENGLISH

E1+E3+E1+E1. Structure: major minor major major

(i) //$_{\wedge}$ the /only really /young people at the // Beau Re/oard //
//$_{\wedge}$ are /Charles /Stratton //$_{\wedge}$ and his/wife /Jean //

E1+E1+E3+E1. Structure: major major minor major

(ii) //$_{\wedge}$ and in par/ticuler //$_{\wedge}$ the South /African / team could /
/probably /learn a /very great /deal //$_{\wedge}$ from the /amicable /
/way in which // we conduct / our affairs over /here //

E2+E1+E3+E1 Structure: minor major minor major

(iii) // They are not// strangers to the // residonce since they've//
// stayed here be/fore //

E1+E1+E4+E1+E1. Structure: major major minor major major

(iv) //$_{\wedge}$ a par/ticular ex/ample that springs to /mind is the er /
/ situation at /Stirling where // in the Bi/ology department //
// em /it was de/cided to // try and do a/way with the //
// A level /entry to bi/ology //

E2+E1+E1+E4+E1. Structure: minor major major minor major

(v) //$_{\wedge}$ but I be/lieve that the //whole of /Africa //
//$_{\wedge}$de/pends for its /future //$_{\wedge}$ on the cor/rect and proper /
/attitude to this //vicious thing called e/partheid //

E1+E4+E6+E6+E2. Structure: major minor minor minor major

(vi) //$_{\wedge}$ do you /sometimes /find there's re/sistance to the
sug//oestion that er //$_{\wedge}$ a uni/versity teacher or a //
// teacher in a poly/technic should de//fine the /aims
of /what he's trying to /teach in a particular /course //

E1+E3+E1+E3+E1+E3+E3+E4+E1. Structure:

major minor major minor major minor minor minor major

(vii) //$_{\wedge}$ but in /recent//years a // number of de//velopments have //
// led to far/ more // questions being//asked about //
// teaching in // higher edu/cation //

E4+E4+E4+E4+E1+E4+E4+E4+E4+E1. Structure:

minor minor minor minor major major major minor minor major

(viii) // we now have a /project in er // University /Teaching
Methods /Unit //$_{\wedge}$ with a re/search officer pro//vided
by /Leverhulme /Trust //$_{\wedge}$ who are /trying to get em/
/teachers in /physics in the // first place and //
//dentistry /later er //$_{\wedge}$ to /specify their ob//jectives
in /teaching //$_{\wedge}$ under /different /headings //

GERMAN

C1+C3+C3+C1. Structure: major minor minor major

(ix) //^ die/haben Ihnen // andeutungs/weise und hinter // vor-
gehaltener /Hand natürlich //^ von diesen be/rüchtigten/
/Briefen er/zählt //

(x) //^ ein/Drittel der/Stunden ist /annähernd /ausgefallen durch
po//litische Diskus/sion //Vollver/sammlungen // und so /
/weiter //

C2+C4+C2+C1. Structure: minor major minor major

(xi) //^ ich bin /bei ihr ge/wesen und //habe die /eindrucksvolle/
/Sammlung von Ge/wehren ge/sehen die // in ihrem Sa/lon
an der //Wand hängen //

C3+C3+C4+C1+C3+C1. Structure: minor minor major major minor major

(xii) //^ und heute /Abend bin ich /hier // um über ge/wisse Per/
/sonen //^ / Ihre Meinung zu /hören weil ich über-//
// zeugt bin dass Sie nicht /voreingenommen sind //^ /
/^ und weil ich /hoffe //^ dass /Sie - /freimütig
und /offen mit mir /sprechen werden //

C1+C1+C2+C3+C3+C1+C2. Structure:

major major minor minor minor major major

(xiii) //^ er /hätte also //^ den ge/heimnisvollen /Unbekannten
bei sich //aufnehmen //^ ihn zum /Essen /einladen //
// ihm eine /Jagdpartie/vorschlagen // und ihn /dann
aus /nächster /Nähe er/schiessen können // mm //

Not all of the above structures are equally plausible; in particular some of the longer ones are capable of being analysed differently or of being broken up into smaller sequences. Nevertheless, these examples do show how the structures described in relation to simpler paratone-groups can be projected on to longer sequences.

7.8 Conclusion

In conclusion, the aims of this section may be restated: the attempt has been to explore the possibility of establishing a higher-ranking unit than the tone-group within the hierarchical phonological scale. The evidence just considered would seem to show that there is considerable justification for such a unit, despite a number of difficulties that are encountered. It is possible to discern within the string of tone-groups certain coherent patterns with a rather limited range of structures. On the other hand some of the structures, particularly in the case of longer sequences, tend to be vague. A speciel problem is posed by sequences involving a falling or rising-falling tone followed by a high rising or falling-rising tone.

It is especially interesting in the context of the present study that the structures recognised for English and German are not completely identical: German does not allow a subordinate tone-group to <u>follow</u> the tone-group to which it is subordinated. Of course, this difference could be said to follow from the differences of system in the two languages, since the only tone to occur in following subordinate tone-groups in English is of a type that has no parallel in German. Nevertheless, it does seem useful to see

this not just as a difference in system but also a difference in structure since, as will be seen in a later chapter, it has further implications for the structure of German and English sentences as a whole.

Chapter 8: Information Distribution

8.1 Introduction

Chapters 5 to 7 have considered in detail various phonetic and phonological characteristics of English and German intonation. Questions relating to the meaning of these features have not been considered except in so far as was necessary for the purposes of the phonological analysis. These questions will be considered in the remaining three chapters of this study.

A general approach to intonational meaning was sketched out in chapter 3 above, but without going too deeply into the specific characteristics of English and German. We may appropriately begin this chaoter by summarising the findings of these earlier general discussions. Two very general conclusions were arrived at (cf. pp. 222-3, above):

(i) intonation is far more of a unitary phenomenon than is generally assumed

(ii) it is essentially an independent phenomenon.

By the first of these is meant that the meaning of intonation cannot be adequately described by means of a list of separate functions, such as that given on p. 140 above; the various functions exercised by intonation are best seen as different aspects of the same basic kind of meaning, and this meaning is textual. By the second of these conclusions is meant that the meanings of intonation cannot be seen as simply a reflection of other factors, especially the grammatical structure of the utterance; the textual rôle of intonation constitutes an independent dimension of meaning.

Against these general conclusions must be set other considerations however. Although we may regard intonation as a unitary phenomenon, it is nevertheless possible to break it down into a number of distinct parameters. This is most obvious with the phonological aspects, but it applies, too, to the semantic aspects. And although intonation is essentially independent, it clearly interacts with, and indeed depends on, a variety of other linguistic features, both textual and non-textual. Nevertheless, the basic conclusions still hold: the various parameters, though to a certain extent distinct, can be seen as aspects of the same kind of meaning, and the dependences which exist between intonation and other features are not such as to take away the essential independence of intonational meaning.

The recognition of several distinct 'systems' within intonation is one of the most valuable contributions of Halliday (1967a). In the present study Halliday's tonality, tonicity and tone systems are augmented by the addition of a parallel set of 'choices' which apply at the rank of the paratone-group. We thus have the following parameters within intonation:

(i) Information Distribution: paratonality and tonality

(ii) Information Focus: paratonicity and tonicity

(iii) Modality: paratone and tone

A separate chapter will be devoted to each of these three in turn.

The interdependence between these various parameters can be seen in the fact that the selection of tonal features (iii) evidently depends on having the appropriate units and structures to which

these features may apply; the assignment of focus (ii) likewise depends on having the appropriate units within which the focus may be established. In a sense, therefore, there is an order of dependence within the set of 'systems': (iii) depends on (ii) and (i), and (ii) depends on (i). This order of dependence is not to be construed in temporal terms, i.e. first establish the units, then assign the focus, and lastly assign the tonal features. It is also not even clear that the semantic dependences proceed in this order, e.g. that the meaning of the 'focus' is only determinable in the context of a given unit of information, and so on. It may be, for example, that information units are established in order to allow a focus on a given element. Nevertheless, it is clear that there is a certain logical order of priority here.

As far as the independence of intonation as a whole is concerned, the relationship between intonation and syntactic structure has already been considered (chapter 3), and the conclusion was drawn that the former is not merely a reflection of the latter. However, the extent to which one can describe and explain the function of intonation independently of other, principally syntactic, features differs with different systems. In the case of modality it is simple enough to assign different meanings to different tonal features, but this is less straightforward with information distribution and focus. Here we are not concerned with variable phonetic features where different values for these features have a different significance, but with different structures, or the relationship between these structures and other features of a syntactic or

lexical kind. For example, the assignment of the tonic within the tone-group may be of no significance whatever for the structure of the tone-group as such: it still may consist of a pretonic and a tonic. Furthermore, the placement of the tonic does not affect the meaning of tonic-placement as such,but is merely concerned with which item is to be assigned this meaning. The same also applies with information distribution: where we place the boundary between two tone-groups does not necessarily affect the structure of the utterance in terms of the number of tone-groups or their relationship; it merely affects the assignment of specific lexical or grammatical items to individual tone-groups.

In the case of the first two kinds of system, therefore, it is hardly possible to avoid reference to lexical or grammatical structure in describing the rôle of intonation. There are certain dangers here, which are not entirely avoided by conventional treatments of the subject. Indeed, most writers, including Halliday and those who adopt his framework, clearly do not see them as dangers to be avoided at all. The chief danger is that by bringing these various lexical and grammatical features into the description we may lose sight of the real functions of intonation, and instead attribute to intonation meanings which are simply the product of the interaction between intonational meaning and other features. This is the case with the so-called 'disambiguating' functions of intonation, where, it is claimed, intonation is able to distinguish different grammatical structures. Thus tonality may, on one occasion, be assigned the function of indicating the 'Status of the Relative

Clause' while on another occasion the same distinction may be said to signal the difference between a simple and a compound sentence (cf. Halliday 1967a, p. 36). What this fails to capture is the fact that not only is the intonational distinction the same in these two cases, but the semantic distinction is identical, too. The different effect obtained is not a property of the intonation as such, but is simply the result of interaction between a general function of intonation and specific syntactic structures.

In the present study this approach is considered illegitimate. Although, for the reasons just mentioned, it is necessary to consider the relationship between intonation and syntactic or lexical features, this relationship is used merely as a way of discovering and exemplifying the more general functions of intonation on which these relationships depend.

8.2 The rôle of segmentation

The segmentation of utterances into phonological units which serve as the domain of variation of features is naturally of general importance at all ranks in the phonological hierarchy. As discussed earlier, it is a moot point which particular unit a given feature should be assigned to, and, indeed, whether features should be assigned to units as such or to their elements of structure (cf. p. 119 above). As far as intonation is concerned, there are two significant units, the tone-group and the paratone-group; the foot is not included even though it may appear to carry a significant pitch pattern, since the bearer of this pattern is not the foot as such but the elements of structure of the tone-group, the foot merely

being a constitutent part of such elements of structure.

The significance of the segmentation of utterances into intonation units is a matter of some controversy. Earlier writers assumed that the tone-group is in some way a meaningful entity, to which they gave the name sense-group. Halliday's term information unit can be seen as equivalent (cf. above p. 132). Unfortunately, these terms are not self-explanatory; there is no independently definable notion of 'sense' or 'information' to which we can appeal for clarification. Attempts to make this more specific have therefore involved trying to find consistent relationships between tone-groups and syntactic structure (cf. p. 154 ff.).

The main question that has arisen here, therefore, is the predictabi lity of tone-group division from syntactic structure. The meaningfulness of linguistic features is often considered to be inversely proportional to their predictability: if there is no choice there can be no meaning. If syntactic structure entirely determines the placement of tone-group boundaries then we could consider the location of these boundaries to be meaningless, and the 'sense-group' to be a misnomer for a syntactic unit.

Several writers do appear, explicitly or implicitly, to come to this conclusion; others, however, allow tone-group division to be meaningful even in those cases where they assume it to be entirely predictable from syntactic structure, since, it is argued, by reflecting the syntactic structure of an utterance, intonation can be said to indicate it. This is especially the case where an

utterance is potentially ambiguous from a syntactic point of view; the intended syntactic interpretation may be revealed by the tone-group divisions. This approach to the meaning of 'tonality' is characteristic of many discussions of intonation, where writers take obvious delight in discovering new cases where intonation can be said to exercise this disambiguating rôle.

8.3 Views on tone-group division

Before discussing these matters in more detail, let us turn to some of the explicit claims made with regard to the relationships between tone-groups and syntactic structure. The first really explicit set of rules governing these relationships was formulated by Halliday (1963a), though a number of the phenomena he describes, such as the treatment of different kinds of relative clause, were current in the earlier literature. Halliday's starting point is the clause: "there is a tendency for the tone group to correspond in extent with the clause; we may take advantage of this tendency by regarding the selection of one complete tone group for one complete clause as the neutral term" (1967a, p. 18-19). The notion of 'clause' is further qualified, however, to "clause operating in sentence structure", a restriction that excludes so-called 'rank-shifted' clauses. This means that the well-known distinction between the intonation of defining and non-defining relative clauses is accommodated without departing from the neutral term: since defining relatives are rankshifted, "the 'neutral' is to share a tone-group with the rest of the items in the same (non-rankshifted)

clause". In other kinds of structure, however, 'marked' tonality is regularly found (which indicates that 'neutrality' is for Halliday not necessarily a question of which is the most regularly found division into tone-groups). Two types of marked case are possible: where the tone group includes more than one clause, and where it includes less. Halliday gives characteristic cases of each: the tone group will correspond to more than one clause if the sequence of clauses is 'reporting' + 'reported' ('he said he was coming') or 'conditioned' + 'conditioning' ('I'll come if you need me'), though the reverse order in the latter case will have neutral tonality, i.e. a tone group for each clause, as will sentences containing appositional clauses or a sequence of two co-ordinate clauses. The tone-group will correspond to less than one clause (i.e. a single clause will be divided up) if there is a 'marked theme' (a lexical item other than the subject in first position), in which case the theme will have a separate tone-group. There may also be a separate tone group for a clause-final adjunct.

It is important to note that these regular correspondences are for Halliday not obligatory. With the simple sentence he concedes that "a break into two tone groups can occur between any two elements of clause structure", and that even with marked theme and marked tonality "the two selections are independent". Tonality is thus in principle not predictable from syntactic structure, and there is a 'system' of Information Distribution in which the 'selection' of one or the other item is said to 'signal' the number

of 'information units' into which the utterance is divided, regardless of its syntactic structure.

The relationship between tone-group division and syntactic structure is thus quite complex in Halliday's framework. On the one hand there are cases in which the division into tone-groups is itself said to be of syntactic significance, for example in the treatment of relative clausee: assuming 'neutral' tonality, whether a relative clause has a separate tone group or not can be said to 'signal' its syntactic status, since a (rankshifted) defining clause will not have a separate tone group while a (non-rankshifted) non-defining clause will. In this case, then, tonality can be said to be meaningful even if it is totally determined by the syntactic relations within the sentence, meaningful, that is, in that by reflecting these relations it 'signals' them. In other cases, however, the meaningfulness of tonality can be said to lie in its <u>independence</u> of syntactic structure and syntactic relations. Whether or not a clause final adverbial is given a separate tone-group, for example, does not generally affect its syntactic status, but simply 'signals' whether it is to be taken as a separate information unit or not.

These two kinds of meaningfulness are not in principle distinguished by Halliday; both constitute 'systems' in which tonality 'signals' different meanings, the different kinds of function involved being reflected only in the labels given to the systems. Thus we have various systems involving <u>Sentence Structure</u> (Status of Relative Clause, Dependence Contrast,

Co-ordination Contrast etc.) on the one hand, and various involving Information Distribution on the other. Furthermore, the different systems are mutually dependent in so far as the operation of one system may be determined by the operation of another. Information distribution within the clause, for example, may depend on the operation of the system involving 'marked theme'. It is in this sense that Halliday can claim to have integrated intonation with an overall grammatical statement: his tonality systems are not in principle different from any of the other systems, and there are mutual dependencies between the various systems.

Several other explicit systematic discussions of the rôle of tone-group division in English are based, directly or indirectly, on this conception of the status of tonality. El Menoufy (1969) takes up a number of cases of tonality contrast in Halliday's framework, one of which is the distinction between 'defining' and 'non-defining' clauses. This is shown to apply more widely than just to relatives. El Menoufy examines 'additioning' (relative), 'report' and 'conditioning' clauses, each of which is subclassified according to whether it is 'wh', 'that', or 'non-finite', and it is demonstrated that in all these cases the rôle of tonality contrasts is dependent on various other systems: the selection of the clause type and its internal structure. Though in general a separate tone-group for the clause in question 'signals' that it is non-defining, this depends on the specific combination

of other 'selections' that have been made. With 'additioning' clauses, for example, the tonality choice operates in this way with wh and non-finite types, but with that and 'unbound' (contact) types it does not, since the former is (probably) always non-defining and the latter defining.

Another case considered by El Menoufy is that of a clause in post-adjectival position, with the adjective as antecedent ('surprised that' etc.). Here the tonality contrast is between a clause which qualifies the adjective and one which constitutes a separate sentence, e.g.:

It's clear he made a mistake.

versus It's clear. He made a mistake.

Again the operation of this system depends on others, such as the presence or absence of that. Similar principles apply with other types of sentence, such as those containing complements to verbs like know, say etc.

The approach of Crystal (1975) is rather different from that of Halliday or El Menoufy. Whereas the latter see variations in the number of tone groups as a 'system' whose significance varies with different syntactic structures, Crystal sees the division of utterances into tone-groups as entirely determined by syntactic structure (cf. p.156, above). Consequently, the concept of 'information unit' used by Halliday and El Menoufy has no place in Crystal's framework, since the tone-group conveys no information that is not already contained in the syntactic structure of the utterance. Nor does Crystal assign to tonality the function of 'signalling' this structure or of disambiguating syntactically

ambiguous sentences. Though his model is avowedly neutral with respect to production and reception, in practice it is one of production, and 'signalling' or 'disambiguation', which are more hearer-based, are thus not applicable; the syntactic structure is taken as given and the 'tone-unit structure' is assigned by means of a number of 'prosodic operations', which apply to sentences (not, it may be noted, clauses). There are three sets of these 'operations', dealing with complex sentences, simple sentences, and nominal groups, each operation adding one tone-unit to the minimum single one for the sentence by placing a tone group boundary (/) in the appropriate position. The actual operations given deal with more or less the same kinds of phenomena as Halliday's systems, but the theoretical basis is, of course, very different. Indeed, Crystal prides himself on having very little theoretical basis: "in the first instance I was anxious to present the facts with a minimum of theoretical overlay" (p. 17).

Crystal's 'operations' are as follows:

A' : complex sentences

1. structural parallelism: put / after each component
2. co-ordinate clauses: put / after each component
3. Subordinate clauses:
   - (i) adverbial initial: put / after clause
   - (ii) adverbial medial: put / on either side
   - (iii) adverbial final: put / before
   - (iv) nominal as subject: put / after subject
   - (v) medial non-restrictive: put / on either side

(vi) final non-restrictive: put / before

(vii) appositive: put / after

4. Medial parenthetical clause: put / on either side

5. Direct speech: put / after reporting verb

6. Comment clauses:

(i) initial : put / after

(ii) medial, emphatic : put / before

(iii) final, emphatic : put / before

7. Tag utterances: put / before

B' : simple sentences

1. Initial vocative: put / after

2. Adverbials (only some):

(i) initial: put / after

(ii) medial: put / on either side

(iii) final: put / before

3. Adverbial sequence: put / after each element.

C' : nominal group

1. Structural parallelism: put / after each component

2. Multiple heads:

(i) separate premodification: put / after first head

(ii) separate postmodification: put / after first head

(iii) non-restrictive apposition: put / on either side of apposed phrase

(iv) noun-phrase tags: put / before

3. Multiple modification:

(i) premodification, general adjectives: put / after

each component except the last

(ii) postmodification, in subject: put / after subject

(iii) postmodification, in passive agent: put / before agent

(iv) postmodification, in non-final object: put / after object

4. Medial non-restrictive phrases: put / on either side

Some of these labels are, of course, not self-explanatory, and a number will be discussed further below. But the general character of Crystal's approach to tone-group division can be seen here: certain types of syntactic structure, unit, or relationship impose certain divisions into tone-groups. These divisions are not regarded as 'signalling' the structures involved and the tone-group is not deemed to constitute a meaningful unit in itself; we simply have a list of correspondences between syntactic structures and tone-group divisions.

Attempts have also been made to specify the relationships between tone-groups and syntactic structure in German, though not in the same detail as in English. One such attempt is that of Bierwisch (1966), who, in a generative framework, tries to account for 'phrasing' by establishing a hierarchy of possible phrase boundaries according to the hierarchy of syntactic boundaries. Other factors, the chief of which is taken to be speed of utterance, are involved in converting these potential phrases into actual 'Phrasierungseinheiten', analogous to the tone-group. No explicit rules are formulated which incorporate these various factors, however.

More explicit is the contribution of Pheby (1975), who adopts Halliday's framework. He gives only sample 'systems' involving tonality, but they do not differ in principle from Halliday's systems for English. One area where there are certain differences between the two languages, and which Pheby explores a little more fully, is the interaction between tonality and thematisation. His findings will be discussed below (8.10.5.2).

8.4 Conclusions on previous work

The above representative discussions of tonality in English and German allow a number of conclusions to be drawn. Firstly, it is clear that there is a considerable amount of agreement as to the usual correspondences between tone-groups and specific syntactic structures. Although there are one or two disagreements, for example in the treatment of substantival clauses, these are relatively trivial compared to the overwhelming unanimity in the majority of cases. The differences appear to lie more in the interpretation given to the correspondences than in the correspondences themselves. Even here, however, the differences may be more apparent than real. Halliday's approach is apparently hearer-based, in that it invokes notions like 'signalling' and 'disambiguation', which seem more relevant from the hearer's point of view. Crystal, on the other hand, appears to adopt a speaker-based approach, despite an explicit denial that his model is directional. His prosodic operations are only relevant from the point of view of the speaker, who has knowledge of the grammatical structures and

relations involved, and uses these operations in their intonational realisation.

On closer inspection, however, this difference of approach is found to be of no great importance, as both models can probably be interpreted from the point of view of either speaker or hearer. Both Halliday's 'systems' and Crystal's 'operations' can be put into reverse, as it were. Take, for example, Crystal's operation A'3 (vi), which places a tone unit boundary before a final non-restrictive subordinate clause. From the hearer's point of view this could presumably be rewritten as an 'interpretive' operation: "if / before final relative clause, then it is non-restrictive". Crystal himself does not give his operations in this form, of course; he states that "the placement of tone-unit boundaries is determined by syntactic structure", rather than, say, "the interpretation of syntactic structure is determined by the location of tone-unit boundaries".

Halliday's formulation of the same correspondence is rather different. He sets up a system Status of Relative Clause with two 'terms': "one tone-group: defining relative clause; two tone-groups: non-defining relative clause". This, too, could operate in reverse: "defining relative clause: one tone-group; non-defining relative clause: two tone-groups". In practice, therefore, the two models are equivalent in their directionality.

The basic model that appears to be adopted by both Crystal and Halliday sees the rôle of intonation as being that of a kind of 'filter'. From the production point of view (cf. Crystal) the

syntactic structure is 'filtered' through the various operations which assign appropriate tone-unit structures. From a reception point of view (cf. Halliday) the signal is 'filtered' through the tonality system, resulting in an appropriate syntactic interpretation. Both models can be reversed, but the 'filtering' function of intonation is preserved.

There is one important respect in which the two approaches differ, however. Halliday allows tonality to operate to some extent independently of syntactic structure: his system of 'Information Distribution' does not signal syntactic structure, but rather the number of information units contained in the utterance. To this extent, then, Halliday does not restrict tonality to a filtering function. But even here he appears to ascribe a certain priority to the syntactic rôle of tonality, since the system of Information Distribution, though theoretically independent, is in practice only allowed to operate within the framework of specific syntactic choices, i.e. we can only apply it in those places where the syntactic disambiguating function cannot apply or has already applied.

One final difference between the approaches of Halliday and Crystal is found in the syntactic unit to which they relate the tone-group. Halliday's starting point is the clause, more specifically the "clause operating in sentence structure". Thus, in the neutral relationship, the clause is co-extensive with the tone-group. Crystal, on the other hand, takes the sentence as the starting point, though his only motivation for this is apparently

"the need to integrate one's treatment with generally accepted models of grammar" (1975, p. 16). In his earlier study (1969a), Crystal in fact takes a smaller unit, the element of clause structure, as his point of reference.

The data examined for the purposes of the present study showed that, taken overall, the number of clauses and tone-groups was more or less equal. The numerical ratio of clauses to tone-groups in German was 1 : 1.1, and in English 1 : 1.2. This ratio varied little from text to text in German, though rather more so in English. This numerical relationship between clauses and tone-groups in both languages suggests that it is quite reasonable to take the clause as the basic syntactic unit to which to relate the tone-group, but it must be borne in mind that these ratios are the average; they do not tell us how many clauses were actually co-extensive with tone-groups. This kind of parity could arise even if there were no single case of co-extensiveness. The percentage of actual one-to-one correspondences gives a somewhat different picture:

	German	English
percentage of clauses co-extensive with a tone-group:	48%	29%
percentage of tone-groups co-extensive with a clause:	51%	24%

Thus in German only about half of all clauses and of all tone-groups were co-extensive with tone groups and clauses respectively, while in English the proportion was even smaller, being between one quarter and one third. In all the remaining cases there was no such correspondence, though cases with more than one tone-group to a

clause were largely cancelled out numerically by those with less. We see, then, that although the clause may seem to be a useful point of reference in view of the similar number of clauses and tone-groups, the majority of utterances cannot be accounted for in terms of a simple clause to tone-group correspondence, and other criteria must therefore be applied.

A word must be said about the notion of 'clause' in the above calculations. The traditional definition of the clause depends on the presence of a finite verb, but such an approach is too inhibiting in the present context. Many independent utterances contain no finite verb at all, but of course they contain one or more tone-groups. It seems legitimate, therefore, to regard such utterances as clauses. The same principle applies to certain non-finite expressions within sentences. The cut-off point because clause and phrase is naturally somewhat arbitrary in such cases, but this is unavoidable. In any case it will do no harm here to leave the notion of 'clause' a little vague; refinements necessary for the discussion that follows will be introduced where necessary.

8.5 Some examples of tonality

We may begin a more detailed analysis of the rôle of tone-group division by considering some examples from the data. We begin with the relatively straightforward case of the simple sentence (which naturally fulfils the requirements of both sentence and clause). There is general agreement here that, unless certain

specified types of construction occur, such sentences will regularly have only one tone-group. A few examples from the data will suffice to illustrate this:

A. English

/I don't find this on the whole on the science side/

/The scientists seem to take to this quite well/

/I'm not nearly so optimistic/

/Did you get the sword of honour?/

German

/Die sollten doch ein bisschen mehr lernen/

/Er hat anscheinend keinen guten Ruf im Dorf/

/Können Sie das bestätigen?/

/Das ist doch ganz natürlich/

Other, more complex sentences are also not divided up into tone-groups:

B. English

/I've nothing against the individuals who play cricket/

/why don't you assess what is valuable?/

/they feel this is undesireable/

/I don't think it would be fair to say that this is general/

German

/das ist alles was Sie gehört haben?/

/wissen Sie wovon Mrs. Richmond lebt?/

/ich trag' Ihnen nur vor was ich erfahren habe/

/ich weiss nicht ob das nur in Niedersachsen betrifft/

/ich glaube wir missverstehen uns/

All the examples of B, which are typical of many, contain more than one clause but only one tone-group. All are perfectly natural utterances. They are all cases in which rules given in the literature by one or other writer can be invoked; they contain defining relative clauses, 'report' clauses, and substantival clauses, all of which are accommodated by Halliday's systems, Crystal's operations, or both. In the case of Crystal, no operations are applicable in such sentences, and hence (correctly) no tone unit boundaries are inserted.

Other complex sentences, on the other hand, do contain more than one tone-group, as the following
(in all cases, tone-group boundaries have been adjusted to coincide with clause boundaries; cf. p. 566, below):

C. English

/Mustn't disturb you /must I?/

/I take a very different view/ as you would expect/

/If they did this / then the students would work/

/the answer has to be /that as far as the MCC is concerned/

they are doing their duty/

German

/ich habe sechs Kinder / und bin damit ganz beschäftigt/

/sie hat uns auch gefragt / was macht ihr denn so in den Ferien/

/wenn ihr gern in unserem Haus bleiben wollt / dann könnt ihr da

gern ein oder zwei Wochen schlafen/

/nur ob das heute schon bei dem Grossteil der Frauen ist / das

möcht'ich bezweifeln/

These sentences, too, fall completely within the rules given in the literature: we have a tag clause, initial adverbial clauses, co-ordinate clauses, direct speech, parenthetical clauses, and so on, all of which qualify, in terms of the rules, for division into two or more tone-groups.

Simple sentences, too, may be divided. The following are examples from the data (tone-group boundaries have been adjusted to coincide with phrase boundaries; cf. p. 550, below):

D. English

/the existence of new aids /like closed-circuit television/
has offered alternative /or supplementary approaches/

/passed out pretty high /pretty high/

/we don't in fact stop the Bolshoi Ballet coming / or any other cultural exchanges between East and West/

/for a long time / there was a considerable amount of complacency/

German

/ich werde Ihnen inzwischen von Henry Darlington erzählen /
dem rohen rachsüchtigen verbitterten Tierarzt/

/wir haben Nora gefragt /die Schottin /

/sie hat ein Wochenendhaus/irgendwo in Schottland/

/es handelte sich nicht um eine Vernehmung Sir / Sondern nur um eine Unterhaltung /

Again these sentences can be accounted for in terms of the rules given by Halliday, by Crystal, or by both. Here we may invoke

apposition, parallelism of structure, multiple modification, and marked theme.

The sentences given in A to D above all conform in their tone-group structure with the rules given in the literature. Very many sentences occur, however, which do not conform to these rules. The following complex sentences all have, contrary to the rules, more than one tone-group:

E. English

/I'm sure /this is so/

/they have shown/ that they can produce biologists just as well/

/it might be some special skill /that he's acquired/

German

/es gibt niemanden in Rothbury / der das nicht weiss/

/er hat mir versichert / das sei lediglich ein Ulk gewesen /

/ ich glaube auch/ dass es ganz schön wichtig ist/

/die Bauern wenden sich nur an ihn/ weil er der einzige Tierarzt im Umkreis von fünfzig Meilen ist /

Although these are quite natural utterances they nevertheless do not conform to the rules for 'normal' cases. Similarly, the following simple sentences are divided up, though in terms of the rules they do not qualify for such division:

F. English

/and students/ have grown far louder / in their protests /

/I/was a bit like you/

/they / are not strangers / to the residence /

/I did jolly <u>well</u> / at <u>Sand</u>hurst /

<u>German</u>

/das macht mich im<u>mun</u> /gegen solche armselige Kleingeisterei /

/einer meiner <u>Hun</u>de /hatte sich eine <u>Pfo</u>te gebrochen/

/eine Be<u>kannt</u>e von mir /ist <u>jetzt</u> mit ihr hingefahren /

/aber sie schiesst <u>mit</u>leidlos /alles <u>Wild</u> ab /

8.6 <u>Some unanswered questions</u>

The examples of A to F of 8.5 raise a number of important questions about the rôle of tonality in English and German. Those of A to D conform to the correspondences discussed in the literature, and if our aim is to tabulate rules for such correspondences then the existing discussions must be considered adequate in respect of these sentences. But one important question remains unanswered, even within the framework of these regular correspondences: why is it that sentences such as those of A and B are not divided up into more than one tone-group while sentences such as those of C and D are, when A and D, and B and C, have the same number of clauses? It is not enough to invoke the 'rules'; the rules are simply a statement of the regular correspondences and do not answer this question. Halliday offers an explanation of a sort in the case of relative clauses: defining relatives "do not operate in sentence structure" and therefore do not take a separate tone-group. But this is not an explanation either, since we must still ask why clauses which do not operate in sentence structure should behave differently from those that do. In any

case, this will not do as a general principle, since all the other subordinate clauses of B do operate in sentence structure yet they do not have a separate tone group.

In the case of E and F the question is different. Here we must ask not why certain rules generally apply but rather why the general rules that apply elsewhere do not operate in these particular cases. Crystal does not allow for such cases at all, other than by treating them as exceptional, but Halliday does, by recognising that the system of Information Distribution may violate the regular correspondences. He writes (1970a, p.3-4): "it is not the case that every clause is one tone group, because the tone group is a meaningful unit in its own right. The tone group is one unit of information, one 'block' in the message that the speaker is communicating; and so it can be of any length. The particular meaning that the speaker wishes to convey may make it necessary to split a single clause into two or more tone groups, or to combine two or more clauses into one tone group. And in reading aloud, or in more formal speech, clauses tend to be divided into quite a number of tone groups, because they are rather long and full of information".

These remarks of Halliday's suggest that the divisions of utterances into tone-groups is to a considerable extent independent of their syntactic structure; utterances are divided up on the basis of the amount of 'information' they contain, though this notion of 'information' is not further clarified. It is also

not entirely clear how the syntactic determination of tone-group division (A to D) relates to this apparent freedom (E and F). If tone-group division is free, depending on "the particular meaning that the speaker wishes to convey", what is the status of the rules of correspondence, according to which tone-group division is not free?

It is evident, then, that a number of fundamental questions remain to be answered about the nature of information distribution and the relationship between tone-groups and syntactic structure. Writers on the subject usually ask only how we can predict the division into tone-groups from syntactic structure, and seek to give rules for the correspondences. A more fundamental question relates to the status of the rules themselves: in what sense can there be rules when there are manifestly so many exceptions? And how can we reconcile a syntactic 'disambiguating' function of tonality, which depends on a consistent relationship between syntactic structure and tone-groups, with the relative independence from syntax of tone-group divisions in many utterances? And, finally, if we consider the tone-group to correspond to an 'information unit', or ' sense-group', what is the nature and status of such a unit, when its syntactic content is so variable?

8.7 Tone groups and syntactic structure

We may begin to approach these questions by examining first the predictability of tone-group division from syntactic structure. Crystal assumes total predictability, but if this is valid, how do we account for the 'deviant' cases of, for example E and F?

A variety of interpretations are possible. Perhaps the least convincing explanation is that they are indeed deviant; they are the result of unpredictable performance factors of no linguistic significance. If this were the case, then all the examples of E and F would be rejected by the native speaker as 'ungrammatical' or 'unacceptable', but they are neither. Hardly better as an explanation is that they are individual stylistic peculiarities; again the evidence is against this interpretation.

We must therefore look for some way of accommodating these variations within the linguistic system itself. A seductive assumption which would allow us to do this would be that the framework of rules given above is too crude to cater for all the possibilities, and that further, more 'delicate' refinements are necessary. One example of this would be the treatment of adverbials. As Crystal notes, different adverbials have different properties (though he does not develop this) and the assignment of tone unit structures will depend on a suitable categorisation of them according to their behaviour. Such a principle could perhaps be extended to other categories and structures, and, if the assumption is correct, we should eventually be able to predict the 'deviant' cases as well as the regular ones.

Unfortunately, this will not serve as an explanation either. It was demonstrated above (e.g. 3.4), if demonstration were needed, that the 'same' utterance can usually be divided up in a natural manner into different numbers of tone-groups without affecting the syntactic interpretation. There can thus be no question of the ultimate predictability of all such divisions on the basis of

syntactic structure, since different divisions can be made with the same syntactic structure.

This last statement might imply a further explanation: that utterances may be divided up into tone-groups in a variety of acceptable ways, all of which are equally arbitrary. This is clearly invalid, however, since it is evident that different versions of the 'same' utterance, with the same syntactic interpretation, are nevertheless different in meaning, however elusive and difficult to describe the differences may be.

The only reasonable conclusion about the status of tonality, therefore, is that it constitutes a separate dimension of meaning, distinct from that of syntactic structure. This accords with Halliday's remarks, quoted above, that "the tone group is a meaningful unit in its own right". Even this conclusion leaves something to be desired, however. If tone-group divisions are independent, how do we explain the existence of 'rules' which specify, in many cases entirely satisfactorily, the regular correspondences between tone-groups and syntactic structure?

This dilemma is reflected in Halliday's distinction between two kinds of system in which tonality plays a part: those involving sentence structure and those involving information distribution. The use of the tonality system as a means of indicating sentence structure depends on the regularity of the correspondence between tone-groups and syntactic structure; without such regularity, it would be impossible for a particular division into tone groups to

indicate which particular syntactic structure is involved. The use of the tonality system to indicate information distribution, on the other hand, depends on the fact that such correspondences are not obligatory; only because of the variability in the relationship can tone-group division take on a semantic significance independent of syntactic structure.

In the present study a different approach is adopted. It was argued above (3.3) that syntactic disambiguation, in common with other grammatical meanings, should not be regarded as a function of intonation at all. The apparent ability of intonation to make such distinctions rests on the identity of 'logical' and 'psychological' structures in such cases, so that by indicating the latter (i.e. the textual structure), intonation might be said to indicate the former. Putting this in the terms used in the present chapter: tonality is only able to indicate syntactic structure if grammatical units are co-extensive with information units; by indicating the latter, tone-group division implies the former.

This has implications for the rules of correspondence between syntactic units and tone-groups. If the role of tone-group division is to indicate information units and not syntactic structure, then any correspondence between syntactic units and tone-groups cannot be a <u>direct</u> one, in the sense that the tone-group realises, or signals, the syntactic status of any part of the utterance. This does not mean, however, that there <u>are</u> no relationships (albeit

indirect) between syntactic units and tone-groups; the 'rules' found in the literature testify to the regularity of the correspondences. What it does mean is that in such cases there is a relationship between syntactic units and information units. This is not a mere terminological quibble; it has important implications for an understanding of the rôle of tone-group division. Since the information unit is a textual unit (cf. 3.4), not a 'logical' or 'grammatical' one, it means that, in so far as we are concerned with syntactic structure in an investigation of tone-group division, we are concerned with it as a textual device, and not as a vehicle for the propositional content of utterances. As discussed in 3.4 above, there is a textual dimension to syntactic structure, and it is with this textual dimension that tone-group division, as the phonological equivalent of another textual parameter, that of information distribution, interacts. The rules of correspondence between tone-groups and syntactic structure thus tell us something about the rôle of syntax in the indication of textual structure, and about the relationship between this role and that of another textual device: tone-group division.

This is, in fact, implicit in some of Halliday's systems. Take, for example, the systems involving thematisation (cf. 3.4.2.2 above). Thematisation is recognised as a textual system which interacts with the tonality system in various ways. In principle the two systems are, according to Halliday, independent, but in practice this is not quite true. One 'term' of each system is treated as 'neutral', and the other as 'marked'. The theme is neutral if it is the subject, otherwise it is marked. Neutral tonality is one tone-group for the clause. There are four possible

combinations:

1) neutral theme + neutral tonality

2) neutral theme + marked tonality

3) marked theme + neutral tonality

4) marked theme + marked tonality

Halliday further complicates (indeed confuses) the issue, however, by introducing a third term: 'unmarked', which is not, as might be supposed, equivalent to 'neutral'. The following passage illustrates its use (1967a, p. 32): "the condition of coextensiveness of one tone-group with one clause is referred to as 'neutral tonality'. This does not imply that neutral tonality, in a grammatical system where it contrasts as exponent with 'marked tonality', always necessarily expounds an unmarked term; there are indeed systems in which a grammatically unmarked term is expounded by marked tonality". This principle is applied in the case of thematisation, where we read (1967a, p.33): "if, however, the clause has marked theme ..., 'two information units' represents the grammatically unmarked term".

Since Halliday does not clarify this term or its use, or explain how it differs from 'neutral', one may be forgiven for misinterpreting it. But it seems to be introduced in order to allow one system to determine another. Of the above four combinations, (1) is apparently the least, and (4) the most 'marked', with (2) and (3) somewhere between. However, if the theme is marked it is likely to have a separate tone group, so that (4) is in fact more likely than (3), and is thus in a sense less marked; it is 'unmarked'

though its tonality is not 'neutral'. In such a case, then, "a grammatically unmarked term is expounded by marked tonality". 'Neutral tonality' thus becomes a rather empty concept; the significant relationship is what is 'unmarked'.

8.8 Explaining tone-group divisions

Despite the fact that Halliday treats the relationship between thematisation and intonation as the intersection of two textual variables, his approach is not entirely satisfactory in a number of respects. In common with others who have considered these questions he appears to be content to list the correspondences between syntactic features and tone-groups without attempting to make generalisations. Generalisation is totally lacking in Crystal's operations, which consist of independent procedures with no attempt made to see if they can be regarded as instances of the same thing. Halliday is less guilty of this, since at least some systems are deemed to operate with a variety of structures, and El Menoufy shows how similar interpretations can be given to several different relationships. But even here the syntactic starting point makes generalisations difficult, since the rôle of tonality is seen in conjunction with specific syntactic structures rather than as an independent factor. Thus no consistent characterisation of the basic significance of tone-group division emerges from the description.

Furthermore, no attempt is made to provide an explanation of the rôle of tonality. Some would no doubt argue that explanation

is not in any case the business of linguistics; its task is to describe. However, if we do not set our sights too high, and seek merely to motivate linguistic phenomena in terms of other factors, then much can be achieved. In this sense, explanation is simply a natural extension of generalisation: we seek to provide a motivating principle which will account for the phenomena in question. In the case of tonality, Crystal does not attempt to provide any such principle; the operations he gives are arbitrary in the sense that, short of direct contradiction, no operation can be considered inconsistent with any other, and there is no reason why these operations should apply and not others. Halliday's systems are not quite as unmotivated as this, since he postulates a 'neutral' term in which the tone-group corresponds to the (non-rankshifted) clause. This implies at least a consistent syntactic content to the information unit, though this is not clarified, nor its significance evaluated. In any case, the concept of 'neutral' tonality is, as we have seen, a somewhat dubious principle, since it may be at odds with what is grammatically 'unmarked'. It appears to be often no more than an arbitrary, if convenient, device which, to quote Halliday himself (1967a, p. 32), "simplifies the descriptive statement".

What is needed, therefore, and what the remainder of this chapter will attempt to provide, is a shift of emphasis away from merely listing likely correspondences between tone-groups and syntactic structure towards a characterisation of the principles underlying and motivating these correspondences. It must also be

explained under what circumstances these correspondences do not hold, and why. The attempt will be made to show that some of the apparent 'irregularities' are at least in part explicable in terms of the same principles that govern the regularities. This leads to the conclusion that the division into tone-groups is not only meaningful; it is also consistent in its meaning.

The present discussion also differs from others in that it includes an additional unit above the rank of the tone-group. The same basic principles will be shown to apply here, too, though in an appropriately more inclusive form. In addition, the present study is comparative; though it might be thought that this would be an impediment to finding general principles governing the relationship between tone-group division and syntax, since the two languages are known to differ in their syntactic structures, in fact these very differences are valuable in that they serve to show how the same general principles may determine a wide variety of apparently distinct phenomena, even in two different languages.

8.9 The information unit

The crucial concept in the analysis of tonality is the information unit. It is not a new entity, since even the early writers on the subject established the 'Sinntakt' or the 'sense-group' as the semantic equivalent of the tone-group (cf. p.132,above). However, there has been very little explicit discussion of this notion, and what there is has been almost entirely by writers on intonation. Despite the obvious semantic implications of the name 'sense-group' itself, and the importance that such an entity might

potentially have for semantic theory in general, neither the term nor the concept have passed into general currency among linguists.

The information unit is clearly concerned with the distribution of 'information' in utterances, which in turn depends on the ability not only to recognise what is meant by 'information' but also to quantify it. The quantification of linguistic information has been discussed by Shannon and Weaver (1949) from the point of view of 'information theory'; in this approach, the amount of 'information' contained in an item is inversely proportional to its probability of occurrence. This is clearly very different from the present approach; here we are concerned not so much with calculating how much 'information' an item contains compared with the other items which could occur at the same point - i.e. a paradigmatic assessment of information - as with the temporal organisation of 'information', which demands greater attention to the syntagmatic assessment of 'information'. That the latter continues to be neglected is evident from Lyons' recent work on semantics (1977); although he devotes a section (2.3) to "the quantification of information", he sees this in entirely paradigmatic terms, and leans heavily, if not uncritically, on 'information theory'. The idea that information can be quantified in terms of its temporal distribution is not considered. At another point, and in another context, Lyons does refer to the 'punctuation' of an utterance, one of the functions of which is "to segment the utterance to manageable information units" (p. 65), but this is

neither clarified nor developed, and this sense of 'information' is not related to the earlier explicit discussion of linguistic 'information'. Nor does the term appear here with the asterisk employed by Lyons to signify a technical term; the meaning of 'information' is here apparently assumed to be an everyday, non-technical one, not requiring further explication.

It is clear, of course, that the temporal dimension has been recognised as important for the communication of linguistic meaning. If we borrow some of the terminology of communications engineering we may say that although the linguistic 'channel' has considerable 'capacity', enabling several different kinds of meaning to be communicated simultaneously, the complexity of linguistic 'information' nevertheless demands the utilisation of the temporal dimension. This dimension may be exploited in different ways, however. The temporal sequencing of elements may be employed to indicate relationships which are themselves not temporal, for example the grammatical relations of subject and object. In English, the subject and object of a sentence may be frequently only identifiable by virtue of their place in the temporal sequence. Such relationships are, however, essentially independent of time, and in different languages the order is not infrequently different, or the relationships are indicated by other means. Linguists' models of sentence structure, such as the 'tree' diagram, are usually intended to reflect the relationships rather than their sequence, and as such they likewise have no temporal implications.

Other aspects of linguistic information are widely held to be dependent on temporal organisation, specifically various textual features of utterances. Such categories as 'theme' and 'rheme', 'given' and 'new', for example, are often linked with the sequence of elements in the sentence. Even here, however, the temporal dimension is merely serving to indicate relationships which are themselves independent of time. Although 'theme' may be defined, as it is by Halliday, among others, as the first item in the sentence, in so far as it is a functional category and not just a label for the item that occurs in first position it is essentially independent of any specific position in the sentence. Similarly with 'given' and 'new'. Though we may think that 'given' means 'given before', which clearly has temporal connotations, the temporal factor only applies <u>outside</u> the sentence in question; <u>within</u> the sentence 'given' is not a temporal category.

The information unit with which we are here concerned appears to constitute a different use of the time dimension in which the relationships involved are not readily translatable into other, non-temporal terms. In other words, the information unit <u>is</u> a temporal unit in itself, a <u>temporal subdivision</u> of an utterance, not an element in a relationship which is simply realised by temporal sequence without being in itself temporal. For this reason information units, unlike syntactic units, can neither overlap nor be embedded within one another. El Menoufy (1969) appropriately speaks of "the linear nature of the organisation of information structure". As Halliday (1970a, p.3) puts it, the information unit

is "one 'block' in the message that the speaker is communicating". Similar remarks are made by Crimes (1975): "Speaking is a time dependent activity. The process of arranging elements of speech one after the other can be separated from the process of deciding what to say and putting it together in pyramided, hierarchical fashion" (p. 256); "the speaker, in addition to having to decide on the content of what he is talking about and how it is to be organised, decides also how much of it he thinks his hearers can take in at one time" (p. 274).

Of crucial importance in understanding the rôle of tone-group division, therefore, is the content of the information unit: what constitutes 'one block' in the speaker's message; and what goes into it in terms of lexical or grammatical elements. This will be the subject of most of the remainder of this chapter.

8.10 The content of the information unit

8.10.1 Undivided utterances

As a starting point for the study of the content of the information unit we may take the following utterances from the data, all of which have a single tone-group and hence form a single information unit.

(1) /sorry/, /well/, /oh/, /no/, /what/
/ja/, /nun/, /doch/, /klar/

(2) /natürlich/,/unglaublich/, /lächerlich/

(3) /still at it/
/welches Thema/,/warum nicht/

(4) /ungefähr fünfzig zu fünfzig Prozent rechts und links/

(5) /I don't find this on the whole on the science side/

/the scientists seem to take to this quite well/

/I'm not nearly so optimistic/

/Did you get the sword of honour/

/Die sollten doch ein bisschen mehr lernen/

/Er hat anscheinend keinen guten Ruf im Dorf/

/Konnen Sie das bestätigen/

/Das ist doch ganz natürlich/

(6) /I've nothing against the individuals who play cricket/

/why don't you assess what is valuable/

/they feel this is undesirable/

/I don't think it would be fair to say that this is general/

/das ist alles was Sie gehört haben/

/wissen Sie wovon Mrs. Richmond lebt/

/Ich trag'Ihnen nur vor was ich erfahren habe/

/Ich weiss nicht ob das nur in Niedersachsen betrifft/

/Ich glaube wir missverstehen uns/

(5 and 6 repeat A and B of 8.5)

. These examples show that the information unit may contain a simple word (1), a complex word (2), a simple phrase (3), a complex phrase (4), a simple sentence (5), or a complex sentence (6). The internal syntactic complexity of an utterance thus does not seem to preclude treatment as a single unit from the point of view of information distribution. In the case of the simple words of (1) it could, of course, hardly be otherwise, as there is here

no internal structure whose elements could be distributed over more than one information unit; the complex words of (2) do have a grammatical structure, but it would require a highly abnormal contrastive context to allow an informational division. As the grammatical structures become longer and more complex, the possibilities for informational subdivisions increase correspondingly.

What is significant here, however, is that from the point of view of the temporal distribution of information all these utterances are regarded as unanalysed wholes. This does not mean that they have no structure; even from the point of view of 'information' most of them clearly do, since each has a 'focus' (the nucleus). But their internal structure is not a matter of temporal distribution, even though it involves sequencing in time.

The informational unity of all these utterances is perhaps not surprising in view of the fact that they are all also grammatically unified. We would expect that since grammatical relations are not in themselves temporal, any unit which serves as the domain of grammatical relations could in principle remain undivided from the point of view of information structure. This does in fact appear to be the case. A corollary of this is, of course, that any stretch of speech which is <u>not</u> grammatically unified will generally be divided up informationally. It is thus unusual to find one information unit spanning two separate sentences.

There are nevertheless a number of cases where items that are not grammatically incorporated into a sentence or phrase regularly share an information unit with it. This seems to occur principally with two types of item: firstly with various exclamatory

particles which may be attached before a phrase or sentence; and secondly with names, titles, etc., which are attached after a phrase or sentence. The following are examples:

(7) /no I'm afraid not/

/still I didn't regret all those hours of study at the time/

/well I take a very different view/

/yes I'm sure/

/well I agree entirely/

/ja schwer zu sagen/

/ach na ja/

/ja wie ist denn das eigentlich/

/nee ich war nicht da/

/oh wir wollen eigentlich nur Schottland sehen/

/nein danke/

/ja ja/

/na und/

(8) /that's all right Major/

/Hallo Stratton/

/Ihr Vertrauen ehrt mich Inspektor/

/vielen Dank Sir/

/danke Sir/

/welche denn Inspektor/

/Entschuldigen Sie Inspektor/

It can be seen that expressions like no, still, well, yes, ja, ach, nee, oh, nein and the like, though not grammatically related to, or part of, the sentence, may be incorporated into

the same information unit when in initial position; similarly with Inspektor, Sir, Major, and so on, when in final position. Most of the first group may also form a separate information unit, though the latter group probably not, at least not without a very different implication. Items of the second group may also occur initially, but they almost always form a separate information unit in this position (cf. Crystal's operation 8'1, which specifies a separate tone-group for an 'initial vocative'). Items of the first type are less likely to occur finally, and almost never without a separate tone-group. Why the one type is treated as part of the same information unit in initial position and the other in final position is not clear, but this general restriction applies in both languages. A partial explanation for the behaviour of these items might be put forward in the light of conclusions to be drawn later in this chapter, but we cannot consider this question here.

The main principle suggested here in connection with examples (1) to (6), that units whose parts are grammatically related need not be subdivided informationally, implies that the point of reference for the investigation of tonality should be the largest such unit: the sentence. The sentence, in other words, is the largest potential information unit. With this general principle we do not need to account for cases where the sentence is in fact co-extensive with a tone-group, as these are simply the actualisation of this potentiality. What must be accounted for are cases of division of sentences into more than one tone-group, to which we now turn.

8.10.2 Divided utterances: 'motivated' and 'unmotivated' divisions

The factors which may lead to the division of an utterance into two or more tone-groups are, according to the literature on the subject, many and various: the number of clauses, the type of constituent, its position in the sentence, its relationship to other constituents, whether it is contrastive or not, the speed of utterance, the length of the items, and so on. As a means of bringing some order into this rather heterogeneous list we may make an initial distinction between motivated and unmotivated divisions. Since these terms might lead to misunderstanding, the particular way in which they are used here must be explained. It is probably to be taken as axiomatic that linguistic behaviour is essentially 'motivated' in the sense that it is determined by our wish to say what we *mean*, and this undoubtedly applies as much to tone-group division as it does to anything else; in this sense all tone-group divisions are 'motivated'. Here, however, 'motivated' is to be taken to mean motivated by syntactic structure: a division is motivated if we may find a correlation between it and some feature of the syntactic structure of the sentence, otherwise it is unmotivated. The various rules for tone-group division presented above thus specify instances of motivated division, since a connection is explicitly made in these cases between tone-groups and some characteristic of the sentence. This does not mean that this connection is absolute but simply that a regular correspondence can be found between the two. In other cases no such connection can be found; tone-group division takes place in defiance of the 'rules' and these divisions are therefore unmotivated. This does

not mean that the latter kind of division is not meaningful, but simply that it is not directly relatable to syntactic features.

This distinction is intended as a practical rather than a theoretically important categorisation; indeed it is to some extent problematic since it is not always easy to distinguish motivated from unmotivated divisions. Certain apparently unmotivated cases may simply be the result of a failure to find the motivating factors in syntactic structure. Nevertheless, the distinction is useful as a practical aid.

8.10.3 Unmotivated division : 'partition' of simple sentences

As we have seen, various 'rules' have been put forward which specify the relationship between tone-group division and certain syntactic features of sentences. These rules are, for the most part, not at issue here; we may accept as valid most of the observations made about regular correspondences. What we are concerned with here are those cases which are not accounted for by the rules, not because the rules are inadequate but because they are broken; those cases, in other words, where a regularly undivided utterance type is divided into more than one tone-group. Unmotivated division of this kind will here be called partition: the utterance is 'partitioned' into a succession of tone-groups.

That partition takes place has not, of course, gone unnoticed. Halliday observes that "a break into two tone-groups can occur between any two elements of clause structure" (1970a, p.20). The phenomenon appears to be entirely analogous in English and

German, though some details of its occurrence differ as a result of the different syntactic structures of the two languages, as will be seen below.

Since we wish to consider only unmotivated divisions here, we must first exclude utterances whose syntactic peculiarities might determine the division. Exclusion of the various motivating features mentioned in the literature will, in fact, result in fairly simple structures in which all the constituents are in their 'regular' positions: 'unmarked' syntactic structures, in fact. Though the broad characteristics of 'unmarked' sentences can easily be determined, there is scope for disagreement on some of the details. However, for our present purposes it will not be necessary to go beyond a fairly gross level of analysis.

Making the assumption that 'unmarked' syntactic structures are regularly undivided, we must first give a brief characterisation of such structures. The categories employed will be those of Quirk et al. (1972). For English, they establish five basic elements of clause structures: Subject (S), Verb (V), Complement (C), Object (O) and Adverbial (A). In terms of obligatory occurrence of these elements, they recognise seven clause types: SV, SVC, SVA, SVO, SVOC, SVOA, SVCA. In German, the same basic elements may be employed, and probably also the same clause types, though the most salient feature of the organisation of the German clause is something which has no counterpart in English: the so-called 'verbal frame' (Rahmen), which consists in splitting complex verbal

elements in such a way that the finite portion of the verb comes in second position in the sentence, while the remainder comes at the end.

Again unlike English, German differs in its ordering of constituents according to whether the clause is main or subordinate; in the latter the finite portion of the verb comes last. Both languages, however, have different orders in interrogative and imperative sentences from that found in declarative sentences, the main characteristic of the former being the initial position of the verb.

Rather than attempt to describe in detail the various syntactic patterns in both languages that can legitimately be considered 'unmarked' it will be sufficient to give examples of sentences with such unmarked structures from the data. All the following simple sentences and clauses are considered to be unmarked, and as therefore potentially, and in most cases regularly, undivided intonationally. In the form in which they occur here, however, they are all divided, and are thus examples of partition. Tone-group boundaries and the nuclear syllable are indicated.

English

Declarative

1. /And students have grown far/louder in their/protests against/
   /teaching .../
2. /The increasing pressure of numbers on/limited resources has
   enc/ouraged enquiries into the ef/ficiency of/various methods/
3. /It doesn't depend on seasonal/trade/

4. /Charles is a/lone in the lounge/

5. /I was a bit like/you/

6. /I did jolly well at/Sandhurst/

7. /They are not/strangers to the/residence/

8. /The 'Beau Regard' is a/small and unpretentious/private hotel on the/south coast of England/

9. /We can learn a great deal/from one an/other/

10. /This area of/teaching in/higher education is our/subject for tonight's discussion/

11. /We now have a project in/University Teaching Methods Unit/

12. /These resident guests/are presided over by Miss Cooper/

Interrogative

13. /Are things being done at a/wider level?/

Relative Clause

14. /who rules her rather simple daughter Sybil/with a distinctly iron rod/

Adverbial Clause

15. /When his wife enters/through the French windows/

16. /because we disapprove most strongly/of some of the regimes behind the iron curtain/

17. /if you did specify ob/jectives/

to-clause

18. /to rest assured in the mys/tique of the/Oxford or Cambridge tutorial/

19. /or perhaps to dismiss the/subject with the/thought .../

20. /peacefully to demonstrate a/gainst the Springboks/

21. /to do this without/any political bias/

22. /to take a stand on this/matter/

23. To specify our ob/jectives in teaching/under different headings/

24. /to try and do away with the/A-level entry to Biology/

that-clause

25. /that the whole of Africa/depends for its future/on the correct and proper attitude .../

Participial clause

26. /studying a/large medical treatise/

27. /pushing a/small perambulator /

28. /involved/in that decision /

German

Declarative

1. /Denn die Kinder sollen heute/besser erzogen werden/

2. /einer meiner Hunde/hatte sich eine Pfote gebrochen/

3. /Leeds Mansion is ein/altes Haus mit/dicken Mauern/

4. /eine Bekannte von mir ist/jetzt mit ihr hingefahren/

5. /seine Gattin dagegen rührte/nie ein Glas an/

6. /Mrs. Richmond/hat sich kürzlich zu einem Vorhaben entschlossen.../

7. /Er kommt Samstag Vormittag mit dem/Bus hier an/

8. /aber sie schiesst mitleidlos/alles Wild ab/

9. /Ihre Theorie entbehrt/jede Grundlage/

10. /Sie haben auf/alles eine Antwort /

11. /Sie haben mich von der Schuld Mrs. Richmond/nicht überzeugt/

12. /Sie ruft einen Antiquitätenhändler aus/Edinburgh zu sich /

Interrogative

13. /Warum sollte der Mann eine grosse Summe/in seiner Brieftasche herumgetragen haben?/

zu-clause

14. /mich für vieles zu/interessieren/

15. /und sich nicht nur/auf den Haushalt zu beschränken/

Dass-clause

16. /dass Major Richmond eine/Vorliebe für/Whisky hatte/

17. /dass die Jagd zu/nächst und vor allem/ein Sport ist/

Complement clause without dass

18. /Der Mann im Gabardinmantel/sei einer dieser Händler gewesen/

In the above examples tone-group boundaries (/) have been inserted in strict conformity with the principles of the phonological hierarchy (cf. above, 2.3.3), so that the tone-group always begins with a salient syllable (or, in some cases, a silent ictus, though this has not been specially indicated). There is some controversy about this principle, but, if accepted, it means that tone-group boundaries often do not coincide with phrase or even word boundaries. Where, then, do the information unit boundaries fall? Should they coincide with tone-group boundaries or with constituent boundaries? Since tone-groups are phonological entities, it is reasonable for their boundaries to be dependent on rhythmical factors, but information units are clearly not phonological, and this dependence seems less plausible in this case. Here it seems entirely legitimate to adjust the boundaries to coincide with the boundaries of grammatical constituents. This means, therefore, that tone-group

boundaries and information unit boundaries do not need to coincide: the information unit may begin with the first foot of the tone-group, but it may also begin in the remiss of the final foot of the preceding tone-group (cf. also El Menoufy, 1969, for a similar adjustment).

A further problem arises here, however, since there may be several constituent boundaries within the final foot, and it would therefore be possible to adjust the information unit boundary to coincide with any one of these. Take, for example, sentence 4 of the English examples. The foot boundaries of this sentence are as follows:

//Charles is a/lone in the /lounge //

The unadjusted tone-group boundary falls in the middle of alone and therefore must be adjusted if it is to serve as an information unit boundary, since it does not even coincide with a morpheme boundary (if we assume that alone is morphologically indivisible). But there are two possible locations for this information unit boundary: after Charles or after is. Either would be plausible on syntactic grounds, and there is no apparent reason for choosing one or the other. If a distinction between the two possibilities is potentially available here, then it is evidently neutralised by the rhythm.

We might opt for the analysis that involves the least displacement of the boundary, i.e. place it after is, but comparison with unambiguous examples suggests that the most appropriate analysis is a division after Charles. The division is clear in

cases where a pause is inserted between the tone-groups, as in sentence E12; this example is analogous in structure and has a break, with pause, after the subject rather than the verb, suggesting that the information unit division of sentence 4 should be:

/Charles / is alone in the lounge /

This is supported by the fact that if we were to insert a pause between the tone-groups in this example, it would be likely to be after Charles rather than after is. Analogous procedures can be carried out with other examples.

This kind of adjustment also brings to light an interesting fact about the partition of utterances: although we are in principle concerned with utterances whose divisions are not motivated by syntactic structure, these divisions are not completely independent of syntax since, as in sentence 4, boundaries are more likely to fall in some places than in others.

In some cases the relationship between tone-groups and syntactic structure is certainly one of con flict rather than co-operation. Take, for example, sentences containing discontinuous constituents. The lack of intrinsic linearity in syntactic structure means that there is no requirement that parts of complex elements should be contiguous, provided, of course, that the relationship between the parts is still discernible. This has implications for information units, since the latter are by their nature linear and cannot be discontinuous. There is thus potential conflict here. This is particularly acute, and particularly common,in German, where the verbal frame is obligatorily discontinuous if there are two or more other constituents. Sentences 7 and 11

of the German examples will serve to illustrate this:

G7 /er kommt Samstag Vormittag /mit dem Bus hier an/

G11 /Sie haben mich von der Schuld Mrs. Richmond/nicht überzeugt/

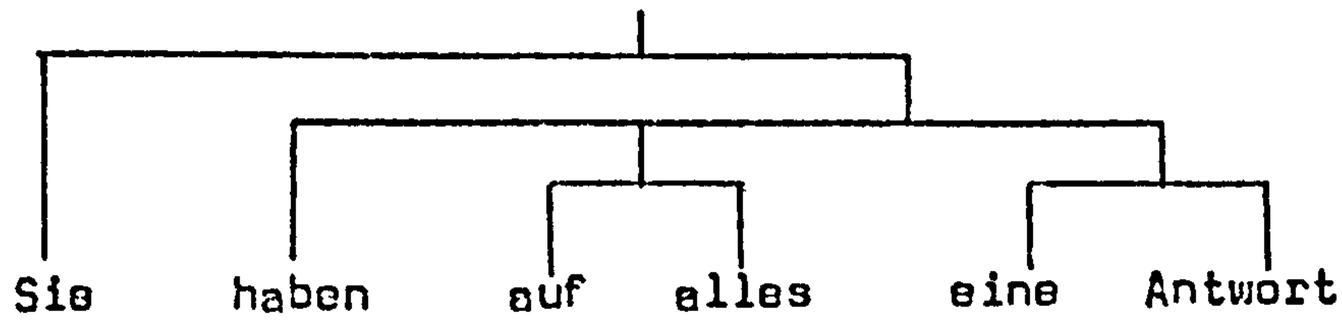
In these examples the temporal discontinuity of the verbal elements kommt .. an, haben ... überzeugt, makes it difficult for their syntactic integrity to be preserved in cases of partition. The whole verbal element cannot be included in a single information unit while excluding the non-verbal matter that intervenes between the two parts. In these examples,characteristically, the two parts of the verb are in different information units.

Although this situation is characteristic of German, it is also found in English, notably where non-verbal items intervene between the auxiliary and the main verb. Sentence 3 of the English examples, for instance, could be modified to:

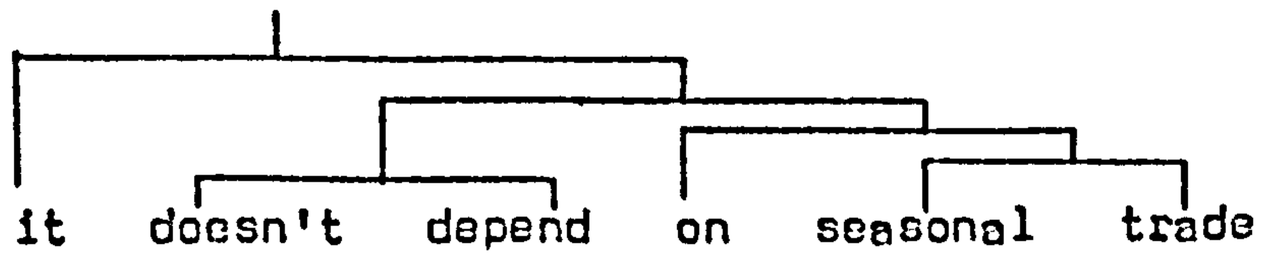
/it doesn't really depend on seasonal/trade/

where does and depend are separated by not and an adverbial. In this case, however, the two parts of the verbal element are not assigned to different information units.

.A further case of conflict between syntax and information units is found in the relationship between tone-group boundaries and the hierarchy of constituent boundaries. Even after adjustment, the information unit boundary will not necessarily respect this hierarchy. One of the many instances in the above examples is 10 of the German sentences. A widely accepted 'tree' for this sentence might be:



The information unit boundary here falls (after adjustment) after haben, and does not coincide with the highest-ranking syntactic boundary, after Sie. A still more blatant violation of the syntactic hierarchy is 3 of the English sentences:



Here the division does not even coincide with a break between two major constituents but falls between seasonal and trade, in the middle of an adverbial. Chomsky (1965 p. 13) uses cases like this to suggest that "the intonation breaks are ordinarily inserted in the wrong places".

These last examples might suggest a completely arbitrary location of information unit boundaries, arbitrary that is in terms of syntactic structure. Nevertheless, inspection of the above examples reveals a certain amount of regularity. In both languages certain divisions appear to be considerably more likely than others. In English, we find a frequent division after the subject, amounting to half the cases of partition. Another common location for an information unit boundary is before a final adverbial, especially if it is optional. On the other hand, division between a verb (or auxiliary) and a following object, complement or obligatory adverbial is rare, while there are no examples at all of a break

occurring between auxiliary and verb. Thus subject and final optional adverbial appear to be the most 'vulnerable' constituents in English, those most susceptible to being given a separate information unit in cases of partition.

In German, division after the subject is frequent, as in English, amounting again to half the cases. A tendency noticeable here, too, is to divide the sentence between an optional medial adverbial and a following object,complement or obligatory adverbial. There are no cases here of a break between a verb (or auxiliary) and a following object, complement, or obligatory adverbial, nor, as in English, between auxiliary and immediately following verb. Because of the verbal frame, verbs also frequently occur in German in final position, after objects, complements and adverbials, but a break before the verb is rare.

It might be possible to establish a link between the frequent break <u>before</u> a final adverbial in English and <u>after</u> a medial adverbial in German, although the evidence provided by these few examples is clearly insufficient for any definite proposals. Both divisions have the effect of separating optional adverbial elements from obligatory objects and complements to the verb, as if to underline their somewhat different status, informationally as well as syntactically. If this observation has any truth in it, then it well illustrates how the same principles can operate in different languages although their similarity may be obscured by specific syntactic structures.

We may explore the possibilities for partition further by experimenting with constructed examples or modifying some of those

found here. Let us consider first the following two sentences (examples 15 and 21 of the English sentences):

E15 /when his wife enters /through the French windows/

E21 /to do this /without any political bias/

The first of these could have an alternative version with the division after wife, but the second would be very unlikely to have the division after do. Examination of other examples reveals further restrictions and regularities. For the purposes of exemplification we may take the sentences given by Quirk et al. (1972) to illustrate their basic sentence types:

SVC: Mary is kind

Mary is a nurse

SVA: Mary is here

Mary is in the house

SV: The child was laughing

SVO: Somebody caught the ball

SVOC: We have proved him wrong

We have proved him a fool

SVOA: I put the plate on the teble

SVOO: She gives me expensive presents

If we assume two tone-groups with the nucleus on the first and last constituents of the sentence, the boundary between the two tone-groups does not fall with equal probability in all the available positions. The break may occur in all cases after the subject, and in the last three after the object, but other divisions are less natural. The patterns are thus (where * marks a less likely division):

S/V<u>C</u>	*<u>S</u>V/<u>C</u>	
<u>S</u>/V<u>A</u>	*<u>S</u>V/<u>A</u>	
<u>S</u>/<u>V</u>		
<u>S</u>/V<u>O</u>	*<u>S</u>V/<u>O</u>	
<u>S</u>/V<u>OC</u>	*<u>S</u>V/<u>OC</u>	<u>SVO</u>/<u>C</u>
<u>S</u>/V<u>OA</u>	*<u>S</u>V/<u>OA</u>	<u>SVO</u>/<u>A</u>
<u>S</u>/V<u>OO</u>	*<u>S</u>V/<u>OO</u>	<u>SVO</u>/<u>O</u>

Some of the starred forms are of course more likely if the nucleus is shifted to the verb and an appropriately contrastive context is constructed, but otherwise they are not very likely.

Sentence 21 given above has the structure (S) <u>VO</u>/<u>A</u>, while sentence 15 has the structure <u>S</u>V/<u>A</u>. The former has the nucleus on the verb, but otherwise conforms to the patterns given; the latter appears to conflict with them. However, the structures given by Quirk et al. consist only of <u>obligatory</u> constituents, to which optional adverbials may be added. The basic structure of 15 is thus not SVA but SV, and similarly that of 21 is not (S)VOA but (S)VO. There is thus no conflict with the patterns given here.

The main generalisation that appears to be justified by these cases is that it is not usual to separate a verb from an immediately following obligatory object, complement or adjunct by assigning them to different information units - at least where the verb is non-focal. This is not to say that <u>no</u> obligatory constituent may be separated from its verb, however, (which might seem to be a reasonable state of affairs); it only applies to that constituent which immediately follows the verb.

Similar principles apply in German sentences, and comparable examples to the above may easily be found. For example, the sentence:

Ich legte den Teller auf den Tisch

with the structure SVOA and nuclei on ich and Tisch, would be likely to have the division after ich or Teller, but less commonly after legte.

In cases where the verb is complex German has different patterns from English. The following sentences exemplify similar patterns to those of Quirk et al., but with an auxiliary in second position and the main verb final, closing the frame:

S Aux C V: Karl soll alt sein; Karl soll Lehrer sein

S Aux A V: Karl soll hier sein; Karl soll im Hause sein

S Aux O V: Karl hat das Buch gelesen

S Aux O C V: Karl hat seine Mutter krank gemacht

S Aux O A V: Karl hat den Teller auf den Tisch gelegt

S Aux O O V: Karl hat seiner Freundin lange Briefe geschrieben

Again with two tone-groups and the nucleus on the first and last constituent (though excluding the final verb), the likely pattern of division is as follows (again * marks a less likely division):

S/Aux C V	*S Aux/C V		
S/Aux A V	*S Aux/A V		
S/Aux O V	*S Aux/O V		
S/Aux O C V	*S Aux/O C V	S Aux O/C V	
S/Aux O A V	*S Aux/O A V	S Aux O/A V	
S/Aux O O V	*S Aux/O O V	S Aux O/O V	

This pattern appears to be entirely analogous to the English case, though here it is the auxiliary and a following object, complement or adverbial that are not normally separated. For the nucleus to fall on the final verb is not common (cf. below), but in this case a further restriction becomes evident: it is not normal to separate an object, complement or adverbial from a <u>following</u> verb, i.e.

*<u>S</u> Aux C/<u>V</u>

*<u>S</u> Aux A/<u>V</u>

*<u>S</u> Aux O/<u>V</u>

*<u>S</u> Aux O C/<u>V</u>

*<u>S</u> Aux O A/<u>V</u>

*<u>S</u> Aux O O/<u>V</u>

What we can see from all these observations is that although tone-group division in cases of partition is in principle not motivated by syntactic structure, there are nevertheless restrictions, if only of a relative kind, on where the divisions may come. These examples are, of course, merely illustrations; no attempt has been made to describe systematically all the possibilities and restrictions. It is interesting to see, too, that very similar principles apply in English and German, despite the differences in their syntactic structures. In both languages there is considerable cohesion between an auxiliary or a verb and its obligatory object, complement or adverbial, even though the verb may come <u>before</u> these constituents in English and often <u>after</u> them in German.

In considering the likely divisions of sentences in cases of

partition it must be remembered that partition is 'marked'. That is to say, the fact that in the above examples a break often occurs after the subject or before a final adverbial in English does not mean that such breaks are the norm for <u>all</u> sentences. These particular tendencies amount to the claim that <u>if partition takes place</u> then it is the subject and a final adverbial that are likely to be given a separate tone-group.

In spite of these relationships between syntax and tone-group division it is clear that the division of sentences in cases of partition is not syntactically predictable and that in most cases the syntactic content of an information unit is rather heterogeneous. That is perhaps not surprising if we bear in mind that the information unit is essentially a temporal subdivision of a structure whose elements are in principle not temporally ordered. But what, we may ask, <u>are</u> the determinants of partition? One factor might be that information units, although from one point of view semantic wholes, nevertheless have an internal structure. El Menoufy (1969) draws attention to the fact that tone-group division has two complementary aspects: a 'segmentative' and a 'delimitative' one. The former is a question of the <u>units</u> established, the latter of their <u>boundaries</u>. There is a tendency in discussing tonality to concentrate on the latter to the detriment of the former and to consider only the extent of tone-groups rather than their content. According to El Menoufy, the segmentative aspect is reflected in the number of <u>tonics</u>, while the delimitative aspect is reflected in the number of <u>tone-groups</u>. Similarly, in semantic terms we might consider either the number of information

<u>focuses</u> or the number of information <u>units</u>.

Although, in the present framework at least, there is one tonic to every tone-group and one focus to every information unit, the two dimensions are not quite the same thing, especially when we consider the causes of partition. We might see partition taking place in response to the need to separate parts of the utterance informationally from one another (the 'delimitative' approach) or in response to the need to have more than one focus in the utterance (the 'segmentative' approach). Halliday refers to this latter possibility as a reason for the division of a sentence: "any one element may be assigned a tonic and therefore demand a new tone-group" (1970a, p. 20).

This latter factor is potentially useful as a means of explaining the heterogeneous syntactic content of many information units. If the sentence contains more than one information 'point' or 'focus', then divisions must be made in such a way as to allow each to be the nucleus of a tone-group, irrespective of the syntactic content of each information unit.

There are nevertheless problems here, as we must still determine the principles involved in making elements of a sentence into information 'points'. This will be considered in more detail in the next chapter, but a few general points may be made here in connection with partition. It is generally acknowledged that the nucleus falls on a 'new' item; it is also agreed that not all 'new' items will have a nucleus and that more than one 'new' item may therefore be included in a single tone-group. This means, however,

that partition cannot be said to take place in response to the number of 'new' items as such: given an utterance containing more than one such item it is not the case that the utterance will necessarily be divided up into tone-groups in such a way as to make each 'new' item the nucleus of a tone-group, and thus the focus of an information unit. We still need to account for the grouping of 'new' items into tone-groups.

This problem is not solved, either, by invoking the similar feature of contrast. Though it is perhaps true that most 'contrastive' items will have the nucleus of the tone-group, it is certainly not the case that all such nuclei are contrastive. In the German sentence 6, above, the constituent containing the first nucleus is clearly contrastive, as it is reinforced by dagegen:

C6 /Seine Gattin dagegen/rührte nie ein Glas an/

but sentence 10, with similar partition, has no such contrastive implication:

C10 /Ihre Theorie / entbehrt jede Grundlage/

It seems, therefore, that to shift the burden of explanation from the 'delimitative' to the 'segmentative' aspect of partition does not solve the problem of what determines tone-group division in such cases. We still cannot dispense with the notion of dividing an utterance up into temporal sections. Unlike 'newness' and 'contrast', the quantification of information involved in partition is a temporal one; it is a matter of the distribution of information in time.

Though 'newness' is not a necessary determinant of separate tone-group status, it does of course appear that items which are given a separate tone-group have greater 'semantic content' or 'weight' than those without. To some extent this can perhaps be correlated with the 'lexical' rather than the 'grammatical' nature of the items concerned. Lexical items are, by virtue of their greater 'semantic content', more likely to form the nucleus of a tone-group and to have a separate information unit status. However, the lexical nature of the item concerned is clearly neither a necessary nor a sufficient condition for such status, and partition may take place where there are no lexical items present at all, as in the English sentence 5. Again it is evident that 'information' in this sense is not to be seen in purely paradigmatic terms; 'semantic weight', if it is a definable and quantifiable entity at all, is not an inherent property of a given item, but the result of temporal groupings within the utterance.

8.10.4 'Partition' of complex sentences

We have seen that certain types of complex sentence are regularly undivided intonationally. According to Halliday (1967a), these include sentences containing such clauses as defining relatives, final 'report' and'conditioning', and a few others. For Halliday, of course, the tone-group regularly corresponds to a clause, so that cases where a complex sentence remains undivided are, in a sense,exceptional, apart from the defining relative clause, which is excluded from the general principle because it does not

'operate in sentence structure'. Crystal (1975) takes the undivided sentence as his starting point, and only lists those cases where the sentence is divided, so that it is not always easy to compare his rules with Halliday's. Nevertheless, it would appear that he concurs with Halliday in respect of defining relatives and report clauses, but not in respect of final conditioning clauses, since his operation A'3(iii) inserts a tone-group boundary before a final adverbial clause.

We see, therefore, that there is not complete agreement about which particular types of complex sentence are regularly undivided and which not, and hence it is difficult to establish whether any particular division is 'motivated' or not.

In order to decide this question, it would be useful to be able to set up 'unmarked' structures for complex sentences in the same way that we could do this for simple ones. This is, however, not easy to do and it is also by no means certain that unmarked sentences would be regularly treated as intonational wholes. A general principle that is worthy of consideration, however, is that subordinate clauses in complex sentences are 'unmarked' if they occupy the position that their phrasal equivalents would occupy in a simple sentence. This would account for adverbial and complement clauses being unmarked in final position, but not in initial position, and so on.

Possible motivating factors in the division of complex sentences will be considered below (8.10.6). For the purposes of the present discussion of <u>unmotivated</u> division we shall consider

only a few fairly secure cases where a single tone-group for the whole sentence is usually considered the norm.

The following examples from the data fall into this category. Here, however, they are divided, and are thus cases of partition:

English

A. Defining relative

1. /then the students would work for /everything that really mattered/

2. /but it might be some special skill that he's ac/quired/

B. 'Report'

3. /They have shown /that they can produce biologists just as well/

4. /the pity is there are no /standards/

5. /I'm sure this is/so/

C. Adverbial

6. /I did so because I'm/quite convinced/

D. Infinitival

7. /I went to Twickenham /peacefully to demonstrate/

8. /they're there to main/tain the high standards of sport/

9. /their job is to/try to do this/

German

A. Defining relative

1. /das Verhalten einer Person die /trinkt ist/oft seltsam/

2. /sie verkauft von Zeit zu Zeit eines der Möbelstücke / die ihr Mann ihr hinterlassen hat/

3. /der taxiert den Gegenstand von/ dem sie sich trennen will/

B. 'Report'

4. /ich glaube auch dass es /ganz schön wichtig ist/

5. /ich sehe Sie/ haben eine ganze Menge erfahren/

C. Indirect question

6. /wissen Sie auch seit /wann sich Mrs. Richmond dem Trunk ergeben hat?/

We may consider the above sentences to be normally undivided, so that these versions are 'marked', and the divisions as such cannot be attributed to the syntactic structure. Nevertheless, as with the partition of simple sentences, there are certainly relationships between the divisions and the structure of the sentence in so far as, if partition takes place, some divisions are more likely than others. In considering the locations of the information unit boundaries we must also be prepared to adjust the boundaries of tone-groups in the same way as with simple sentences (cf. p. 550, above).

After such adjustment, the information unit boundaries show a clear tendency to coincide with clause boundaries. This indicates that the syntactic integrity of the clause tends to be preserved in cases of partition. The only exception to this principle in the above examples is one instance of a defining relative clause (E1), where the antecedent is grouped together in the same information unit as the relative clause. This is explicable in terms of Halliday's discussion of the relationship between tone-groups and clauses: the defining relative clause, unlike other types of

subordinate clause, is not an element of structure of the sentence as such, but of a constituent of the sentence, here an adverbial.

In other respects, partition of complex sentences does not in principle differ from that of simple sentences. In sentences of the above kind, although it is possible to find a relationship between syntactic structure and the divisions made, it is not possible to predict that a division will be made on the basis of syntactic structure, since the norm here is no division at all. The question of which particular structures should be regarded as normally undivided will be considered below (8.10.6). There is no reason to consider the semantic significance of partition of complex sentences to be in any way different from that of partition of simple sentences, except that the clausal status of subordinate clauses appears to contribute to their semantic 'weight' and thus to make separate tone-group status more likely.

8.10.5 Motivated division: simple sentences

According to the literature on the subject, division of simple sentences is to be expected with certain specific types of sentence structure. Characteristic cases of this kind have been mentioned above (cf. 8.3). Though writers do not always agree on specific instances, there is nevertheless something of a consensus on what these structures are, and there is in principle no reason to dissent from this consensus; in both languages there are many instances of divisions of sentences which can be regularly correlated with syntactic features of the kind discussed. The

accuracy of those observations is thus not at issue; if criticism can be made, it is in respect of the lack of generalisation that is evident in these descriptions. No general motivating principle is put forward which will account for all the cases observed and, furthermore, account for cases <u>not yet</u> observed.

One factor that appears to be involved is the type of sentence constituent: adverbials are treated differently from subjects or objects. Another factor is the position of the element in the sentence: elements are treated differently in initial, medial, and final position. A combination of these two factors will allow us to describe most of the characteristically divided structures. It is thus necessary to know what the regular position for the various types of constituent is, as in many cases deviations from the regular position produce structures which are regularly divided. This conforms to the assumption made above (8.10.3) in the discussion of partition of simple sentences, where it was suggested that the kind of sentence that is regularly undivided has an 'unmarked' structure.

We might thus take as an initial hypothesis that the factor which determines regular tone-group division in the simple sentence is the 'markedness' of the structure. As will be seen below, there is some truth in this hypothesis, but other factors must also be taken into account; 'markedness' alone is not an explanation; we must consider also the factors which render an element 'marked' and the motivation for having 'marked' structures.

We might take 'marked' structures to be simply those which deviate from the typical sentence patterns, such as those given by, among many others, Quirk et al. (1972). 'Deviant' does not here mean 'ungrammatical', of course; marked structures are just as grammatical as unmarked ones. Apart from cases which involve altering the grammatical relations within the sentence (e.g. passivisation) or altering the number of clauses (e.g. clefting, pseudo-clefting), the textual rôle of which will not be considered here, a variety of such 'deviations' may be recognised. Quirk et al. give, for English, principally 'thematic fronting', subject-verb inversion, and various forms of 'postponement' and 'reinforcement' (1972, Ch. 14). German grammarians give considerable attention to word order, particularly in relation to the strict placing of the verb. Here, we shall consider in detail two main factors which seem to be of importance in connection with tone-group division: 'Ausrahmung' (for the significance of this term see 8.10.5.1) and thematisation. Among the structural characteristics of sentences which require discussion we shall consider apposition and co-ordination. And finally we shall examine certain properties of a type of constituent which has important implications for tone-group division: the adverbial. Consideration of these five topics should not, of course be taken to imply that no other feature of sentence structure plays a part in tone-group division. These topics, though the most important, are only illustrations of the factors that are involved, and serve as convenient headings under which to consider the motivating principles.

8.10.5.1 'Ausrahmung'

We have already seen the importance of the so-called 'verbal frame' (Rahmen, Klammer) in the structure of German sentences. According to the 'frame' principle the finite portion of the verb is placed in second position in declarative sentences and in first position in interrogative and imperative sentences, while the other parts of the verb (infinitives, participles and separable prefixes), as well as certain other elements closely associated with the verb, are placed at the end, thus enclosing the remainder of the verb phrase in a kind of frame. German grammarians have devoted considerable attention to this phenomenon, not so much from the syntactic point of view as from the point of view of its assumed significance for the communication of information and for the psychological processes underlying this.

One rôle which has been assigned to this frame by some grammarians is, to quote Grebe (1966, p. 635), "die Gleichzeitigkeit der nacheinander gesprochenen Wörter eines Satzes und damit dessen Einheit zu sichern"; thus the discontinuity is seen, paradoxically perhaps, as a unifying factor, binding the temporal succession of elements into a non-temporal syntactic whole. At the same time, the separation of the verbal elements, and the postponement of one part until the end, is said to create a certain 'tension' (Spannung) within the sentence (cf. especially Boost, 1955): the opening of the frame raises expectations which are not satisfied until the frame is closed.

When we remove the psychological trappings which tend to encumber discussions of this sort, a significant point emerges.

The 'verbal frame' is a clear reflection of the non-temporal nature of syntactic structure, but 'tension' arises because of the temporal sequence through which this structure must nevertheless be realised. In fact it is clear, as suggested earlier, that there is a kind of conflict between these factors, between the unity of syntactic structure on the one hand and its temporal distribution on the other; the non-linear nature of the former conflicts with the linear nature of the latter. Not surprisingly, therefore, there are frequent breaches of the 'frame' principle, especially in colloquial speech, in favour of a more linearly ordered structure. Such breaches are often referred to as 'Ausrahmung' or 'Ausklammerung'. An example given by Kufner (1962) is the sentence:

'Er kommt mit seinem Geld aus trotz aller Schwierigkeiten'

The frame principle would demand placing aus at the end instead of before the final adverbial.

The status of 'Ausrahmung', and indeed of the 'frame' itself, is one of the most disputed points in German grammar. Some writers have seen in the frame a literary importation of Latin provenance which is now receding under pressure from native colloquial usage and which will ultimately disappear. Thus for Kufner the above example illustrates a 'growing tendency'. Faulseit and Kuhn (1972), from their prescriptive point of view, criticise over-use of Ausrahmung for this very reason: it "erinnert an umgangsprachliche Gepflogenheiten" (p. 76). Admoni (1970, 1973), on the other hand, disputes this interpretation, and draws attention to the long and respectable history of both the Rahmen and Ausrahmung in both

literary and colloquial German; the verbal frame is, in short sentences at least, just as much a part of colloquial German as it is of more literary style.

Whatever its historical origins, the conflict between Rahmen and Ausrahmung is a synchronic fact, but it is not a conflict of native and foreign, or literary and colloquial. It is a conflict between the essentially non-linear syntactic structure and the inevitably linear information structure.

On the syntactic interpretation there is more agreement. It is recognised that Ausrahmung may be 'partial' or 'total', depending on how much of the verb phrase is excluded from the frame. The frame may merely be shorter (what Schmidt, 1967, calls 'verkürzter prädikativer Rahmen') or it may be non-existent, with the second part of the verb immediately following the first ('potentieller Satzrahmen'). In some cases Ausrahmung is acknowledged to be the norm (cf. Grebe, 1966, Schmidt, 1967, Admoni 1970, 1973, Jung, 1966, Helbig and Buscha 1974):

(i) with comparative constructions involving wie and als

(ii) with infinitive constructions with zu

(iii) with relative clauses

together with a few others. In other cases, however, Ausrahmung is deemed to be 'stylistic', taking place in the following circumstances, among others:

(i) if a constituent is so long as to overload the frame or to obscure the transparency of the structure

(ii) to give emphasis to a constituent

What is of special interest in the present context is the relationship between Ausrahmung and tone-group division. It seems to be the case that those parts of sentences that are excluded from the frame in this way are regularly given a separate tone-group. This claim is supported by sentences in the analysed data, such as the following (tone-group boundaries have been adjusted):

1. /(sie) arbeitet doch sehr viel mit /zum Teil aus finanzieller Sicht/
2. /... sich zu interessieren /für das was ihnen angeboten wird /in der Presse .../
3. /die eigentlich zu irrelevant sind / für die Allgemeinheit/
4. /eine meiner Schwestern hat sich bewerben da /für Krankengymnastik/
5. /ein Drittel der Stunden ist annähernd ausgefallen /durch politische Diskussion/

Counter-examples to this principle are to be found, but they are rare:

6. /Wir haben zu Ostern eine Fahrt gemacht durch Schottland/

This tendency to give constituents outside the frame a separate tone-group has implications for information structure and for the nature of information units. It appears that the frame itself encloses not so much a syntactic unit as an informational one; by bringing the frame prematurely to an end we also close the information unit, and what follows is a new information unit even if it belongs syntactically with what is inside the frame. This is prosumably what Kufner (1962) means, though his formulation is disappointingly unlinguistic and unacceptable, when he says that

Ausrahmung involves putting "the adverb at the end of the 'thought' rather than the clause" (p. 23).

The verbal frame is characteristic of German and hence it, and Ausrahmung, do not occur in English. There are a number of constructions in both languages, however, which are analogous in that items are taken from their usual place in the sentence and 'postponed' until after what would otherwise be the end of the sentence. Many of these involve clauses rather than constituents of simple sentences, and these will not be discussed here, but one or two are non-finite sentence elements. Quirk et al. (p. 971) give the following cases of a 'noun-phrase tag':

they're all the same, these politicians

I know them, men

I wouldn't trust him for a moment, that lad

to which they add the remark: "the tag generally occurs in a separate tone-unit with a rising tone". The separate tone-group given to 'noun-phrase tags' is also noticed by Crystal: his operation C'2(iv) places a boundary before them. Quirk et al. also suggest that the separate tone-group given to the tag distinguishes this construction from one with a vocative, e.g.:

he's coming /John

he's coming John

The first of these is a tag, with John as a postponed subject, co-referential with he; the latter is a vocative, where he and John are not co-referential. As always with such 'disambiguating' functions of intonation, however, this distinction is by no means consistent; vocative expressions may also be subject to the same

treatment as tags, so that the first version is still ambiguous.

An example of this type of structure from the data is the following:

7. /It implies /this complaint .../

Such cases are in many ways analogous to Ausrahmung: the subject is shifted from its usual position in the structure and appended at the end, while its place in the sentence is occupied by a 'dummy' pronoun.

A similar construction is also possible in German, e.g.

Die sind alle gleich diese Politiker

but the usual treatment of this kind of sentence is not the same as that of Ausrahmung or that of this structure in English, since here a separate tone-group is not the norm. This would seem to be an exception but in fact it is explicable in terms of other factors. In cases of this kind in English, the postponed subject, though forming an independent information unit, nevertheless remains subordinate, as is evidenced by its forming a postparatonic with tone 53. In German, however, this kind of structure is not possible: there are no postparatonics, and thus it is impossible for the subject in this case to form a separate information unit while at the same time being subordinate. In this it differs from Ausrahmung proper, where the postponed item is not treated as subordinate; the structure of the paratone-group here is either minor + major, or major + major (cf. above, chapter 7). The latter structure is in fact much more common; the fact that the first tone-group is major rather than minor serves to reinforce the impression that

the sentence is coming to an end with the closing of the frame.

These remarks on the structure of the paratone-group and its relationship to tone-group division cannot be further developed here. The subject will be considered in more detail in Chapter 9, below.

8.10.5.2 Thematisation

One category that is widely held to be communicatively important is the 'theme'. We have already considered (3.4 above) various definitions of the theme, as "that which is known", as "the sentence element ... carrying the lowest degree of CD" (= communicative dynamism), or simply as the first element in the sentence. Here we follow Halliday, among others, in taking the 'theme' to be the last of these, with the assumption that the first element of the sentence is a functional category.

The significance of the theme in this sense is well attested in the literature, and has been discussed at length by writers on both English and German. For English, Quirk et al. (1972, p. 945) give as "the expected or 'unmarked' theme of a main clause" one of the following:

(1) subject in a statement

(2) operator (i.e. auxiliary) in a yes/no question

(3) wh-element in a wh-question

(4) main verb in a command

In addition to these cases, other elements may occur as the theme, in which cases they are 'marked'. Quirk et al. give examples of objects and complements; in the case of adverbials they are

uncertain as some of these are regularly found in initial position.

For German, most writers agree that, as in English, the subject is the most natural theme in declarative clauses. This case is described by Admoni (1970) as 'gerade Wortfolge', and by Eichler and Bünting (19 76) as the 'Grundstellung'. Jung (1966), on the other hand, disagrees. For him the only norm that can be established here is for the verb to occur in second position; the first position is variable. Helbig and Buscha (1974) allow either subject or adverbial as theme to be neutral, with objects and complements possible as marked cases. This seems to correspond exactly to the conclusions of Quirk et al. for English.

There are nevertheless observable syntactic differences between the two languages in their treatment of thematisation. The fact that in declarative clauses in German the verb must occupy second position means that if the theme is other than the subject then subject-verb inversion must take place. Apart from the restricted types given by Quirk et al. (p. 948 ff.), the subject-verb order is unaffected by the placing of other elements in initial position in English. This difference between the two languages is of some importance, as will be seen shortly.

The semantic rôle of thematisation has also been widely discussed. For English, Quirk et al. describe the theme as "the communicative point of departure for the rest of the clause" (p.945). For German, the characterisation given by Admoni (p. 30;) would be virtually identical if it were not for the psychological terminology: "der natürliche Ausgangspunkt des Gedankens". German

grammarians have made this a little more explicit, however, by recognising two specific functions: the theme serves to connect up with the previous sentence (what Helbig and Buscha call 'Satzverflechtung') - a rôle that it shares with other elements but for which, as the first element, it is most suited. The item in first position, according to Admoni, is the one which "den Zusammenhang mit dem vorhergehenden Redeabschnitt verschafft". As a second function the theme may serve to give emphasis (Hervorhebung) to the element in question; the first element may thus be one which, according to Admoni, "besonders hervorgehoben werden soll". In this case, "Spitzenstellung ... bedeutet affektische Ausdrucksstellung" (Erben, 1968, p. 123).

There is admittedly a certain paradox here. The first of these functions, that of linking up with previous utterances, makes the theme into something 'given' or 'known', and therefore of low communicative value. Grebe (1966) suggests that the first position "am spannungslosesten ist, weil es eine Gegebenheit bezeichnet, die sich aus der vorangegangenen Rede ergibt, oder die als bekannt vorausgesetzt werden kann" (p. 631). This hardly seems reconcilable with the rôle of first position as 'Ausdrucksstellung', with "das sinnwichtigste Wort einer Mitteilung emphatisch vorangestellt" (Erben, 1964, p. 238).

The explanation of this apparent contradiction is to be found in the notion of 'markedness'. If the theme is unmarked it is communicatively weak, if marked it is communicatively strong. Schmidt (1967), basing himself on the pioneering work of Drach in this

field, puts it as follows: "Voraussetzung für das Zustandekommen der Hervorhebung ist, daß ein Satzglied an die erste Stelle rückt, das in ruhiger, sachlicher Darstellung an späterer Stelle zu erwarten wäre. Die besondere Betonung resultiert also aus der Ungewöhnlichkeit der Stellung" (p. 274). To this may be added Admoni's remark: "Je ungewöhnlicher diese Stellung für ein Satzglied ist, desto wirksamer wird seine Versetzung an diese Stelle" (p.301).

There is some evidence that English and German differ in the use that is made of 'marked theme', and that these remarks about the 'Ausdrucksstellung' are not entirely accurate. There are cases where a 'marked theme' in this sense is possible in German, though not in English, without any 'emphatic' connotation, serving merely the 'linking' function. Examples are:

Den kenn'ich

Das weiss ich nicht

Structures such as this, with a direct object pronoun as theme, are very uncommon in English, and are highly marked, but German sentences of this type are frequent and one would hesitate to call them in any way 'emphatic'.

This excursus into the rôle of thematisation and of 'marked theme' is important in the context of a discussion of tone-group division. For both languages it seems to be accepted that a marked theme will take a separate tone-group. Halliday (1967a) states that "lexical adjuncts and complements in thematic position are particularly likely to carry a separate tone-group: they are already marked by sequence, being away from their neutral position

after the predicator, so that with marked tonality their thematic status is further reinforced" (p. 21). Thus "if the clause has marked theme... 'two information units' represents the grammatically unmarked term" (p. 33). For German, Pheby's claim is identical. He states that "ein sequentiell unmarkiertes Thema wird normalerweise keine eigene Informationseinheit bilden", in which case it is 'informationell unmarkiert'. With a separate tone-group it is 'informationell markiert'. Conversely, "ein sequentiell markiertes Thema ist bei markierter Informationsverteilung informationell unmarkiert" (p. 130 - 131).

This principle nevertheless appears to work differently in the two languages. Sentences such as those given above, with direct object pronoun as theme, would be likely to remain undivided in German, but the equivalent structure in English would usually be divided.

There thus seem to be three differences between the operation of thematisation in English and German:

(i) if an item other than the subject is placed in initial position this regularly causes inversion of subject and verb in German, but not in English.

(ii) German is more tolerant of certain items, such as direct objects, as theme, without the necessity for these items to be 'emphatic' or 'contrastive'

(iii) English is more likely to give elements other than the subject as theme a separate tone-group than German.

At this point it will be useful to give some examples of non-subject themes in the two languages taken from the data. Tone-

group boundaries have been adjusted to coincide with constituent boundaries.

English

(a) no separate tone-group for the theme

1. /this we can't afford/
2. /therefore I shall have exactly the same attitude/
3. /indeed I think it would be a tragedy/
4. /now perhaps the pity is ... /

(b) separate tone-group for the theme

5. /for a long time / there was a considerable amount of complacency/
6. /for some people / it was enough to point/
7. /among them/are .../
8. /and in particular/the South African team could probably learn a very great deal/
9. /in the Biology department / it was decided .../
10. /in particular in the Arts field/ it might be very difficult/
11. /or in your experience I mean / are things being done/

German

(a) no separate tone-group for the theme

1. /dafür kann ich von mir aus sagen/
2. /Dann haben wir natürlich Gäste zu bewirten/
3. /an sonsten ist der Haushalt ja .../
4. /ausserdem geh'ich sehr sehr gern in die Oper/
5. /und das möcht'ich meinen Kindern an sich ersparen/
6. /offenbar veranlasste ihn seine schlechte Gesundheit aufs Land zu ziehen/

7. /natürlich haben Sie ihm das nicht geglaubt/

8. /und heute Abend bin ich hier .../

9. /bei uns im Süden läuft überhaupt nichts mehr/

10. /Einerseits seh'ich ja eigentlich keine neue Alternative/

11. /jedenfalls sind sie glaub'ich für eine Woche hingefahren/

12. /da kriegt man ja keine Unterkunft/

13. /oder sonst wollten wir vielleicht nach Wales fahren/

14. /da haben wir's/

15. /vielleicht hätten Sie das tun sollen/

16. /dann hat sie sich inzwischen aber sehr verändert/

17. /einen von ihnen erwartet sie in diesen Tagen/

18. /vielleicht hatte er Bedenken/

(b) separate tone-group for the theme

19. /ausserdem /hab'ich aber auch noch meine Hobbies/

20. /acht Tage später/ liess er sich in Rothbury nieder/

21. /vor einem Jahr ungefähr/ hat Doktor Darlington ganz plötzlich seine Praxis in Edinburgh verkauft/

22. /durch dieses neue Gesetz/wirst du jetzt bezahlt/

23. /unter achtzehnhundert Leuten / war nix drin/

24. /auf allen Gebieten / ist die Reaktion .../

25. /in Braunschweig und Hannover/war glaub'ich ganz schön was los/

26. /nach dem Tod ihres Mannes / hat sie zu trinken angefangen/

The number of examples given here is a fair reflection of the frequency of occurrence of the various types. In English type (a) is very rare, and the status of some of the examples given is not completely secure, since the 'theme' here is in some cases more in

the nature of a conjunction. Sentences in which the subject is preceded merely by <u>well</u> or <u>now</u> and similar expressions have not been included here, as such forms are probably best regarded not as constituents of the sentence itself. In German, sentences of type (a) are very numerous. Again, those beginning with expressions such as <u>also, nun</u>, and the like (which, incidentally, do not usually cause inversion and can thus legitimately be regarded as not forming part of the sentence) have not been included.

Although about the same number of 'divided' cases, with a separate tone-group for the theme, has been included here from both languages, this is a reflection more of the overall greater numb er of non-subject themes in German than of the similar treatment given to such themes in the two languages. That is to say, although one may find a fair number of such themes with a separate tone-group in both languages, as a proportion of the <u>total</u> number of non-subject themes they are more frequent in English than German.

The three differences between the two languages mentioned above are not unrelated, and can thus to some extent be generalised. By defining 'marked theme' differently in th e two languages, it is in fact possible to eliminate (iii) altogether, if the latter is rephrased in terms of marked theme. Pheby's characterisation of marked and unmarked theme is, in fact, slightly different from that found in standard grammars of German, and seems to come closer to the facts. He considers as 'unmarked theme' not only a (grammatical or lexical) subject, but also a grammatical (not lexical) object. And even the subject can be a marked theme if it is lexical while

the object is grammatical. This can be illustrated as follows:

Unmarked	Marked
der Lehrer hat die Schüler gefragt.	die Schüler hat der Lehrer gefragt
er hat sie gefragt	
die hat er gefragt	
er hat die Grippe	die Grippe hat er
das hat mein Bruder	mein Bruder hat das

This approach effectively eliminates those cases where English and German appear to differ in their application of the principle giving a separate tone-group to a 'marked theme', since the cases where, contrary to expectations, German does not have a separate tone-group are now no longer cases of marked theme.

Difference (i) may also, though more speculatively, be related to this. There may be a connection between the possibility in German of having elements such as direct objects as unmarked theme and the syntactic properties of this construction in the language. The fact that the verb is not displaced from its regular position whatever the theme means that, in effect, thematisation is not such a disruptive process in German as in English: a non-subject theme in German is still recognisably part of the syntactic structure of the sentence, while in English it stands outside this structure to some extent. This allows a thematic object to be more integrated and less isolated in German than in English, with the result that it can be informationally grouped together with the rest of the sentence in appropriate cases.

It is also interesting to note that in those few cases where inversion takes place in English after a non-subject theme a similar situation seems to exist to that encountered in German. Unlike those cases of non-subject theme <u>without</u> inversion, those <u>with</u> inversion do not normally have a separate tone-group for the theme. The following examples from Quirk et al. (p. 948-9) illustrate this point:

Here's the milkman

There are our friends

Hardly had I left ...

So are we all

In many cases of this kind the theme is grammatical rather than lexical, and it is fully integrated into the structure of the sentence in a way which is not characteristic of marked themes without inversion. It would be extremely unusual to give the theme a separate tone-group in such cases, even though it is not the subject.

Mention may also be made here of a related kind of construction in which the theme, such as it is, seems to function merely as a dummy, a grammatical placeholder which allows the subject to be post-poned. This is especially the case with existential sentences, where the subject is, in a sense, rather like a predicate, since nothing is predicated of it other than its existence. Postponement to the predicate position is thus quite natural. The dummy theme here is in English <u>there</u>, in German <u>es</u>:

there are lots of people here

es war einmal ein König

Dummy themes also occur in non-existential sentences, such as the following, with <u>there</u>, <u>es</u>, and <u>da</u>

there came a time when ...

es kamen zwei Männer herein

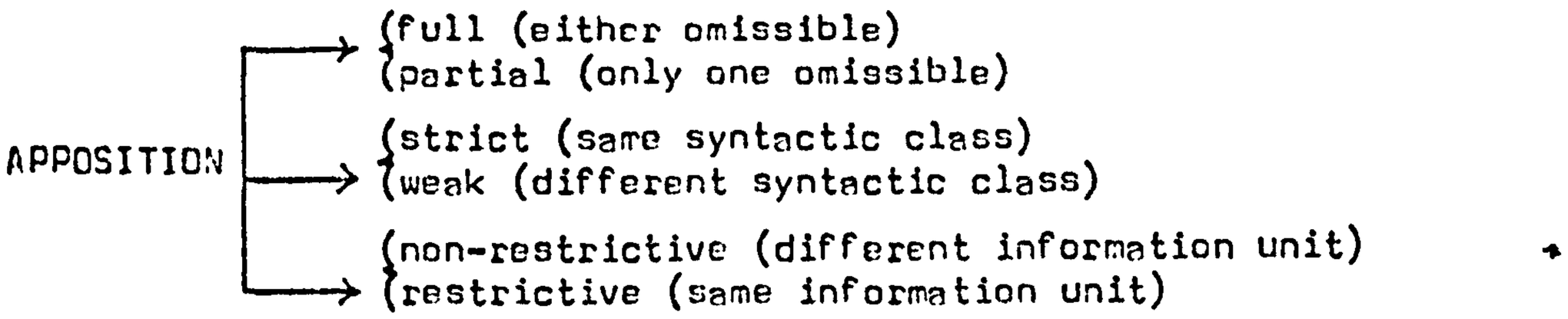
da kommt doch gestern der Karl zu mir und sagt ...

In all these cases it could be argued that the theme is not the subject (there is, of course, some controversy over the status of <u>there</u>); but it is nevertheless not given a separate tone-group. Again the reason can plausibly be taken to be that it is syntactically integrated into the sentence, as seen in the inversion of subject and verb in both languages. Such 'empty' elements could, of course, hardly constitute an information unit in themselves, as their information content is virtually nil.

It is noteworthy that the above conclusions about thematisation and tone-group division are in important respects analogous to those arrived at in connection with Ausrahmung. In both cases we are concerned with the degree of integration of an element or elements into the syntactic framework of the sentence: with Ausrahmung certain elements may be postponed until <u>after</u> this framework is closed; with marked theme an elemsnt may occur <u>before</u> the framework is opened. German grammarians generally observe that the Rahmen is a <u>verbal</u> frame, enclosing only the predicate of the sentence; but the sentence as a whole, including the subject, forms another frame by virtue of its syntactic cohesion. Marked thematisation could thus be seen as another kind of Ausrahmung.

8.10.5.3 Apposition

In their detailed discussion of apposition in English, Quirk et al. (1972) draw a variety of distinctions which they summarise as follows (p. 625):



German grammarians also distinguish different types, though on a different basis and less rigorously. Grebe (1966) distinguishes "die unmittelbar beim Substantiv stehende Apposition" from "die nachgetragene Apposition"; Helbig and Buscha (1974) distinguish 'enge' from 'lockere' Apposition.

We are here concerned with only one kind of distinction, that between 'non-restrictive' and 'restrictive' apposition, which, as already indicated in the brief characterisation given by Quirk et al., has implications for information unit division. This distinction is not explicitly recognised by German grammarians, though it is as valid for German as it is for English; it has some affinity with the 'eng' v. 'locker' distinction. Quirk et al. do not really make clear the syntactic nature of the distinction, however, but define it in terms of information unit division. This seems to confuse a symptom with a defining characteristic. Restrictive appositions are essentially qualifiers of nouns, on a par with other modifiers such as adjectives, while non-restrictive appositions are independent noun phrases existing in parallel with their antecedents.

This difference of status is, as Quirk et al. indicate, regularly reflected in tone-group division: the former do not have a separate tone-group but the latter do.

Halliday also gives examples of the 'disambiguating' function of intonation here. The sentence:

// I'll /ask my /brother the //heart specialist //

differs from the sentence:

// I'll /ask my /brother the /heart specialist //

in being "apposition in contrast with qualification", where the number of tone-groups 'signals' the distinction.

The following are examples of non-restrictive appositional phrases from the data, all of which have a separate tone-group. Tone-group boundaries have been adjusted.

English

1. /then there's Mr. Fowler/ a retired schoolmaster/

2. /... Miss Meacham / a sprightly spinster of uncertain age/

3. /Willem van der Eycken /Senior Research Fellow in Education at Brunel University /

German

1. /das sei lediglich ein Ulk gewesen / ein schlechter Scherz den sich gewisse Kollegen mit ihm geleistet hätten /

2. /ich werde Ihnen inzwischen von Henry Darlington erzählen / dem rohen rachsüchtigen verbitterten Tierarzt /

3. /wir haben Nora gefragt / die Schottin /

An explanation for the different treatment of restrictive and non-restrictive appositional phrases might be found in the fact that

their syntactic status is different: the restrictive type is 'rank-shifted'; it is a constituent of the noun phrase which has the antecedent as its head, while the non-restrictive type is a noun phrase in its own right. This does not explain why the latter should be given a separate tone-group, however. This seems to be explicable more from its relative independence and, in a sense, optionality. Erben (1964, p. 125) speaks of these appositions as "relativ eigenstandige ... Zusätze, die eine begriffliche Abrundung, eine mehr oder minder entbehrliche Erläuterung bringen". Both Erben and Eichler and Bünting (1976) also note the intonational independence that these appositions have; they speak of a slight 'pause' separating the appositional phrase from what has gone before. Such a pause is not, however, usually found, and this remark may simply be their (inaccurate) observation of separate tone-group status.

The independence and optionality of non-restrictive appositions means that they are not, informationally speaking, as closely integrated into the structure of the sentence as restrictive appositions. Additional evidence of this lack of integration is found in the German examples given above, all of which involve not only apposition but also Ausrahmung: the appositional phrase is placed <u>after</u> the verbal frame rather than directly after its antecedent. The independence of the appositional phrase from the rest of the sentence also asserts itself in German in the fact that case concord, which is more or less obligatory with restrictive apposition in items which show case (there are some exceptions), occasionally breaks down with non-restrictive apposition, as in the following sentence from the works of

Heine cited by, among others, Erben (1964):

'Die Kühnheit dieses Denkers zeigt sich namentlich in seiner Nomadenlehre, eine der merkwürdigsten Hypothesen...'

Here the neutral 'caseless' nominative eine replaces the expected dative.

Although Ausrahmung as such does not occur in English, comparable postponement of appositional phrases does occur, with similar results (cf. Quirk et al. p. 621, p. 634)

An unusual present was given to him for his birthday/ a book on ethics

Many students died in the fire / the cream of the school

Thus we are justified in seeing non-restrictive appositions as yet another case where lack of integration into the sentence structure gives it an independent informational status, reflected in tone-group division.

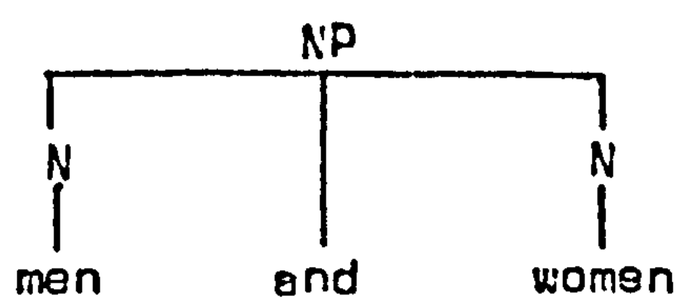
8.10.5.4. Co-ordination

Co-ordinate structures resemble appositional structures in that they involve multiple occupancy of a single 'slot' in the sentence structure. Unlike appositional phrases, however, co-ordinate items are not co-referential, and they are not restricted to noun phrases but may be of any word class, and, indeed, of any rank. Here we are concerned only with co-ordination below the rank of the clause.

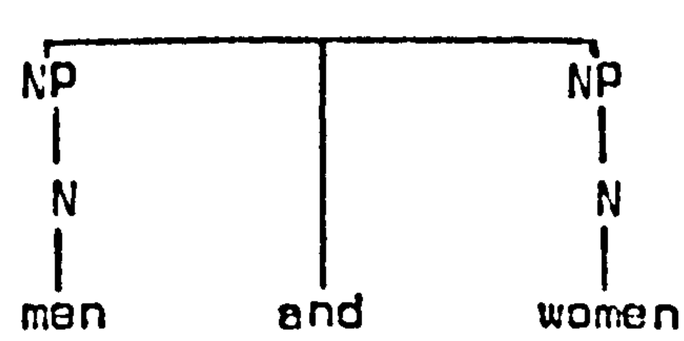
It is customary to make a number of distinctions of co-ordination types, primarily on the basis of the semantic relationship inherent in the co-ordinator. Helbig and Buscha (1974) for example, distinguish

'adversative', 'alternative', 'causal', 'conditional', 'copulative', 'restrictive', 'specification', and 'intensive repetition'. This is, of course, in addition to the many subordinating relationships. Syntactically it is also possible to distinguish 'syndetic' from 'asyndetic' co-ordination in both languages (cf. Quirk et al., p. 950; Crebe, p. 543): the former has a co-ordinator, the latter has not.

The distinction that we are concerned with here, however, is of a slightly different kind which has received far less attention. Items may be co-ordinated to different extents, with different degrees of closeness, so that they form either one single unit or two connected units. The former will here be designated unifying co-ordination, the latter concatenating. The difference is not easy to demonstrate simply, but it may be illustrated with a phrase containing two nouns, such as men and women. These could be regarded as one noun phrase, with the structure:



or as two noun phrases, with the structure:



These are not simply two alternative analyses of the same structure; there is a genuine structural ambiguity here. The well known ambiguity of such phrases when modified by an adjective (old men and women)

is partly a reflection of this structural difference; if <u>old</u> refers to both <u>men</u> and <u>women</u> the phrase must be a unifying co-ordination; if it refers only to <u>men</u> it could be either unifying or concatenating.

In some cases, unifying co-ordinations have become so unified that they have almost become lexicalised to the extent of regularly taking a singular verb. An establishment advertising that 'Bread and Butter is sold here' is likely to be a restaurant; one advertising that 'Bread and Butter are sold here' is likely to be a grocer's. As a further test of the difference between the two we may note that concatenating co-ordinated phrases are susceptible of being split into parallel clauses, whereas unifying ones are usually not. Thus the advertisement 'Bread is sold here and butter is sold here' can only be an expansion of the concatenating type; the latter can, in a sense, be regarded as an elliptical form of the former.

There is thus a certain relationship between concatenating co-ordination and ellipsis, which does not hold for unifying co-ordination. In object position 'bread and butter' is similarly ambiguous as to type, and can be disambiguated by inserting some of the 'ellipted' matter e.g.

do you sell bread and butter

do you sell bread and do you sell butter

Unlike unifying co-ordination, concatenating co-ordination allows a certain independence to its co-ordinated parts, in keeping with their relationship to independent clauses. This independence takes various forms. Firstly, the parts of concatenating co-ordination

may be alternatives to each other rather than together forming one entity, and this may take the form of contrast between them. Unifying co-ordination may also involve alternatives, but not normally internal contrast. Lists, particularly open ones, are also characteristically concatenating. The independence of the parts is also seen in their susceptibility, in appropriate cases, to Ausrahmung. This applies in both languages, under a wider interpretation of Rahmen than just the verbal frame. An example from English would be:

Give me some bread, please, and butter

where the sentence 'final' please effectively closes the 'frame'; postponement of the second part of the co-ordination is normally only possible under the concatenating interpretation.

The relative independence of the parts of concatenating co-ordination is clearly analogous to that of non-restrictive appositional phrases, while the indivisibility of unifying co-ordinate phrases is analogous to that of restrictive apposition. One further characteristic of the two co-ordination types is obviously our main concern here: their relationship to tone-group division. We would expect unifying co-ordinate phrases to be regularly undivided, and concatenating co-ordinate phrases to be regularly divided. Broadly speaking, this does seem to be the case. This tallies with Crystal's view; most of his operations C' involve 'structural parallelism' and multiple elements, which can largely be subsumed under the general heading of co-ordination.

The situation is not quite as clear as in the case of

apposition, however, as concatenating phrases are not always divided. To some extent, whether the phrase is divided or not may depend on what other factors are present. The command:

/Buy some bread and butter /

is probably to be understood in the unifying sense, and

/Buy some bread/ and butter /

in the concatenating sense. But a more natural way of putting the latter would probably be:

/Buy some bread and some butter/

without division but with separate modification of the two items to indicate their separate status.

A further problem here is that there is considerable interferance from partition (i.e. unmotivated division). Co-ordinate phrases are likely to be long and semantically weighty whichever type they are, and partition is thus common even in the case of unifying co-ordination.

The following are examples from the data which are undivided from the intonational point of view:

English

(a) modifiers in sequence

1. ... small and unpretentious ...

2. ... the correct and proper attitude ...

3. ... the Oxford or Cambridge tutorial ...

(b) noun phrases

4. ... the quality and methods ...

5. ... the Prices and Incomes Board ...

German

(a) adjectives/adverbs in sequence

1. ungefähr fünfzig zu fünfzig Prozent rechts und links

2. ... zunächst und vor allem ....

3. man hält ihn fur rachsüchtig, verbittert und unnötig roh gegenüber den Tieren

4. sie tun es ungern und widerstrebend

5. dass Sie freimütig und offen mit mir sprechen werden

(b) noun phrases

6. ... Rede und Antwort stehen kann

7. ... im Rundfurk oder Fernsehen

8. ... in Braunschweig und in Hannover

9. sie glaubte im Alkohol Zuflucht und Vergessen zu finden

10. Er behandelte vor allem Schosshündchen Katzen und Kanarienvögel

(c) verbs

11. (die Männer) wünschen und möchten dass die Frauen sich engagieren

12. ... zu hören oder zu lesen

The following co-ordinate phrases are divided. Boundaries have been adjusted.

English

(a) modifiers in sequence

1. /has offered alternative / or supplementary approaches/

2. /a university teacher/ or a teacher in a polytechnic/

3. /sometimes well meant/but incompetent/

4. /in a departmental context / or a university context/

(b) noun phrases (including those governed by prepositions)

5. /military history /great battles of the world / Clausewitz/ that sort of stuff /

6. /to make a judoment / and a ruling /

7. /there's often in the past been an inadequate examination of the purposes / of the objectives/

8. /research/ or other activities/

9. /for research/as opposed to teaching/

10. /the time spent / and rewards offered/

11. /to look at the intention/and method of what's being taught/

12. /I used to be up in my room/or in the library there you know/

13. /Charles Stratton / and his wife Jean/

14. /we don't in fact stop the Bolshoi Ballet coming / or any other cultural exchanges between east and west/

15. /there are no standards / no international basis/

(c) verbs

16. /good teachers are born / and not made/

German

(a) adverbials in sequence

1. /nicht immer /nicht ausschliesslich jedenfalls/

2. /andeutungsweise / und hinter vorgehaltener Hand natürlich/

(b) noun phrases

3. /es handelt sich nicht um eine Vernehmung sir / sondern nur um eine Unterhaltung /

4. /braucht man nur die Fahrt zu bezahlen/ und die Verpflegung/ und nicht die Kosten des Hauses/

5. /sie begnügte sich mit Kaffee / oder Tee .../

6. /denn der ganze Lebensstandard/ und die ganze Schulbildung die langt heute an sich nicht mehr/

7. /ist schnell zum Zwang / und schliesslich zum Laster geworden /

8. /statt einen einzigen Möbelstück /nun eine ganze Zimmereinrichtung zu verkaufen /

9. /von Küche / und Kirche etwas wegzukommen/von Kindern sicher noch nicht /

10. /in der Presse / im Fernsehen / im Rundfunk /

11. /in niederen Standen / und auch noch in den Mittleren/

12. /vom Mann / möglicherwiese auch von der Familie/

13. /kann man eigentlich kaum eine Zeitung / eine Illustrierte/ aufschlagen /

14. /nicht nur ihr Haushaltungsgeld/ sondern auch eigenes Geld/

15. /durch politische Diskussion / Vollversammlungen/ und so weiter/

(c) verbs and verb-phrases

16. /Tatsachen zu sammeln/und zu koordinieren/

17. /Fenster geschlossen / und Vorhänge zugezogen/

It is notable that the undivided cases usually involve pairs of words which are closely related in meaning, e.g. small and unpretentious, correct and proper, zunächst und vor allem, ungern und widerstrebend, freimütig und offen, Rede und Antwort, Zuflucht und Vergessen, wünschen und möchten, hören oder lesen. Not only is there no contrast between any of the elements co-ordinated, but they are so close in meaning as to be unifiable into one element. In the divided utterances, on the other hand, contrast is frequent, e.g. well meant but incompetent, research as opposed to teaching, born

and not made, nicht um eine Vernehmung sondern nur um eine Unterhaltung, nur die Fahrt ... und die Verpflegung und nicht die Kosten des Hauses, statt einen einzigen Möbelstück nun eine ganze Zimmereinrichtung, von Küche und Kirche ... von Kindern sicher noch nicht, nicht nur ihr Haushaltungsgeld sondern auch eigenes Geld.

A further characteristic of the undivided type is that the two parts are not usually separated by any other matter; modifying elements are placed before both parts and are not repeated before the second. The only exceptions here are the German examples 8 and 12, where in and zu are repeated before the second item. With the divided types, on the other hand, separate modification of the two parts is frequent, e.g. in the English sentences 2, 4, 6, 7, 12, 15, and the German sentences 1, 3, 6, 10, 13, where articles, prepositions etc., are repeated before the second item.

It can be seen, then, that the second group of co-ordinate phrases is 'looser' than the first, with more independence given to the co-ordinated elements, which is in turn reinforced by their intonational status. This independence can be seen in the possibility of Ausrahmung in both languages. Numbers 4 and 9 of the German divided utterances are characteristic, with the second part of the co-ordinated phrase occurring after the verbal element which closes the frame. Number 3 is analogous, the frame being closed by the 'sentence final' sir. Exactly the same phenomenon is found in number 14 of the English divided sentences, with the verb intervening between the parts. Though rather different, numbers 2 and 4 are in some ways analogous; as well as illustrating separate modification or qualification they involve a kind of Ausrahmung, since the co-ordinated

modifiers are separated from each other by the intervening noun.

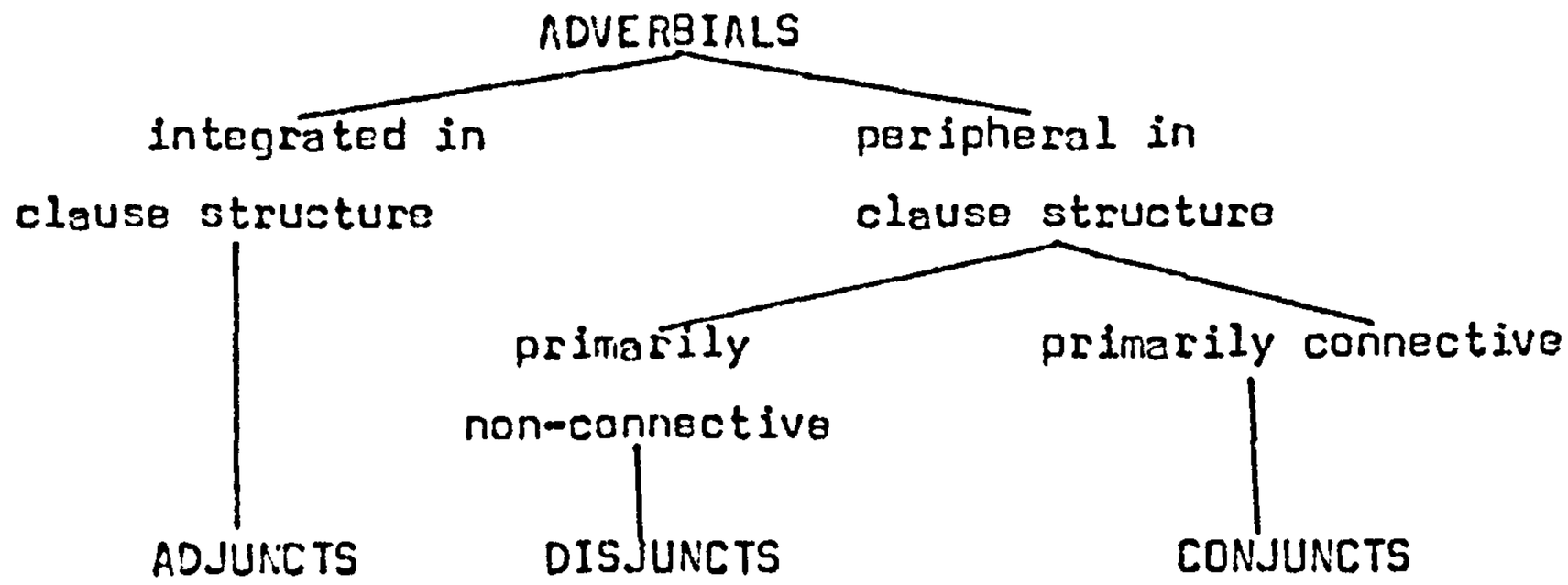
As a general conclusion from these cases of co-ordination, therefore, it seems that we may make a distinction between two kinds, a closer or unifying co-ordination, with the two (or more) parts welded into a single whole, and a looser or concatenating co-ordination in which the parts retain a degree of independence. The independence in the latter cases is generally reflected in their intonational treatment, with assignment of the parts to separate information units.

Both apposition and co-ordination thus show a similar prinicple. In both cases there are two kinds of structure, one which behaves like a single unit, and one which behaves like two. It does not seem to be usual for the second type to be included in a single information unit. In general terms we might say, therefore, that simple information units tend to include only one instance of a given constituent type; in cases of multiple occupancy of a given constituent 'slot', the utterance will be broken up into more than one information unit. Restrictive apposition[s] and unifying co-ordinations constitute only one item and may thus be included in one information unit; non-restrictive appositions and concatenating co-ordinations constitute more than one item of the same type, and are thus generally assigned to more than one information unit.

8.10.5.5 Adverbials

The term 'adverbial' covers a wide range of grammatical functions including almost everything in the sentence that is not the subject, object, complement, or verb. As a class, the adverbial is thus somewhat heterogeneous. Quirk et al. (1972) divide adverbials into

three main types: adjuncts, disjuncts, and conjuncts, which they characterise as follows (p. 421):



Each of these types, especially adjuncts, is further subdivided into classes, some of which have further subdivisions, and not all the members of the resultant groups have the same characteristics. There are thus real difficulties in generalising the behaviour of adverbials.

As far as their location in the sentence is concerned, Quirk et al. recognise four positions (p. 426):

I - initial position (before the subject)

M1 - medial position 1: (a) immediately before the 'operator' (i.e. auxiliary)
(b) between two auxiliaries

M2 - medial position 2: (a) immediately before the verb
(b) before the complement in intensive BE clauses

E - end position: (a) after an intransitive verb
(b) after an object or complement

Different groupings of positions are possible here, especially with the M types. Allerton and Cruttenden (1976), for example, prefer to separate M1(a) from M1(b), the former being 'medial immediately

after the subject', and to group the latter together with M2, forming a type which is 'medial within the phrase'. For our present purpose, however, we may disregard the distinctions between the M types; it will be sufficient to recognise three positions: I, M and E.

The categories of adverbial established by Quirk et al. can probably be applied without major modification to German, since they are largely based on semantic criteria, but this does not apply to the positions that they occupy in the sentence. The verbal frame in German imposes two main restrictions on the location of other elements, since both second position and absolute final position are, as it were, pre-empted by the two ends of the frame. Thus the E position must be so defined as to exclude verbal elements, affixes, etc., which constitute the second part of the frame. In subordinate clauses the finite portion of the verb itself occurs in final position, and must similarly be excluded from the definition. Similar restrictions apply with the M positions. Since the finite part of the verb occurs obligatorily in second position, position M1(a) of Quirk et al. has no counterpart in German. Positions M1(b) and M2(a) are similarly inapplicable, since the second of two auxiliaries, or the main verb if there is an auxiliary, are relegated to the end of the clause. The specified conditions for these positions can thus only be found in cases where M1(b) and M2(a) are indistinguishable from E. There <u>is</u> a genuine medial position in German, but it clearly cannot be defined in a similar way to medial position in English.

A major difficulty in the discussion of adverbials is that the various categories of adverbial, and even members of the 'same'

category, differ considerably in their potentiality for occurrence in the various positions. In some cases it is possible to find absolute restrictions on the occurrence of individual types; in other cases it is only possible to find 'preferred' positions. Naturally, opinions as to acceptability and normality are subjective and variable.

The following table gives the 'preferred' positions of the adverbial types of Quirk et al., in so far as these can be ascertained. Positions given in brackets are either alternative, less preferred, positions, or they are characteristic of only a subgroup of the major category. The category of 'focus adjuncts' has been omitted because it is too variable for general conclusions to be drawn.

ADJUNCTS					
1.	Viewpoint		I	(M)	
2.	Intensifiers:	emphasisers		M	
		emplifiers		M or	E
		downtoners	(I)	M	(E)
3.	Process		(I)	(M)	E
4.	Subject		(I)	M	
5.	Formulaic			M	
6.	Place		(I)		E
7.	Time:	when	(I)	(M)	E
		duration		(M)	E
		frequency	(I)	(M)	E
		relationship		M	(E)
DISJUNCTS			I	(M)	(E)
CONJUNCTS			I	(M)	

It can be seen that certain types (intensifier, subject, formulaic and time relationship adjuncts) prefer position M; amplifier, process, place, time when, duration and frequency, prefer position E; viewpoint adjuncts and both disjuncts and conjuncts prefer position I. Of these a number also allow a second position, though less usually than the preferred one. Of the mainly M types, some kinds of intensifier and time relationship adjuncts can also occur at E; some kinds of intensifier and subject adjuncts can also occur at I. Of the mainly E types, some process and time adjuncts can also occur at M, and some types of intensifier, process, and time adjuncts can also occur at M. All of the types which prefer I can also occasionally occur at M, and a few disjuncts can also occur at E.

This pattern of distribution clearly defies generalisation and for that reason no attempt will be made to present a detailed systematic analysis of adverbial types. Instead, a few characteristic examples of some major types will be given, and these will serve as a basis for a discussion of tone-group division.

Examples (constructed) from English are as follows (underlining here identifies the adverbial, not the nucleus):

M position

1. I just can't understand it (emphasiser)
2. He entirely agrees with you (amplifier)
3. I almost resigned (downtoner)
4. He is deliberately being a nuisance (subject)
5. We haven't yet eaten (time relationship)

E position

6. She spoke to him coldly (process)

7. It's much warmer inland (place)

8. He always comes home late (time when)

9. Things haven't been any better lately (time duration)

10. Committee meetings take place weekly (time frequency)

I position

11. Visually it was a powerful play (viewpoint)

12. Briefly there is nothing more I can do about it (style disjunct)

13. Amazingly he didn't turn up (attitudinal disjunct)

14. All in all he's had a very good time today (summative conjunct)

In so far as any conclusions at all may be drawn from these examples they will inevitably be speculative. However, it seems that adverbials in the different positions differ in the degree to which they are syntactically integrated into the sentence. Examples 1-5 seem most integrated, 6-10 less so, and 11-14 least of all. It is, however, difficult to provide objective evidence for this claim. The tripartite classification of Quirk et al. supports this to a certain extent, since for them disjuncts and conjuncts are 'peripheral in clause structure', and, characteristically, they tend to appear in the least integrated position, I. But even within the adjunct group there are different degrees of integration; those occurring regularly in position M seem more integrated than those occurring regularly in position E, while the only adjunct type whose normal position is I, the viewpoint adjunct, seems least integrated.

It must be emphasised that these categories of 'integrated'

versus 'non-integrated' are relative rather than absolute. It is also evident that individual adverbial types, and individual positions, do not belong permanently to one or the other. Examination of the above examples shows that several of the adverbial types can occur in more than one position, which inevitably means that the degree of integration will depend on <u>both</u> the type <u>and</u> the position. Some adverbials, such as those of 1 or 3, seem to resist movement to other positions; others, such as those of 4, 7, and 11, are more freely variable in position. Significantly, too, those that are more or less restricted to medial position seem more 'grammatical' than 'lexical', which appears to justify their more integrated status.

When we turn to the relationship between these categories and positions and information structure, as reflected in tone-group division, we find that the behaviour of these adverbials largely confirms these conclusions. Of the above examples, the first two groups (1-5, 6-10), which we may consider to be more integrated, would not normally be divided up, whereas the third group (11-14) almost certainly would be. Of the first two groups, the second <u>could</u> be divided to give a separate tone-group to the adverbial, but the first could hardly be so divided (i.e. with <u>three</u> tone-groups, one for the adverbial, one for the preceding, and one for the following matter); division of the first group into <u>two</u> tone-groups, with the nucleus of the first tone-group on the adverbial, is more likely, but this does not give separate tone-group status to the adverbial as such. Thus the scale of integration remains the same: M, E, I, with M the most, and I the least, integrated.

It is also interesting to observe what happens when items are displaced from their usual positions. If the moveable adverbials of group one occur in position E their behaviour is not always the same. Sentences 2 and 4 could probably only have the adverbial in position E if it took a nucleus, either the nucleus of a single tone-group for the sentence, or the nucleus of its own tone-group with two tone-groups for the sentence. An alternative form would be to make it, in effect, a separate sentence, with a separate paratone-group, i.e.:

He agrees with you. Entirely.

He's being a nuisance. Deliberately.

Thus final position for adverbials of the first group generally brings with it greater informational prominence, and hence greater informational independence. Initial position is only open to the adverbial of sentence 4 here, and independent informational status is more or less obligatory.

Adverbials of the second group appear already to have a measure of informational independence by virtue of their final position. It is thus not surprising to find that a separate tone-group for the adverbial, though not the norm, is a possibility here. All those examples given here seem to resist medial position, and certainly cannot occur there without a separate tone-group. Example 10 could perhaps have its adverbial in position M, but this would be treated as an interpolation, and would usually demand a nucleus:

/Things <u>late</u>ly / haven't become any <u>bet</u>ter /

or /Things haven't <u>late</u>ly / become any <u>bet</u>ter/

The third and least integrated group is also susceptible to a certain amount of repositioning. With the exception of 12, all can have the adverbial in final position, usually with a separate tone-group. All can be inserted in a medial position, but here they will demand a nucleus and often a separate tone-group, especially in 12 and 14:

/there <u>is</u>/<u>brief</u>ly /nothing more I can <u>do</u> about it/

/he <u>had</u> /all in <u>all</u> / a very good <u>time</u> today /

The general conclusion to be drawn from the behaviour of adverbials in English, therefore, is that different types differ in their degree of syntactic and informational integration into the sentence. Certain positions in the sentence are likewise more integrated than others. To some extent the more integrated types of adverbial will be more likely to occur in more integrated positions, and will be unlikely to have informational independence; when they occur in less integrated positions they will acquire a degree of independence which is reflected in their informational status. Similarly, the less integrated types of adverbial will be likely to occur in less integrated positions with corresponding informational independence; when they occur in more integrated positions their inherent independence will be generally preserved, and reflected in their information status.

As mentioned above, the position of adverbials in the German sentence is not identical to that found in English. Nevertheless, three positions, analogous to those of English, can be established, as in the following examples:

I: In der Früh pflügte der Bauer seinen Acker

M: Der Bauer pflügte in der Früh seinen Acker

E: Der Bauer pflügte seinen Acker in der Früh

As in English, different kinds of adverbial differ in their potentiality of occurrence in these positions, and in their 'preference' for initial, medial, and end position.

German grammarians, for example Helbig and Buscha (1974), distinguish 'adverbs' from 'particles' and 'modal words'. For them, the first of these corresponds more or less to those which function as 'process', 'place' and 'time' adjuncts in the framework of Quirk et al., but it also includes the latter's 'conjuncts' as a sub-class of 'conjunctional adverbs'. 'Particles' are essentially adverbs which are not independent sentence constituents; they thus include some types of the 'focus' adverbial of Quirk et al. 'Modal words' correspond to those adverbials which express "nicht die Art und Weise des Geschehens... sondern die Stellungnahme des Sprechers zum Geschehen"; they thus include the 'subject' adjuncts of Quirk et al., and some of their 'disjuncts'.

As far as the position of German adverbials is concerned, a distinction is generally made between 'free' and 'obligatory' types. According to Grebe (1966), the latter "haben eine besondere Neigung zu Endstellung", while the former can be either initial, medial, or final. Whether the adverbial is medial or final is deemed to depend partly on morphological factors (pronouns generally precede adverbials, but nouns tend to follow them, especially if the adverbial is short), partly on the 'Mitteilungswert' of the items in question (Grebe, p. 642). As Helbig and Buscha (1974, p 516)

recognise, however, this also depends on the type of adverbial, since certain adverbials (process and place) "an das Satzende streben", while others (conjuncts) "nach vorn treten". As far as initial position is concerned, this, too, may be the 'neutrale Satzgliedstellung' for adverbials (Helbig and Buscha, p. 506).

There are thus very considerable similarities in the pattern of occurrence in English and German, with often the same semantic types behaving in similar ways. Thus German process, place, and time adverbials prefer position E, as in English, while disjuncts and conjuncts often prefer position I, again as in English. A difference can nevertheless be found in the regular position of certain types which in English prefer position M. Some adjuncts do, as in English, prefer a medial position, e.g.

Er hat sicher kein Geld bei sich

but others which in English have this position regularly come finally in German:

Er hat die Prüfung endlich bestanden

On the other hand, it is not difficult to find cases of the reverse relationship:

My boss is well again

Mein Chef ist wieder gesund

Despite differences in the behaviour of individual adverbials, however, it would seem that the principles operating in the two languages are rather similar. The medial position can be regarded as the most integrated, and as the least independent. This is reflected in the well known principles of ordering whereby 'grammatical' items tend to precede 'lexical' items in German sentences, and items

with less 'Mitteilungswert' tend to precede those with more (cf. Grebe, p. 642). The effect of both these principles is to ensure that 'weaker' grammatical items occur medially, while 'stronger' lexical ones occur finally. Final position is thus 'stronger' and more independent than medial position.

The rôle of positions I and E in German does not appear to be altogether analogous to their rôle in English, however. As far as position I is concerned, we saw earlier (2.10.5.2) that this does not necessarily have the same characteristics in the two languages, since it is possible to have an item other than the subject here as an 'unmarked theme' in German. This was exemplified above with a direct object, but it could in principle also apply to an adverbial. According to Pheby's principle, a direct object could be an unmarked theme if it is grammatical while the subject is lexical. This may well also be the case with certain 'conjunctional adverbs' e.g. deshalb, deswegen, sonst and a few others, which could be considered more or less 'grammatical', and regularly occur in first position. All this suggests that position I is more integrated for adverbials in German than in English, a claim that is supported by the fact that adverbials in this position regularly cause inversion in German.

There are nevertheless cases of initial adverbials in German which are entirely analogous to their English counterparts, and where position I is clearly not integrated. One such case is that of certain types of 'style disjunct', which are so peripheral in the structure of the sentence as not to cause inversion:

Kurz, er ist ein Verbrecher

This type of adverbial, with an adverb used alone, is much rarer than in English; it is generally accompanied by a participle:

ehrlich gesagt, es interessiert mich nicht

grob gesagt, sein Haus ist wie ein Stall

The intonational behaviour of German adverbials is also of interest here. Like their English counterparts, those in position M do not normally have a separate tone-group. As we have seen, not all adverbials in position I need have a separate tone-group, which may partly be explained by defining ' marked theme' differently in the two languages (cf. p.583, above). As far as position E is concerned, the treatment of adverbials is basically similar to that of English, viz. they usually do not take a separate tone-group but may do.

This discussion of adverbials and tone-group division has attempted not only to show that there is a certain relationship between adverbial type, adverbial position, and information unit status, but also to establish more general principles underlying this relationship. It appears that the different adverbial types differ in the degree to which they may be syntactically integrated into the sentence; different positions in the sentence likewise seem to be integrated into the sentence to different extents, so that certain combinations of adverbial types and positions are more or less possible, more or less likely, or more or less independent. Intonation, in its function of indicating information structure, interacts with these other variables in a reasonably well motivated way, so that the degree of independence of a given item may be reflected in its informational status.

8.10.6 Motivated division : complex sentences

In 8.10.4 we considered unmotivated division of complex sentences. The types of sentence considered there were all of the kind which can be called 'unmarked' in structure, in so far as unmarked structures can be established for complex sentences. It was also claimed that such sentences are regularly undivided from the point of view of information structure, and that division, where it occurs in such cases, will therefore be 'unmotivated'.

We turn now to complex sentences whose structure is 'marked' in the sense that the order of constituents deviates from the regular pattern. As suggested above, this regular pattern is essentially the same as for simple sentences: the unmarked position for subordinate clauses in complex sentences is the position that a functionally equivalent non-clausal constituent would occupy in the sentences. The unmarked position for substantival clauses functioning as subject is thus the regular subject position, i.e. initial in the sentence, and so on with other clauses.

As far as tone-group division is concerned, unmarked complex sentences behave rather like their equivalent simple sentences, i.e. they are regularly undivided. The distinction between simple and complex sentences is thus not of fundamental importance for information distribution, despite the claims made by Halliday, for example, that the clause should be treated as the point of departure for the tonality system.

The following sections deal with a number of important types of complex sentence whose syntactic properties are particularly significant for tone-group division. These are sentences containing

'report clauses' (8.10.6.1), substantival clauses (8.10.6.2), relative clauses (8.10.6.3), co-ordinate clauses (8.10.6.4), adverbial clauses (8.10.6.5), comment clauses (8.10.6.6), tag questions (8.10.6.7), and non-finite clauses (8.10.6.8).

8.10.6.1 'Report clauses'

Among the 'nominal' clauses, Quirk et al. (1972) distinguish a variety of types, including dependent declarative and dependent interrogative clauses (or 'report' clauses) (p. 734ff.) The first of these can occur in five functions, as follows:

subject: that she is still alive is a consolation

direct object: I told him that he was wrong

subject complement: the assumption is that things will improve

adjectival complement: I'm sure that things will improve

appositive: your assumption that things will improve is unfounded

Dependent interrogative clauses are either wh or yes/no types. The range of functions for the former is similar to that of the dependent declarative clause, except that they can also occur as a prepositional complement:

'no-one was consulted on who should have the prize'

The yes/no type is introduced by whether or if:

'do you know whether/if the banks are open?'

Similar types of report clause can also be recognised for German, though there are a few differences, since additional types of dependent declarative clause are possible in which the subordinate clause is a prepositional object or a genitive object (cf. Grebe, 1966,

p. 560), e.g:

er rühmt sich, dass er unschlagbar sei

er besteht darauf, dass ich ihn zuerst besuche

The most important type of report clause in both languages is that which functions as direct object. Since the unmarked position for direct objects is after the verb, the regular structure for complex sentences containing clauses of this type will have the subordinate clause following the main clause. We would also expect such structures to be undivided. Examples from the data which confirm this are the following:

<u>English</u>

1. /I hope that the tour will go <u>ahead</u>/
2. /I don't think it would be fair to say that this is <u>gen</u>eral/
3. /I think it's not inaccurate to <u>sug</u>gest .../
4. /I don't think I could <u>do</u> it/
5. /I think it's very <u>diff</u>icult/
6. /I think it would be a <u>trag</u>edy/
7. /I think the answer <u>has</u> to be .../
8. /I think we can learn a great <u>deal</u>/
9. /They feel this is unde<u>sir</u>able/
10. /Do you find there's sometimes re<u>sist</u>ance/

<u>German</u>

1. /ich glaube dass sie für <u>man</u>che Frauen .../
2. /ich glaube dass die deutschen <u>Frau</u>en /
3. /aber ich glaub'es gibt eine Be<u>wusst</u>seinswehrung/
4. /erlauben Sie dass ich mir eine <u>Pfeif</u>e stopfe sir?/

5. /ich glaub'es liegt auch viel darin .../

6. /um zu wissen dass sie keiner Fliege was zuleide täte/

In all these cases the object clause occupies the regular object position and the structure is thus unmarked. Object clauses in other positions are rare, but where they do occur we would expect them, as marked, to have a separate tone-group. Such is the case in the following German sentence:

7. /nur ob es das heute schon bei dem Grossteil der Frauen ist/
   das möcht'ich bezweifeln/

This particular example, however, would probably qualify for division on other grounds, as the first part is long enough to make partition likely, and the insertion of a dummy demonstrative pronoun das in the main clause effectively dissociates the report clause from the main clause. This last device is, however, not atypical in cases of initial report clauses in German; it further emphasises the markedness of the structure and the lack of integration of such clauses into the overall sentence structure.

A pronoun may also be inserted in German when the report clause is in its regular final position. An alternative to sentence 4, for example, could be:

'erlauben Sie es, dass ich mir eine Pfeife stopfe sir'

The same applies to genitive objects; an alternative to the example given above could be:

'er rühmt sich dessen, dass er unschlagbar sei'

With a prepositional object, a structure of this kind is obligatory, with a dummy pronominal da inserted into the main clause to

support the preposition (cf. the example given above: 'or besteht darauf ...' etc.).

In all these cases where a pronominal element is inserted into the main clause with a following report clause the norm for tone-group division is not entirely clear, but it seems usual <u>not</u> to give the report clause a separate tone-group.

The relationship of report clauses to Ausrahmung is likewise not entirely clear. Ausrahmung is more or less obligatory in cases where there is a verbal frame. Thus we find:

'er hat gesagt, dass es unmöglich sei'

but the following is hardly possible:

*er hat, dass es unmöglich sei, gesagt

and similarly:

er gibt zu, dass er das Buch nicht gelesen hat

but not:

*er gibt, dass er das Buch nicht gelesen hat, zu

The norm for tone-group division is variable; of the two examples of Ausrahmung given here, the first seems more natural <u>without</u> a division, the latter more natural <u>with</u>. In this respect then, such clauses are not quite equivalent to their phrasal counterparts.

Similar principles appear to govern clauses of this type functioning as subject complements or adjectival complements. Subject clauses, however, such as the example given by Quirk et al.

'That she is still alive is a consolation'

seem regularly to have a separate tone-group. This function for these clauses is not frequent in either language; we are more likely to find:

it is a consolation that she is still alive

This version is likely to be undivided. Again the behaviour of report clauses is seen to be not quite the same as their phrasal counterparts, here the subject of the sentence.

All these observations suggest that the assumption made at the outset, that report clauses should be equated with phrases of equivalent function, is not altogether justifiable. Although in the most common function of object these clauses behave syntactically and intonationally like simple object noun phrases, this does not appear to be the case with Ausrahmung, or where the clause functions as subject. The simplest explanation of these 'exceptions' is that the normal position for such clauses is in fact <u>final</u> in the sentence, where in German 'final' may mean <u>after</u> the verbal frame if there is one. This would explain the behaviour of these clauses with Ausrahmung.

8.10.6.2 <u>Substantival clauses</u>

Substantival clauses (called by Quirk et al. 'nominal relative clauses') are similar to report clauses in their range of functions. The following are examples from the data where the substantival clause functions as direct object and occurs after the verb; all are undivided:

<u>English</u>

1. /why don't you assess what is <u>valuable</u>/

2. /you would miss what was most valuable in the course/

3. /and give back what they've given to them in lectures/

German

1. /ich weiss noch gar nicht genau was ich mache/

2. /ich trag'Ihnen nur vor was ich erfahren habe/

The behaviour of such clauses in respect of tone-group division is identical with that of report clauses. Sentence 2 of the German examples is a case where there is Ausrahmung but no tone-group division. Inclusion of the object clause inside the frame would give a sentence which is hardly acceptable:

*ich trag Ihnen nur was ich erfahren habe vor

As Quirk et al. remark, this type of clause "can normally be paraphrased by a noun phrase containing a postmodifying relative clause" (p. 738). This structure has the same effect as the insertion of pronominal elements in the main clause of sentences containing report clauses except that here the pronoun forms the antecedent of the relative clause (cf. 8.10.6.3).

Substantival clauses as prepositional complements differ in the two languages. The English type is exemplified by the following:

English

4. /...the standard is going to be up to what they look for/

This type is less common in German. Instead we find either a relative clause (3) or the insertion of a dummy da to which the preposition is attached, followed by the substantival clause, with Ausrahmung where appropriate (4):

German

3. (sich zu interessieren) für das was ihnen angeboten wird

4. das hängt etwas davon ab woher die Frauen kommen

It can be seen, then, that substantival clauses as object behave in the same way as dependent declaratives and interrogatives ('report'clauses): they regularly occur sentence finally, with Ausrahmung where appropriate, but without the expected separate tone-group which usually accompanies Ausrahmung in simple sentences.

Sentences containing substantival clauses are not always undivided, however. Consider the following:

English

5. /what is valuable in the course /is being neglected by the students/

6. /what goes into an examination/is simply a recall/

German

5. /was mir an Zeit übrig bleibt / verwende ich dafür .../

6. /niemand kann von aussen sehen / was bei ihm vorgeht /

Both the English examples have subject clauses in initial position; the first German example has an object clause in initial position while the second has an object clause in final position, with Ausrahmung. In terms of markedness of structure we would expect the English sentences to be undivided, and both would in fact sound perfectly natural with a single tone-group. But no example of an undivided sentence of this type occurred in the data, and Crystal's conclusion is also that division is the rule here: his operation A'3(iv) puts a boundary after a nominal clause as subject. Furthermore, the separate tone-group given to substantival clauses as subject is

parallel to that generally given to report clauses as subject.

If we accept, as the evidence suggests we should, that substantival clauses as subject are regularly and normally given a separate tone-group, how are we to explain this fact? It clearly cannot be the clausal status of the subject <u>as such</u> that determines its separate information unit status, since substantival clauses as object are not so treated. The answer is not clear here (as also in the case of report clauses as subject) but it might be tentatively suggested that, since it also possible to have <u>no</u> division in these cases, the undivided forms should be regarded as the norm, despite their rarity, and the division be regarded as syntactically unmotivated (i.e. partition), while the fact that subject clauses, but not object clauses, are given a separate tone-group might be attributed to the greater susceptibility of subjects to partition (cf. above 8.10.3).

In the case of the German examples 5 and 6 we can probably find an adequate syntactic motivation for the divisions. As an initial object, the substantival clause of 5 is clearly a marked theme, and is thus in conformity with the principles established for simple sentences (cf. above, 8.10.5.2). Sentence 6, though superficially similar to 2, differs from it in that the object clause is separated from the regular object position by more than just the final element of the verbal frame. It may be that the more radical nature of the Ausrahmung motivates, or at least contributes to, the separate information unit status of the object clause.

8.10.6.3 <u>Relative clauses</u>

The regularly different intonational treatment of 'defining'

and 'non-defining' relative clauses is one of the best known 'disambiguating' functions of intonation, and it has already been mentioned several times in this study. Examples of both types, with appropriate tone-group division, can easily be found, though non-defining relatives are much rarer than defining ones.

Defining relative clauses - undivided

English

1. /I've nothing against the individuals who play cricket/
2. /...are not doing anything which is improper/
3. /this is a difficulty which increases/
4. /a particular example that springs to mind is the situation at Stirling /
5. /...everything that really matters/
6. /something which only the individual teacher can tackle/
7. /... the information one would put across to students/

German

1. /...die vielen technischen Hilfsmittel die wir heute haben/
2. /das ist nämlich eine Mischung die ich mir eigens in London herstellen lasse/
3. /das ist alles was Sie gehört haben ?/
4. /...gewisse Briefe die ihm zugestellt worden sind /
5. /also denn so die Nachrichten die ich bekomme aus Heidelberg/
6. /also das Gebiet das sich anschliesst nördlich von Edinburgh /

Non-defining relative clauses - divided

English

8. /Dr. Ruth Beard /who's in charge of the University Teaching Methods Research Unit /

9. /a sprightly spinster of uncertain age /whose main interest is in horseracing /

German

7. /um nicht nur Hausarbeit machen zu müssen /die mich also mehr oder weniger nicht sehr interessiert/

8. /der mysteriöse Unbekannte / wessen Fall ich untersuche/

9. /nun eine ganze Zimmereinrichtung zu verkaufen / die einen beträchtlichen Wert darstellen dürfte /

10. /und begibt sich gleich zu Mrs. Richmond/ die ihn schon erwartet/

The motivation for the intonational distinction here is analogous to that given above for apposition in simple sentences (8.10.5.3). Defining (or restrictive) relative clauses are intrinsic parts of their noun phrases which cannot be omitted, while non-defining (or non-restrictive) relative clauses are more loosely connected to their antecedents, and are optional. This difference of status is reflected in their informational independence; since non-defining relatives are not essential parts of the structure they are not fully integrated into it, and regularly form a separate tone-group.

This independence is also reflected syntactically. Being less closely attached to their antecedents, non-defining relatives are often separated from them, while this is unusual for the defining type. In the above examples, all the defining relatives follow directly on their antecedents, while only half of the non-defining relatives do. Whether this separation takes place in the latter case appears to depend on a number of factors: the length of the relative clause, the place of the antecedent in the sentence, whether the relative

clause would separate closely related items, and so on. In sentence 9 of the English examples the relative clause is separated from its antecedent by another modifier; in sentences 7 and 9 of the German examples by the end of the verbal frame.

8.10.6.4 Co-ordinate clauses

In the discussion of co-ordination in simple sentences above (8.10.5.4), a distinction was made between a closer, or 'unifying', type, and a looser, or 'concatenating', type. This distinction also holds for co-ordinate clauses, though it is perhaps less important here. Most co-ordination of clauses is of the concatenating type, and the clauses are given a separate tone-group. Examples from the data are:

English

1. /... to make the clearest denunciation of that evil / and call it as clearly to mind .../
2. /... to make such a protest/ and hope .../
3. ... the MCC will reverse their decision/ and not have the South African cricketers here next year/
4. /they are doing their duty / and not doing anything which is improper /

German

1. /ich habe sechs Kinder / und bin damit ganz beschäftigt /
2. /ich bringe sie zum Beispiel morgens zur Schule / hole sie wieder ab / sitze mindestens zwei Stunden pro Tag mit ihr bei der Hausarbeit .../
3. /or ist Jäger /hat also Samstag nachmittags keine Sprechstunde /

4. /sie waren am Sonntag bei uns / und haben sich verabschiedet /

5. /ich bin bei ihr gewesen / und habe die eindrucksvolle Sammlung von Gewehren gesehen /

6. /wir haben Dezember / die Vereisungsgefahr ist gross .../

7. /der Tote war nicht mehr jung /vielleicht hatte er Bedenken /

Very few instances of an undivided co-ordinate sentence occurred in the data, and there is thus some justification for Crystal's operation A'2, which puts / after each component in such cases. Cases of unifying co-ordination, with no division, are not inconceivable, however. The most likely types of structure for such treatment are those which have ellipsis, particularly of the subject. Quirk et al. note (p. 592) that "intonation and punctuation marking may be absent if the ellipsis results in the linking of two lexical verbs":

'Mary washed (the clothes) and (Mary) ironed the clothes'

'Susan will sing and (Susan will) dance'

These cases are probably best treated as a single clause with co-ordinate verbs rather than as co-ordinate clauses. Quirk et al. go on to say, however: "often the effect of ellipsis is no more than to suggest that there is a combined process rather than two separate processes. This combinatory effect is common when the co-ordinated clauses are direct or indirect questions or subordinate to another clause, or when negation is involved". They give the example:

'Did Peter tell lies and hurt his friends?'

which, they say, "is one question, and may be answered by yes or no", whereas in the sentence

'Did Peter tell lies and did he hurt his friends?'

the two actions "are regarded as two separate processes and there are two separate questions".

This seems to parallel exactly the distinction between unifying and concatenating co-ordination made in 8.10.5.4 above. We need only add here that the distinction is also reflected, as in simple sentences, in the division into tone-groups. The first version here would normally be undivided and the second divided. If the first were divided, it would probably be ambiguous.

8.10.6.5 Adverbial clauses

In 8.10.5.5 the position and behaviour of adverbials in simple sentences was discussed. Despite the complexities and uncertainties found there, it was seen that it is nevertheless possible to discern a certain amount of regularity and system. The clausal counterpart of the adverbial is the adverbial clause; this is by no means as complex as the phrasal adverbial; there are fewer distinguishable types and the behaviour of these types is much more consistent.

Quirk et al. (1972) distinguish as major classes of adverbial clauses those of time, place, condition and concession, reason and cause, circumstance, purpose and result, and a few minor types: manner, comparison, proportion and preference. For German, Helbig and Buscha (1974) have a slightly different list: temporal, local, modal, causal, anstatt dass, and adversative, with modal divided into instrumental, comparative, 'fehlender Begleitumstand', proportional, specifying, and restrictive, and causal divided into causal proper, conditional, concessive, consecutive, and final.

These distinctions are, for the most part, irrelevant in the present context, since most have very similar properties. As far as their distribution in the sentence is concerned, we may recognise the same three positions as for phrasal adverbials: I, M, and E. The M position is very rare, though not impossible; in the majority of cases adverbial clauses are initial or final.

It is not immediately clear which of these two positions should be regarded as the norm. For German, Helbig and Buscha state unequivocally that "der häufigste Typ ist der Nachsatz" (i.e. the one in final position), but in fact most of their examples have the adverbial clause in initial position. For English, Quirk et al. suggest that position I is the norm for certain types (time, condition and concession) while result clauses only occur at E. Of adverbial clauses of reason, those with <u>because</u> tend to occur finally, those with <u>as</u> or <u>since</u> initially.

Of the adverbial clauses examined in this study, the majority were in fact in final position, with a proportion of about two final to one initial in both languages. Medial adverbial clauses were extremely rare. As far as the different types are concerned, the number of instances were not really sufficient to establish tendencies, though the most frequent type, the <u>if/wenn</u> clause, appeared readily in initial and final (and even medial) position.

In respect of tone-group division, adverbial clauses in position I clearly have a separate tone-group as the norm. The following are examples:

English

1. /if they did this / then the students would work /

2. /as far as the MCC is concerned/ they are only doing their duty/

German

1. /wenn ihr gern in unserem Haus bleiben wollt/ dann könnt ihr da gern ein oder zwei Wochen schlafen/

2. /als ihr Mann noch lebte / waren beide mehrmals (bei mir) /

3. /selbst wenn es so wäre / enthält Ihre Schlussfolgerung einen weiteren Irrtum/

The only exception to this principle sounds rather odd:

German

4. wenn du fertig bist mit der Referendarzeit da kriegst du glaub'ich kein Geld /

In position E there is more variation, but the majority had a separate tone-group. The following, for example, were not divided:

English

3. /the method of teaching that might be adopted if you accepted so many A levels as an entry qualification/

4. /I agree with you that you can do it where skills are involved/

German

5. Also ich hab' ein bisschen Bedenken wenn ich zurückkomme nach Heidelberg/

6. /... ein hübsches Steuererspарnis wenn es bei dem Geschäft um eine bedeutende Summe geht/

The following are examples of divided utterances:

English

5. /... which increases / as we get more students /

6. /except that they made me battalion adjutant /because I was good at paperwork/

7. /I did so / because I'm quite convinced /

8. /I don't think I could do it /unless I was prepared to make such a protest /

9. /I take a very different view /as you would expect /

German

7. /... zum Teil aus finanzieller Sicht /weil die Mieten sehr hoch sind/

8. /...die ich verrichte / weil man sie eben machen muss /

9. /die Bauern wenden sich nur an ihn /weil er der einzige Tierarzt im Umkreis von fünfzig Meilen ist /

10. /aber ich lebe ausserhalb des Dorfes /wie Sie sich überzeugen konnten/

11. /... dass alle Lehrer angestellt werden /obwohl sie vielleicht keine Arbeitstelle kriegen /

12. /... dass sie einen bestimmten Prozentsatz des Gelds trotzdem bezahlt kriegen/ auch wenn sie keine Arbeitstelle kriegen/

For completeness, a case of a medial adverbial clause, with a separate tone-group, may be included:

German

13. /Damit ich meinen Kindern/ wenn sie mit Fragen kommen / Rede und Antwort stehen kann/

Taking adverbial clauses in all positions together, it is clear that the majority have a separate tone-group, wherever they

occur. Only in final position do we find adverbial clauses regularly without a separate tone-group, and even here not in the majority of cases. The possibility of having undivided sentences with a final adverbial clause suggests that final position should be regarded as the norm for such clauses, in which case the informational independence of adverbial clauses in other positions is explicable. The fact that adverbial clauses may often have a separate tone-group even in final position must be attributed to partition. Most adverbial clauses apparently have a considerable amount of 'semantic weight' (cf. p. 567, above); many are also optional constituents and are thus likely to be less integrated into the sentence than other constituents.

As far as other symptoms of informational independence are concerned, all the final adverbial clauses in German are subject to Ausrahmung, in appropriate conditions.

8.10.6.6 Comment clauses

Comment clauses are characteristically expressions like you know, I think, etc., appended or inserted into the sentence. Quirk et al. recognise several types (p.778):

(1) like a main clause: I believe

(2) like an adverbial clause: as you know

(3) like a 'nominal relative' clause: what's more

(4) to-infinitive clause: to be honest

(5) -ing clause: speaking as a layman

These clauses resemble disjuncts (cf. above 8.10.5.5) in being "somewhat loosely related to the rest of the clause"; they may occur initially, medially, or finally.

The following are examples from the data containing comment clauses of various types in different positions:

English

Medial

1. /who I think wish to look at cricket which is a very good game to look at anyway/

Final

2. /everything does you know/

3. /in the library there you know /

4. /most praiseworthy effort /I think/

German

Initial

1. /ich mein' einerseits seh'ich ja kein eigentlich keine neue Alternative/

Medial

2. /jedenfalls sind sie glaub'ich für eine Woche hingefahren/

3. /... war glaub'ich ganz schön was los /

4. /Mrs Richmond ist sagen wir eine Alkoholikerin /

5. /es gibt eine Bewusstseinswehrung /um das moderne Wort zu gebrauchen / bei den deutschen Frauen /

Final

6. /die Leute im Dorf haben wieder mal geklatscht wie ich sehe/

7. /...gewisse Briefe die ihm zugestellt worden sind nehm'ich an/

8. /Antiquitätenhändler bezahlen mit Scheck soviel ich weiss/

It will be noticed that all of these, with the exception of the English sentence 4 and the German 5, remain intonationally undivided. (This proportion of undivided to divided is not necessarily generalisable in view of the small number of examples representing only a few types).

It is convenient to distinguish the first category of Quirk et al. from all the others. All the comment clauses in the English examples belong to this type, as do the first four of the German. In medial position (1 and 2 of the English sentences, 3 and 4 of the German) these do not normally have a separate tone-group, though they may do so. In fact, without the separate tone-group they are hardly distinguishable from simple adverbials like really, apparently, or vermutlich, anscheinend, etc. There is no reason to consider them as anything other than fully integrated into the sentence, both syntactically and informationally.

In initial position additional items occur, e.g. I mean, ich meine, which do not occur readily elsewhere (cf. German example 1). It is difficult to distinguish comment clauses of the 'main clause' type in initial position from genuine main clauses with dependent declaratives (cf. 8.10.6.1), but there does nevertheless appear to be a difference. Example 1 of the German sentences is of the comment type rather than a main clause, since as a main clause it would be followed by a clause of a slightly different structure. But whatever the interpretation here the same principle applies: there is generally no separate tone-group.

In final position these comment clauses do not all behave in the same way. In English, the 'weakest' of the main clause type

(e.g. I think, I see, you know) would rarely have a separate tone-group, but 'stronger' forms, with more lexical content (e.g. I believe, I suppose, I expect, etc.) do seem to prefer a separate tone-group, generally a minor tone-group forming a postparatonic with tone E3, reflecting their independent, yet subordinate, status (cf. below). (Example 4 of the English sentences, which has a clause of the first type and a separate tone-group, must be considered exceptional.) The information status of these clauses thus seems to depend not only on their syntactic function but also on their 'semantic weight'. In German, postparatonics do not occur (cf. chapter 7, above), and hence such clauses are not given a separate tone-group.

Comment clauses not of the 'main clause' type, e.g. adverbial clauses, infinitival or participial expressions, substantival clauses, etc., may also occur in initial, medial, or final position. In initial and medial positions they seem regularly to have a separate tone-group. The following sentences would in all likelihood be divided up (cf. example 5 of the German sentences):

as I understand it, we are going to Edinburgh tomorrow

it is, to put it bluntly, rather a mess

they come, generally speaking, from the south

um die Wahrheit zu sagen, er ist nicht sehr verlässlich

er benimmt sich, ehrlich gesagt, wie ein Esel

In final position these clauses behave like the 'stronger' of the main clause type: in English, they tend to have a separate (minor) tone-group; in German, which does not have final minor tone-groups, they generally do not have a separate tone-group, as in

the German examples 6, 7 and 8.

We may draw some conclusions, albeit rather speculative ones, from this pattern of occurrence. Comment clauses are of two types, a 'main clause' type and a non-main-clause type. Of the former, the most common instances are syntactically fully integrated into the sentence and behave largely like simple adverbs (with the exception of not causing inversion in German); the remainder, together with the non-main-clause type, are not so well integrated, and behave like disjuncts. Although they are not integrated into the sentence syntactically, they nevertheless are informationally subordinated to it; they take a separate tone-group in English, but this must be minor. Since German does not allow minor tone-groups in final position, final comment clauses do not have a separate tone-group in German.

6.10.6.7 Tag questions

Tags resemble some comment clauses to the extent that they are clauses - syntactically main clauses - appended to others as an addition or qualification, but unlike comment clauses they are interrogative. Their syntactic characteristics are rather different in English and German, though this does not appear to have any effect on their function or behaviour with respect to tone-group division.

In English, tag questions have a fairly clearly defined set of syntactic characteristics (cf. Quirk et al. p. 391): they consist of an auxiliary and a subject pronoun, where the auxiliary repeats that of the main clause, or, if there is none, then is the

appropriate form of do, and the pronoun repeats that of the main clause, or is the appropriate pronoun to replace the subject of the main clause. In most cases the tag is positive if the main clause is negative, and negative if it is positive, though the combinations positive + positive, and, very rarely, negative + negative, are also possible.

German tags are syntactically even more restricted. They are not strictly clauses, since they have no verb; in effect they are restricted to a small number of set phrases, viz. nicht wahr, ja, oder, oell, oder nicht, oder doch and perhaps a few others. Only the last two of these depend on the polarity of the main clause oder nicht appearing with a positive clause, and oder doch with a negative clause. Oell is regional, even dialectal.

The position of these tags in the sentence is almost exclusively final, though other positions are occasionally possible if the main verb is not final, e.g.

'He said, didn't he, that I could come'

The intonational behaviour of tags is more straightforward than that of other clauses. In almost all cases the tag has a separate tone-group. There are, of course, well known differences of meaning associated with different tones, but these do not concern us at this point. It is also possible, though rare, to have both main clause and tag as one tone-group, with the nucleus on the main clause, e.g.:

/He's coming is he/

/er kommt nicht wahr/

but this does not apply to all the German tags. In fact, a disambiguating function of intonation could be found here where

certain items constitute a tag with a separate tone-group, but do not without it:

tag: /er kommt / nicht / (tones G1+G2)

non-tag: /er kommt nicht/

tag: /er kommt/ oder nicht (tones G1+G2)

non-tag: /(ob) er kommt oder nicht/

In the rare case of a medial tag, a separate tone-group is almost obligatory.

Since both main clause and tag are, in effect, separate 'speech acts', statement and question, it is not surprising to find that they are regularly separate information units.

8.10.6.8 Non-finite clauses

The definition of the clause is usually held to require the presence of a finite verb; nevertheless, many clause-like items occur which lack such a verb. In many of these a verbal element is present in a non-finite form, while in some there is no verbal element at all.

Quirk at al. (p. 722) establish three main classes of English clause according to 'structural type': finite, non-finite, and verbless. The non-finite class has a number of sub-types:

I infinitive with to

II infinitive without to

III -ing participle

IV -ed participle

Type II is rare and will be ignored here; types III and IV can

be amalgamated. We are thus left with infinitival and participial clauses.

In German, too, similar types can be established, but the participial type is much rarer than in English, and did not occur at all in the data examined. Many cases where a participle is used in English would have a finite or infinitive clause in German.

Non-finite clauses can appear in a variety of functions, but always as subordinate clauses. Most can be replaced by finite expressions: participial clauses often by finite adverbial clauses, and infinitive clauses often by that clauses. As a result, these non-finite types occur in positions suitable for their finite equivalents, and their intonational treatment is also analogous.

The following are examples containing participial clauses in English:

1. /it's all right having a class of five people/
2. /but having done so / I just want to draw your attention to the difficulty here/
3. /... which we possess / compared to many other countries/

As can be seen, 1 is undivided. Its participial clause is equivalent to an adverbial clause (e.g. 'if you have...') which, in final position, frequently has a separate tone-group, but also frequently does not. Alternatively, this participial clause can be seen as in apposition to it, which is a dummy element, and would not be expected to have a separate tone-group from the appositional clause.

The two divided utterances are also regular; in 2 the participial clause is an initial adverbial, in 3 it could be construed as a final

adverbial. In the former case a separate tone-group is the norm, in the latter it is optional (cf. above 8.10.6.5). Here it is likely to be divided because the participial clause is not really part of the same sentence: the adverbial does not qualify possess but rather some other suppressed verb, i.e. the sentence is elliptical for e.g.

'... which you would find that we possess if you compared us with other countries'

The other major non-finite clause type is infinitival. Here the distinction between verbal elements forming separate clauses and those forming a complex verbal element in a single clause is not always entirely clear. For example the sentence:

'I want to take him to London to see the Houses of Parliament' contains two infinitival expressions: to take him to London and to see the Houses of Parliament. Little purpose would be served by considering the first of these to be an infinitival clause, however; the to is produced simply by the presence of want, which is no more than an auxiliary here. The second infinitival expression, on the other hand, is best seen as a clause, corresponding to a finite clause of purpose.

The following are examples of infinitival clauses from the data:

English

4. /I think it's not inaccurate to suggest .../
5. /it was enough to point /
6. /unless I were prepared to make such a protest/
7. /... which is a very good game to look at anyway/
8. /it is not for them to judge/

9. /it is difficult to consider /

10. /... makes the objectives extremely difficult in fact to specify/

11. /I don't think it would be fair to say that this is general/

12. /I went to Twickenham /peacefully to demonstrate /

13. /they're there / to maintain the high standards of sport /

German

1. /...vordringlich arbeiten um Geld zu verdienen /

2. /... Bemühungen sich selbständig zu machen /

3. /Arbeit ist nicht nur dazu da um Geld zu verdienen /

4. /ich glaubte bei ihm eine gewisse Zurückhaltung zu spüren/

5. /die Studenten jetzt gewissermassen gezwungen sind hart zu arbeiten/

6. /sie glaubte im Alkohol Zuflucht und Vergessen zu finden/

7. /... die unerfreuliche Gewohnheit hat zu trinken/

8. /... gedenkt sie mehrere Interessenten gegeneinander auszuspielen/

9. /aber ich gehe arbeiten/um auch weiter mit in dem Leben zu stehen /

10. /meine Rolle besteht vielmehr darin /Tatsachen zu sammeln .../

11. /... die logische Verbindung zu suchen / um sie miteinander in Einklang zu bringen/

12. /... dass du keine Zeit mehr hast/ bisschen umzusehen /

13. /... hat die Dame das unbestrittene Recht/sich ihrem Lieblingszeitvertreib hinzugeben/

14. /ich habe mir nie erlaubt /danach zu fragen /

15. /... die gezwungen ist/ihren ganzen Besitz nacheinander zu verkaufen/

16. /vielleicht hatte er Bedenken / die Fahrt im Wagen zu machen /

All but the last two of the English examples are undivided; the first eight of the German examples are undivided, the last eight divided.

On the basis of these examples it is difficult to arrive at a firm conclusion about the relationship between infinitival clauses and tone-group division. They do show a greater tendency to give these clauses a separate tone-group in German than in English, though the reason for this difference is not at all clear. In the German examples there are cases where the same construction is in one case undivided, in another divided (1 and 9, 5 and 15). It is evident then, that there is no absolute constraint here; it seems reasonable to treat the undivided form as the norm and to regard the divided form as a case of partition.

A few more specific tendencies may nevertheless be noted. In English an infinitival clause following an adjective (5, 7, 10, 11, 12) seems most naturally spoken without a division, as here (there are no comparable German examples but the same appears to hold for the same construction in German). Infinitival clauses following a noun are of several types. The German examples, 2, 7, 13 and 16 are appositional, and they are restrictive; such clauses, like their phrasal counterparts, regularly have no separate tone-group. The same would apply to the equivalent English structures. However, only 2 and 7 are here undivided, so that 13 and 16 must be seen as cases of partition.

8.10.7 Conclusions on the content of the information unit

In the above sections (8.10.1 - 8.10.6) we have considered a

8.10.7 Conclusions on the content of the silo unit

In the above sections (8.10.1-8.10.6) we have considered a variety of structures and the way in which they can be, and are, regularly treated from the point of view of tone-group division. It has been possible to establish certain types of structure which are regularly divided, and certain types which are regularly undivided.

Most discussions of these phenomena in the literature on the subject deal with these correspondences between syntactic structure and information structure as rather isolated, even random, relationships. In the present study an attempt has been made to look for more general principles and motivating factors which underlie the various individual correspondences. There are, of course, dangers here. It is all too easy, in seeking general principles of this sort, to resort to somewhat dubious speculations about the psychology of linguistic communication. It is thus necessary to exercise restraint and caution, while at the same time being prepared to draw general conclusions where these seem warranted.

In this section the various strands of the arguments put forward above will be drawn together in an attempt to formulate a set of general principles which can be said to underlie information distribution in English and German. This will involve restating some of the previous claims and conclusions and combining them into more general statements. No attempt will be made, however, to restate or summarise the details of individual correspondences between specific syntactic structures and tone-groups.

As a starting point we may say that utterances consist of one or more information units, realised phonologically as tone-groups, each of which has an information focus, realised phonologically as

the nucleus of the tone-group. No straightforward relationship exists between such units and the syntactic structure of the utterance: an information unit is not a misnomer for some sort of syntactic unit, nor is the tone-group the phonological realisation of one. Nevertheless, it is clear that the sentence, because of its grammatical cohesion, is ideally suited to being an information unit; this applies, too, though to a far less extent, to smaller syntactic units: the internal cohesion which is possessed by grammatical units is inevitably a factor in determining where and when utterances are divided up into information units.

The grammatical relations which hold between elements constituting a syntactic unit such as a sentence are not of a temporal kind though, inevitably, there must be a temporal, linear, arrangement of the units in the majority of cases. The information unit, on the other hand, is <u>defined</u> in terms of temporal relations: it is one temporal unit in the communication of linguistic information. This difference between grammatical structure and information structure is crucial for an understanding of the rôle of tone-group division; in so far as grammatical structure is <u>not</u> linear, it may to some extent conflict with the linear nature of information structure; but the inevitable linearity of the sequential arrangement of grammatical elements in the sentence provides a source of interaction - in part co-operation - between syntactic structure and information structure.

Perhaps the most straightforward, though the least predictable, case of interaction between syntactic structure and information structure is what has here been called 'partition' (cf. 8.10.3,

8.10.4). In this case, a single, syntactically cohesive structure is divided up into more than one information unit; this seems to reflect a rather elusive factor of 'semantic weight', which is possessed by an individual element or elements of the structure. The 'newness', contrastiveness, length, or lexical content may certainly play a part here, but this notion of 'weight' is essentially independent of such factors, being much more contextually determined. The independence of information units from syntactic structure can be seen here in the way in which information groupings may often conflict with, and override, syntactic groupings, though syntactic structure is evidently not entirely irrelevant here.

It is important to note that syntactic structure has a variety of functions. One of these, certainly, is the indication of grammatical relations in the narrow sense of subject, object, etc. But syntactic structure also has a <u>textual</u> rôle, indicating what was traditionally called the 'psychological' structure of the sentence. Grammatical relations themselves have textual significance, of course, in that it is of textual importance what we make the subject of the sentence, but in addition a major textual device is the sequence of sentence elements. Since this exploits, indeed depends on, the temporal dimension, we would expect a certain amount of interaction with the inherently temporal information structure. The main points of contact between information structure and syntactic structure are thus found where the latter is being used as a textual device, rather than as a device for indicating 'logical' relations.

The minimal use of syntactic structure for textual purposes is the 'unmarked' structure in which all items are in their 'neutral',

and least communicative, positions. Not surprisingly, we may say that the 'neutral' information structure for such sentences is a single, undivided information unit. In such a case, variations in information distribution may be provided by partition, so that partition is a 'marked' information structure with an 'unmarked' syntactic structure. Complex sentences are more likely to be partitioned than simple sentences, as the 'clausal' status of a constituent tends to give it the extra 'weight' which leads to partition.

It is well known, and it has been discussed and exemplified in the preceding sections, that sentences containing certain types of element (e.g. non-defining relative clauses, some appositional and co-ordinated phrases and clauses, some adverbials such as 'disjuncts' and 'conjuncts' etc.) are regularly divided up into more than one information unit. The attempt has been made here to show that such items are inherently less integrated into the sentence structure than certain other items, a characteristic which is often reflected in their syntactic behaviour, too.

This notion of 'integration ' is an important one, and it is related to the principle of 'cohesion' of grammatical structures. We have seen that grammatical units whose constituent parts are subject to such cohesion are regularly, and naturally, to be found as single information units. By the same token, grammatical units whose constituent parts are not completely integrated into the structure of the sentence have less cohesion, and are less likely to be treated in a unitary fashion from the point of view of information structure. Elements which are less integrated are more likely to be informationally independent.

Integration is not just a matter of the inherent properties of certain species of constituent, however. It seems clear, too, that certain positions in the sentence are less integrated than others, and hence any item which occurs in such a position is thereby rendered more independent. What these positions are will naturally vary with the type of element concerned, since, in a syntactically unmarked structure, all items will be fully integrated. In general terms, however, the most obvious positions for such independence are those which are temporally most 'exposed': initial and final position.

Initial, or 'theme', position is for most types of constituent 'marked', since this position is normally reserved, in unmarked structures, for the subject. That this position is relatively independent, even for the subject, however, is demonstrated by the frequent partition of sentences containing long subjects, with a separate information unit for the subject. Certain inherently non-integrated items, such as disjuncts and conjuncts, tend to be attracted to initial position, with appropriate informational independence, while others, such as objects, adjuncts, adverbial clauses, and report clauses,acquire informational independence (as 'marked theme') by being moved to this position.

Final position is somewhat more integrated than initial position, and several types of constituent, such as report clauses and adverbial clauses, regularly appear here without being informationally independent, while this is also the regular position for certain inherently more independent items, like tag questions, which are

usually also informationally independent. In German, the independence of an item in final position is often reflected syntactically, since it may be placed outside the verbal frame and is thus not syntactically integrated into the sentence.

Medial position is, understandably, generally the most integrated and it is thus the preferred position for several types of more 'grammatical' items and weak adverbials. When inherently independent items, such as disjuncts, non-defining relative clauses, tag questions, and the like, appear in this position, they generally retain their independence and are treated as interpolations, which break up the sentence.

It can be seen that this approach to information structure attempts to see the apparently idiosyncratic behaviour of individual items in terms of two main factors: the inherent independence (or lack of independence) of certain types of constituent, and the syntactic processes operating within the sentence, which allow constituents to be moved from their neutral positions into less integrated ones. The combination of these two factors interacts with the linear division of an utterance into a succession of information units in such a way that the independence of an item may be reinforced by information structure.

In this exposition of the basic principles of this approach there has been no attempt to deal separately with the phenomena of English and German. This is deliberate; one of the main claims advanced here is that these basic principles relating to the role of information structure and its interaction with syntactic features of

the utterances are identical in the two languages. This does not mean that every aspect of the correspondence of individual sentence elements with information units is the same; on the contrary, numerous cases of difference have been noted above. But the differences are not to be attributed to differences in these basic principles but to differences of syntactic structure in the two languages, and of syntactic properties of individual elements. As an example: the verbal frame in German imposes a variety of constraints on the position of elements in the sentence, so that different items can be considered as 'unmarked' in theme position, the possibilities of occurrence of medial adverbials are severely restricted, and the status of final elements can be different according to whether or not there is Ausrahmung. This means that the results of interaction of thematisation, medial adverbials, and final elements with the principles of information structure are likely to be different in German and English. But this does not affect the basic principles themselves.

Assessments of the specific 'information value' of individual items and of individual positions in the sentence, as well as judgments as to 'regular' or 'normal' tone-group division on which the principles depend, are, of course, open to discussion and to amendment or refinement. Not all the judgments made here may be valid, and it is likely that other observers will come to different conclusions in specific instances. But the approach presented here seems to offer greater explanatory power than most of the conventional treatments of these phenomena allow.

8.11 The complex information unit

We have so far considered the division of utterances into information units as reflected in the division of tone-groups. The tone-group is, however, not the only tonal unit recognised in this study: we also have the higher ranking unit of the paratone-group. Since it is accepted that the tone-group corresponds to an information unit, it is natural, indeed inevitable, that we should see in the paratone-group the phonological equivalent of a different, and higher ranking, information unit. Of course, since the paratone-group has not been recognised in the literature, there is no explicit discussion of such an information unit, nor have any rules been formulated, comparable to those for the tone-group, to specify the relationship between such a higher ranking information unit and syntactic units of some kind.

It is not possible to embark here on a detailed examination of individual syntactic structures and their relationship to information units of this kind, and it seems that in any case most of the complexities in the relationship between syntax and information structure are to be found at the rank of the tone-group rather than at that of the paratone-group. There is nevertheless room for some discussion here of the basic principles involved.

In the discussion of the paratone-group, above (chapter 7), it was conceded that there are certain difficulties involved in delimiting this unit as well as in describing its structure. The chief problem with delimitation is that it does not seem to be possible to establish paratone-groups on the basis of the sequences of tones alone; that is, given a string of tone-groups, there is in many cases no

mechanical procedure for grouping them into paratone-groups on the basis of their tonal features. Although tone-groups with a basically falling tone (E1, E5, G1, G4) are always major tone-groups, those with a basically non-falling tone (E2, E3, E4, G2, G3) may be either major or minor, so that an appeal to tone-type will not necessarily produce unambiguous structures. More importantly, the possibility of co-ordinate paratone-groups with more than one major tone-group makes it difficult, indeed often impossible, to distinguish co-ordinate paratone-groups from sequences of paratone-groups on a purely phonological basis.

The solution to this problem is an appeal to grammatical structure: a string of tone-groups is regarded as one paratone-group (assuming that it satisfies one of the possible structural descriptions of a paratone-group) if it has a certain grammatical coherence; where it does not, it may be treated as two or more paratone-groups (provided of course, that each paratone-group satisfies a possible structural description).

The implications of this use of grammatical structure in delimiting paratone-groups for the relationship between paratone-groups and syntactic structure are obvious: since a major defining characteristic of the paratone-group is its co-extensiveness with the grammatical sentence, it is hardly surprising to find a more or less one-to-one correspondence between paratone-groups and sentences.

This situation is naturally not entirely satisfactory. Since at the rank of the tone-group there is no one-to-one correspondence between information units and syntactic units, we should expect a

similar disparity here: there should be cases where the paratone-group is less than a sentence and cases where it is more.

The difficulties do not lie solely in the definition of the paratone-group, however; the sentence, too, is not at all easy to delimit. That we can identify sentences in their written form as beginning with a capital letter and ending with a full stop is of course irrelevant, and begs the question. In spoken language we might find the delimitation of sentences more difficult. Where syntactic markers of subordination or co-ordina tion of clauses are present, the difficulties are less acute, but such markers are not infrequently absent. In this case we must rely on an impression of a close connection between successive parts of the utterance. And one of the factors which may give such an impression is undoubtedly the degree of intonational connection between these parts, i.e. whether they constitute a single paratone-group.

It is thus by no means as unreasonable as might at first be thought to base the delimitation of paratone-groups on a syntactic unit, since the latter is partly delimited in terms of the former. This procedure amounts to no more than the claim that there is likely to be a coherent syntactic content to an information unit - a claim that has in any case already been advanced in connection with the tone-group.

The higher ranking information unit corresponding to the paratone-group and the sentence will here be called a complex information unit. It is 'complex' because it consists of one or more 'simple' information units - the 'information units' of our previous discussion. Recognition of such a unit naturally has implications for the nature

of information structure as a whole: it implies a more complex structuring of 'information' than merely the division of utterances into units, each with its 'information point' or 'focus', following each other in a linear sequence. In addition we must recognise a more complex entity which will potentially include more than one unit of this kind, and which imposes a ranking of these units into a 'major' and a 'minor' type. To this extent, then, the view of information structure as essentially linear, is not entirely accurate; this only applies at the rank of the 'simple' information unit.

The factors that are involved in determining which simple information units are major and which are minor will be considered in the next chapter. Here we are concerned only with the existence of this complex unit, and the interpretation of its nature and rôle. In particular, we may ask under what circumstances simple information units are incorporated into larger and more complex entities.

We have seen in earlier sections of this chapter that certain types of syntactic elements in certain positions in the sentence may be given a separate tone-group. The conclusion drawn from this was that different degrees of integration of an element into the sentence are reflected in different degrees of informational independence. It is important to note, nevertheless, that this informational independence is not total; elements which are given a separate information unit are not thereby completely divorced from the rest of the utterance but still belong syntactically, however loosely, to it. For example, such regularly independent elements as non-defining relative clauses, tag questions, disjuncts, and the like, are still closely connected to the sentences of which they form a part. This

connection may be overtly syntactic, as, for example, with a marked theme in German, which forms part of its sentence by virtue of the inversion it induces, it may be produced by the obligatory nature of the element in the structure in question, by the inability of the element to stand alone, and so on. But the connection can also be created intonationally: though intonation may indicate or reinforce the informational <u>independence</u> of an item by giving it a separate tone-group, it may also indicate the <u>connection</u> between such independent items by including them in the same paratone-group.

In most of the examples given in the preceding sections where tone-group division takes place it will be found that one of the tone-groups in question is subordinated to the other. This applies whether or not the division is motivated or unmotivated. In some cases there is co-ordination of tone-groups rather than subordination, but in all cases we can treat the divided utterance <u>as a whole</u> as a single paratone-group. Since paratone-groups can consist of a single major tone-group as well as a sequence of tone-groups, both divided and undivided sentences can constitute a complex information unit, and, what is more, <u>the same sentence</u> in its divided and undivided versions, where both are possible, constitutes such a unit. This seems to be a further justification for the introduction of the paratone-group: it enables us to account for the informational unity of sentences, however they may be divided up into tone-groups.

Chapter 9: Information Focus

9.1 Introduction

A further dimension of meaning with which we need to concern ourselves is that associated with the location of the tonic, or nucleus, within the tone-group ('tonicity'), and with the location of the paratonic within the paratone-group ('paratonicity'). The functional rôle of these two variables may be subsumed under the title 'information focus'.

Of the systems relevant at the rank of the tone-group, tonicity has been more widely discussed than tonality, perhaps because of the greater relevance of the placement of the 'sentence stress' for segmental phonology. As with tonality, there is considerable disagreement about the relation of the tonic to syntax, but also at least a modest amount of agreement as to the kind of significance that tonic placement has, as will be seen below.

There has, of course, been no explicit discussion of 'paratonicity' since the paratone-group has not been hitherto recognised. Nevertheless, some of the factors that can be considered under this heading have been noted, though they have naturally been given a rather di fferent interpretation from that put forward in the present study.

In this chapter, the rôle of tonicity and paratonicity will be considered in more detail, with regard to both the general significance of these variables and their specific manifestations in English and German. As in the case of tonality, an attempt will be made to seek general motivating principles rather than merely to list individual instances. It will also be shown how the different characteristics of tonicity and paratonicity in the two languages

can be reduced to common principles.

9.2 Views on tonic placement

We have already considered at various points in this study (cf. 3.3.2; 3.3.3; 3.4.3.1; 3.4.4; 3.4.5) the views of prominent scholars on the significance of the location of the tonic within the tone-group. We must now examine this matter in more detail. As in the case of tone-group division, the views are diverse and often conflicting, a reflection of the complexity and inherent difficulty of the phenomena under investigation. We should not, therefore, expect to find a simple answer to the basic questions raised.

The traditional pedagogical works are somewhat disappointing in their treatment of tonic placement. Although these works have contributed much to our understanding of the phonological factors involved, with the recognition of the rôle of the nucleus as the centre of the intonation pattern, discussion of the semantic or syntactic significance of the nucleus is seldom encountered, and where there is discussion it is generally unilluminating. The main point made is that the nucleus falls on the 'most important word' of the sentence. O'Connor and Arnold (1961), for example, say that the 'important words' are 'made prominent' by means of 'accent'; for German, von Essen (1956a) says that the 'Schwerpunkt' falls on 'das sinnwichtigste Wort'. Almost all writers make a further claim: that the nucleus will come at the end of the tone-group. Kingdon (1958, p. 6) makes it coincide with the 'last fully stressed syllable', and O'Connor and Arnold with 'the last stressed syllable of the last

prominent word in a sense-group'. To this principle writers generally add the qualification that the nucleus may come elsewhere, but only in cases of 'contrast' or 'emphasis'. Schubiger (1958, p.107) considers this 'shifted nucleus' to be 'engendered by emotion'; Kingdon (1958, p. 39) speaks of 'emphasis by nuclear tone-shift'; Stock and Zacharias (1973, p. 83 ff.) allow the 'accent' to be shifted under the influence of 'Affekt'.

Remarks of this kind are not particularly helpful as they do not really come to grips with either the meaning of tonic placement as such or with the relationship between the location of the tonic and other features of the utterance. In particular the notion of 'important word' is not clarified; on the one hand it is claimed that the nucleus will fall on the most important word, but on the other it is asserted that any word may be made important if the nucleus falls on it. Similarly it is stated that the nucleus will come at the end, but cases are adduced where it can come earlier. In the absence of any clarification of the notion of 'importance' or of 'normal' position of the nucleus, these claims, when reduced to their basic forms, hardly amount to more than saying that (i) the nucleus falls on the most important word, where the latter is defined as the word on which the nucleus falls, and (ii) the nucleus comes at the end except in those cases where it does not.

Two basic issues are raised by these earlier studies: the semantic significance of tonic placement, and the place where the tonic falls in relation to other features of the utterance. Attempts have been made to improve on the earlier statements on both these

questions. The second question has attracted the attention of generative phonologists, largely as an extension of work on rules for word-stress, which have played a prominent rôle in the theory because of their morphophonemic significance, especially in English. The starting point here has been the conception of stress as a set of different 'degrees' which generative phonology has inherited from Post-Bloomfieldian phonemics (cf. above, 2.2.3). With this view of stress it is natural to wish to extend rules for stress placement to the 'highest'degree: 'sentence stress'. The mechanism of stress assignment in the 'standard theory' of generative phonology (i.e. that presented in Chomsky and Halle, 1968), has already been discussed, as well as its relationship to the rank-scale adopted in the present study (c.f. 2.2.3, 2.3.8). What we are concerned with here is the specific rule or rules which assign 'primary stress' above the level of the word, and especially on the final cycle. Such rules may be reasonably equated with rules for assigning the tonic. The specific rule given by Chomsky and Halle which serves this purpose is the 'Nuclear Stress Rule', which can be formulated as follows: (p. 240)

$$V \longrightarrow \left[1\text{stress}\right] \; / \left[\#\,\#\,X\left[\frac{\quad}{1\text{stress}}\right]\; Y\,\#\,\#\right]$$

where Y contains no vowel with the feature $\left[1\text{stress}\right]$

This rule locates the nuclear stress on the last item which has primary stress by the end of the previous cycle, all other stresses being automatically reduced by one degree. This will ensure that the nuclear stress falls on the last constituent of the sentence,

though where it falls <u>within</u> that constituent depends on previous rules which themselves depend on the internal structure of the constituent.

The illustration of the application of this rule given by Chomsky and Halle (p. 22) is the sentence 'John's blackboard-eraser was stolen', which has the following approximate derivation:

$$[_{S}[_{NP}[_{D}\text{John's}]_{D}\ [_{N}[_{N}[_{A}\text{black}]_{A}\ [_{N}\text{board}]_{N}]_{N}\ [_{N}\text{eraser}]_{N}]_{N}]_{NP}\ [_{V}\text{was stolen}]_{V}]_{S}$$

Cycle 1	1	1	1	1		1
Cycle 2		1	2			
Cycle 3		1	3	2		
Cycle 4	2	1	4	3		
Cycle 5	3	2	5	4		1

The first four cycles do not concern us here; they use word and compound stress rules. The Nuclear Stress Rule comes into play on the fifth cycle, placing the nuclear stress on the last item which already has primary stress, viz. <u>stolen</u>.

It is clear that Chomsky and Halle's approach is really no advance on less formalised versions which simply place the nucleus at th e end of the sentence. It is simply a more explicit formulation of this principle. Like others before them, Chomsky and Halle also exclude cases of 'shifted' and 'contrastive' stress.

Criticism can be, and has been, levelled at the cyclical principle involved in Chomsky and Halle's stress rules (cf. especially Schmerling, 1976), on the grounds that it makes the wrong predictions

with regard to the non-nuclear stresses in an utterance. Here, however, we are concerned only with the nuclear stress; does their approach make the right predictions here, even for cases not involving contrast?

One instance where Chomsky and Halle themselves concede that their rules do not give the right result is the contrast cited by Newman (1946) between pairs such as 'George has plans to leave' and 'George has plans to leave', each having a different syntactic structure and semantic interpretation. As Chomsky and Halle say (p. 24): "it is not at all clear what features of syntactic structure determine this difference". Their rules will only produce the version with the nucleus on leave, whatever the syntactic structure.

This and a number of other similar cases are taken up by Bresnan (1971) (cf. also Lakoff, 1972; Berman and Szamosi, 1972; Bolinger, 1972; Bresnan, 1972). Bresnan explains the difference between Newman's two sentences by asserting that underlying the first is a structure containing the sentence 'George leave plans', while underlying the second is a structure containing the sentence 'George leave'. With neutral tonicity, the Nuclear Stress Rule would assign the nucleus in these underlying sentences to plans and leave respectively, hence it also falls on these items in the derived structure. This leads to the rather disruptive conclusion that the Nuclear Stress Rule must apply before the syntactic rules which shift the items to their surface positions: "The Nuclear Stress Rule is ordered after all the syntactic transformations on each transformational cycle". That a phonological rule must precede a syntactic rule naturally has far-reaching consequences for the form of a grammar.

This theoretical point aside, it is evident that although Bresnan is apparently strengthening the case against Chomsky and Halle's Nuclear Stress Rule, since these are types of sentence where it does not appear to work, the conclusion she arrives at has just the opposite effect. In her analysis, the different position of the nuclear stress in these sentences can be obtained by applying the Nuclear Stress Rule to underlying rather than superficial syntactic structures. Thus, far from weakening this rule she in fact strengthens it by allowing it to apply at a deeper level and by using it to derive sentences with different stress patterns.

It can be seen, therefore, that Bresnan shares the assumptions of Chomsky and Halle about the ultimate predictability of tonic placement from the syntactic structure of the sentence. Bresnan's analysis is aimed at improving Chomsky and Halle's approach by refining the apparatus used so as to predict more accurately where the tonic will fall. Such an approach is not adopted by all generative grammarians, however. Lakoff (1972), for example, gives a rather different interpretation in his intervention in this debate. In his approach, the item on which the nucleus will fall is determined by a 'global constraint'. For a noun phrase to have the nucleus, for example, it must conform to three requirements:

(i) in logical structure it is a direct object

(ii) in shallow structure it has no clause-mates following it

(iii) in surface structure it is a clause-mate of its logical predicate

Such conditions go well beyond the apparatus of the 'standard theory' of generative grammar, but they are for that reason perhaps more easily

translatable into non-generative terms. It will be seen that the criteria for tonic placement are not just surface structure features as in Chomsky and Halle's rule, but involve what Lakoff calls 'logical structure'. In so far as this comes closer to what non-generative scholars might call the 'meaning' of the items in question this approach suggests that semantic aspects of sentences are involved here. Nevertheless, it is clear that the semantic aspects are of a basically grammatical kind.

Attempts to predict the location of the nucleus from grammatical structure are not confined to writers within a generative framework. One of those who makes a determined effort to find syntactic conditioning factors is Crystal (1975, p. 22 ff.). Adopting some of the principles established by Halliday (see below), he makes an initial distinction between <u>lexical</u> and <u>grammatical</u> items, and considers that "the norm of tonic placement will be on the final lexical item". As Crystal concedes, "this is a fairly traditional and uncontroversial claim". This allows three types of deviation from the norm: where the nucleus falls on (a) a "pre-final grammatical item", (b) a "final grammatical item", and (c) a "pre-final lexical item". The first two of these are grouped together since "the conditions operatings on positions (a) and (b) are the same". Thus Crystal has two types of case to predict: where the nucleus is on a grammatical item, and where it is on a non-final lexical item.

As far as the first of these is concerned, Crystal claims that where the grammatical items occur in closed sets, "the presence of tonicity ... produces a semantic contrast between the marked item

and some other member(s) of the same system". In cases of grammatical items which do not seem to operate in closed sets, "one has to assume that it is the attitude of the speaker which has conditioned the tonicity".

Stating the conditions which cause a non-final lexical item to bear the tonic is "a more complicated matter", as these are not "wholly syntactic in character". Crystal gives five cases of syntactic conditioning, viz:

(1) final adverbial disjunct/conjunct: the tonic is placed on the next previous lexical item, e.g. /he didn't <u>do</u> it of course/

(2) final direct speech marker: the tonic is placed on the next previous lexical item, e.g. /I don't want to go <u>out</u> he said/

(3) final vocative: the tonic is placed on the next previous lexical item, e.g. /it's the <u>bake</u>r Mr. Jones/

(4) lexical sets in co-ordinate structure: the tonic is placed on the items belonging to the same set, e.g. /<u>one</u> egg / or <u>two</u>/

(5) question-word government: the tonic is placed on the governed item, e.g. /what <u>time</u> does your watch say/

Apart from these instances, however, Crystal must concede that "the vast majority of cases of pre-final lexical tonic can be accounted for only by referring to some kind of semantic or lexical conditioning", i.e. "lexical presupposition".

With the exception of the recognition of these five cases of conditioning factors, Crystal's approach does not really go much beyond the more traditional treatments of tonic placement, which locate the nucleus on the last 'important word' except in cases of contrast or

special emphasis. Furthermore, some of the examples he gives to illustrate these five points are not convincing, and (4) could be interpreted as a case of contrast within a closed set and thus generalised with the treatment of grammatical items.

There have also been attempts to predict the location of the nucleus in German. Stock (1965), though accepting that this depends on the context, nevertheless distinguishes 'neutral', 'contrastive', and 'emphatic' accentuation, and gives a number of general rules for determining the location of the nucleus in each of these cases. For 'neutral' cases the main principle is stated as follows (p.159): "Wird innerhalb der eigentlichen Mitteilung das Satzes ein Teil durch einen anderen näher bestimmt, so liegt der Hauptton auf dem bestimmenden, nicht auf den bestimmten Begriff, und zwar unabhängig von der Reihenfolge im Satz". More specifically, he establishes four cases:

(a) the nucleus falls on 'Bestimmungen' of the verb (objects, adverbials, subjects in final position)

(b) the nucleus falls on words and phrases which are closely connected to the verb, such as separable prefixes, except when these are "durch einen weiteren Begriff näher bestimmt"

(c) in intonationally undivided complex sentences, the nucleus falls on the subordinate clause, irrespective of where this clause comes in the sentence, because the subordinate clause is a 'Bestimmung' of the main clause.

(d) in direct or indirect speech, the nucleus falls on what is said.

Other principles for neutral cases are given. Thus in 'Beifügungsgruppen' (i.e. noun phrases consisting of a noun and

modifier, including adjectives, genitive attributes, appositional phrases, relative clauses, etc.) the nucleus falls on "das letzte sinnstarke Glied". The same applies to co-ordinate constituents: the last takes the nucleus.

With contrastive stress this pattern may be disturbed, and otherwise unstressed items, such as negation words, conjunctions, prepositions, pronouns, articles, etc., may bear the nucleus. Similarly, with explicit contrasts within the sentence both words in the contrast may have a nucleus.

Further rules are proposed by Stock and Zacharias (1973). They give four rules which apply only to a "sachliche, affektfreie Mitteilung oder Aussage ..., die ohne Nachdruck und ohne Kontrastierung gesprochen wird" (p. 60). These rules are as follows:

Rule 1: The following are not accentable:

articles, prepositions, conjunctions, auxiliary or modifying verbs when with full verbs, relative pronouns, relative adverbs; also personal pronouns except when declined in initial position, interrogative pronouns and interrogative adverbs except in repeat questions, reflexive pronouns except in the prepositional phrase an sich.

Rule 2: In 'Beifügungsgruppen' (see above) the communicatively most important accent falls on the last accentuated word.

Rule 3: In 'Verbergänzungsgruppen' (i.e. verb phrases with an object, complement, or adverbial) the last and communicatively most important accent falls on the last accentable word of the last or only 'Ergänzung', except in the following cases:

(i) the Ergänzung is determined

(ii) the Ergänzung consists of only one adverbial, which is a past participle.

Additions to the verb which are separable verb-prefixes or parts of fixed expressions used in place of simple verbs have no accent if preceded by an undetermined 'Ergänzung'.

Rule 4: The 'Kernakzent' always falls on the last word of the utterance that is accented by rules 2 or 3 or both. With theme-rheme structure it is always in the rheme.

These rules are very complex, and are clearly not completely comprehensible without exemplification. Rule 4 in particular requires some comment. The 'Kernakzent' is the main nucleus of the sentence, the nucleus which is preserved when, in faster speech, the number of tone-groups is reduced. (It might legitimately be equated with the paratonic of the present study). Rule 4 is designed to cater for long sentences which may have several 'Ergänzungen', each of which could in theory be assigned the nucleus by rules 2 or 3. The similarity between the for mulation of this rule and that of Chomsky and Halle's Nuclear Stress Rule is noticeable, both depending on prior assignment of 'stress'. Stock and Zacharias give an example which is also analogous to that of Chomsky and Halle:

$^{1}($ ^{2} [Der Vorsitzende des Ministerrats] ^{3}[überreichte ^{4}{den berufenen Professoren} ^{5}{die Urkunden mit ihrer Ernennung}])

(2), (4) and (5) are Beifügungsgruppen which would be accented by rule 2; (3) is a Verbergänzungsgruppe which would be accented

by rule 3. In order to assign the Kernakzent within the whole sentence (1) we apply rule 4, which places it on Ernennung, as the last word which would be accented by rules 2 and 3. Since (2) is the theme, the Kernakzent falls within the rheme.

We see, therefore, that the approach to tonic placement exemplified by Chomsky and Halle, Bresnan, Crystal, Stock and Zacharias, among others, attempts to formulate precise rules which will allow the tonic to be predicted from a variety of syntactic factors: the word class, grammatical or lexical status, functional rôle, and especially the position in the sentence. The aim is thus to assign the nucleus as far as possible without reference to the meaning of tonic placement as such. It must be noted, of course, that these rules in general only cater for 'neutral' or 'normal' cases; 'non-neutral' cases must be referred to special factors, such as 'contrast' or 'emphasis'.

Many writers have adopted a different approach, however, either as an alternative to predicting tonic placement or as a supplement to it. Their aim is to explicate the meaning or functional significance of tonic placement, independently of predicting its location. The two approaches are not necessarily incompatible, unless one assumes that the predictability of tonic placement makes it meaningless. In any case, there are the non-neutral cases to be accounted for, which cannot be accommodated by the rules. However, not all writers find it necessary to distinguish the neutral from the non-neutral when considering the meaning of tonic placement.

As we have seen, traditional pedagogical writers considered that the nucleus falls on the 'most important word' of the sentence;

attempts to establish the meaning of tonic placement amount in effect to making this notion of 'importance' more precise. One such attempt is that of Hultzén (1959), who characterises the item on which the nucleus falls as being an 'information point'. Though this is clearly a terminological improvement, it does not really solve the problem, since 'information' in this sense is not a self-explanatory term. Nevertheless, it does indicate that the meaning of tonic placement is to be sought in its communicative significance rather than in any syntactic function.

As we have seen elsewhere, important contributions have been made to the study of such communicative factors by members of the Prague School, with their 'Functional Sentence Perspective'. As might be expected, Prague School scholars have turned their attention to tonic placement as one of the functional devices involved here. The major distinction recognised in FSP has been that between 'theme' (or'topic') on the one hand and 'rheme' (or 'propos' or 'comment') on the other, and the placement of the tonic is generally seen in terms of this distinction. (On problems with defining the 'theme' see above, 3.4.2.2). Daneš (1960) regards the 'thème' as the thing spoken about and the 'propos' as what is said about it; the latter constitutes 'new' information, and normally comes at the end. The 'Centre of Intonation'(i.e. the tonic) is on the last stressed word of the 'propos' (unless emphatic). Examples given to illustrate this are:

(a) the train has <u>come</u>.

(b) the <u>train</u> has come

According to Daneš, (a) has the structure 'thème' + 'propos', while (b) has the structure 'propos' + thème'. Thus it would appear that the meaning of tonic placement is the indication of the 'propos'/'rhema'/'comment'. Elsewhere (1967), Daneš makes this more explicit: "It appears that in many languages (perhaps in most, but we dare not, for the present, make this a universally valid statement), the comment of the utterance would be associated with the centre (nucleus) of the (terminal) intonation contour. This means that in languages where, as a rule, the comment is placed towards the end of the utterance ..., the centre of the terminal intonation contour ... should be located on the last stress unit of the utterance, e.g. 'The train has <u>come</u>', 'John hates <u>Mary</u>'. German: Der Zug ist <u>gekommen</u>". According to Daneš, however, English differs from some other languages (such as Czech) in allowing more freedom to the nucleus to be placed on non-final elements. Furthermore, "utterances conveying emphasis are governed by special rules". In utterances in which "the emphatic feature characterises the utterance as a whole" we find the order 'comment' + 'topic' and hence an initial nucleus (e.g. 'The <u>train</u> has come', 'der <u>Zug</u> ist gekommen'). Utterances where only one element is emphatic, because it is contrastive, may have a variety of characteristics, one of which is a shift of the nucleus.

Daneš's conception of the rôle of tonic placement has been endorsed by other Prague scholars. Firbas (1974) writes: "F. Daneš's extensive and important researches into Czech intonation and into problems of intonation in general offer ample proof of the view that the rheme is signalled by the intonation centre".

A rather different view is taken by Halliday (1967b, 4.3). Although he, like the Prague scholars, recognises a 'theme' v. 'rheme' distinction, he does not consider it to be signalled by tonicity. For Halliday, the theme is in any case restricted to the initial position in a sentence, so that the tonic on the first item cannot be said to signal the structure 'rheme' + 'theme'. For Halliday, the tonic marks the 'information focus', which "reflects the speaker's decision as to where the main burden of the message lies", and which part "he wishes to be interpreted as informative". The label Halliday uses for this is 'new', with its opposite 'given'. Thus "we can say that the system of information focus assigns to the information unit a structure in terms of the two functions 'given' and 'new'". The theme/rheme structure is considered to be distinct from given/new, but they are not unrelated: "in the unmarked case the focus of information will fall on something other then the theme; it will fall at least within the rheme".

The term 'new' is in need of explanation. Halliday makes it clear that it does not mean that what is 'new' "cannot have been previously mentioned", but rather that "the speaker presents it as not being recoverable from the preceding discourse". 'Recoverable' information, on the other hand, is generally 'represented anaphorically' in an utterance, and is inherently 'given'. Certain anaphoric items, such as pronouns, may nevertheless be 'new', but only in the sense of 'contrastive'. This is related to the fact that grammatical items form closed systems, and "since prominence in a closed system is inherently contrastive, with such items also information focus implies contrast".

A further point is made by Halliday in connection with the non-recoverability of 'new' information from the context. The utterance 'John painted the shed yesterday' could have, according to Halliday, several interpretations, and be a reply to such questions as 'what did John paint yesterday?', 'did John paint the wall?', and so on, but also a reply to the question 'what happened?'. The utterance 'John painted the shed yester day', on the other hand, could not be an answer to this last question, but only to a question such as 'when did John paint the shed?', 'did John paint the shed this morning?', and so on. Thus the first utterance does not necessarily imply that any information at all is 'given', while the second does. As a result, the first utterance is ambiguous as to the scope of the focus: only shed may be new, or the utterance may contain only new items. This allows Halliday to establish an 'unmarked' focus; an utterance with an unmarked focus "does not imply any preceding information". This unmarked focus will, according to Halliday, fall on the final lexical item, whereas a 'marked' focus will fall elsewhere. In sum, then, "a distinction may ... be made between unmarked focus, realised as the location of the tonic on the final accented lexical item, which assigns the function 'new' to the constituent in question but does not specify the status of the remainder, and marked focus, realised as any other location of the tonic, which assigns the function 'new' to the focal constituent and that of 'given' to the rest of the information unit".

Another writer who has explored the contextual factors involved in tonic placement is Gunter (1966, 1972, 1974). His discussion is all the more interesting because it appears to be entirely independent

of European views of these phenomena. Gunter argues for a 'context grammar' which will account for inter-sentence relations. A sentence "points backwards to its context" and can thus only be interpreted in relation to its context. A sentence is a 'response' to its 'context sentence', and is 'relevant' to it. Thus "a given variety of a sentence signals its own particular kind of relevance to its context" (1966). Like Halliday, Gunter relates tonic prominence to 'newness', though not in quite such a consistent and explicit way, and, like Halliday, he establishes a 'neutral form' which may have no context at all and therefore need not point to one.

One further discussion of tonic placement may also be noted here: that of Chomsky (1970). We have already seen that the standard theory of generative phonology attempts to predict the location of the nucleus from the syntactic structure; from this point of view, then, tonic placement is mechanical and (presumably) meaningless. In elaborating his model, however, Chomsky points out certain weaknesses in the standard framework for the grammar as a whole, in particular the requirement that semantic interpretation is determined exclusively by deep structure. Among the evidence he adduces is the rôle of 'focus', which, contrary to the theory, seems to demand that semantic interpretation should also depend on aspects of surface structure. The specific theoretical point at issue here does not concern us, but Chomsky's interpretation of the semantic implication of 'focus' is relevant in the present context. He relates 'focus' to 'presupposition', i.e. to what is presupposed by the utterance in question. Thus "the focus is a phrase containing the intonation center, the presupposition an expression derived by replacing the

focus by a variable". In other words, the presupposition of an utterance is everything contained in that utterance except the focus, and, conversely, the focus of an utterance that element of an utterance which is not presupposed. Although Chomsky deals separately with 'contrastive' or 'expressive' nuclear stress, he suggests that in principle this does not differ from 'normal' stress as far as focus and presupposition are concerned. In either case "phrases that contain the intonation center may be interpreted as focus of utterance, the conditions perhaps being somewhat different and more restrictive when the intonation center involves expressive or contrastive stress". In a somewhat un-Chomskyan passage, he notes that "choice of focus determines the relation of the utterance to responses, to utterances to which it is a possible response, and to other sentences in the discourse". Focus and presupposition "must be determinable from the semantic interpretation of sentences if we are to be able to explain how discourse is constructed and, in general, how language is used".

We see, then, that writers who have attempted to clarify the meaning of tonic placement, whatever their theoretical point of departure, have all found it necessary to refer <u>outside</u> the utterance in question; the meaning of tonic placement is thus acknowledged not to be dependent solely on factors inside the utterance itself. Beyond this, there seems to be some agreement as to the nature of the relationship between tonic placement and the context, in principle if not in detail, though it is difficult to determine the extent to which the different terminological frameworks are intended to cover the same range of concepts and categories.

9.3 'Neutral' tonicity

Before looking more closely at specific characteristics of tonic placement in English and German, and thus applying and evaluating some of the above proposals, we must consider a number of more general points relating to the predictability of tonic placement and the concept of 'neutrality'.

Those who establish rules of the kind discussed in the previous section for predicting the location of the nucleus are always careful to state that the rules are only intended to cater for 'normal' or 'neutral' cases, and that the rules may on occasion be 'broken'. The notion of neutrality is thus a crucial one on which the rules and their application depend.

The basis of the neutral/non-neutral distinction has received little explicit discussion, however. Those who do consider it (such as Halliday, 1967b, and Chomsky, 1970) see it essentially in terms of the context. Both these scholars take the 'normal' or 'unmarked' version to be that which is least dependent on its context. But there are some difficulties here. In the first place, it seems odd that the 'neutral' version should be independent of any context, since utterances which are spoken without context are surely rare. Thus 'neutral' cannot really be equated with 'normal'. More importantly, the dependence or independence of an utterance on its context is not a simple matter to assess. It is also not an absolute but a relative matter.

As an illustration of the difficulty here we may take the example from Halliday cited above. Halliday takes the utterance

'John painted the shed yesterday' to be 'unmarked' because it does not presuppose any 'given' information; everything in the utterance could be 'new'. Any other version, with the tonic elsewhere, would presuppose some 'given' information, and this is 'marked'. Unmarked focus must necessarily fall on the last lexical item, as otherwise post-focal lexical items would be 'given'. We thus have a classification into two types: both unmarked and marked focus specify the focal element as 'new', but the former does not specify anything else as 'given', whereas all the non-focal elements in the latter case are 'given' (cf. the quotation from Halliday in 9.2 above). The problem here is that this simple dichotomy 'unmarked' v. 'marked' is not sufficient to cater for all the possibilities. Although we can accept that with the tonic on the last lexical item all preceding lexical items are unspecified as to given or new, it is not the case that, with the tonic elsewhere than on the last lexical item, all non-focal elements must be specified as given. Thus, for example, in the following sentences, the tonic is unmarked only in (i), but the informational status of the items before the tonic is the same in all cases, viz. they are unspecified as to 'new' or 'given':

(i) John painted the shed yesterday

(ii) John painted the shed in the afternoon

(iii) John painted the shed on Wednesday after the meeting

All these versions could have everything up to and including shed as new, for example as answers to the question:

(i) what happened?

(ii) what happened in the afternoon?

(iii) what happened on Wednesday after the meeting?

It is clear, then, that marked tonicity, in the sense of the tonic not falling on the last lexical item, does not necessarily restrict 'new' information to the focal element, as is claimed by Halliday. In both unmarked and marked cases anything up to and including the focal element is potentially 'new'.

This, of course, does not affect the possibility of establishing an unmarked focus as such, nor of defining it in terms of maximal potential independence of context. Nor does it prevent us from setting up a dichotomy by regarding any non-maximal potential independence of context as 'marked'. But what it does suggest is that, if 'marked' and 'unmarked' are defined in this way, we do not have a simple dichotomy as such, but rather a <u>scale</u>, with maximal potential independence of context at one end, and minimal independence at the other. Looked at in this light, the idea of a fundamental distinction between 'normal' and 'shifted' nucleus seems less attractive.

A further problem in taking the neutral or unmarked tonic placement to be that which marks an utterance as independent of a context is that tonic placement is not the only feature which may relate an utterance to its context. An obvious feature which also serves this function is the use of anaphoric pronouns. If an utterance contains pronouns which link it to its context, it makes little sense to say that it may have neutral tonic placement if neutral tonicity is said to be that which it has with no context. A similar point applies with other contextualising features such as

word-order; an utterance where the theme is not the subject, for example, may already be linked to its context by this theme, and again it makes no sense to regard the neutral position of the tonic in such an utterance as the place where the tonic falls where there is no context.

It is evident, then, that the 'neutral' position of the tonic is neither a simple nor a completely independent matter. Tonic placement interacts with a variety of other features of utterances. This is, of course, exactly the same phenomenon as was observed with tone-group division, where the factors determining the number of tone-groups were seen to be diverse. Only by considering the intersection of these diverse factors could we arrive at a serious explanation of tone-group division in terms of a general principle. A similar state of affairs is to be expected with tonic placement; it is likely that the general principles involved here can only be understood in the light of a similar intersection of variables. Just as constituent types, syntactic functions, and syntactic structure are all involved with tone-group division in establishing the information value of sections of utterances, we must expect that a variety of factors of this kind will contribute to the 'importance' that we associate with the tonic of a tone-group.

These remarks will be taken up again in more detail below in the more specific context of English and German. For the moment it is enough to note that 'neutrality' is not a simple matter. One could, of course, simplify it in a somewhat arbitrary way by, for example, establishing as 'neutral tonicity' the coincidence of the tonic with

the final item in the tone-group in every case, and regard all other positions for the nucleus as 'marked'. We would then simply need a 'system' according to which the nucleus is 'shifted' from the neutral position under certain specified conditions. This is almost Halliday's approach; as with tonality he establishes a 'neutral' position for the tonic which need not in all cases be 'unmarked'. It is notable, however, that Halliday's 'neutral tonicity' is not simply, as one might expect, the coincidence of the tonic with the last constituent in the information unit; he qualifies it to the last lexical item. Thus the neutral location of the tonic takes account of two variables: the position in the information unit ('last') and also the type of item involved ('lexical').

The various factors on which the location of the tonic may be said to depend can be grouped into two types. Firstly, there are internal characteristics of utterances (their structure, the order of elements, the type of elements), and secondly there are external characteristics (contextually determined features). In 'neutral' cases the internal factors will clearly predominate; the placement of the nucleus will be as independent of the context as the other features of the utterance allow. In 'non-neutral' cases these internal factors will interact to a greater extent with the external features of the context. Sections 9.4 and 9.5 will deal with internal and external factors respectively.

9.4 Internal factors in tonic placement

9.4.1 The nature of internal factors

In considering internal factors in tonic placement, we are

concerned with the possibility of predicting the location of the tonic from the characteristics of an utterance itself, without reference to the context, whether verbal or non-verbal, in which the utterance occurs. As we have seen above (9.2), a number of writers on the subject have established rules which are designed to do this, in varying degrees of detail and explicitness, and several different determining factors have been put forward: position in the tone-group, whether fully stressed or not, whether lexical or grammatical, the word class involved, the place in the grammatical structure, and so on.

One possible type of internal factor proposed is purely phonological: the nucleus, it is claimed, will fall on the 'last fully stressed syllable' of the tone-group. This is Kingdon's formulation, though others have made similar remarks. The difficulty here is in the notion of 'full stress'. For Kingdon, and others, it is possible to have stressed syllables after the nucleus but they are less prominent than those up to and including the nucleus; they are therefore said to have 'partial stress'. But to predict the location of the nucleus from this pattern of occurrence of 'full' and 'partial' stresses is clearly completely circular, since 'partial' stresses are only partial because they occur after the nucleus.

The claim that the nucleus falls on the last fully stressed syllable can be made meaningful, however, in an approach which allows different 'stages' of stress assignment. The generative approach, with a Nuclear Stress Rule that applies to the output of previous stress rules, is of this kind; Chomsky and Halle's rule is in fact

remarkably like Kingdon's if the latter's 'last fully stressed syllable' is equated with that syllable in the former's approach which has primary stress at the stage when the Nuclear Stress Rule applies. In Chomsky and Halle's framework, of course, the process of nuclear stress assignment is not an exclusively phonological matter, since the assignment of primary stress on previous cycles ultimately depends on the syntactic structure of the sentence.

It would certainly be possible to formulate a purely phonological rule for tonic placement, in which the nucleus was assigned to, say, the last syllable or foot of the tone-group. It might well be that such a rule would work for a considerable number of cases, since there is a clear tendency for the nucleus to come towards the end of the tone-group. However, not only would such a rule have very many 'exceptions', at least some of the 'exceptions' would be obviously explicable in terms of a very simple factor: not all syllables are inherently 'stressable', and not all salient syllables may take the tonic.

A more reasonable rule would therefore also include some grammatical information, for instance by placing the nucleus on the last word of the tone-group. Lest this, too, be considered entirely arbitrary, it is worth giving a few figures to show the extent to which it would be effective. In the data examined in this study, the percentage of tone-groups in which the nucleus fell on each word, counting 1 as the last word, 2 as the penultimate word, and so on, is as follows:

	German	English
Word 1	59%	72%
2	20%	13%
3	10%	6%
4	6%	5%
5	2%	1%
6	1%	1%
more than 6	2%	2%

The tendency here is very evident: in both languages the nucleus falls on the last word in a clear majority of cases. Thus, if we are looking for a basic rule which will predict the location of the nucleus in the majority of cases, then the rule placing the nucleus on the last word will serve; it would have a three-fifths success rate in German, and an over two-thirds success rate in English.

Despite this, however, the rule is clearly unsatisfactory. We presumably wish to do more than simply give a rule which works more often than it does not; we wish to find explanations for the cases where it does not work, and other factors must therefore also be invoked. The most commonly used qualifying factor is, as we have seen, the status of the item in question as <u>lexical</u> or <u>grammatical</u>. To have a rule such as Halliday's, which places the nucleus on the last <u>lexical</u> item, would certainly increase the success rate of prediction. There are, however, a number of difficulties here, in particular in defining the notion 'lexical item' (cf. below, 9.4.9). There are also several cases where the rule, even in this form, does not apply, for example the cases cited by Bresnan (1971), among others.

It must also be remarked that the aim in establishing such rules should not necessarily be to predict the location of the nucleus in actual utterances, but rather to predict the location in neutral utterances. Actual utterances are naturally subject to a variety of factors, external as well as internal, but as a first step in establishing the effect of these factors we must restrict ourselves to neutral cases which are maximally independent of context. There is no reason to suppose that the majority of utterances produced by speakers will be maximally independent of context; indeed, it would be most surprising if this were the case, since speakers do not produce isolated utterances but engage in conversations and produce 'texts'. Having established the rules for neutral cases, we may then project them on to actual utterances and assess the influence of external factors on the application of the rules.

The aim of this section on internal factors, therefore, will be to establish general rules for the location of the nucleus in neutral cases. The following section on external factors will take up the question of other influences that might apply in non-neutral cases.

9.4.2 Grammatical factors: basic principles

In investigating grammatical factors involved in tonic placement we are faced with an initial problem that the tone-group corresponds not to a grammatical unit as such but to an information unit. The grammatical structure of information units is, as we saw in chapter 8, often rather heterogeneous, which means that it may be difficult or impossible to establish the grammatical rôle or function of the

element which bears the nucleus (the 'focus') within the information unit itself. If we wish to investigate the possibility that the focus may be determined by grammatical function, for example, the grammatical function itself may, in fact, not be determinable on strictly internal grounds but only with reference to the relationship of the content of the information unit in question to the content of other information units. To this extent, then, we must interpret the term 'internal' rather broadly, to allow for cases where the characteristics of an item are not derivable from the immediate syntactic context.

A useful practical test of contextual independence is to provide a 'stimulus' context sentence which provides minimal presupposositions for the 'response' utterance in question. For example, to investigate the neutral position of the nucleus in the sentence 'John painted the shed yesterday' we might give as stimulus sentence 'what happened?' rather than, say, 'what did John paint yesterday?', 'what did John do yesterday?', or 'what happened yesterday?'. The first of these gives only minimal presuppositions for the response sentence, such as the notion 'past event'.

Where pronominal items are present, e.g. 'he painted the shed yesterday', the context sentence can naturally not treat <u>he</u> as not being presupposed. Here a context sentence such as 'what did he do?' might be more appropriate; this sentence gives only <u>he</u> and 'past action' as presuppositions. In all cases discussed below, it is assumed that neutrality is to be established by means of general contexts of this kind, which will thus allow us to consider, as far as possible, the interaction of internal factors without the

complicating factor of external influence.

For the purposes of this discussion it is convenient to consider different kinds of syntactic structure separately. We may thus separate cases where the information unit corresponds to a single clause from those where it corresponds to more and to less; in the first of these cases it is also helpful to separate different sentence functions, main and subordinate clauses, and clauses with neutral and inverted word-order.

It must also be noted that we shall be concerned here with the distribution of tonicity within sentences in terms of basic sentence constituents, such as subject, object, etc. Differences of tonicity <u>within</u> these constituents, especially within the noun phrase, are of a rather different kind (though depending ultimately on similar factors), and will not be considered here. We shall therefore not be concerned with whether the nucleus falls on an adjective or a noun in the noun phrase, but simply with whether or not it falls within the noun phrase as a whole.

9.4.3 <u>Tonic placement in simple declarative clauses</u>

9.4.3.1 <u>Subject-verb structures</u>

The simplest form of declarative clause structure in both languages has the constituents Subject and Verb. Instances of information units with this structure are not particularly common, but they do occur, especially as the main clause of divided complex sentences with report clauses. The following are examples from the data which are considered to have neutral tonic placement. The nucleus is underlined.

German

1. Darlington kam

2. ich verstehe

3. Sie vergessen ...

4. ich sehe ...

English

1. and it implies ...

2. they say ...

3. but I believe ...

We may also add here the structure Subject - Auxiliary - Verb, exemplified from the data as follows:

German

5. ich gehe singen

6. die wird verringert

7. ich muss gestehen ...

English

4. the students would work

5. they have shown ...

6. it's being suggested ...

In all these cases the nucleus is on the final verbal element in both languages. However, in only two of these examples (G1 and E4) are both subject and verb lexical; the remainder have a grammatical item as the subject, which may potentially distort the pattern. As it is methodologically desirable to begin with utterances in which both constitutents are lexical rather than grammatical, we must resort to constructed examples in the first instance, and only when the basic

principles have been determined in such idealised cases can we project them on to utterances with complicating factors.

Taking Subject-Verb structures in which both items are lexical and placing them in a suitably non-presupposing context, we find that both possible versions, with the nucleus on the subject and on the verb, may be neutral, though not normally with the same sentence. The following, for example, seem quite normal with the nucleus on the subject:

the window broke/ has broken

the snow melted/has melted

the train came/ has come

the light fused/ has fused

In other cases, however, the neutral version seems to demand the nucleus on the verb:

Jesus wept/ has wept

the teacher couched/has coughed

How do we explain this difference, when both types seem to occur without any conditioning environment, and both types have the same syntactic structure? Halliday (1967a, p. 38) suggests that the S V pattern is the basic one (since it has the nucleus on the last lexical item) but S V may be the unmarked term in specific cases. He offers two such cases: where the S V combination is a "high frequency collocation" which occurs "especially in intransitive clause structure, with inanimate nouns as subject", or where "the final lexical item is itself of very high frequency, at the grammatical end of lexis, as it were".

A rather different interpretation is given by Schmerling (1976), who argues that the S V type is the norm in what she calls "simple news sentences", which are "sentences which would be uttered by a speaker who is making no assumptions as to the expectations of his audience regarding the propositional content of the utterance" (p. 89). Such sentences are subject to the general rule that "the verb receives lower stress than the subject" (p.82). Cases with the pattern S V are interpreted differently, as being of the 'topic' + 'comment' type rather than 'simple news sentences': "the cases discussed here which have the primary stress on the predicate all seem to be 'about' the subject rather than an entire state of affairs; that is, in uttering such a sentence, the speaker brings up some topic and says something about it - makes a comment" (p. 93).

Exactly the same variation occurs in German. The following are neutral with the nucleus on the subject:

der Zug kam/ist gekommen

das Wasser kocht/hat gekocht

der Hund bellt/hat gebellt

The following, however, have the nucleus on the verb in neutral cases:

Hans singt /hat gesungen

die Zeit vergeht /wird vergehen

meine Frau raucht /hat geraucht

The explanations given by Halliday and Schmerling are not entirely convincing. In both types it could be said that "the

speaker brings up some topic and says something about it", and some 'high frequency collocations' appear to have the pattern S <u>V</u> rather than <u>S</u> V. Nevertheless, there does seem to be some plausibility in the explanations offered, and Halliday's remarks are in fact not incompatible with Schmerling's. The placing of the nucleus on the subject does seem to make the information unit more a single entity than placing it on the verb; in the latter case it is easier to see it as two entities. This could no doubt be interpreted as saying that the <u>S</u> V conveys "an entire state of affairs", while the S <u>V</u> type has a double content: 'topic' and 'comment'. In the same way, if the <u>S</u> V type is interpreted as a 'high frequency collocation', as Halliday suggests, this would account for its informational unity. Likewise, if the verb is of 'very high frequency' this could motivate its relative semantic emptiness and its place "at the grammatical end of lexis", and cause it to be informationally enclitic to the subject.

It does appear, certainly that in many cases with the nucleus on the subject the verb has less semantic 'weight', and is often one of the 'expected' verbs with the subject in question. Vehicles are likely to 'come', windows to 'break', lights to 'fuse' and dogs to 'bark', etc. However, it would also be possible to say 'the <u>win</u>dow's melted' as a reply to a non-presupposing sentence such as 'what's happened?', though this is hardly a high frequency collocation or a very frequent verb. It must be admitted nevertheless that such an utterance might require a suitable situational context in order to sound perfectly natural as a 'neutral' version - for example the context of someone using a blowlamp to remove paint from

a window-frame. At any rate, the precise determinants of this difference in intonational treatment are clearly not easy to establish, and no more satisfactory explanation can be offered here. Whatever the explanation, however, it will evidently apply to both languages.

We have so far considered only cases where subject and verb are lexical. Most of the examples from the data have a grammatical subject, however, namely a personal pronoun. The distinction between 'lexical' and 'grammatical' will be considered further below (9.4.9); for the moment we must take it for granted.

If we adopt the convention of representing 'lexical' items with capitals, and 'grammatical' items with lower case letters, the possible combinations in subject-verb structures are as follows:

(a) S V

(b) s V

(c) S v

(d) s v

The cases considered so far have been of type (a); most of the examples from the data given above are of type (b); types (c) and (d) did not occur in the data but they are possible in English with an 'anaphoric' verb. Such verbs are rare in German, especially without an object, and the German versions of (c) and (d) can thus be omitted from consideration.

The neutral versions of types (b), (c) and (d) appear to be s <u>V</u>, <u>S</u> v, and s <u>v</u>, respectively, as in the following examples:

	English	German
s V:	he <u>came</u>	er <u>kam</u>
	I <u>know</u>	ich <u>weiss</u>
S v:	the <u>man</u> did	
	my <u>friend</u> has	
s v:	he <u>did</u>	
	she <u>has</u>	

More generally: if one item is lexical and the other grammatical, the nucleus will fall on the lexical item; if both are grammatical it will fall on the verb.

A few special cases may also be noted. Where the verb is anaphoric in English, it is usually some form of the verb <u>do</u> if it 'represents' a simple verb, but if it 'represents' the pattern Auxiliary + Verb, then the anaphoric form is the auxiliary alone. Thus the patterns with an auxiliary <u>and</u> an anaphoric verb, such as S Aux v, or s Aux v, are in themselves non-neutral, and mark one of the verbal elements as contrastive. Thus we do not find e.g. '<u>John</u>'s done', or 'he's <u>done</u>' but rather '<u>John</u> has', or 'he <u>has</u>'. The form 'John <u>has</u> done' is clearly contrastive. <u>Be</u> seems to behave partly like a lexical verb (at least in one of its senses), so we <u>do</u> get '<u>John's</u> been', or 'He's <u>been</u>' as neutral forms.

Another form that needs special mention is the case where the verb has an affix or 'particle' attached to it, as with the English phrasal verbs or the German separable verbs. The same principles apply as before, but here it is the affix that takes the nucleus in those cases where the verb is focal, e.g.:

English

S V: my shoe's fallen off

s V: it's fallen off (not: it's fallen off)

German

S V: mein Bruder kam mit

s V: er kam mit (not: er kam mit)

With an auxiliary in German, the affix is prefixed to the verb, but it still takes the nucleus:

er ist mitgekommen

All these variants are easily derivable from the basic patterns by simple rules.

As far as simple S V patterns are concerned, therefore, we may summarise the placement of the tonic in neutral cases as follows:

(a) S V or S V

(b) s V

(c) S v

(d) s v

All these apply in English, though in German only (a) and (b) regularly occur.

9.4.3.2 SVO, SVA, and SVC structures

We now turn to more complex structures involving an object, adverbial, or complement after the verb. Neutral examples from the data include the following:

SVO: German

1. aber es gibt sehr heftige Bewegungen s V O

s V O

✗ 2. Ihr Vertrauen ehrt mich Inspektor — s V O

3. Sie hatten diesen dollen Streik — s V O

4. sie hat ein Wochenendhaus — s V O

5. das spottet jeder Logik — s V O

6. wir haben Dezember — s V O

English

✗ 1. but this enables them — s V O

✗ 2. I take a very different view — s V O

SVA: German

7. sie studiert an der PH — s V A

8. Antiqitätenhändler bezahlen mit Scheck — s V A

9. das war im vorigen Winter — s V A

10. Rechts ist auf dem Vormarsch — s V A

English

3. I went to Twickenham — s V A

✗ 4. I did so — s V a

5. they're there — s V a

SVC: German

11. es ist unglaublich — s V C

12. (es) ist ganz enorm — s V C

13. das ist fantastisch — s V C

14. die Vereisungsgefahr ist gross — s V C

15. er ist Jäger — s V C

16. das ist kein Problem — s V C

English

6. I'm sure — s V C

We may also include here sentences containing an auxiliary, though the ordering here is different in English and German because of the 'verbal frame' in the latter.

S Aux O V: German

17. ich würde nein sagen

18. wir haben Nora gefragt

19. sie haben sich verabschiedet

20. ich habe die eindrucksvolle Sammlung von Gewehren gesehen

21. er hat mir versichert

S Aux V O: English

7. they are doing their duty

S Aux A V: German

22. er hatte in Edinburgh studiert

Cases containing a verbal affix will be discussed below.

Very few of the above examples have lexical items for all three major constituents, though most have lexical items for the last two. Using the same conventions of capitals for lexical items and lower case letters for grammatical items we obtain the following possibilities:

(a) S V O, S V A, S V C

(b) s V O, s V A, s V C

(c) S V o, S V a, S V c

(d) s V o, s V a, s V c

It is also possible to have an anaphoric verb, but only if the object, adverbial, or complement is grammatical. We thus may add two more types:

(e) S v o, S v a, S v c

(f) s v o, s v a, s v c

All the first four types are represented in the above examples, though not in equal numbers, by far the most common type being (b), with (d) the next most common. Thus, almost all have a grammatical subject.

Type (a), with lexical subject and object, is only represented in German (G8, G10, G14). Further (constructed) examples are the following:

Hans fuhr sein Auto

Hans fuhr nach Berlin

Hans ist Lehrer

Mary ate her lunch

Mary went to London

Mary is a shop-assistant

The rule here is clear: in neutral cases the nucleus falls on the final lexical object, adverbial, or complement. The same rule applies with type (b) of which there are many instances in the examples given above. The grammatical or lexical status of the subject is thus irrelevant if the final element is lexical.

In the case of types (c) to (f) the situation is more complex, however. The following constructed examples will illustrate this:

Type (c): Hans fuhr es; Hans lebt dort

Mary ate it; Mary went there

Type (d): er fuhr es; er lebt dort

she ate it; she went there

Type (e): Hans machte es

Mary did it; Mary did so

Type (f): er machte es

she did it; she did so

In no case here does the nucleus fall on the final grammatical element, but it may fall on either the subject or the verb. In type (d), with a grammatical subject, the nucleus falls unequivocally on the verb in neutral cases; in type (e), with an anaphoric verb, it is less clear-cut, but the nucleus on the lexical subject seems to be common, and perhaps the only form in neutral cases. The difficulty here is in deciding whether forms such as

Mary <u>did</u> it; Mary <u>did</u> so

are neutral or not. They could be interpreted as contrastive, though in fact they appear to be often merely confirmatory rather than contradictory. In type (f), where the subject is grammatical, there is no doubt about the neutral version, however: the nucleus falls on the verb, even though it is anaphoric.

The location of the nucleus in type (c) is uncertain in the same way as in type (e), though, since the verb is lexical, the neutral version is probably to be taken as that which has the nucleus on the verb. It is nevertheless possible to imagine situations where the nucleus would fall on the subject even though the verb was clearly 'new'. We might say in reply to the sentence

'what happened to the sausage?'

for example,

<u>Mary</u> ate it

though the form with the nucleus on <u>ate</u> is also possible here. Whether this case is related to the similar one involving S-V structures is difficult to say; it could be that 'ate', being an expected verb in the context of 'sausage', is semantically weak, and may therefore fail to take the tonic.

If we assume that the neutral cases in structures of these kinds are those given above, then the rule for tonic placement in types (c) to (f) can be stated as follows: the nucleus falls on the verb unless this is anaphoric with a lexical subject, in which case the subject takes the nucleus.

This rule might also be stated in a more general form, which also includes types (a) and (b) (though it could not apply to case (f)?); the focus in these structures is on the last lexical item in the information unit. This is, as we have seen, a frequent formulation, and is that given by Halliday. There are reasons, however, for rejecting it, as will be shown in what follows.

Let us first consider variations on this structure involving auxiliaries and verbal affixes. In English we find the following neutral forms:

S Aux V O: Mary has eaten her lunch

S Aux V o: Mary has eaten it

S Aux v o: Mary's done it

s Aux V O: she's eaten her lunch

s Aux V o: she's eaten it

s Aux v o: she's done it

S V O Affix: Mary ate her lunch up

S V o Affix: Mary ate it up

s V O Affix: she ate her lunch up

s V o Affix: she ate it up

(The structures S v o Affix and s v o Affix do not occur; an anaphoric verb does not normally take an affix.)

The patterns involving an auxiliary are no different from those without; they therefore require no further discussion. Those with an affix need some comment, however. The patterns found here are difficult to reconcile with the principle that the nucleus falls on the last lexical item. The examples given here which have a lexical object have the nucleus on this object, which suggests that the affix should here be taken to be a grammatical item - a not unnatural categorisation. But if this is so then we should expect the nucleus to fall on the verb in those structures which have a grammatical object, whereas it here falls on the affix - which suggests that the affix should be treated as lexical. Assuming that the affix has the same grammatical or lexical status in all cases, these structures are simply not reconcilable with the principle that the nucleus falls on the last lexical item.

The rule in such cases is, in fact, very simple to state, provided we do not formulate it in terms of the last lexical item:

2.9 the affix takes the nucleus wherever, in sentences with no verbal affix, the verb itself would take it. In fact, the affix is to be regarded as part of the verb here. We could make the 'last lexical item' principle work if we adopted a solution à la Bresnan: the

2 affix is adjacent to the verb at that point in the derivation when the nuclear stress rule applies, and is only subsequently moved to sentence final position, taking its nucleus with it, if it has one. This has some plausibility, since, in English, the post-verbal position is a 'surface' possibility, provided that the object is lexical:

Mary ate up her lunch

An alternative, non-generative, formulation may be provided, however, if we take into account the German patterns with auxiliaries and affixes. Consider the following:

S Aux O V: Hans hat sein Auto gefahren

S Aux o V: Hans hat es gefahren

s Aux O V: er hat sein Auto gefahren

s Aux o V: er hat es gefahren

S V O Affix: Hans fuhr sein Auto hin

S V o Affix: Hans fuhr es hin

s V O Affix: er fuhr sein Auto hin

s V o Affix: er fuhr es hin

The patterns with an affix are identical to the English type and pose exactly the same kind of problems, but those with an auxiliary are different. In terms of the category of constituent on which the nucleus falls they are the same as the English pattern, but because of the obligatory syntactic rule according to which the verb is at the end it is no longer the case that the last lexical item is focal: if the last lexical item is a verb, it will only take the nucleus if the preceding object (and, we may add, adverbial or complement) is non-lexical.

Of course, we could also adopt a Bresnan-like solution in this case, and shift the verb to its final position only after the application of the nuclear stress rule. But if we do not wish to use this framework, we must concede that, for German, it would be incorrect to generalise that pattern found in these structures with a simple rule placing the nucleus on the last lexical item. Naturally,

this does not prove that this principle is not therefore correct for English, unless we assume that both languages are governed by the same principles. However, a strong argument has been advanced by Schmerling (1976) in favour of assuming that the principles <u>are</u> the same in the two languages. She points out that once English speakers learning German have mastered the correct word-order in sentences with auxiliaries, then "the correct stress comes automatically"; that is, the English speaker will automatically put the nucleus on the object, adverbial or complement in such sentences and <u>not</u> on the final lexical constituent (the verb). Since the learner does this automatically, it seems safe to assume that he is using the same principle that he uses in his native language.

Schmerling uses this observation to suggest that rules for English which simply assign stress to the final constituent (her remarks are directed specifically against Chomsky and Halle) imply that "German sentence stress must be governed by quite different principles, and English speakers should have difficulty learning them" (p. 84). Since they do not, we must assume that the principles governing tonic placement are the same in the two languages, and hence the rule for English is wrongly stated.

The principle should therefore be not that the nucleus falls on the last lexical item, but rather that it falls on the last <u>non-verbal</u> lexical item (though, as we have seen, this does not include the subject, unless the verb is anaphoric; if the object etc. is non-lexical the nucleus <u>will</u> fall on the verb).

In fact, it can be shown that this rule is valid for English, even without the indirect evidence of German, since it is precisely this rule which will account for the location of the nucleus in sentences with verbal affixes in both languages. The distribution of the nucleus in sentences with verbal affixes is identical in both languages, and this is also identical with its distribution in German sentences with auxiliaries. If the verbal affix is regarded as part of the verb then the same rule applies in all these cases.

A few minor points may be made here. There is one type of structure which appears often not to conform to the general principles described so far, and this is true in both languages. With an S V A structure where the verb is 'existential', e.g. be, and the adverbial is non-lexical, the nucleus often falls on the adverbial rather than in the expected position on the verb. Thus we get the following as neutral cases:

he's here

ich war da

A further minor remark relates to one of the examples given above from the data (G2): here we have a final vocative expression following the basic structure but having no effect on it. This tallies with Crystal's observation, as quoted in 9.2 above (case 3), according to which such items do not take the nucleus. There is, however, the case mentioned by Moulton (1962) of a greeting of the form:

guten Morgen Hans

This would not normally be used in English. It is perhaps best

treated as an intonational idiom which does not affect the validity of the statement that final vocatives do not take a nucleus.

9.4.3.3. More complex structures

The structures just considered contain only a single object, adverbial or complement. Sentences containing more than one such element are, of course, common. The following are neutral examples from the data:

German

S V O A
1. mein Vater kennt dich doch
2. wir hatten Glück mit dem Wetter
3. es gibt niemanden in Rothbury ...

S V A O
4. aber das macht doch nichts
5. wir haben noch die Regelstudienzeit
6. sie verkauft von Zeit zu Zeit eines der Möbelstücke

S V A C
7. ich bin damit ganz beschäftigt
8. das ist doch ganz natürlich
9. das war natürlich out
10. es war ja wirklich out
11. es war ja wirklich warm
12. der Tote war nicht mehr juno

S V C A
13. Sie meinen doch nicht ...

English

S V O A
1. but (it) offers a comfortable home to a number of residents
2. and you hear this even today

S A V A 3. I really don't

S A V O 4. we now have a project

(The last two English examples differ from the others in having an adverbial between the subject and the verb, which is not possible in German.)

The theoretical possibilities here, taking for the purposes of exemplification the structure S V O A, are as follows:

(a) S V O A (b) s V O A

(c) S V O a (d) s V O a

(e) S V o A (f) s V o A

(g) S V o a (h) s V o a

(Those patterns may be taken to include those with constituents of a similar status, i.e. O stands for O, A or C, and o for o, a or c, etc. Thus neither the functional category nor the ordering are assumed to be significant here.)

a) Type (a) usually has, as expected, the nucleus on the final lexical item, e.g.:

S V O A: Meine Eltern hatten Glück mit dem Wetter

S V A O: Die Dame verkauft von Zeit zu Zeit Möbelstücke

S V A C: Der Lehrer ist mit seiner Arbeit ganz beschäftigt

S V O A: The hotel offers a comfortable home to a number of residents

S V O O: The professor gave the student a bad mark

S V A A: The sociologist agrees entirely with Dr. Beard

This pattern is unaffected by the occurrence of a non-lexical subject (type b), as in C2, C6, E1.

With one of the elements after the verb non-lexical, the location of the nucleus is also as expected: it falls on the lexical element, regardless of position. Of the four types of this kind (c, d, e, f) only the last two are represented in the data. In fact, types (c) and (d) are rare in German; German prefers to order its sentence elements in such a way that a non-lexical element will precede a lexical one. This is illustrated by the well-known rule for the ordering of dative and accusative objects: with two lexical elements dative precedes accusative, and with two non-lexical elements accusative precedes dative; but with one lexical and one non-lexical element, the non-lexical precedes the lexical. Sentences in which a lexical item precedes a non-lexical one are nevertheless found in both languages.

Where both post-verbal items are grammatical, as in types (g) and (h), the nucleus seems to fall regularly on the verb. This is the same principle as that given above for sentences containing only one post-verbal element.

These claims can be exemplified as follows:

sie holte ein neues Buch von der Bibliothek

sie holte es von der Bibliothek

sie holte ein neues Buch von dort

sie holte es von dort

she brought a new book from the library

she brought a new book from there

she brought it from the library

she brought it from there

The patterns with auxiliaries and with verbal affixes are in principle the same as those discussed above for simpler structures except that the position of the affix in English sentences may be between the two post verbal elements. Here again, however, the rule that the nucleus will fall on the last non-verbal lexical item (where the affix is included in the verb) still holds:

she brought a new book down from the library

she brought it down from the library

she brought a new book down from there

she brought it down from there

Only in the last of these sentences, where both of the other elements are non-lexical, does the verbal affix take the nucleus. Again, the rule of 'final lexical item' does not work.

In information units consisting of still more complex declarative clauses exactly the same principles can be found to apply in neutral cases. The following are examples from the data which all have neutral tonicity:

German

14. er begibt sich gleich zu Mrs Richmond

15. ich habe mich nicht darum gekümmert

16. es rutschte mir nur so aus

17. ich werde Ihnen inzwischen von Henry Darlington erzählen

18. ich sitze mindestens zwei Stunden pro Tag mit ihr bei der Hausarbeit

English

5. I came quite close to it though

6. they have come down again for a short holiday with their infant son

7. you could then make assumptions about prior knowledge.

There is at least one type of sentence where the rules considered so far do not appear to work on all occasions. Consider the following examples from the data, all of which seem to be neutral versions:

German

19. es gibt so viele 'wenns' in Ihrer Theorie

20. er hat anscheinend keinen guten Ruf im Dorf

21. der Mann hat vermutlich eine bedeutende Summe in seiner Brieftasche

Although the final adverbial is clearly lexical in these examples, the nucleus nevertheless falls on the preceding object. These sentences have in common the fact that the final adverbial is a locative expression. Similar examples can be constructed for English:

there's a fly in my soup

I've no money in the bank

He put his hands in his pockets

This certainly does not apply with all locative expressions, and it may be that it occurs only with 'expected' adverbials; with less common collocations the nucleus would be likely to fall on the adverbial itself:

he put his hands in the washing-machine

If the object is non-lexical in sentences of this kind, the nucleus reverts in any case to the adverbial:

there's something in my soup

I've nothing in the bank

he put them in his pockets

9.4.4 Tonic placement in imperative and interrogative clauses

9.4.4.1 Imperative clauses

Imperative and interrogative clauses differ from declarative clauses in their basic structure, and the rules for tonic placement are thus potentially different. Imperative clauses need not detain us long, since their syntactic characteristics are not such as to make their tonic placement different from that of declaratives. In English these clauses normally differ syntactically from declaratives in having no subject, but since the subject has little influence on tonic placement its absence does not effect the pattern. In German the same applies, except that the 'polite' imperative has a subject pronoun Sie after the verb. Being non-lexical, this pronoun has no effect on the pattern of tonic placement. The same is true of the pronoun wir in the first person 'imperative'.

The following are neutral German examples from the data which confirm these remarks:

1. Entschuldigen Sie Inspektor
2. aber vergessen Sie nicht ...
3. nehmen wir einmal an ...
4. lassen wir das erstmal auf sich beruhen

The first three of these have the nucleus on the verb (in G3 on the verbal affix) in the absence of any other lexical item in the sentence. In G4 auf sich appears to behave like a lexical item

(cf. the remark of Stock and Zacharias quoted above to the effect that an sich is an exception to the general rule making pronouns accentless).

There were no instances of information units consisting of an imperative clause in the English data. The following constructed examples of neutral cases allow us to explore imperative structures further:

German:

V s:	Entschuldigen Sie
V s O:	Nehmen Sie Platz
V s O O:	Geben Sie meinem Freund dieses Buch
V s o:	Nehmen Sie es
V s o O:	Geben Sie ihm das Buch/ Geben Sie es meinem Freund
V s o o:	Geben Sie es ihm
V s Affix:	Gehen Sie hin
V s O Affix:	Bringen Sie das Buch her
V s O O Affix:	Nehmen Sie dem Kind das Spielzeug weg
V s o Affix:	Bringen Sie es her
V s o O Affix:	Nehmen Sie ihm das Spielzeug weg/Nehmen Sie es dem Kind weg
V s o o Affix:	Nehmen Sie es ihm weg

English

V O:	Stop the noise
V O A:	take this book back to the library
V o :	Stop it
V o A:	take it to the library
V O a:	take this book there

V o a: take it there

V Affix: go back

V O Affix: take this book back

V O Affix A: take this book back to the library

V o Affix: take it back.

V O Affix a: take this book back there

V o Affix A: take it back to the library

V o Affix a: take it back there

The patterns here are entirely in conformity with the rules established so far for declarative clauses, viz. the nucleus in neutral cases will fall on the last non-verbal lexical item; if there is no such item it will fell on the verb. Verbal affixes are counted as part of the verb.

Imperatives also occasionally have a supporting pronoun in both languages, viz.

you do it

mach du das

In such cases, however, the pronoun is contrastive or emphatic and thus falls outside the framework of neutral tonicity.

9.4.4.2 Yes-no interrogative clauses

In both languages yes-no questions have a verbal element in initial position which in German is simply the finite verb of the sentence but in English is generally an auxiliary. The subject is thus shifted into the body of the sentence and becomes more relevant for tonic placement than it is in declarative clauses. In German, it is usual for a grammatical element to precede a lexical one,

and this applies to the ordering of the subject as well as other constituents. Thus, in structures where the subject is in direct contact with the object, as in yes-no interrogatives, a grammatical object will generally precede a lexical subject.

The following are neutral examples from the data of information units consisting of yes-no interrogative clauses:

German

1. können Sie das bestätigen?
2. haben Sie ihn darüber vernommen?
3. warst du schon mal da?

English

1. did you get the sword of honour?
2. is this your experience?
3. are things being done?

In all these examples the nucleus falls on the last constituent, and it conforms to the pattern established for declarative clauses, viz. it is on the last lexical item, or, in the absence of non-verbal lexical items, on the verb. Two examples require comment: in G3 we have an instance of the exception noted earlier in connection with SVA structures, where the nucleus is on the grammatical adverbial rather than on the verb if the latter is existential; in E3 'things' must be taken to be non-lexical (cf. 9.4.9 below). Neither of these cases is thus exceptional.

These examples can be supplemented with constructed ones to illustrate the possibilities more comprehensively: The basic structural possibilities are as follows:

German

a)	(i) V S	b)	(i) Aux S V	c)	(i) V S Affix
	(ii) V s		(ii) Aux s V		(ii) V s Affix
	(iii) V S O		(iii) Aux S O V		(iii) V S O Affix
	(iv) V s O		(iv) Aux s O V		(iv) V s O Affix
	(v) V o S		(v) Aux o S V		(v) V o S Affix
	(vi) V s o		(vi) Aux s o V		(vi) V s o Affix

English

d)	(i) Aux S V	e)	(i) Aux S V Affix
	(ii) Aux s V		(ii) Aux s V Affix
	(iii) Aux S V O		(iii) Aux S V O Affix
	(iv) Aux s V O		(iv) Aux s V O Affix
	(v) Aux S V o		(v) Aux S V o Affix
	(vi) Aux s V o		(vi) Aux s V o Affix

English does not have the two patterns without an auxiliary (except with the verbs be and have), and German does not have the pattern with auxiliary and affix, since in the latter case the affix is prefixed to the verb and is not a separate entity.

Examples to illustrate these structures are as follows:

a) (i) kommt der Zug?

(ii) kommt er?

(iii) isst der Hund Fleisch?

(iv) isst er Fleisch?

(v) isst es der Hund?

(vi) isst er es?

b) (i) ist der Zug gekommen?

(ii) ist er gekommen?

(iii) hat der Student das Buch gebracht?

(iv) hat er das Buch gebracht?

(v) hat es der Student gebracht?

(vi) hat er es gebracht?

c) (i) kommt der Zug an?

(ii) kommt er an?

(iii) bringt der Student das Buch mit?

(iv) bringt er das Buch mit?

(v) bringt es der Student mit?

(vi) bringt er es mit?

d) (i) has the train arrived?

(ii) has it arrived?

(iii) does your dog eat meat?

(iv) does he eat meat?

(v) does your dog eat it?

(vi) does he eat it?

e) (i) has your friend come back?

(ii) has he come back?

(iii) has the builder taken the floor up?

(iv) has he taken the floor up?

(v) has the builder taken it up?

(vi) has he taken it up?

Although these are arguably all neutral versions, there are some difficulties in a number of cases in assessing this. Those

examples which have a lexical object (viz. (iii) and (iv) of each group) are straightforward: in the neutral version the nucleus is on the object regardless of the grammatical status of the subject, or the presence or absence of a final verb or verbal affix. Where there is no lexical object the situation is more complex. With a grammatical subject as well as no lexical object (i.e. (ii) and (vi) of each group) the nucleus falls on the verb or the verbal affix, regardless of position in the sentence. We are thus left with examples (i) and (v) of each group, both of which share the characteristic of having no lexical object (in the case of (i) no object at all) but a lexical subject. In these cases there seems to be some fluctuation with regard to tonic placement, which is rendered more acute with these interrogative structures because of the close proximity between subject and verb and their variable order according to the presence of other elements. Types (a, i) and (a, v), in which the lexical subject follows the verb, are straightforward enough: the nucleus is on the subject as the last non-verbal lexical item, and, indeed, the last lexical item of any sort. All the other instances of type (i) in each group, however, have the lexical subject followed by the verb, and it seems possible to have the nucleus on either element under conditions which are not entirely clear. These structures resemble, of course, simple intransitive declarative clauses in that the last two elements of the information unit are S and V, both being lexical items. It was noted in 9.4.3.1 in connection with this structure that there is variation here with the location of the tonic. It can be seen that this is not just a property of these simple declarative structures but arises elsewhere when the last two constituents are lexical subject followed by lexical

verb. The same also applies with sentences of type (v) in each group, though here there may be, as in the English cases, an additional grammatical object. Though the versions given here, with the nucleus on the subject, may perhaps be regarded as the most likely neutral versions, informants asked to pronounce (e, v) out of context invariably put the nucleus on un.

9.4.4.3 Wh-Interrogative clauses

There were no examples of information units consisting of simple wh-interrogative clauses in the English data, though a few occurred in German. The following appear to be neutral cases:

1. und welchen Eindruck hat er auf Sie gemacht?
2. wie ist denn das eigentlich?
3. was macht ihr denn so in den Ferien?
4. wo ist da ein Zusammenhang mit Ihrem Verbrechen?

These clauses are of several types in both languages, according to the element that is being questioned. The interrogative word may be, or may be part of, the subject, object, complement or adverbial, and since the element containing the question word is placed in first position, there are corresponding changes in the word-order of the sentence. We may tabulate some of the principle types as follows, where the prefix W- indicates that the element in question contains a question word:

German	English
a) (i) WS V (ii) WS V O (iii) WS V o (iv) ws V (v) ws V O (vi) ws V o	
b) (i) WO V S (ii) WO V s (iii) wo V S (iv) wo V s	
c) (i) WO V S A (ii) WO V s A (iii) wo V S A (iv) wo V s A (v) WO V a S (vi) WO V s a (vii) wo V a S (viii) wo V s a	
d) (i) WS Aux V (ii) ws Aux V (iii) WS Aux O V (iv) ws Aux O V (v) WS Aux o V (vi) ws Aux o V	e) (i) WS Aux V (ii) ws Aux V (iii) WS Aux V O (iv) ws Aux V O (v) WS Aux V o (vi) ws Aux V o
f) (i) WO Aux S V (ii) WO Aux s V (iii) wo Aux S V (iv) wo Aux s V	

Examples of sentences with these structures are the following:

a)	(i)	welcher Zug kommt?	which ship sank?
	(ii)	welcher kommt?	which one sank?
	(iii)	welcher Student liest das Buch?	which student read the book?
	(iv)	wer liest das Buch?	who read the book?
	(v)	welcher Student liest es?	which student read it?
	(vi)	wer liest es?	who read it?

b) (i) welches Buch liest der Student?

(ii) welches Buch liest er?

(iii) was liest der Student?

(iv) was liest er?

c) (i) welchen Film sehen die Studenten am Montag?

(ii) welchen Film sehen Sie am Montag?

(iii) was sehen die Studenten am Montag?

(iv) was sehen Sie am Montag?

(v) welchen Film sehen jetzt die Studenten?

(vi) Welchen Film sehen Sie jetzt?

(vii) was sehen jetzt die Studenten?

(viii) was sehen Sie jetzt?

d) (i) welcher Zug ist gekommen?

(ii) welcher ist gekommen?

(iii) welcher Student hat das Buch gelesen?

(iv) wer hat das Buch gelesen?

(v) welcher Student hat es gelesen?

(vi) wer hat es gelesen?

e) (i) which <u>ship</u> has sunk?

(ii) which one has <u>sunk</u>?

(iii) which student has read the <u>book</u>?

(iv) who has read the <u>book</u>?

(v) which student has <u>read</u> it?

(vi) who has <u>read</u> it?

f) (i) welches Buch haben die Studenten ge<u>lesen</u>?

(ii) welches Buch haben sie ge<u>lesen</u>?

(iii) was haben die Studenten ge<u>lesen</u>?

(iv) was haben sie ge<u>lesen</u>?

(i) which book have the students <u>read</u>?

(ii) which book have they <u>read</u>?

(iii) what have the students <u>read</u>?

(iv) what have they <u>read</u>?

Determination of the neutral version is difficult in a number of the se examples, and alternative versions are thus possible. Again, those in which there is a final lexical object or adverbial, viz. (a) (iii) and (iv), (c) (i) to (iv), and (e) (iii) and (iv), have the nucleus on this element. Those with no non-verbal lexical items (viz. (a) (ii) and (vi), (b) (iv), (c) (viii), (d) (ii) and (vi), (e) (ii) and (vi), and (f) (iv)) have the nucleus on the verb. A lexical object followed by a final verb, as in (d) (iii) and (iv), likewise takes the nucleus. Other cases are less certain, but it seems clear that a final lexical subject (as in (b) (ii) and (iii), (c) (v) and (vii)) is likely to take the nucleus. Where only non-lexical elements follow the verb (as in (a) (v), (b) (ii), (c) (vi)

and (e) (v)) the nucleus is likely to fall on the verb. The remaining patterns all have a final verb; in (d) (v) and (f) (ii), where the verb is preceded by non-lexical items, the verb seems generally to take the nucleus, but in the remaining cases, viz. (a) (i), (d) (i), (e) (i), (f) (i) and (iii), the verb is preceded directly by a lexical subject, and this kind of structure is, as we have seen, subject to a certain amount of variation, some sentences preferring the nucleus on the subject, others on the verb.

All in all, therefore, the patterns found in wh-interrogative clauses are similar to those found elsewhere, the main differences being that thematisation of the wh-element may lead to more cases where the clause ends in a lexical subject followed by the verb, such structures being variable in their tonicity.

One final remark: there is no evidence here for the claim made by Crystal (1975) that the nucleus always falls on the wh-item.

9.4.5 Tonic placement in clauses with inverted word-order

We have so far considered only clauses which can be said to have 'normal' or 'neutral' word order, which in declarative clauses means having the subject in initial position. Since this order is not obligatory in either language, there are many cases of other sentence elements occurring in initial position. In English, such elements tend to have a separate tone-group, but less frequently in German, so that we find more cases in German where a single information unit consisting of a declarative clause has an item

other than the subject (generally an adverbial) in initial position.

In structures of this kind it is less easy to establish what is the neutral version. The difficulty seems to be that utterances with an item other than the subject as the theme are heavily dependent on their context; the motivation for the thematisation of another item may well be that of linking up with the previous utterance. Thus our concept of neutrality, which is based on maximal independence of context, is further constrained.

Perhaps the main significance of non-subject theme for tonic placement is that it causes postponement of the subject itself, which is thus in closer proximity to the other elements of the sentence which regularly determine tonic placement in neutral cases. This is especially so in German, since here inversion of subject and verb is obligatory. In other respects however, the principles involved in sentences with inverted word order are basically the same as in more normal structures.

The following are some examples from the data to illustrate tonic placement in these structures. They are all considered to be neutral cases.

German

1. in Deutschland sind bereits einundvierzig Prozent der Frauen
   berufstätig
2. (so) hat die Dame das unbestrittene Recht
3. da kriegt man ja keine Unterkunft
4. veilleicht hatte er Bedenken
5. da sieht's also recht düster aus
6. da haben wir's

7. dann hat sie sich inzwischen aber sehr verändert

8. natürlich haben Sie ihm das nicht geglaubt

9. einen von ihnen erwartet sie in diesen Tagen

10. das möcht'ich bezweifeln

English

1. now perhaps the pity is ...

2. therefore I shall have exactly the same attitude

3. this we can't afford

All these examples are consistent with the principles given earlier: the nucleus falls on the last non-verbal lexical element unless there is none, when it falls on the verb. The only major types of structures which are not represented and need to be added are those with a lexical theme and a non-lexical subject and object or adverbial; and patterns with a lexical subject and a non-lexical object or adverbial, or no object or adverbial at all:

in Deutschland hat man es schon

in the winter they bury them

das wissen die Engländer

in that case the French department must teach it

in the morning the postman comes

It appears that a lexical theme has no influence on the tonic placement, presumably because it is regularly 'given'; a lexical subject with no lexical object or adverbial following it appears to be variable in its tonicity, as with other structures. The examples given here have the nucleus on the subject, but it may also fall on the verb.

9.4.6. Tonic placement in subordinate clauses

9.4.6.1 Adverbial clauses

Adverbial clauses in English do not differ much in their structure from declarative clauses. The same principles of tonic placement thus apply here as in declarative clauses. Examples from the data of neutral cases are the following:

English

1. when his wife enters ...
2. and when one enquires ...
3. it was decided ...
4. as I can
5. as you would expect
6. if it's put off
7. when I was at Sandhurst ...
8. because the objectives become more diffuse
9. except that they made me battalion adjutant
10. because I was good at paper-work
11. for it gives a unit an educational unit of about one member of staff
12. Because I'm quite convinced ....
13. because they're not a political body

In German the structure is slightly different because the verb, including any auxiliary, is relegated to the end. As before, however, this verb does not take the nucleus unless the other constituents are non-lexical:

German

1. euch wenn du keine Lehrstelle kriegst
2. wo du Prüfungen ablegen kannst
3. und (weil) man einen gewissen Wohlstand haben möchte
4. wenn man irgendwo hinkommt
5. wenn sie schulpflichtig sind
6. selbst wenn es so wäre
7. als man es früher getan hat
8. weil er ausserdem einen schlechten Ruf hat
9. (weil er) angeblich Drohbriefe erhielt
10. obwohl sie vielleicht keine Arbeitsstelle kriegen
11. solange sie nicht ausserhalb der Saison jagt
12. als es irgendwie nicht in der Zeitung erscheinen würde
13. wenn ihr gern in unserem Haus bleiben wollt
14. weil er der einzige Tierarzt im Umkreis von fünfzig Meilen ist

The only difficulty presented by structures of this sort is where a lexical subject is not followed by a lexical object or adverbial, as in E1. Tonic placement is variable here.

9.4.6.2 Relative clauses

Relative clauses resemble wh-questions in that a wh-element occurs initially which may be subject, object, complement or adverbial. The main syntactic difference is that there is no inversion of subject and verb in English and the wh-element is always pronominal, except with 'whose' or 'wessen'; it is thus usually non-lexical. In German the verb comes last. The following examples will illustrate some of the types found in the data in

neutral cases:

<u>German</u>

a) relative pronoun as subject

1. die auf die <u>Strasse</u> ziehen
2. die einen beträchtlichen <u>Wert</u> darstellen dürfte
3. der das nicht <u>weiss</u>
4. die ihn schon er<u>wartet</u>
5. das ihr vor die <u>Flinte</u> gerät
6. die mir also wirklich <u>zu</u>sagen würden

b) relative pronoun as object

7. die ich ver<u>richte</u>
8. die er nicht mehr <u>vor</u>legen konnte
9. den er möglicherweise gar nicht be<u>gangen</u> hat
10. was sie für sich mal <u>aus</u>geben kann

d) relative adverbial

11. wobei ich <u>fest</u>stellen konnte ...
12. wo man sich organi<u>sieren</u> könnte
13. von dem sie sich <u>trennen</u> will

<u>English</u>

a) relative pronoun as subject

1. who is so much the retired <u>major</u>
2. who's in charge of the University Teaching Methods Re<u>search</u> Unit
3. who are doing the <u>teaching</u>

b) relative pronoun as object

4. which we pos<u>sess</u>

5. which we would give a degree of approval to

c) 'whose'

6. whose main interest is in horseracing

None of these examples present any difficulty in terms of the rules so far given. One type of structure which is not represented here is that which contains a non-subject relative pronoun and a lexical subject, e.g.

den mein Freund nicht gesehen hat

who John knows.

The neutral position for the nucleus is not immediately evident here; in some cases it is on the subject, (cf. 'this is the house that Jack built'), but it is also possible on the verb.

9.4.6.3 Substantival clauses

Substantival clauses exactly resemble relative clauses in their structures and in their pattern of tonic placement, as these neutral examples from the data show:

German

1. was bei ihm vorgeht

2. was zunächst nur als eine Art Heilmittel gedacht war

3. so schon was meine Schwestern sagen

English

1. what is being taught in a particular course

2. who you are teaching

9.4.6.4 Report clauses

Report clauses differ little from ordinary declarative clauses

in English, though in German the verb is at the end. The following neutral examples from the data show that they conform to the rules given so far:

German

1. dass sie glaubten ...
2. dass ich bemühe ...
3. dass es ganz schön wichtig ist
4. dass du keine Zeit mehr hast
5. dass wir häufig Nebel haben
6. dass Sie freimütig und offen mit mir sprechen werden

English

1. that students work only for examinations
2. that they can produce biologist just as well
3. that they are improvable

9.4.6.5 Non-finite clauses

Non-finite clauses differ from others in that, except in some participial clauses, they do not have a subject. Since the interaction between subject and verb has been shown to be a source of variation in tonic placement in some cases, the absence of a subject in non-finite clauses makes their pattern of tonic placement very straightforward. The following are neutral examples from the data:

German

a) without um

1. sich zu interessieren
2. Tatsachen zu sammeln
3. (sie) zu ko-ordinieren

4. die logische Verbindung zu suchen

5. danach zu fragen

6. dich ein bisschen umzusehen

7. die Fahrt im Wagen zu machen

8. nun eine ganze Zimmereinrichtung zu verkaufen

9. drum einen Menschen zu töten

10. sich ihrem Lieblingszeitvertreib hinzugeben

11. sich selbständig zu machen

12. und sich etwas von dem Haushalt zu lösen

b) with um

13. um das moderne Wort zu gebrauchen

14. sondern auch um sich zu emanzipieren

15. um einen eigenen Lebenskreis zu haben

16. um nicht nur Hausarbeit machen zu müssen

17. um auch weiter mit in dem Leben zu stehen

18. um sie miteinander in Einklang zu bringen

English

a) infinitival

1. to rest assured

2. to be almost unbelievable

3. to take a stand

4. to make a judgment

5. to maintain the high standards of sport

6. to try to do this

b) participial

7. pushing a small perambulator

8. cramming away like mad

9. passed out pretty hioh

10. but having done so

11. coming into the universities

12. all wishing tc study a speciality

13. and finally in assessing the entire course

14. having the team come over from South Africa

The rule in all these cases is the same as that encountered before: the nucleus is on the last non-verbal constitu ent containing a lexical item, or, if there is no such constituent, on the verb.

9.4.7 Tonic placement in complex sentences

9.4.7.1 Sentences containinc report clauses

As we saw in chapter 8, certain types of complex sentences are regularly treated as a single information unit. The syntactic structure of such information units is thus different from that considered so far. We may begin by considering sentences containing report clauses.

There are two questions to be asked here: which clause does the nucleus fall on in neutral cases, and where within the clause does it fall. We may attempt to answer these questions by examining some neutral cases from the data:

German

1. weil ich überzeugt bin dass Sie nicht voreingenommen sind

2. dass man nicht erwartet dass die Frau zu Hause sitzt

3. ich glaube diese Frage kann man unbedingt mit ja beantworten

4. man hat mir gesagt er hätte Drohbriefe erhalton

5. ich glaube wir missverstehen uns

6. erlauben Sie dass ich mir eine Pfeife stopfe Sir?

English

1. I don't know how you do it

2. I don't think it would be fair to say that this is general

3. I think we're at stage one of this

4. I hope that the tour will go ahead

5. I think it would be a tragedy

6. I think it's very difficult

7. they feel this is undesirable

According to the evidence of these examples, the nucleus will fall on the second clause in neutral cases, and within this clause in the regular place. Note that it will fall on the subordinate clause even if this clause contains no non-verbal lexical items, e.g.

why don't you tell John how you do it?

'John' is the last non-verbal lexical item, but it does not take the nucleus, which is confined to the dependent clause.

It is also to be noted that the rule does not place the nucleus in the subordinate clause as such, but only in the final clause. In those rare cases where the report clause precedes the reporting clause in the same information unit the nucleus still falls on the second clause:

that it's possible he didn't say

This contradicts the assertion of Stock and Zacharias that the nucleus always falls in the subordinate clause (cf. 9.2 above).

9.4.7.2 Sentences containing infinitival clauses

Similar, but not identical, principles govern the location of the nucleus in sentences which contain an infinitival clause. The following examples from the data illustrate this:

German

1. und dann haben wir natürlich Gäste zu bewirten
2. Arbeit ist nicht nur dazu da um Geld zu verdienen
3. und (sie) versuchen sehr viel dafür zu tun

English

1. it was enough to point
2. we asked them to specify in terms of behavioural objectives
3. it's difficult to consider ...
4. it's not for them to judge

The principles are similar to those operating with report clauses except that in cases such as G1 a constituent (Gäste) is, in effect, shared between the main and subordinate clause, being the object of both verbs, and here it takes the nucleus although it is apparently outside the infinitival clause. In a sense, this constituent does duty for a 'missing' object after the second verb as well as for the object of the main clause. Informationally, it is thus treated as part of the second clause and may take the nucleus. This is, of course, the same as the well-known case cited by Newman (1946) and taken up by Bresnan (1971):

George has plans to leave

If plans is here the object of leave as well as of has it is subject to the rule placing the nucleus on the last non-verbal element of the second clause; the alternative form

George has plans to leave

differs in that plans is now no longer the object of leave and is thus not in the second clause. The rule thus cannot place the nucleus on it even if it is the last non-verbal element in the sentence; instead, the nucleus must revert to the verb of the final clause. We are thus able to account for this difference without the elaborate mechanisms of Bresnan, Lakoff, and others.

9.4.7.3 Sentences containing relative clauses

There are similar complicating factors with relative clauses. It is probably the case that, with a final relative clause, the nucleus will generally fall within the relative clause rather than within the main clause (it should also be recalled that only defining relative clauses normally are included in the same information unit as the preceding clause). There are cases, however, where the nucleus nevertheless falls outside the relative clause. The number of clearly neutral examples encountered in the data is too small to allow conclusions to be drawn, and we must therefore resort to constructed sentences. The following are probably neutral:

that's the actor I saw at the party

that's the actor I mentioned

that's the one I mentioned

das ist der Professor der in Berlin lebt

das ist der Professor den ich meine

das ist der den ich meine

If this evidence is typical, then we may say that, as in the case of infinitival clauses, the nucleus will fall within the final clause if it contains a non-verbal lexical item, but may fall outside it if there is no such item, in this case on the antecedent of the relative clause, provided that the antecedent is lexical. This would be consistent with the close connection between antecedent and relative clause and the status of the latter as not an element of sentence structure.

An illustration of this principle is given by Schmerling (1976), though she does not offer a satisfactory explanation. She notes the pair:

this is the man I was telling you about

this is the doctor I was telling you about

This difference can be accounted for in terms of the principle just given, if 'man', as a weak lexical item, is considered to be non-lexical (cf. below 9.4.9).

Other factors are clearly involved here, however; the location of the nucleus does not just depend on the lexical status of the antecedent. It is possible that it depends on the grammatical relationship of the antecedent to its clause, as in the case of infinitive clauses; if the antecedent is the subject of the relative clause it seems less likely to take the nucleus:

this is the doctor who examined you

But it may also depend on the lexical content of the second verb.

9.4.7.4 Sentences containing substantival clauses

Substantival clauses occur in various positions in the sentence with various syntactic functions. Information units containing substantival clauses are therefore of various types, not all of which occur in the data, and especially not in their neutral form. In all the cases encountered, the substantival clause was in final position, as follows:

German

1. ich trag' Ihnen nur vor was ich erfahren habe

English

1. is this where we should start?
2. you would miss what was most valuable in the course
3. why don't you assess what is valuable?

These resemble other kinds of subordinate clause in final position: the nucleus falls on the dependent clause, and within it in the regular position. (It may be noted that example E2 is a case of the nucleus not falling on a final locative expression ; cf. p.702 above).

Substantival clauses in initial position in the same information unit as the main clause are rare in both languages, as such sentences are regularly divided. Where they do occur, however, they do not take the nucleus, which falls on the final clause as usual:

what we want is Watney's

whatever I like is illegal

whatever I like hurts

was mir gefällt ist seine Stimme

was ich esse schmeckt mir

Again, therefore, it is the order of the clauses, not their grammatical function, which determines where the nucleus will fall.

9.4.7.5 Sentences containing comment clauses

Comment clauses differ from other types of clause in complex sentences in that they do not take the nucleus even if they are in final position. The following examples are typical:

German

1. die existiert sehr heftig kann man sagen

English

1. everything goes you know

2. well this raises the question you see ...

3. this leads us I think ...

The final comment clause is simply ignored for the purposes of tonic placement in such cases. This can also be extended to 'direct speech markers' such as 'he said' etc. This latter case forms one of Crystal's five rules for tonic placement (see above, 9.2).

9.4.8 Tonic placement in information units which are less than a clause

We saw above (chapter 8) that many clauses are divided up into more than one information unit, as a result of either 'motivated' or 'unmotivated' division. This means that many information units will thus consist of less than a clause, and, consequently, will not have a coherent syntactic structure.

Nevertheless, the structures considered so far immediately suggest the principles that are likely to be operative here: the nucleus is likely to fall, in neutral cases, on the last non-verbal lexical item in the information unit. This principle does not require a complete clause for its operation.

Large numbers of information units of this kind were encountered in the data. Some of these were relatively self-contained groups of phrases, while others were simply what was left over when a constituent was allocated an independent information unit. Two German examples will illustrate this point:

a) Übrigens wäre ein Antiquitätenhändler/ sicher nicht mit dem Omnibus gekommen

b) Sie haben mich von der Schuld Mrs Richmond /nicht überzeugt

Both these are cases of unmotivated division which leaves all information units syntactically incomplete: the auxiliary is in the first information unit and the main verb in the second in each case. Nevertheless it can be observed that the nucleus is placed in all four tone-groups in accordance with the rules established above. The nucleus of the first tone group of (a) is a lexical item, while that of the second tone-group of (b) is a verb; neither would have received the nucleus if the sentences had been undivided, but within their own information units tonicity is neutral.

Many other such cases can be found. The following are a few representative examples:

German

1. ... und Kirche etwas wegzukommen
2. an sonsten ist der Haushalt ja
3. gerade aus niederen Klassen
4. möglicherweise auch von der Familie
5. und sehr gern ins Theater
6. besser erzogen werden
7. für Whisky hatte
8. an der Wand hängen
9. mit einer Ladung Schot erschossen wurde
10. alles Wild ab
11. ein Soort ist
12. in bar auszuzahlen
13. auf alles eine Antwort Inspektor

English

1. has encouraged enquiries
2. have grown far louder
3. sometimes well-meant
4. in the library there you know
5. sometimes quite a range of ability
6. about the situation particularly in the new universities

9.4.9 'Lexical' and 'grammatical' items

In the above discussion it has been shown that the distinction between 'lexical' and 'grammatical' items is of crucial importance for the prediction of tonic placement in neutral cases. We have tacitly assumed that this distinction may be drawn relatively easily.

This is not necessarily the case, however; the dividing line between the two categories is far from clear. In the constructed examples given above care has been taken in using grammatical items to take only those whose 'grammatical' status is not in doubt, e.g. personal pronouns or weak adverbials.

One way of characterising the differences between 'lexical' and 'grammatical' items is to regard the former as constituting 'open' sets and the latter 'closed' sets. There is a problem, here, however, in so far as many apparently lexical items occur in sets which are effectively closed, and a number of closed sets of apparently grammatical items can be regarded as subsets of larger and more inclusive sets which are to all intents and purposes open. For example 'day' is presumably lexical, but it forms a relatively closed set with such items as 'night', 'morning', 'afternoon' and 'evening'; 'now' might be regarded as a grammatical item, since it often occurs in places where its semantic content is low and it serves a deictic function contrasting with 'then'. But both 'now' and 'then' can also be treated as adverbs together with a very large number of others, and hence one might well consider them to be lexical.

However, we are not concerned here with an <u>a priori</u> distinction between 'lexical' and 'grammatical' items as such, but rather with a division of items into classes according to their influence on the placement of the tonic. This classification certainly appears to coincide fairly closely with the rough distinction between 'lexical' and 'grammatical', but exactly how closely is a matter which deserves some investigation. In order not to prejudge the issue the terms

'focal' and 'non-focal' will be used, where 'focal' means 'taking the nucleus in neutral cases under appropriate conditions', and 'non-focal' means 'not taking the nucleus in neutral cases'. The 'appropriate conditions' for the former include, for example, when not followed by another focal constituent.

This division is not directly related to grammatical function; focal and non-focal elements appear as subject, object, complement or adverbial. One important source for non-focal items in all these functions is anaphora, when an item 'represents' another that is mentioned elsewhere. Noun phrases in any function are generally anaphoric if they consist of pronouns, including one and the pronominal forms of the demonstratives and quantifiers, e.g. this, some, all, any. The pronominal forms something, someone, somebody, everything, everyone, everybody; anything, anyone, anybody are also non-focal. The same applies to the equivalent forms in German such as man, etwas, jemand, jeder, alle, einer, etc. A few nouns also appear to be regularly non-focal; they are the general items for human and non-human nouns: people, things, Leute, Sachen, Dinge etc. It is difficult to give an exhaustive list of such items, as several may be either general or specific, e.g. English man, German Mann; these may thus be either focal or non-focal according to the context.

Anaphoric items also occur for other types of constituent. For adverbials of time, then is the most common such item; for adverbials of place either there or here; for adverbials of manner we have like that, that way, and so on. An anaphoric form which represents a complement clause is so ('he said so').

Similar anaphoric forms occur in German: dann, da, dort, hier, so. An interesting contrast with the anaphoric forms for complement clauses was noticed by Strothmann (1962). He points out that there is regularly a difference in the intonation patterns of sentences with 'elliptic' and 'non-elliptic' nicht or ja. For example, in reply to the question 'Haben Sie Freunde?' we may say 'ich glaube, ja', where ja is 'elliptical' for 'ich habe solche Freunde'. But the ja in 'Du blutest ja!' is not elliptical. Strothmann observes that the nucleus falls regularly on the ja in the first case, but not in the second. The same applies with nicht: 'ich glaube nicht' is elliptical for a complement clause, whereas 'ich glaube nicht' is simple negation. (The latter would mean 'I have no faith'.) This kind of contrast is not possible in English. Although the tonic would fall on the not of 'I think not', we can no longer say 'I think not' as a simple negative. The equivalent distinction to the German case would normally be between'I don't believe so' and 'I don't believe', where tonicity plays no part. German also has a form with the nucleus on the verb, as in English: 'Ich glaub'es nicht'. This area is clearly a rather complex one.

It is not only anaphoric items that are regularly non-focal, however. There are many forms which one would expect to be focal on the basis of a lexical/grammatical distinction but which are usually non-focal. Consider the following sentences; they are assumed to be neutral in tonic placement:

(i) John walked slowly .

(ii) John came too

(iii) John painted the shed on Wednesday

(iv) John painted the shed yesterday

(v) I haven't been to America yet

(vi) he hasn't read enough

(vii) young people are ill-mannered nowadays

(viii) the dustbin smells a bit (or: the dustbin smells a bit).

All of these contain final adverbials; in the first three cases the adverbial is apparently focal and in the last four it is not, but the differences cannot be entirely correlated with a simple 'lexical' versus 'grammatical' dichotomy.

Most of the non-focal adverbials are simple adverbs, though there are some exceptions (e.g. a bit in sentence (viii)). Not all classes of simple adverbs appear in all positions in the sentence (cf. 8.10.5.5) and those that appear finally are clearly likely to be more important for tonic placement. However it is not the case that all adverbs of a given class will be either focal or non-focal; there appears to be a considerable amount of idiosyncratic behaviour in these adverbs.

There follows a list of some of the adverbs in English and German which seems to be regularly non-focal. The list is by no means exhaustive, but merely representative. To establish a definitive list would require a more extensive study.

English

1. Intensifiers

a lot, a little, a bit, somewhat, to some extent, too much

(but not: for certain, for sure, completely)

In negative sentences: enough, sufficiently, (very) much,

(but <u>not</u>: in the least, a bit, a thing)

2. <u>Manner</u> ('Process')

well, badly

(but <u>not</u>: beautifully, carefully, horribly, excellently)

3. <u>Place</u>

here, there, everywhere, somewhere

(but <u>not</u>: elsewhere, nowhere, inside, outside, nearby, within,

upstairs, downstairs)

In negative sentences: anywhere

4. <u>Time</u>

then, now, sometime, soon, occasionally, sometimes, again,

often, frequently, yet, recently, at the moment, at present

(but <u>not</u>: repeatedly, infrequently, rarely, already,

immediately, right away, later)

today, tomorrow, yesterday, tonight, last night, last year,

this year, next year, last week, this week, next week, this

evening, this morning, this afternoon.

(but <u>not</u>: a month ago, a year ago, etc.; hourly, daily, weekly,

monthly, yearly, etc.)

5. '<u>Conjuncts</u>'

by the way, therefore, for example, for instance, so, then,

else, rather, on the other hand, however, though

(but <u>not</u>: anyhow, anyway, nevertheless, for all that)

German

1. Intensifiers

so, sehr, überhaupt, etwas, mehr, genug, wohl, kaum, fast, beinahe, wenigstens, mindestens, nur, sicher, sicherlich, sogar, eben, keineswegs, keinesfalls, höchstens, etwa, ja, doch

2. Manner

gern, derart, glücklicherweise, irgendwie

(but not: umsonst, anders, schnell, etc.)

3. Place

hier, da, dort, darin etc., irgendwo, überall

(but not: oben, unten, draussen, drinnen, vorn, hinten, dahin, dorthin, hierher, aufwärts, abwärts, überallhin etc.)

4. Time

dann, jetzt, schon, bereits, damals, neulich, eben, gerade, soeben, bald, je, jemals, endlich, immer, noch, oft, manchmal, wieder, irgendwann, vorher, nachher, gestern, heute, morgen, heuer.

(but not: abends, morgens, mehrmals, zweimal etc., sofort)

5. 'Redeweise'

möglicherweise, sicher, sicherlich, aber

6. 'Conjuncts'

sonst, aber, trotzdem, zwar, freilich, allerdings, übrigens

7. 'Disjuncts'

vielleicht, vermutlich, wahrscheinlich, bekanntlich, hoffentlich

A few examples may be adduced to support this list. These are all taken to be neutral versions where the adverbial would take the nucleus if it were focal but not if non-focal.

English

he eats a lot/ too much

(but: he's failed completely)

he doesn't eat enough

(but: he hasn't failed in the least)

John dresses badly

(but: John dresses horribly)

John's gone somewhere/ there

(but: John's gone elsewhere/ outside/ downstairs)

I'm rather busy now/ at the moment

He goes to London occasionally/ sometimes

(but: he goes to London repeatedly/ weekly)

he failed by the way/though/however

(but: he failed nevertheless/ for all that)

German

er isst viel/ja/doch/sogar/eben

(but: er isst schnell/ umsonst)

er wohnt hier/ dort

(but: er wohnt oben/ unten/ hinten)

er kommt schon/ gerade/ noch

(but: er kommt abends/ zweimal/sofort

ich kenne ihn zwar/ freilich/übrigens/ also

er kommt vielleicht/ vermutlich/bekanntlich/ hoffentlich

Not only is this list very tentative, and incomplete, but not all these items will necessarily always be non-focal. In some cases ordinarily non-focal items can be made focal by the context, for example if they are part of an adverbial containing even, (even here, even then), or selbst/auch (selbst hier, auch dann). These items are inherently contrastive. Similarly some may become focal if negative, and so on.

It is difficult to find any consistent features which may be said to characterise the non-focal adverbials, apart from their possible relative semantic weakness compared with the focal items. They include the more frequent and more general adverbs, also indefinite forms and forms which serve more of a linking function than a function of providing lexical content. But there nevertheless seems to be an element of arbitrariness in their assignment to the focal or non-focal categories.

9.4.10 Conclusions on internal factors in tonic placement

The foregoing discussion of internal factors in tonic placement allows us to draw some more general conclusions. The basic tendency, observed and documented for a wide variety of structures, is to place the nucleus on the last non-verbal lexical constituent of the information unit, or, in the absence of such a constituent, on the verb. This very general tendency is clear in the majority of cases, the only reservations being in respect of certain structures where the subject is the only non-verbal lexical item in the sentence; here there seems to be some indecision, especially where the subject and verb are the last two constituents in the information unit, and

the nucleus may be found in some cases on the subject, in other cases on the verb. Another slight reservation that must be made is with complex sentences, where, in general, the nucleus is confined to the final clause, even if it contains no non-verbal lexical items.

These basic principles have not been as widely recognised as might be supposed; in fact, no scholar seems to have presented them in such an explicit form, though they are certainly implicit in a number of discussions. Some explicit statements, for example the rule given by Halliday, are seen to be inaccurate because they are not sufficiently restricted; the rules of Stock and Zacharias, on the other hand, seem excessively restrictive. Of course, it is not being claimed that the principles given here are entirely adequate either. Nothing has been said about tonicity <u>within</u> constituents, for example within the noun phrase; this matter will not be dealt with in this study. Furthermore, not all of the basic problems have been solved. Nevertheless, the rules given here do seem to cover a large number of neutral cases with a variety of syntactic characteristics.

There is one further respect, however, in which the present rules, as indeed all other rules that have been proposed, are sericusly defective. Though they may provide the means of predicting the location of the tonic in the majority of cases they do not really offer any serious explanation or motivation for the position of the tonic; they are thus in an important sense arbitrary. We may draw a comparison with the rules for tonality discussed in the

previous chapter. There, we were able, in a similar manner, to set up rules for neutral tone-group division in a variety of structures, but we were also able to go beyond this and to provide a motivation for the rules. We noted that the crucial factor is the degree of integration or non-integration of an element into the structure of the sentence, with a corresponding reflection in its informational independence, and that tone-group division interacts with various other features of utterances - the type of constituent, its position in the structure, intrinsic properties of individual items, etc. - in indicating this independence. In the case of tonicity is it possible to go beyond the bald statement of rules for specific structures in a similar way and to find more fundamental principles?

We have seen that predicting the location of the nucleus in neutral cases involves taking into account a variety of factors, of which the principal ones are:

a) the 'lexical' or 'grammatical' status of elements (or 'focal' and 'non-focal')

b) the grammatical rôle (subject, object, verb, etc.)

c) the order of elements

Although these are in principle independent factors, there are some dependences, too: the order of elements often depends on the grammatical rôle, and, to a less extent, the 'lexical' or 'grammatical' status.

It is clear that each of these factors may contribute to the 'focal' potential of an item, though in different ways. We may

establish a scale of such potential on which elements may be located by means of these factors. Such a scale involves different degrees of informational 'prominence' of some sort. The basic principles of evaluation by these factors seem to be that, other things being equal,

Rule 1: 'lexical' items are 'stronger' than 'grammatical' ones

Rule 2: objects, adverbials and complements are 'stronger' than verbs

Rule 3: later items are 'stronger' than earlier ones

The qualification 'other things being equal' is an important one however, since these factors may not only combine with one another but also come into conflict.

As far as combination is concerned, these principles specify that, in a sequence containing lexical and grammatical items, the lexical items will predominate over the grammatical ones (Rule 1), that among the lexical items objects, adverbials,and complements will predominate over verbs (Rule 2), and that in the event of there being more than one such non-verbal lexical item the last will predominate(Rule 3).

As far as conflict is concerned, we can identify a number of cases where these rules do not automatically provide a solution because different rules suggest different positions for the tonic, e.g.

i) where a lexical item precedes a grammatical one (Rule 1 versus Rule 3)

ii) where a lexical verb co-occurs with a grammatical

object, adverbial or complement (Rule 1 versus Rule 2)

iii) where a verb follows an object, adverbial, or complement (Rule 2 versus Rule 3)

As we have seen, in case (i) the lexical item predominates; in case (ii) the verb predominates; and in case (iii) the object, adverbial, or complement predominates if it is lexical, but the verb predominates if the object, adverbial, or complement is grammatical. This means that Rule 1 is stronger than Rule 2, and that Rule 2 is stronger than Rule 3. We can thus establish a hierarchy of prominence here: a lexical object, adverbial, or complement is the strongest element, and a grammatical object, adverbial or complement is the weakest, the verbs coming in between. Among non-verbal lexical items, the last is the strongest.

The status of the subject in this is not entirely clear. If it is grammatical it is very weak, but if lexical its status seems to depend on its position: if it occurs <u>before</u> the verb it is stronger than a grammatical (anaphoric) verb, but of variable status with respect to a lexical verb; if it occurs <u>after</u> the verb it is of equal status with lexical objects, adverbials and complements, the predominance among these being determined, as just noted, by their order.

These observations allow us to draw conclusions comparable with those given earlier for tonality. Whereas with tonality we were concerned with informational <u>independence</u>, here we are concerned with informational <u>prominence</u> (see 9.5 below). Just as

various other factors besides intonation were seen to contribute to this independence, so various other factors contribute to this prominence: lexical or grammatical status, grammatical rôle, and the order of the elements. These factors interact and even conflict with one another, so that the item which actually is informationally the most prominent is the result of a complex of characteristics, and in some cases there is no unambiguously prominent item.

The location of the nucleus must be seen against this background. In neutral cases the location of the nucleus is determined entirely by these other factors, i.e. the nucleus falls on that item which is informationally the most prominent according to the above rules and their relative strength. It must be stressed, of course, that this only applies in neutral cases; in non-neutral cases the situation is different (cf. below). Neutral tonicity thus has, informationally speaking, only a reinforcing rôle, since it locates the nucleus on that item which is made most prominent by other, non-intonational factors.

One final point may also be made which is relevant in the comparative context of the present study: these rules and principles, together with the conclusions drawn from them, are equally applicable to both languages. The differences that have been observed above relate not to the principles governing tonic placement as such, but merely to the syntactic rules with which these principles interact. Here, as with information distribution, there is no evidence of any difference in the fundamental characteristics of intonational usage.

9.5. External factors in tonic placement

9.5.1 The rôle of external factors

In 'neutral' cases, the location of the nucleus is considered to be entirely dependent on internal features of utterances, so that such cases can be considered in isolation from their context. Needless to say, utterances which are independent of any context are rare; most information units are part of an extended discourse and will thus reflect their place in this discourse. We have already had occasion to note, in fact, that even in cases of neutral tonicity the utterance is bound to its context by other, non-intonational factors such as anaphora, word-order, and the like. Since these latter factors are involved in the determination of neutral tonic placement, it is clear that the difference between 'neutral' and 'non-neutral' tonicity does not lie in independence of context as such, but rather in the indirectness or directness of this dependence. In other words, in neutral cases the location of the tonic does not depend directly on the context but on internal features of the information unit which are themselves dependent on the context; the dependence on context is thus indirect. In non-neutral cases,however, tonic placement is not determined by these internal features but responds directly to external features of the context.

The rôle of external factors can thus be integrated with the general framework for neutral cases sketched out in 9.4.10. There, tonic placement was shown to depend on three basic internal factors which together produce a hierarchy of informational prominence and

locate a peak of such prominence in every information unit. In neutral cases these are the only factors that need to be considered, since the tonic falls on this predetermined peak. In non-neutral cases, however, the tonic falls elsewhere, and we must thus invoke another factor, external to the information unit itself. This can be accommodated by adding another variable to the list, a contextual factor which governs tonic placement more directly because it may override the combined effect of the three internal factors already given. This factor must thus be 'stronger' than the other three. In neutral cases this additional factor does not apply, or at least it does not conflict with the hierarchy of prominence dictated by the other variables. In non-neutral cases it <u>does</u> conflict, and, being stronger, it predominates.

9.5.2 <u>The nature of external factors</u>

We must now consider the nature of the external factor, or factors, which can determine the location of the nucleus in non-neutral cases. An important question that arises here is not only the semantic character of these factors but also their relationship to the factors involved in neutral cases.

As we have seen, there have been a number of proposals as to the meaning of tonic placement, and a number of categories have been suggested to accommodate it. The most explicit and promising categories for neutral cases are the 'given'/'new' and 'presupposition'/'focus' dichotomies. There are some differences between the terms of these oppositions: the 'focus' is a single item, presumably corresponding to the nucleus, but 'new' is a category which may be

applied to more than one item in the information unit, only one of which will bear the nucleus. Anything which is not 'new' is 'given', but the status of the 'presupposition' is less clear. Chomsky implies that the presupposition is anything except the focus, but this does not seem satisfactory, since 'new' items are presumably not presupposed, and some non-nuclear items may be 'new'. In short, then, 'new' versus 'given' seems more suitable than 'focus' versus 'presupposition'.

These categories are intended to apply to neutral cases, and it is not clear to what extent they may be extended to cover non-neutral ones. For the latter, other categories are often suggested, such as 'contrast' or 'emphasis'. Since 'emphasis' is prohibitively vague, 'contrast' would seem to be the more likely candidate. Chomsky suggests that 'contrast' is a distinct category, but that in principle its effect is not to be distinguished from non-contrastive focus. Crystal (1975), among others, asserts that the nucleus on a <u>grammatical</u> item implies contrast, but the nucleus on a <u>lexical</u> item reflects 'lexical presupposition'.

In order to clarify the situation here we may turn to some specific cases of non-neutral tonicity from the data. It is noteworthy first of all that the great majority of information units in the data had the nucleus in the neutral position. This is perhaps surprising if we take neutral tonicity to mean independence of context, but less so if we remember that the context asserts itself in all cases indirectly through the medium of internal features of utterances.

It is possible to group the non-neutral cases in the data into types according to the item on which the nucleus falls and according to the assumed motivation for the 'displacement' from the neutral position. Crystal, as we have seen, sets up a variety of categories; since for him the norm for the nucleus is to fall on the last lexical item there are three types of deviation: where it falls on (a) a prefinal grammatical item, (b) a final grammatical item, (c) a prefinal lexical item. He groups the first two together as instances of the same thing. In fact, since we have seen that the norm for tonic placement is on the last <u>non-verbal</u> lexical item, we should add a further category here: where the nucleus falls on a final lexical item, namely the verb.

More important than where the nucleus falls in non-neutral cases, however, is the motivation for the shift. In some cases the nucleus appears to fall elsewhere than in the neutral position because the neutral position <u>repels</u> the nucleus; in other cases because the other position <u>attracts</u> the nucleus. This distinction is important for an understanding of the semantic significance of non-neutral tonicity, but it is not always easy to draw; in some cases both factors may be at work simultaneously.

In cases of 'repulsion' the element which on internal grounds might be expected to take the nucleus may be unsuited for this rôle because it is <u>given</u>; in this case the nucleus must revert to some other constituent that is next in the hierarchy of prominence - in fact the constituent that would take the nucleus if the expected element were grammatical rather than lexical. The element that actually takes the nucleus may thus not do so because of any positive quality

which it possesses but which it would not have possessed with neutral tonicity; its informational status may be the same in either case.

A few examples of this from the data may be cited:

German

1. er habe die Briefe zerrissen
2. dass alle Lehrer angestellt werden
3. die ihr Mann ihr hinterlassen hat
4. auf das mich seine Worte hätten hinführen können

English

1. by using different teaching methods
2. in setting up the course
3. in defining objectives

In all these examples the nucleus falls on an item other than the expected neutral one; we should expect to find it on Briefe, Lehrer, Mann, Worte, teaching, course, and objectives as the last non-verbal lexical items in each information unit, but in all cases it is on the verb. This is, however, not because the verb in any of these examples has any additional characteristic such as 'contrast' which would lead to its being favoured over the regular constituent; it is simply because the regular constituent in all these examples is'given' by the context. The nucleus in these cases in fact falls on the item it would fall on if the expected item were grammatical: the nucleus is shifted to the verb as though there were no non-verbal lexical constituent.

Cases like this immediately disprove the view that non-neutral tonicity is always the result of contrast or emphasis. They also

provide important evidence against treating non-neutral tonicity as semantically different from neutral tonicity, since these cases can be accounted for simply by extending the rule which assigns no prominence to grammatical items so as to assign none to 'given' lexical items, too.

It is interesting that the verb takes the nucleus in such cases as this even if it is 'given'. In examples G2, E1, E2, and E3 the entire clause consists of 'given' elements, but the nucleus nevertheless falls on the verb. This seems to indicate that for the nucleus to fall on the verb may be a way of marking the whole clause as 'given'. There is also another way of achieving this which is often met with: placing the nucleus on a suitable introductory element such as a conjunction or preposition. We may thus encounter sentences like

(ich weiss) <u>dass</u> alle Lehrer angestellt werden

(you can do it) <u>by</u> using different teaching methods

It will also be noticed that the nucleus is moved <u>forwards</u> in all the German examples, but <u>backwards</u> in all the English ones. This seems to be simply the result of the different position of the verb in the two languages; the motivation for the shift of nucleus is the same.

In these cases it can be shown that the nucleus is shifted because the expected item 'repels' it; in others, however, this is less clear. Consider the following examples:

<u>German</u>

5. die Versuchung ist <u>gross</u> für eine Frau

English

4. are these comments general to the whole field of higher education

5. what kind of content this teaching should be

Here, the nucleus is not in the neutral position, but it falls on another non-verbal lexical constituent rather than on the verb. In such cases it could, as before, be argued that these items take the nucleus because the expected items are 'given' and these items are next in the hierarchy of prominence. Could one not also suggest, however, that there could be some additional quality in the items gross, general, and content - be it 'contrast' or 'emphasis' - which 'attracts' the nucleus at the expense of the expected item? Here, too, the first explanation seems more suitable. It appears that it is not possible for a 'new' item to occur after the nucleus; any item occurring in this position appears to be automatically 'given', if not by the immediate verbal context then at least by the situational context. There may possibly be a few exceptions to this principle, but in so far as it is valid it means that even if, in cases like C5, E4 and E5, the focal item has some special characteristic such as 'contrast' or 'emphasis' which would cause it to be focal, it could only be followed by further lexical items in the same information unit if these were 'given'; and if these are 'given', they automatically 'repel' the nucleus and throw it onto the preceding lexical item.

The upshot of this is that even if the items bearing the nucleus in cases such as the above were contrastive or emphatic this would

be irrelevant for tonic placement, since they would in any case take the nucleus as long as they were 'new', for in either case the following lexical items would be 'given'. This would suggest that it cannot be the function of non-neutral tonicity with the nucleus on a lexical item to indicate any <u>positive</u> characteristic of the nuclear item, such as contrast or emphasis, but only to indicate a <u>negative</u> characteristic of the item on which the nucleus would be expected to fall in neutral cases, namely that it is 'given'. This does not preclude the possibility that the nuclear item <u>has</u> some positive characteristic of this sort, but this is not indicated by the fact of its bearing the nucleus.

There is potentially one case where it might be thought that non-neutral tonicity with the nucleus on a lexical item could be the result of a positive characteristic of the nuclear item: where the nucleus falls on a <u>final</u> lexical item, viz. on the verb where it is the last lexical item. As mentioned earlier, prenuclear lexical items may be unspecified as to 'given' or 'new', and hence for the nucleus to fall on the final verb would not necessarily indicate that the expected nuclear item was 'given'. This would require the conclusion that the verb had some positive characteristic which could attract the nucleus away from its neutral position. Examples of structures where this would be possible are G1 to G4, above. However, it does not appear that this interpretation is possible here either, since the nucleus on the final verb <u>does</u> seem to indicate that the non-verbal lexical items are given, even though they precede the nucleus. Again we must conclude, therefore, that non-neutral tonicity with the nucleus on a lexical item does not indicate any positive quality of the nuclear item itself.

When we turn to cases where the nucleus falls on a grammatical item the situation is rather different. Grammatical items never take the nucleus in neutral cases, even if all other items are grammatical; here the nucleus reverts to the verb. Hence, non-neutral cases where the nucleus falls on a grammatical item cannot simply be the result of the normally nuclear item being 'given'. The following are examples of cases of this kind:

German

6. denn sie wird schon emanzipiert
7. ich habe noch nicht die gefunden
8. aber sie wissen sicher auch
9. ich kann von mir aus nur sagen
10. ich war nicht da
11. aber Niedersachsen ist ja auch konservativ
12. dass ich also arbeiten gehe
13. weil man sie eben machen muss
14. die mich also mehr oder weniger nicht sehr interessiert
15. seit wann sich Mrs Richmond dem Trunk ergeben hat
16. das hängt etwas davon ab woher die Frauen kommen
17. wissen Sie wovon Mrs Richmond lebt?
18. man sagt aber heute Abend wollen wir nicht über die emanzipierte Frau reden

English

6. I think
7. or some of them say
8. stating the objectives for them
9. in trying to improve these
10. in doing that

These examples fall into various types according to the kind of item that bears the nucleus. In all the English examples and numbers 9 and 12 of the German, the nucleus falls on a pronoun; in G6 and G13 it falls on an auxiliary; in the remaining cases on weak adverbial forms which would be classified as 'non-focal'. In none of these cases would the items in question bear the nucleus even if all the other items in the information unit were grammatical, or even 'given'; we must conclude, therefore, that there must be some positive characteristic which these items possess which attracts the nucleus. This does not exclude the possibility that other items may also repel it, however; the principle that no 'new' items (with the exception of the verb) may follow the nucleus still applies here. In G15, for example, where the nucleus is on the first constituent, the two non-verbal lexical items which follow must be 'given'. But the expected form of this utterance, even with these two items as 'given', would have the nucleus on the verb, according to the rules we have established in previous sections.

What positive characteristic do these items possess? On the analogy with other cases we would assume that they must at least be 'new'. In most cases this appears to be true, but not in all. E8, E9, and E10, for example, do not seem to conform to this since the focal element is given by the previous discourse. The immediately preceding context to E8, for example, is

it's all right having a class of five people ...

Them is thus anaphoric and inherently 'given'. G12 is another case where the nuclear item has occurred in the immediately preceding context;

in fact, it immediately follows G9. In a normal sense of 'given', the ich of G12 would appear to be 'given' by the mir of G9, just as the them of E8 is 'given' by the people of the preceding context.

It is often remarked that'given' does not necessarily mean 'given explicitly in the preceding discourse' but may also mean 'given by the situation, etc.'. By the same token, however, it would appear from these examples that 'new' does not mean 'not given by the preceding discourse'.

In some of these cases, it seems appropriate to say that the item in question is 'contrastive'. A clear example of this is E7. This is the second information unit in a sequence, viz.

/they say/ or some of them say/

Though the contrast is not explicit here, as it would be if the first information unit here were 'they all say', it is nevertheless implicit. We might also extend this notion of contrast to G9 and E6, where ich and I contrast with the other personal pronouns, and to G5, where wird contrasts with ist. We might even extend it to those cases which contain nicht: G7, G10, G14 and G18, since we might say that the negative contrasts with the positive. To extend the notion of contrast to cover E8, E9 and E10, however, seems less legitimate. We could say, of course, that them in E8 contrasts with the other personal pronouns in the same way that I does in E6, but this hardly seems to fit the meaning. Similarly with these and that in E9 and E10; since these are part of a small closed system of demonstratives, where the only internal oppositions are 'remote' v. 'proximate' and 'singular' versus 'plural', both these and that would have to contrast

with either <u>those</u> or <u>this</u>, which in these examples seems to be clearly <u>not</u> the case. Just what the contrast would be in G8, G11, G13, G15, G16 and G17 is not at all clear.

It is evident, therefore, that it is simply incorrect to assert, as a number of writers do, that the location of the tonic on a grammatical item always involves contrast. But if contrast is not involved here, what features do the focal items have which attract the nucleus? Can we discern any common factor in all the instances of a focal grammatical item given here? In a number of cases, including E8, E9, and E10, perhaps the most satisfactory term for the rôle of tonicity is that it <u>specifies</u> a particular item; it is a kind of intonational 'pointing'. This notion is, of course, vague and no doubt requires clarification, but attempts to be more precise seem to result in labels which are too restrictive. The above discussion seems to suggest that the rôle of tonicity in examples of this kind is simply that of specifying the informationally most prominent point in the information unit, no more and no less. That an item is 'contrastive' or 'emphatic' will certainly contribute to its informational prominence, but the indication of 'contrast' or 'emphasis' cannot really be seen as a function of tonicity itself.

It will also be evident that such a general function for non-neutral tonicity is in no way different from the kind of function generally recognised for neutral tonicity. In the discussion of neutral tonicity above we saw that various internal factors jointly produced an information 'peak' for the information unit. The only difference between neutral and non-neutral tonicity in this respect is therefore that in the former case this peak is derivable without recourse to

features outside the information unit itself, while in the latter case it is not; but the meaning of tonic placement as such does not appear to be different in the two cases.

A further, and final point may also be made. Though the prominence associated with the tonic is an independent factor, its location is, as we have seen, determined in the majority of cases by other features of the utterance. The fact that neutral tonicity is far more frequent than non-neutral tonicity in all types of information unit, including those which are heavily dependent on their context, suggests that various choices are made in respect of these other features which allow this neutrality to be maintained. For example, we must suspect that the ordering of elements in the sentence, which is in principle independent of tonic placement, is not established without reference to where the nucleus is to fall: 'new' lexical items are generally placed after 'given' ones as far as possible; similarly, utterances appear to be divided into information units in such a way that focal items are generally the last lexical items in their information unit. There is, of course, limited room for manoeuvre in the ordering of elements, especially if they are grammatical rather than lexical, but it seems clear that these various factors 'conspire' to ensure that, in the majority of cases, neutral tonicity can be preserved. This demonstrates the essential unity of the textual structure of utterances.

9.6 Paratonicity

9.6.1 Phonological characteristics of the paratone-group

Paratonicity is concerned with the location of major tone-groups

within the paratone-group. It is thus analogous to tonicity, but there are nevertheless important differences between them. The structure of the paratone-group differs in the two languages (cf. chapter 7, above):

<u>English</u> $(\text{minor}_0 \ \text{major}_1 \ \text{minor}_0)_1$

<u>German</u> $(\text{minor}_0 \ \text{major}_1)_1$

An important characteristic of this structure is recursion: everything within the brackets may be repeated indefinitely. There may thus be more than one peak of prominence within the paratone-group. This gives rise to a number of terminological difficulties, particularly with the term 'paratonic'. Unlike its analogue at the rank of the tone-group (the tonic) it is not to be seen as a single entity, but we could say either that the paratonic may consist of a number of major tone-groups, which need not be contiguous, or else that there may be more than one paratonic in the paratone-group. Since there do not seem to be precedents for the former usage elsewhere (i.e. that an element of structure may consist of an indefinite number of non-contiguous 'places') the latter usage is probably to be preferred, but for the most part the term 'major tone-group', which does not suffer from this difficulty, will be employed. The terms 'preparatonic' and 'post paratonic' also only really make sense if the latter usage is adopted, otherwise the prefixes <u>pre</u> and <u>post</u> are meaningless.

Paratone-groups containing more than one major tone-group may be called <u>co-ordinating</u>; those with only one major tone-group but more than one tone-group may be called <u>subordinating</u>; there may, of course, also be subordination in co-ordinating paratone-groups.

German differs from English here in that it cannot have minor tone-groups <u>following</u> the major tone-groups to which they are subordinated. In subordinating paratone-groups in German, therefore, a paratonicity system is redundant, since the major tone-group is automatically the last tone-group in the paratone-group. As both languages have co-ordinating types, however, a system is required in both languages to specify the <u>number</u> as well as the location of the major tone-groups. The paratonicity 'system' is thus more complex than the tonicity system, and in fact it must include several different variables, but they have in common the fact that they specify which tone-groups are major and which are minor.

A major problem with paratonicity is the recognition of the major tone-groups. This was discussed in chapter 7, where it was noted that major tone-groups cannot be established on the basis of tone-type alone, since some types may occur in either major or minor tone-groups. Falling and rising-falling tones are nevertheless always major. In other cases we must apply a variety of tests, for example reducing the paratone-group to a single tone-group to see which nucleus remains, or substituting other tone-types to see if the information value is affected. In the data examined, it rarely proved difficult to isolate the major tone-groups in this way.

9.6.2 <u>The rôle of paratonicity</u>

In 3.4.3 above the rôle of paratonicity was sketched out very briefly. It was shown that the paratonic has a similar rôle in the paratone-group to that of the tonic in the tone-group (allowing for the phonological differences mentioned in the last section): it

indicates the informationally most prominent point, or points, and this can often be related to a feature like 'newness'. In addition to the example given in 3.4.3 we may take the following:

// what he'd <u>like</u> / is for us to <u>go</u> / in <u>my</u> opinion //

If the tones are E4, E1 and E3, we might consider the second tone-group to be major, and the first and third minor; the second thus forms a 'parafocus'. That this tone-group is informationally dominant may be tested by reducing the whole paratone-group to one tone-group; the only way to preserve the informational ranking here is to place the nucleus of such a tone-group on <u>go</u>.

It is also possible to establish 'neutral' paratonicity. The best test here is probably, as in the case of tonicity, that of contextual independance: the neutral version is that which could be uttered in a non-presupposing context. In the present example this would again probably place the major information point on the second tone-group, whereas structures with the major tone-group in first or final position would imply some sort of presupposition.

The concept of neutrality also implies that it should be possible, in neutral cases, to predict the location of the major tone-group on internal grounds, for example from the syntactic structure or the order of the elements. In so far as such a neutral version is not obligatory, we must also recognise the potential influence of external factors. It will be the task of the following sections to consider a number of factors of both an internal and external kind which may be said to determine the location of major tone-groups.

9.6.3 Paratonicity in subordinating paratone-groups

Subordinating paratone-groups are those containing only one major tone-group and one or more minor tone-groups which are subordinated to it. In German these are of only one type, with the minor tone-groups preceding the major, but in English the minor tone-groups may precede or follow, or both. Even in English the type with preceding minor tone-groups is more common, however, and can, for the majority of syntactic structures, be regarded as the neutral version.

Many paratone-groups of this kind occurred in the data. They can be exemplified by the following passages, where // = paratone-group boundary, / = tone-group boundary, ___ = nucleus of major tone-group, ___ = nucleus of minor tone-group.

English

// I went to Twickenham / peacefully to demonstrate/ against the Springboks // and I did so / because I'm quite convinced / that South Africa / has brought politics / and an evil of politics / into sport // and I want to make the clearest denunciation of that evil / and call it as clearly to mind / as I can //

German

// ich habe sechs Kinder / und bin damit ganz beschäftigt // was mir an Zeit übrig bleibt / verwende ich dafür / mich für vieles / zu interessieren / damit ich meinen Kindern / wenn sie mit Fragen kommen / Rede und Antwort stehen kann //

In both these passages the paratone-groups are clearly recognisable. They consist of one or more minor tone-groups followed by a major tone-group, and all the minor tone-groups have non-

falling tones and the major tone-groups falling tones. Since this type of structure is the norm for most kinds of syntactic structure it will be unnecessary to exemplify it further.

Of more importance is the consideration of cases where this structure is <u>not</u> the norm. In German, the only alternative to this structure is a co-ordinating one (see 9.6.4 below), while in English we may also have different subordinating versions by changing the position of the major tone-group. It is possible to specify at least some of the syntactic structures for which the structure major + minor tone-group may be regarded as neutral. By far the most common here are sentences containing a final adverbial, where the adverbial takes a minor tone-group, though not all adverbials are necessarily treated in this way. In the data, adverbials were the largest single group of items taking a final minor tone-group. The following are some examples:

<u>English</u>

1. // and questions asked <u>now</u> / about examination methods/for example//

2. // now the <u>Arts</u> people / <u>do</u> resist this suggestion / <u>quite</u> often//

Given this division into tone-groups, it would be unusual for the final tone-group to be major. Halliday gives other examples to illustrate this structure (in his terms where the tone-group has a double tonic; cf. 1967a, p.37; 1970a, p. 38):

// I saw <u>John</u> / <u>yes</u>terday //

// there are <u>deer</u> / in these <u>woods</u> //

// he didn't come <u>home</u> / last <u>night</u> //

He also gives an example with a clause as adverbial:

// you can <u>oo</u> / when you've <u>fin</u>ished //

but the status of this as 'neutral' is less secure.

A second type of structure which seems regularly to have a final minor tone-group is that with a 'noun-phrase tag', i.e. a sentence where a noun phrase is postponed to the end, its place in the structure being generally occupied by a pronoun. Halliday again gives examples:

// it's a real <u>nui</u>sance /that <u>dog</u> //

// they've <u>left</u> / the <u>oth</u>ers //

// nice <u>chap</u> / <u>John</u> //

A third type, not discussed by Halliday, is a final 'comment clause'. This was mentioned above (8.10.6.6) in connection with tonality, where it was noted that certain kinds of final comment clause regularly have a separate minor tone-group. Examples from the data include the following:

<u>English</u>

3. // most praiseworthy <u>effort</u> / <u>I</u> think //

4. // this we can't <u>afford</u> / I dare <u>say</u> //

In all these cases the paratone-group structure with a final minor tone-group seems to be neutral; other versions would be 'marked' in some way.

It must be recalled that the operation of a 'paratonicity system' depends on tonality, inasmuch as a constituent can only be treated as a minor tone-group if it is a separate tone-group in the first place. Thus, when we say that the structure major + minor is neutral

here, this means that it is neutral <u>given this division into tone-groups</u>. Whereas a separate tone-group for noun-phrase tags and certain comment clauses constitutes neutral tonality, this is not necessarily true for adverbials; the more 'integrated' types often do not have a separate tone-group. In fact, the cases given above appear to be all 'marked' in their tonality; they would not normally be expected to have a separate tone-group.

There is also a relationship with tonicity here: the adverbials in question would, in an undivided tone-group, not take the nucleus in neutral cases (because they are non-focal, or locative, etc.). Those adverbials which regularly <u>do</u> attract the nucleus, e.g. 'repeatedly', would not normally be treated as minor even if they formed a separate tone-group, e.g.

// I saw <u>John</u> / re<u>pea</u>tedly //

Although this version is possible, the neutral versions would probably be minor + major, or major + major.

The occurrence of the structure major + minor is thus at least in part dependent on the kind of constituent involved. Certain types of constituent are evidently susceptible to this treatment, either inherently, as in the case of noun-phrase tags and certain comment clauses, or else by being given 'marked' status as an independent tone-group, as in the case of certain adverbials. This latter case, in particular, makes it clear what the status of such elements is: they are items which have, or have acquired, a certain independence while still remaining subordinate.

Not all instances of final minor tone-groups belong to these

syntactic types, however, as the following examples from the data show:

English

5. // it doesn't depend on seasonal/trade //

6. // I/was a bit like you //

7. // Yes I'm sure / this is so //

These cases are marked in tonality, as we should expect them to be undivided, but they are also marked in paratonicity, since, given this tone-group division, we should expect the paratonic to fall on the final tone-group. This can also be tested by giving these sentences neutral tonality and tonicity, with a single tone-group and the nucleus in the neutral position: it would fall on trade, you, and so.

Evidently, therefore, this structure is subject to external as well as internal factors, and a variety of elements may constitute a minor tone-group. As Halliday puts it (he treats this structure as a 'double tonic' within a single tone-group): "a minor information point may occur on any element of structure that is in a suitable position in the tone-group" (1967a, p. 22).

The semantic significance of this pattern in non-neutral cases appears to be very much the same as in neutral cases: it reflects independent though subordinate information in final position. Whereas in neutral cases this status is given by the syntactic characteristics of the elements concerned, in non-neutral cases it is not. What factor is involved in such cases, therefore? It appears that this, too, is analogous to that encountered with tonicity, since the

location of the paratonic seems to correlate with 'newness' (in the same rather vague sense used above), and information units following the paratonic are automatically 'given'. It is evident that 'given' does not preclude a measure of information content, since the 'given' item still constitutes an information unit. Thus Halliday (1970a, p. 44) writes: "another use of the double tonic is to bring in an item which has been mentioned or implied before, and thus is technically 'given', but to which the speaker wishes to give some prominence as essential information".

In the light of this, it is interesting to consider how German, which does not permit such a structure, is able to communicate a similar state of affairs, viz. a minor information peak. It was indicated in a number of places in chapter 8, above, that the intonation structure of several syntactic types in German is different from that of equivalent types in English, precisely because German is unable to give this subordinate prominence <u>after</u> the major focus. Cases cited were, for example, noun-phrase tags (8.10.5.1), and final comment clauses (8.10.6.6). There are other devices available in German, however, which to some extent compensate for the lack of final minor information units. It is much more frequent to have a non-subject theme in German than in English; such themes are informationally prominent because of their position (cf. 8.10.5.2, above), but they do not necessarily have a separate tone-group, as they would be likely to in English. We often find a similar informational rôle being accorded to final minor tone-groups in English and such a 'marked theme' in German. An example of this

was given in 3.4.4 above, where the following pair were said to be informationally analogous:

//I ◝know this /◟ book //

and // Dieses Buch ◝kenn'ich //

The first of these is, of course, a paratone-group containing a major tone-group followed by a minor tone-group.

It is tempting, though of course speculative, to interpret this relationship diachronically; English was once much more flexible in its word-order, resembling modern German much more than now. The loss of case inflections in English and the accompanying fixation of word-order (which is cause and which effect is a matter of dispute) meant that the number of textual means available was reduced. It is not unreasonable to suggest that the device of giving subordinate prominence to an item by means of a final minor tone-group may have developed in response to this loss of alternative means.

Examples E1 and 2 given above show that in English the types with following and preceding minor tone-groups can be combined. In E2, for example, the paratonic falls not on the final information unit containing an adverbial but on the preceding one. In this case, of course, the tonicity in the major tone-group is non-neutral. The adverbial is not 'given', but is of a 'non-focal' kind. There is also marked tonality, since both the theme and the final adverbial have separate tone-groups. Even preserving the marked tonicity, this utterance could have been given the form:

// now the Arts people <u>do</u> quite often resist this suggestion//

In order to obtain a normal-sounding version it will be noted that the adverbial has been placed in a weaker, medial position. But

the speeker evidently wished to give more prominence both to the subject and to the adverbial without at the same time reducing the prominence of do. The subject is in fact contrastive, and requires a separate tone-group. The resultant version actually found here gives the necessary prominence to all three parts, but orders them appropriately so as to give the major prominence to do.

Needless to say, German would need to re-order this kind of sentence considerably in order to achieve the same kind of textual relationships. A textually equivalent version might involve having a co-ordinating paratone-group in order to place the necessary prominence on the adverbial, e.g.

// Also die philosophische Fakultät / wehrt sich tatsächlich /

öfters gegen diesen Vorschlag //

A subordinating version would have to have the paratonic on öfters, thus relegating tatsächlich to subordinate status; the textual relationships would thus be different. Syntactic reordering so as to get tatsächlich after öfters, and hence as the last focal item, would be difficult, especially as the other possible prominent position, the theme, is already occupied by a focal element. This example shows the complexity of the relationships, and the difficulty of obtaining textual equivalence.

9.6.4 Paratonicity in co-ordinating paratone-groups

Co-ordinating paratone-group structures are of a variety of types in both languages. The simplest type is just co-ordinating, consisting of major tone-groups alone; more complex types have both major and minor tone-groups.

The factors involved here are usually considered to be a matter of the choice of tones in sequences rather than the choice of a particular structure. Thus we might, with Halliday, interpret the conditions for co-ordinating paratone-groups as conditions under which a falling tone, for example, is followed by another falling tone, since it is generally the case that major tone-groups within a paratone-group have the same tone. Halliday thus specifies the conditions for tone-concord. In the present framework, however, this is a question of structure rather than of system, and in fact, as we saw in chapter 7 above, tone-concord is not necessarily applicable in all types of paratone-group, and it is also not restricted to major tone-groups within the paratone-group.

Two basic questions arise in relation to co-ordinating structures. Firstly, what syntactic or other internal conditions might determine this structure, and secondly what is its semantic significance? In what follows we shall attempt to answer these questions on the basis of analysis of a number of examples from the data.

The simplest type of co-ordinate structure, containing only major tone-groups, is found in the following examples:

English

1. // well I take a very different view / as you would expect //
2. // then there's Mr. Fowler / a retired schoolmaster //

German

1. // ich werde Ihnen inzwischen von Henry Darlington erzählen /
   dem rohen rachsüchtigen verbitterten Tierarzt //
2. // wir haben Nora gefragt / die Schottin //

In these examples the pattern given, with two major tone-groups, seems the expected one; the use of the more 'regular' structure minor + major is less natural here. This is not true of all the examples of co-ordinating structures from the data, however; the following have only major tone-groups but a sub-ordinating structure would be the appropriate one in neutral contexts:

English

3. // to rest assured / in the mystique / of the Oxford or Cambridge tutorial //

German

3. // einer meiner Hunde / hatte sich eine Pfote gebrochen //

From this evidence, then, it would appear that although a variety of syntactic structures may have a co-ordinating paratone-group, this type of structure can be regarded as neutral for some but not for others. (We must again assume that neutrality is a question of contextual independence rather than of frequency of occurrence.) The types of syntactic structure for which co-ordination is neutral appear to include the following:

(i) apposition

(ii) relative clauses

(iii) sententtial relative clauses

(iv) adverbial comment clauses

(v) tag questions

(vi) unlinked clauses

Apposition and relative clauses should perhaps be restricted to 'non-defining' types, but since the 'defining' types would not normally have a separate tone-group this may be unnecessary, especially as in cases of marked tonality where they do have a separate tone-group they tend to have this co-ordination anyway. Not all these types occurred in the data in paratone-groups containing only major tone-groups, but the following are examples; constructed examples are unnumbered.

English

(i) apposition

(see E2, above)

(ii) non-defining relative clause

// I live in York / which is a nice place to live //

(iii) sentential relative clause

// he said he was ooing / which came as a shock //

(iv) adverbial comment clause

(see E1, above)

(v) tag question

// he's gone to America / hasn't he?//

(vi) unlinked clauses

// I don't believe it / it just isn't true //

German

(i) apposition

(see G1 and G2, above)

(ii) non-defining relative clause

G4 // gewisse Briefe / die ihm zugestellt worden sind nehm'ich an//

(iii) sentential relative clause

// er kann chinesisch / was mir ungeheuer imponiert //

(iv) adverbial comment clause

// ich kenne ihn nicht / wie gesagt //

(v) tag question

// es regnet / nicht wahr?//

(vi) unlinked clauses

cf // ich würde nein sagen/ es ist zum grössten Teil überholt//

In addition to these cases, a number of others are found where co-ordination is neutral, especially in German, where subordination with a following minor tone-group is not possible. One kind of structure of this sort is Ausrahmung. As noted above (8.10.5.1) clauses with Ausrahmung are regularly divided in German, and the separate tone-group for the matter excluded from the frame is usually co-ordinate with that of the frame:

// er ist in Urlaub gefahren / nach Kreta //

A related case of word-order disruption may be found in sentences with more than one adverbial. The basic order in neutral structures is Time + Manner + Place. It can happen, however, that this rule is not observed, but where it is not, a final 'displaced' adverbial will generally take a separate tone-group, co-ordinate with the rest of the clause:

// er fährt nächste Woche nach Deutschland //

but // er fährt nach Deutschland / nächste Woche //

In all the examples given here, whether constructed or from the data, the substitution of a subordinating pattern for the co-ordinating

one would result in a 'marked' version. Similarly, the occurrence of a co-ordinating structure in place of a subordinating one in other types of syntactic structure must be regarded as 'marked'.

Examples of such 'marked' structures from the data were given as E3 and G3, above. In principle, the occurrence of such a pattern in sentences of this kind is unpredictable on internal grounds, but most likely to be affected, because of their frequency of occurrence in sentence final position, are adverbials.

As a general conclusion from the occurrence of co-ordinating structures in neutral and marked cases we may attempt to characterise the semantic significance of the pattern. It is clear that major tone-groups in a paratone-group are informationally equivalent, in the sense that one is not subordinated to the other. The neutral cases given above are evidently those where this informational equivalence is matched by a syntactic equivalence: non-defining appositional phrases and relative clauses, and sentential relative clauses, are in parallel with their antecedents and not subordinated to them. Similarly, adverbial comment clauses and tag questions are not part of the main clause as such, but are linked to the main clause as a kind of parallel proposition. There is a natural transition from such cases to the 'unlinked clauses' of type (vi), above, where there is no overt link at all. These cases are marginal as single paratone-groups, and it may be possible to see them as sequences of more than one paratone-group. What justifies treating them as a single paratone-group is the textual parallelism; they appear to have an informational unity despite their lack of overt syntactic link.

The interpretation of the significance of a co-ordinating paratone-group for non-neutral structures is rather similar, but this time the informational equivalence is imposed on the parts of the utterance rather than being a result of internal features of the utterance itself. The kind of intonation structure found in E3 and C3, for example, ascribes to the various information units (themselves the result of unmotivated division) an informational equivalence which is not justified by the syntactic structure of the sentence. The impression given by such a pattern is of independent 'afterthoughts', even where the information unit is in fact necessary to complete the sense. This is particularly common in unscripted conversation, with so-called 'unplanned' sentences, where the speaker has not worked out the informational structure of his utterance in advance.

Co-ordinating and subordinating types, and also neutral and non-neutral patterns, can occur together. Each of the major tone-groups in a paratone-group may have minor tone-groups dependent on it. The following are examples from the data which illustrate some of the variety of patterns found. These are not the most complex types encountered, but more complex types are built up on the same principles.

English

(a) m ⌐M M⌐ etc.

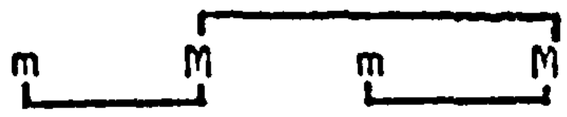
4. // now perhaps the pity is / there are no standards / no international basis / in which one can apply certain rules //

5. // the existence of new aids / like closed-circuit television /

has offered alternative / or supplementary approaches //

(b) 

6. // I think we can learn a very great deal / from/one another //

(c)  etc.

7. // as far as the MCC is concerned / surely in the absence of any ruling or otherwise / from government / it is not for them to judge / other than whether the cricket / and the standard is going to be up to what they look for //

8. // but I believe / that the whole of Africa / depends for its future / on the correct and proper attitude / to this vicious thing called apartheid //

(d) 

9. // it doesn't depend on seasonal / trade / but offers a comfortable home to a number of residents //

German

(a) 

6. // sie beabsichtigt / statt einen einzigen Möbelstück / nun eine ganze Zimmereinrichtung zu verkaufen /die einen beträchtlichen Wert darstellen dürfte //

7. // es ist üblich in diesem Beruf / einen Teil der Summe / unter der Hand / in bar auszuzahlen //

(b)  etc.

8. // ein Drittel der Stunden ist annähernd ausgefallen / durch politische Diskussion / Vollversammlungen / und so weiter //

9. // er hätte also / den geheimnisvollen Unbekannten / bei sich aufnehmen / ihn zum Essen einladen / ihm eine Jagdpartie

vorschlagen / und ihn dann aus nächster Nahe erschiessen können / mm? //

(c) m M m M

10. // er hat mir versichert / das sei lediglich ein Ulk gewesen / ein schlechter Scherz / den sich gewisse Kollegen mit ihm geleistet hätten //

11. // ich bin bei ihr gewesen / und habe die eindrucksvolle Sammlung von Gewehren gesehen / die in ihrem Salon / an der Wand hängen //

In these sentences we see two principles at work together. Certain parts of the utterance are accorded equivalent informational status, giving a co-ordinating structure to the paratone-group, but each of these parts may in turn have a subordinating structure. Paratonicity is thus a powerful set of systems which is able to reflect various gradations of informational prominence and also to impose such gradations on syntactic structures. This, coupled with the variations in informational prominence involved in tonicity, gives an extremely rich textual articulation to utterances.

Chapter 10: Modality

10.1 Introduction

The remaining dimension of intonational meaning, here called 'modality', is that which is associated with the pitch pattern itself as opposed to its structure. This is perhaps the aspect of meaning that is most popularly associated with intonation, since it appears to relate more directly to attitudinal features of utterances.

In chapter 3 above, and especially in 3.5, a general approach to this kind of meaning was set out, and it will be helpful to recall at this point the main conclusions that were drawn there. It was argued that most treatments of this kind of meaning illegitimately include features of the syntactic or situational context (especially sentence function) in the meaning of the intonation pattern. In addition, most writers fail to separate satisfactorily the meaning of the intonation pattern as such from an interpretation of this meaning that a listener can place upon it in specific circumstances. As a result, the meanings of intonation patterns given in most of the standard handbooks are too specific. When we eliminate these various illegitimate features from the meanings of intonation patterns we find that they become far more general and, indeed, far more consistent than is usually taken to be the case.

As far as the nature of this meaning is concerned, it was claimed that, since systems of tonal features apply to textual units, the meaning of these features must itself be textual in nature. An attempt was made to indicate how the notion of 'attitude' may

be interpreted in these terms.

The present chapter will apply this approach in detail to the intonation patterns of English and German. As elsewhere, we shall be looking for the widest possible generalisations. Rather than trying to make the contribution of the intonation pattern to the meaning of individual utterances too specific, too dependent on other features of these utterances, we shall attempt to make it as independent as possible, in the belief that this more adequately captures the essential nature of the 'modal' function of intonation.

10.2 Modality and phonological systems

The extent and complexity of the modal meaning of intonation is naturally directly dependent on the phonological systems to which it is related. These phonological systems are, as we have seen in earlier chapters, quite complex, with a variety of parameters at different ranks, and this is reflected in a similar complexity of the meanings here.

The rank-scale recognised in this study has two units for which intonation is relevant: paratone-group and tone-group. Each of these has elements of structure which are the domains of systematic feature contrasts. We must first consider the relationship between the various systems.

Halliday (1967a) recognises a 'primary' system, consisting of the items distinguishable "at the primary degree of delicacy", applying in the tonic part of the tone-group. 'Secondary' systems are for him of two kinds: those involving distinctions at the

pretonic, and those involving a further degree of delicacy at the tonic. As mentioned in 3.5.3 above, the 'secondary' status of these systems is not self-evident, but it is probably justifiable. The choice of features of the tonic appears to be much more significant for the general character of the tone-group than the choice of features of the pretonic, and hence the former may well be considered to be 'primary' and the latter 'secondary'. This is further reinforced in Halliday's framework by the polysystemic treatment of the pretonics, since the system of pretonics depends on the (prior) selection of tone. In the case of the 'secondary' systems at the tonic the situation is different; here the basis of the distinction is entirely semantic: whether we group two pitch types together as 'secondary' varieties of a single 'primary' tone or separate them as distinct 'primary' tones in their own right depends on the degree of similarity or difference of meaning that we judge them to have. The problem is, however, that such similarity or difference forms a scale rather than a simple dichotomy, so that there is no clear point at which we can draw the boundary between 'primary' and 'secondary'. Though there is, for the most part, a certain affinity between pitch-types with the same basic shape (e.g. different kinds of simple fall), there are also affinities between falls and rise-falls and between rises and fall-rises, and so on, and different pitch types with the same basic shape are by no means identical in meaning. What degree of 'delicacy' we adopt in establishing a 'primary' system is thus a moot point, and the policy here is probably motivated more by the practical consideration of

having a manageable number of discrete tones than by theoretical considerations.

Thus any system of tones (including the one set out in chapter 5) is to some extent arbitrary, not in the sense that any grouping of pitch types into primary tones would do, but in the sense that different degrees of discrimination of types could be adopted. The point at which the distinction is made in the present study will be justified in 10.5 below.

The extension of the framework to include the paratone-group brings with it analogous problems at a higher rank, and also creates further problems in the relationship between the systems operating within the tone-group and those operating within the paratone-group. If we summarise the chief 'modal' intonational variables at the rank of the tone-group as follows:

(i) choice of primary tone

(ii) choice of secondary tone

(iii) choice of pretonic

then we could, by analogy, have the following variables at the rank of the paratone-group:

(i) choice of primary paratone

(ii) choice of secondary paratone

(iii) choice of pre- and post-paratonic

It would be difficult to apply such a framework, however. If choice of primary and secondary tone consists in the choice of pitch features of the tonic, then choice of primary and secondary paratone must presumably consist in the choice of pitch features of the paratonic.

However, the latter presumably amounts to the same thing as the choice of pitch features of major tone-groups. Similarly, the choice of pre- and post-paratonic amounts to the choice of pitch features of minor tone-groups. Hence the systems operating in the paratone-group specify most of the pitch features which could be catered for by the systems in the tone-group, and vice-versa. Some of these systems (though it is not immediately evident which) would thus seem to be redundant.

We might consider that the most satisfactory approach here would be to treat such tonal features as the property of the tone-group and to ignore their rôle in the paratone-group. There are, however, advantages in taking the larger unit as our starting point here. Firstly, it is clear that the tone of an individual tone-group will depend on its function within the paratone-group, specifically whether it forms part of the preparatonic, paratonic, or postparatonic. Such conditioning of tone-choice is more easily stated in terms of the paratone-group as a whole. Semantically this is also advantageous, since not to invoke the paratone-group here would entail including information about the function of the tone-group in the paratone-group as part of the meaning of the tone. This is, in fact, what is done in the standard works on intonation: tones are given not only an attitudinal connotation but also a meaning such as 'continuation' or 'finality'. This is quite unnecessary if we separate the different classes of tone-group according to their rôle in the paratone-group; we can then eliminate such purely structural information from the meanings of the tones.

A second reason for describing the system of pitch features in terms of the paratone-group is that this allows us to capture relationships between the tones of tone-groups in a paratone-group. Tone-groups with a similar function in the paratone-group (especially major tone-groups) are generally characterised by tone-concord, so that the choice of tone for a number of tone-groups can be stated once instead of several times. Similarly, it is sometimes the case that there is a relationship between the tone of a major tone-group and that of a minor tone-group in the same paratone-group. This, too, can best be stated in terms of the paratone-group as a whole.

Thus, not to recognise that tone-groups form part of a larger structure would often complicate the statement of the meanings of the systems, since we would need to include information about the meaning at a lower rank than that at which it is actually applicable. This would perhaps be analogous to attempting to describe the meanings of pretonics or tones at the level of feet rather than tone-groups. The same meaning would need to be stated several times over, once for each foot.

In order to do justice to the complexities here we shall therefore need to refer some traditionally tone-group features to the paratone-group. This will be achieved by considering the tone-systems of major tone-groups separately from those of minor tone-groups. This is tantamount, of course, to separating the choice of paratone and the choice of pre- and post-paratonic. The same principle could no doubt be extended to pretonics and 'secondary tones' by considering

these as more delicate distinctions of paratones, but this would certainly obscure some of the generalisations which could be made here. Both protonics and secondary tones will be discussed (in 10.6 and 10.5 respectively) independently of their occurrence in major or minor tone-groups.

10.3 The primary systems in major tone-groups

10.3.1 General considerations

Discussion of the meanings of the tones in the literature centres largely on their use in independent, i.e. major, tone-groups. Most of the tones, with the probable exception of the level types, occur freely in such tone-groups, thus forming a system of mutually contrasting items.

In considering the meanings of these tones we will naturally need to take into account the extensive literature on the subject, but comparison of the discussions in the literature is often difficult, partly because the phonological systems established are not the same, and partly because descriptions vary in the degree to which they have successfully made generalisations and abstractions from the context. As far as phonological differences are concerned, these do not present as serious a difficulty as might be thought, since, as noted in chapter 5, they are not entirely arbitrary but may be related to a scale of delicacy, where different writers select different points on this scale. Thus it is often possible to relate the meanings of the various pitch types to one another to some extent independently of their allocation to phonological tones. Differences in the degree of generalisation attained by different writers are more troublesome;

the meanings given are, as discussed in 10.1, usually too specific, but different writers may make them too specific in different ways. But here, too, we may often overcome the difficulties; the source of the differences in meaning can usually be identified as the illegitimate inclusion of contextual features, such as sentence function, and it is often possible, by eliminating such features, to obtain something of a consensus. The aim of the following sections, in which the meanings of the individual tones are discussed in detail, will be to show that these meanings can be satisfactorily stated in more general terms than these published discussions usually allow.

10.3.2 The simple falling tones (E1 , G1)

Tones of a simple falling type are recognised by the majority of writers on both English and German intonation as the norm for most types of sentence. For English, the only type of sentence in which they are not considered to be the norm is the yes/no question. Thus, Armstrong and Ward (1926, p.9ff.) say that 'Tune 1' is used in:

(1) ordinary, definite, decided statements

(2) questions requiring an answer other than 'yes' or 'no'

(3) commands

(4) exclamations

Similarly Schubiger (1958, p.39) states that "Type F, the nuclear glide conveying finality, is appropriate for statements, commands, exclamations. Questions beginning with an interrogative word also have this intonation." Despite his very different theoretical framework, Halliday's treatment (1967a) is also analogous: tone 1 is 'neutral' for declarative, imperative, and non-polar interrogative

clauses, but 'marked' for polar interrogatives. One slight difference with Halliday is that this tone is not considered to be neutral for negative imperatives, though it is for positive ones.

For German, von Essen (1956a) considers his 'terminal' intonation to occur typically "in Aussagen, Aufforderungen, Ausrufen, vorangestellten Anreden, Ergänzungsfragen, indirekten Reden, den zweiten Gliedern von Doppelfragen". Pheby (1975) takes his tone 1 to be neutral for 'Aussage', 'Antwort' and 'Aufforderung'.

In both languages, therefore, it is accepted that there is a connection between the sentence type and the tone used, and that tone E1 or G1 is usual in most types of sentence. This was certainly evident from the data examined in the present study, where over 75% of all paratone-groups, in both languages, had tone E1 or G1 in the paratonic. In declarative sentences, 79% had tone G1 in German, and 87% had tone E1 in English in the major tone-group. No imperative sentences occurred in the English data, and only a handful in the German data, but all of the latter had tone G1. On the other hand, only 27% of all interrogative clauses in German had tone G1, and all these were of the wh-type rather than the yes/no type. In English, no interrogative clauses at all had tone E1.

It must be acknowledged,of course, that the number of instances in the data was really too small to establish reliable statistical findings, but even so it is clear that there is some sort of correlation between sentence mood and the occurrence of the simple falling tones.

In the light of this, it seems reasonable to regard tones E1 and G1 as 'neutral' in these sentence types. This being so, we might be content to give them no particular meaning in these cases. The fact that other tones may occur here, however, means that we need to give some sort of characterisation. What this characterisation is will depend on how we interpret the term 'sentence type'. It will be recalled that this term is ambiguous in that it may refer to sentence mood (declarative, interrogative, etc.) or to sentence function (statement, question, etc.). Only Halliday and those who follow his model (e.g. Albrow and Pheby) consistently make this distinction, though there are generally references elsewhere to 'questions in the form of a statement', and the like. The characterisation of the meaning of intonation in such cases depends on whether we relate it to sentence mood or to sentence function. Halliday and Pheby are able to give the meaning 'statement' to the falling tone in 'neutral' cases since they start from sentence moods: a declarative clause with tone E1 or G1 is a statement, but with tone E2 or G2 it may be a question. In a framework where 'declarative' is not distinguished from 'statement' however, this is hardly possible, as it makes little sense to say that the meaning is 'statement' in 'statements'. Thus we find rather different labels in the majority of works: 'ordinary, definite, decided' (Armstrong and Ward), 'decided and final' (Kingdon), 'assertive and conclusive' (Schubiger), 'definite and complete' (O'Connor and Arnold), and so on.

A further factor here, however, is that tones E1 and G1, though 'neutral' in declarative/statement, wh-interrogative/question, and imperative/command, may also occur as a 'marked' tone in yes/no

questions. Being marked, it is here said to convey a special meaning. Schubiger gives it the meaning 'curt' or 'tone of cross-examination'. O'Connor and Arnold characterise it as 'unsympathetic' or 'hostile', as 'insistent' or 'ponderous', or as indicating 'mild surprise', according to the pretonic and the height of the fall. Halliday gives the meaning as 'strong key' in yes/no interrogatives and in negative imperatives. For German, von Essen suggests that yes/no questions with the falling tone "haben ... gar nicht den Sinn einer Frage. Sie enthalten eher einen Appell, eine Aufforderung, einen Befehl." He characterises the effect here in terms similar to those used by writers on English: "streng, befehlend, hart, herrisch". Pheby, on the other hand, gives the fall in such cases simply the meaning 'vergewissernd'.

An important question here, therefore, is the relationship between the meaning recognised in yes/no questions and that recognised elsewhere. The meanings are, as we have seen, regarded as rather different by most writers. In Halliday's approach, which considers the tones separately for different sentence moods, the meanings are not just different in detail, they are different in kind: in one case the meaning is a sentence function, in the other it is an attitudinal connotation ('strong key').

There is convincing evidence, however, that this separation of different types of meaning is illegitimate. It was shown in 3.3.5 above that not only are yes/no interrogatives with tone E1 not statements, but also that declarative clauses with tone E2 are not really questions, at least not in the usual sense.. It was claimed

that the basic sentence function remains constant for a given sentence mood, and that the intonation pattern in all cases indicates an attitudinal connotation rather than a sentence function.

Not only is there evidence that the meanings of tones E1 and C1 in 'neutral' and 'marked' cases are not of a fundamentally different kind, but a strong case could be made for not distinguishing them at all. We could say that yes/no interrogatives with these tones are 'assertive' questions in the sense that they ask the question in a rather more forceful or presumptive manner. This 'assertive' element is often interpreted in the literature as indicating hostility (Schubiger's 'curt', 'tone of cross-examination'; O'Connor and Arnold's 'grim hostility'). Other meanings given are 'insistent' and the like. It seems, however, that all of these are simply interpretations of a more general meaning which derives from the fact that the question is being spoken with an intonation which is more appropriate to a statement or a command. Such an intonation may, under appropriate circumstances, convey hostility and the like, but this is surely an <u>interpretation</u> of the meaning in an appropriate context and not the meaning itself. There may, indeed, be no element of hostility at all.

With this view of the meaning of the fall in yes/no interrogatives, it is not difficult to find an analogy with its meaning in those kinds of sentence where it is 'neutral'. In these latter cases, however, the element of 'hostility' is not singled out, because an 'assertive' intonation pattern is entirely appropriate for most statements or commands.

In other words, the claim that is being made here is that we do not need to separate the meaning of the simple fall in yes/no interrogative sentences from that in other kinds of sentence. The different total effect of the combination of sentence mood and intonation pattern is not to be seen as a property of the intonation pattern itself but as the result of the interaction of two meanings: that of the mood, which consistently indicates the sentence function, and that of the intonation, which is similarly consistent.

The view of the meaning of the tone and its relationship to sentence mood is analogous to the approach adopted in this study to the rôle of information distribution and information focus in chapters 8 and 9. There, as here, it was possible to establish certain relationships as 'neutral' or 'unmarked', so that it would in principle be possible to distinguish two kinds of meaning: one type in 'neutral' cases, another in 'marked' cases. This is the case with information distribution, as discussed in 8.3 , above, where Halliday recognises two kinds of system for tonality, one involving differences of 'sentence structure' and one involving 'information distribution'. The former exploits the neutral relationship, in that 'neutral tonality' may vary with different syntactic structures and hence, with neutral tonality preserved, tone-group division can be said to disambiguate different structures. In cases where there is no syntactic ambiguity, differences of tone-group division will involve a contrast between 'neutral' and 'marked' tonality, and this will have textual rather than syntactic significance. In the present study, however, this approach to the meaning of intonational features is rejected; in the case of information

distribution it was argued that it is possible to establish a unitary meaning for the intonational variable, which may interact in different ways with different syntactic structures. The same applies in the present context of the meanings of the tones: a unitary meaning can be established for the tone in question, and this can be said to interact with sentence moods. There is no need to establish different meanings for 'neutral' and 'marked' cases.

The 'assertive' element that has tentatively been identified as the common factor in the meaning of the falling tones is, of course, rather reminiscent of a sentence function. As suggested in 3.3.5 above, however, we should see this meaning in informational terms rather than in terms of sentence function. Labels for informational meanings are, of course, rarely adequate to the task, but we might say that the fall indicates that the information unit is to be taken as 'closed'. What this entails will become clearer from the discussion of other tone-types below, but a 'closed' unit of information is in a sense self-sufficient. A falling tone is thus clearly appropriate for utterances which impart rather than solicit information, especially statements and commands, but it is also not incompatible with utterances that <u>do</u> solicit information. In the latter case, however, the effect will be of an 'assertive' question.

The only real difficulty with this interpretation is the wh-question, which regularly has a fall in both languages. The sentence function for both yes/no wh-interrogatives is presumably the same: question. Why, then, are they treated differently? There are, of course, syntactic differences here, but they are not such that the

yes/no interrogative requires to be marked as 'non-closed' while the wh-interrogative does not, since both are readily identifiable as interrogatives, the one from its word-order, the other from its characteristic question-word. The different intonational treatment of these two types of clause in both languages would thus appear to be entirely arbitrary in terms of the synchronic system. It is probably idle to speculate on historical origins, too. We might, of course, find a synchronic justification in the fact that wh-questions are more specific, and therefore more 'local' in their interrogation, and therefore contain more that is 'asserted' as opposed to 'elicited' (cf. the German term 'Ergänzungsfrage' for this type of question), but such speculations will not be pursued further here.

The present attempt to find a unitary meaning for the simple fall is supported by certain discussions in the literature which do not associate the fall with any particular sentence type. Jassem's statement is, in spirit at least, in full accord with the view expressed here: "falling nuclear tones have a proclamatory value ... That means that in the case of a tone-group with a falling NT, whatever the listener's reaction to the tone-group, he is not able to alter or supplement the general contents of the tone-group. The listener will do or think something in consequence of the speech act describing the situation, but he is not expected to have any influence on the situation itself" (1952, p. 70). Jassem's examples include a variety of sentence moods, but the connotation remains unchanged throughout.

In conclusion it may be said that this basic significance of

the simple fall does not appear to differ in the two languages. There are, as noted above, differences in the frequency of occurrence relative to other tones, since German has fewer tones than English. Thus G1 may be found in cases where English might prefer a different type of tone. This does not necessarily mean, however, that the meaning of tone G1 must be extended to include the meanings of the English tones which could be used here. The connotations of these other tones may be expressed partly by other means in German (cf. 10.8, below), or simply not expressed at all.

10.3.3 The simple high rising tones (E2, G2)

Many of the remarks about the relationship between sentence type (mood and function) and tone made in the preceding section are also applicable to the high rising tones. As noted above, the high rise is considered by writers on the subject to be normal only in yes/no questions. Kingdon (1958) states, somewhat ambiguously, that "its use is confined almost entirely to those questions which require an interrogative intonation". Schubiger (1958, p. 40) writes that "type R, the nuclear glide suggesting a continuation, is appropriate for non-final sense-groups, and for questions requiring the answer yes or no", but she considers that it is the low rise that is typical in questions. In the present framework, of course, the rôle of the tones in 'non-final sense-groups' is treated separately. O'Connor and Arnold likewise take the low rise (with a high head) to be the norm for yes/no questions, but for Halliday tone 2 is 'neutral' here. The meaning 'question' is not normally given for this tone in yes/no questions, presumably because the question element is already indicated by the syntactic structure, and because the sentence function

appears to be the same whatever the tone used.

The following are examples from the data of the use of the high rising tone in yes/no interrogatives (the nucleus of the major tone-groups is indicated by double underlining):

English

1. // 2 did you get the sword of honour //
2. // 4 is this in the last resort / 2 something which only the individual teacher can tackle //

German

1. // 2 können Sie das bestätigen //
2. // 2 haben Sie ihn darüber vernommen //
3. // 2 warst du schon mal da //
4. // 2 wissen Sie wovon Mrs Richmond lebt //

This tone is not restricted to yes/no interrogatives, however, as the following examples show:

English

3. // 2 that's all right major //
4. // 2 passed out pretty high /2 pretty high //
5. // 2 and you can't now //
6. // 2 yes major //
7. // 2 er no //
8. // 2 what //

German

5. // 2 das ist alles was Sie gehört haben //
6. // 2 ich würde nein sagen // 2 es ist zum grössten Teil überholt //

2 und die moderne junge Frau von heute die arbeitet doch sehr viel mit //

7. // 2 und Schottland gefällt mir sowieso ganz gut //

8. // 2 und welchen Eindruck hat er auf Sie gemacht //

9. // 2 wo ist denn das //

10. // 2 und wo ist da ein Zusammenhang mit Ihrem Verbrechen //

11. // 2 ja //

12. // 2 welches Thema //

13. // 2 warum nicht //

Examples E3 to E8 and G5 to G13 contain a variety of different sentence moods: declarative, wh-interrogative, 'minor clause' and 'wh minor clause'. For O'Connor and Arnold and also for Halliday, the high rise in English with a declarative clause is a question rather than a statement. A similar implication is contained in Schubiger's remark that the high rise is used "for questions not in interrogative form". Halliday also allows the high rise here to function in the system of 'agreement' as the term meaning 'contradictory'. In wh-interrogatives Schubiger and O'Connor and Arnold characterise this tone as indicating a 'repeat' or 'echo' question (O'Connor and Arnold also give 'tentative' as a meaning here). Halliday has a similar meaning provided that the nucleus is on the question word. Since both Schubiger and O'Connor and Arnold regard the low rise as the norm in yes/no questions, the high rise can take on a special significance here: 'great doubt', 'asking for confirmation', 'surprised repetition for confirmation' (Schubiger), 'echo question', 'light' and 'casual' (O'Connor and Arnold). For imperative clauses O'Connor and Arnold give the meaning as 'questioning' and Halliday allows it to

indicate a question. Armstrong and Ward state that "a sentence which with Tune I is a command becomes a request if Tune II is used".

For the most part, then, sentence moods other than yes/no interrogative are considered to be given a 'questioning' element by tone E2; if, as in the case of wh-interrogatives, they already have a question element, they are given the connotation of 'repeat' or 'echo' question.

For German, von Essen's characterisation is slightly different. The 'interrogativ' intonation may be used as a 'variant' in "Aussagen, Aufforderungen und Ergänzungsfragen, wenn sie Warnungen oder Drohungen darstellen sollen, in geringer melodischer Bewegung auch bei Aufforderungen als Ausdruck der Höflichkeit". Pheby, however, gives the meaning 'Frage' to the high rise in declara tive clauses; in wh-questions it has the connotation 'beteiligt'.

Examination of the above examples from the data does indeed suggest that in both languages a declarative clause with tone E2 or G2 may function as a question. Both the English example 5 and the German example 5 fall into this category. It is equally evident, however, that this cannot be the only function of these tones, since 3 and 4 of the English examples and 6 and 7 of the German are <u>not</u> questions. Examples E8, G8, G9, G10, G12 and G13 <u>are</u> questions, but the question element is already present in the interrogative word contained in these utterances. Minor clauses <u>without</u> an interrogative word (examples E6, E7 and G11) are here <u>not</u> questions.

There are here no examples of imperative clauses with tone E2

or G2, but the following constructed examples will illustrate this type:

<u>English</u>

// 2 go <u>home</u> //

<u>German</u>

// 2 geh nach <u>Hause</u> //

// 2 gehen Sie nach <u>Hause</u> //

Of these, the second German example is interesting, in that with a 'neutral' tone intonation could be said to indicate the sentence function: with tone G1 it is a command, with G2 a question. This could not apply with the first German example, which is not syntactically ambiguous, nor could it apply with the English example. Both these could have a 'questioning' implication, however, if the utterance is an 'echo question' in which the speaker is questioning whether or not this utterance was said (or should have been said) by the previous speaker. The English example here would, in fact, have wider application since the verb is identical to the 'citation' form of the verb; it also corresponds, therefore, to the German phrase <u>nach Hause gehen</u>. However, even this 'questioning' element is not necessarily present in an imperative with a high rising tone; it could still be a command, though of a rather lively kind.

In general, then, although many cases of the high rising tone elsewhere than in yes/no questions appear to be questions or have a questioning element in them, this is not true of all of them. Furthermore, even those cases that can be interpreted as questions are not questions in the usual sense; we may again refer back to the discussion in 3.3.5 above, where it was argued that a declarative with

a rising intonation is not so much a question as a statement held up for ratification or denial; it does not ask a question but 'questions' a statement. This can, of course, be extended to the 'questioning' interpretation of the imperative examples just discussed: they do not ask a question but 'question' a command. The general conclusion to be drawn here, then, is that question as such is not the meaning of the high rise in declaratives or imperatives, since these retain their basic sentence function of statement and command respectively, even with this type of tone.

If 'question' is not the meaning of tones E2 and C2 in declarative and imperative sentences, then what is? And can this meaning be generalised to cover the occurrence of these tones in yes/no questions, too? In some cases these tones are said to have the implication 'question', in others 'questioning' (which is not quite the same), in others 'request' or 'politeness' and in still others 'contradiction' . In still other cases, such as some of those from the data given above, none of these implications seems appropriate, but there is a note of 'liveliness'. What all these have in common seems to be a general element of appeal to the listener, where the utterance is directed in some way towards the listener for his answer, comment, approval or denial. This implication is naturally entirely appropriate for questions; it is not incompatible with other sentence functions, but its effect here is capable of a number of interpretations, as the labels given in the literature show. Of course, a difficulty here is, as mentioned above, the wh-interrogative, which, contrary to expectations, does not normally have this tone.

We may state this 'appeal' element more appropriately in textual terms: an utterance with the high rising tone in both languages is presented as an 'open' unit of information, which is not intended to be textually self-sufficient. It is not hard to see a connection between this connotation and the 'non-final' implication of minor tone-groups in the preparatonic, but there is certainly a difference here. Whereas non-falling tones in the preparatonic indicate that the complex information unit is unfinished, non-falling tones in the paratonic (here the high rise) indicate that the complete complex information unit has an open connotation and elicits a reaction.

Various writers have attempted to characterise the high rise in these terms. Bodelsen (1943) notes the 'appeal' element here; Jassem (1952) states that "rising nuclear tunes have evocative value ... the listener is expected to be actively engaged (be it only mentally) in the situation itself." It is also interesting to note the remarks of Coleman (1914) in trying to explain the occurrence of the high rise in yes/no questions: "such questions seem to me to be simply alternative questions in which the second alternative is suppressed. By its nature such a question expects one of two answers; it is therefore an alternative question; the alternative 'or not' is already present to the mind." This proposal is attractive, especially as it would explain the non-occurrence of the high rise in wh-questions in neutral cases and would also link the use of this tone in major tone-groups with its use in minor tone-groups. It fails to explain, however, the occurrence of this tone in other types of sentence as a 'marked' form. In declarative

and imperative clauses there is presumably no 'or not', even in the mind; a wider meaning is thus called for.

10.3.4 The simple low rising tone (E3)

Almost all writers on English recognise a low rising tone which is distinct from the high rise. A comparable distinction is seldom encountered in analyses of German; neither von Essen nor Pheby recognise a low rise (at least not at the primary level of differentiation) but Trim (1964) does. In common with the majority of analyses, therefore, the present study recognises a low rise for English but not for German. This does not necessarily mean that the possibility of a low rising pitch at the tonic in German is denied, but simply that its phonological status is different from that of the same pitch-type in English.

Writers on English also ascribe to the low rise a meaning which is distinct from that of the high rise. Kingdon labels it "the perfunctory tone" which, in statements, "makes the statement perfunctory and without enthusiasm". Palmer (1922) states that "it is used to convey the idea that all is well, that there is perfect agreement between speaker and hearer: it is a reassuring intonation". Jassem (1952) gives two basic meanings. Firstly "it expresses reserve or uncertainty when giving an opinion", but when preceded by a high level head it "expresses solicitous consideration for the listener". Schubiger gives a wide variety of meanings according to the type of head and the sentence type. In statements, the low rise without a head is 'casual' or 'guarded'; with a head it is

'friendly', 'reassuring', 'encouraging'; with a rising head it is 'patronising' or 'condescending'. It is also said to be 'contradicting' or 'protesting'. In commands, the low rise with a head is 'regardful', 'encouraging', or a 'polite request'; with pre-nuclear falls it is 'patronisingly or condescendingly encouraging'; again it may be 'protesting'. In wh-questions it is 'regardful' if it has a head, but has a note of 'resentfulness', 'reproach', 'perplexity' or 'entreaty' if it has pre-nuclear falls. In yes/no questions with a rising head and body it shows 'eager interest', 'surprise' or 'impatience'; with prenuclear falls it means 'entreaty', 'despair', 'concern'. O'Connor and Arnold adopt a similar approach: for them, the low rise with a <u>low</u> head (or no head) in statements means 'reserving judgment', 'guarded', 'reproving', 'resentful contradiction', or 'deprecatory'; in wh-questions it is 'wondering', 'disapproving', 'menacing'; in yes/no questions it shows 'disapproval' or 'scepticism'; in imperatives it is a 'calm warning or exhortation'; in interjections it shows 'reserved judgment' and is 'calm' or a 'casual acknowledgement'. With a <u>high</u> head, on the other hand, the low rise in statements is 'soothing', 'encouraging', or 'calmly patronising', and in interjections 'airy', 'casual', encouraging', 'bright', 'friendly'.

By the side of this richness of meaning, Halliday's meanings are quite sparse. In declarative clauses and yes/no interrogatives tone 3 is 'uncommitted' with a low pretonic and 'confirmatory' in declarative clauses with a high pretonic. In positive imperatives tone 3 with a high pretonic is 'mild' (it is 'neutral' in negative

imperatives), but 'deliberate' with a low pretonic.

Most writers do not consider that the low rise is the neutral tone for any sentence type. Exceptions are Schubiger and O'Connor and Arnold, for whom it is the norm in yes/no questions, and, as just noted, Halliday, for whom it is the norm in negative imperatives. The view of the first two is rejected here; the high rise is considered neutral in yes/no interrogatives. It is difficult to decide whether Halliday should be followed in his approach to negative imperatives; in fact, most commands in English are in the form of a yes/no interrogative (will you..., would you..., could you..., etc.), so that positive imperatives are in any case rare. Palmer (1922) asserts that this tone "is confined to statements and commands" and "it cannot be used in questions", but this seems doubtful.

This tone was not at all frequent in major tone-groups in the data. The following are examples:

1. // 3 I didn't regret all those hours of study at the time //
2. // 3 I did jolly well / 3 at Sandhurst //
3. // 3 I'm afraid not //

All these involve declaratives; constructed examples may be used to illustrate the occurrence of this tone with other sentence moods:

// 3 why don't you come //

// 3 are you sure //

// 3 come back soon //

// 3 don't be angry //

Of these, the least convincing is perhaps the example involving a

yes/no question (cf. Palmer's claim that it cannot occur in such sentences). Though possible, it is perhaps rather unusual here. This fact is interesting, because it shows that the low rise is more acceptable in sentences whose 'neutral' tone is the <u>fall</u> rather than the high <u>rise</u>. This reinforces the decision to make the high and low rise distinct tones, since the low rise may in some respects have more in common with the fall than with the high rise.

The meanings given in the literature and reproduced above are not easy to interpret in a generalised fashion. Some of the separate meanings, especially those given by Schubiger and O'Connor and Arnold, are clearly susceptible to amalgamation on quite a large scale. The labels 'guarded', 'casual', 'reserving judgment', 'calm', 'uncommitted', 'reserved', 'uncertainty', for example, can easily be reduced to a single meaning. The same applies to 'friendly', 'reassuring', 'encouraging', 'regardful', 'soothing', 'solicitous consideration', 'confirmation', etc. The meanings 'patronising' and 'condescending' can probably be assigned to the last group as an interpretation in a specific context, and other meanings can perhaps be assigned to one or other of these, too. If, for example, 'commitment' is called for, the lack of it, indicated by the labels of the first group, might be taken to indicate 'resentment', 'reproach', even 'menace'. The basic meanings can thus probably be reduced to two: 'reserved', 'uncommitted', etc., and 'encouraging', 'confirmatory', etc.

The first of these is perhaps the kind of meaning that we would expect in view of the mid pitch arrived at by the rise. If the final

low pitch of the fall indicates 'assertiveness', and the like, and the final high pitch of the high rise indicates 'appeal', and the like, the final mid pitch of the low rise might appropriately be considered to lack both assertiveness and appeal, to lack any kind of commitment. This connotation is thus a somewhat <u>negative</u> one. The second group of meanings, however, seems opposed to this: it suggests sympathy, warmth, encouragement, etc., which are much more <u>positive</u> qualities.

Apart from the difficulty of reconciling these two connotations, it must also be noted that the difference between them - which seems to cut across sentence types - is correlated with a different kind of pretonic. Meanings of the first type are assigned by several writers in cases where there is either no pretonic or a low pretonic; meanings of the second type are assigned where there is a high pretonic. On the whole, we should not expect such different attitudinal connotations to be indicated by the pretonic rather than by the tone, since pretonics generally do not have such a meaning (see 10.6 below). There is nothing theoretically repugnant about this state of affairs, of course, but it does seem to constitute an inconsistency.

If we are looking for generalisations, however, it is natural to ask whether or not these two different meanings really should be kept apart, and whether a further stage of generalisation could not amalgamate them. This can, in fact, be done. It is probably not too far-fetched to see in both meanings a basically <u>negative</u> connotation: an absence of assertiveness, an unwillingness to be

definitive or absolute. 'Casualness', lack of 'commitment' are, of course, close to this, but if we do not see this as necessarily deprecatory or unpleasant, then it is possible to interpret the same basic non-assertiveness as 'confirmatory' or 'reassuring', and hence 'encouraging', even 'friendly'. The point is not, of course, that casualness and encouragement are really one and the same thing - such a claim would clearly be preposterous - but rather that the true meaning of the low rise is more general than either of these connotations. The rôle of the pretonic can also be more clearly seen in the light of this. As will be seen in 10.6, below, the low pretonic has a 'downtoning' effect which, coupled with the basically non-assertive connotation of the low rise, can easily be interpreted as casualness, etc; the high pretonic, on the other hand, has no such effect, and its greater liveliness, together with the greater range which this combination allows, suggests no such interpretation; here the overall effect may be given a more 'positive' interpretation. This is <u>not</u> to say, however, that the difference between these two meanings of the low rise is indicated by the choice of pretonic; it is important to reiterate that <u>neither</u> of these meanings is here considered to reside in the low rising tone <u>or</u> in the pretonics. The particular combination of pretonic and tone may, however, lend itself to one or other more specific interpretation of a much more general meaning.

In support of a unitary meaning for the low rising tone it may also be observed that, if there were indeed two distinct meanings of this kind, then we would expect the occasional ambiguity and

misunderstanding, especially in cases without a pretonic. Thus an utterance such as the following:

//3 somebody will do it //

would be ambiguously 'reassuring' or 'indifferent' - two very different connotations - and misunderstanding would result. However, no such ambiguity seems to be present here, and we feel that only one implication is conveyed by the intonation, which we are free to interpret negatively or positively according to the context. This is not a case of ambiguity, but of generality.

The view adopted here, therefore, is that the low rise in English has basically one kind of meaning, a 'non-assertive' one. Different pretonics may add further nuances but they do not actually modify this meaning. Textually, we might say that this meaning is neither 'closed' as with the simple fall nor 'open' as with the high rise; it lacks the textual self-sufficiency of the fall and the element of appeal of the high rise.

As stated above, German does not have a low rising tone of this sort with such a connotation. It is worth considering, therefore, how German is able to indicate the specific connotation of the English tone 53. We may, of course, claim with some justification that there is no necessity for there to be anything comparable in German; as an initial hypothesis, however, it would seem legitimate to assume that there should be, since it would be strange if German had no way at all of conveying an implication of this sort, granted that the communicative needs of Germans are likely to be not greatly different from those of English speakers.

It does seem to be the case, nevertheless, that German does not have any consistent <u>intonational</u> means for achieving the particular effect of the English tone E3. Something of the 'non-committal' interpretation of this meaning can perhaps be obtained by a generally undemonstrative intonation pattern, particularly by narrow overall range, but this is less specific in its implication than the low rising tone. The lack of such a tone may conceivably contribute to the overall impression of assertiveness, even arrogance, which German speech often conveys to English listeners. Speculations as to national character may be inappropriate in a linguistic study, but it is difficult to resist the temptation to point out the correlation between the presence and absence of a 'non-assertive' tone and stereotypes of English and German speakers respectively.

German does, however, possess non-intonational means which are less widely available to speakers of English and whose function is in a number of respects analogous to that of intonation patterns: the so-called 'modal particles'. This matter is of sufficient interest and importance to justify a more extended treatment (cf. 10.8 below), but a few remarks are appropriate here. A number of these particles give an implication to the utterance which might be compared with that of tone E3 in English. The most common item here is perhaps <u>ja</u> in declarative sentences. Thus the utterance:

// Er <u>kommt</u> //

whose neutral tone is C1, may be made 'confirmatory' by the addition of <u>ja</u>:

// Er <u>kommt</u> ja // (cf. // 3 he's <u>com</u>ing//)

Another particle with a similar effect is schon. In imperative clauses the appropriate particle is mal:

// komm mal herein // (cf. // 3 come in //)

It cannot be claimed, however, that these particles are absolutely identical in their meaning to tone E3; even the above examples will show that the implication of the particle is rather more specific than that of the tone. There can thus be no question of a consistent correspondence between the two, despite a superficial similarity (cf. 10.8 below).

10.3.5 The falling-rising tone (E4)

The falling-rising tone is universally accepted as a characteristic feature of English intonation, though its status in German is more controversial. In the present study the pitch type 'fall-rise' is recognised for both languages, but the phonological interpretation given to it is different in each case. Halliday's analysis, which recognises two types of fall-rise in English, is adopted here; for German, the fall-rise is regarded as the equivalent of Halliday's 'broken' tone 2, and not of his tone 4, of which there is no equivalent in German.

The meaning of the English tone E4 is rather elusive, and writers clearly have some difficulty in characterising it. Palmer (1922) remarks that "the exact semantic functions of this tone-group are exceedingly difficult to define with precision. Probably no word exists in the language which will aptly describe the particular attitude conveyed by its use" (p. 82), though he suggests that 'concession' is perhaps the best word. He also claims that this tone

is "used chiefly for contrast". Kingdon normally tries to give a single label for each tone, but in the case of the fall-rise he has to give three: "the hesitant or apologetic or warning tone". In statements he suggests that it means that "the speaker wishes to convey some insinuation" and that "the statement is made hesitantly or tentatively". Schubiger's view is that the fall-rise "is not straightforwardly assertive but expresses a reservation or concession". In statements she gives it the meanings 'restrictive', 'concessive', 'contradictory'; in commands the meaning 'warning' is given. O'Connor and Arnold give a long list of meanings in statements: 'concession', 'grudging admission', 'reluctant dissent', 'direct contradiction', 'correction', 'concerned', 'reproachful', 'hurt', 'warning', 'apology', 'tentative suggestion'. In commands it indicates 'urgency' or a 'warning'; in interjections it means 'scorn', and in questions (both kinds) it may mean 'surprise', 'interest', or 'astonishment'. Halliday gives tone 4 the meaning 'reserved' in statements; in yes/no interrogatives, in its intensified form 4, it is said to mean 'strong assertion' and in imperatives 'compromising'.

It is interesting to note here that, like tone E3, this tone occurs more readily in sentence types whose neutral tone is E1 rather than E2. Palmer, for example, says that "it is used exclusively for statements and commands, never for questions", and few of the other writers consider it in conjunction with interrogative clauses, the chief exceptions being O'Connor and Arnold and Halliday, but even here only in rather unusual cases. This contrasts with the German fall-rise (G2), which appears primarily in questions. Pheby,

for instance, includes his fall-rise tone in three 'systems'; two of these apply only to questions, and in the other the use of the fall-rise (his tone 4) or the high rise (his tone 2) is considered to indicate a question. Here, then, is further important evidence for not regarding the German fall-rise as a separate tone from the high rise, and for not equating it with the English tone E4.

Tone E4 is a frequent tone, but most instances are in minor tone-groups (cf. 10.4 below). In major tone-groups it is, in fact, rather rare in the data. The following are examples:

1. // 4 I came quite <u>close</u> to it though //
2. // 4 no <u>no</u> //
3. // 4 of course when I was at <u>Sandhurst</u> //

Of these, the last could justifiably be excluded as syntactically incomplete, and perhaps also informationally incomplete; in this case it could be treated as a minor tone-group without a following major tone-group.

Further examples can be provided to supplement these, as the following, from O'Connor and Arnold (p. 277ff.):

// 4 <u>I</u> do //

// 4 <u>parts</u> of it were fairly interesting //

// 4 I'd rather <u>not</u> //

// 4 <u>show</u> me //

// 4 don't say <u>that</u> //

In view of the wide range of meanings proposed in the literature for this tone, a considerable amount of generalisation is clearly

called for. One kind of meaning given is 'tentative', 'hesitant', 'reserved', and the like. Another adds a note of displeasure: 'disapproval', 'reluctance' etc. Another is 'concessive' or 'restrictive'; and another is'warning'. These are not all incompatible with one another, however. 'Reluctance' seems a natural extension of 'hesitant', though the note of displeasure it contains is almost certainly a contextual interpretation. The most general meaning here, however, from which all the others may be derived,appears to be that there is a qualification implied. In declarative clauses an assertion is made but with 'strings' attached; this may be interpreted as 'tentative', but also as 'reluctant' and hence 'disapproving', in appropriate circumstances. In the case of imperative clauses the meaning 'warning' is often given, but this is surely simply an extension of the notion of qualification or concession to a command: the command draws attention to attendant circumstances and may thus suggest a warning.

Another meaning which may be associated with this tone is contrast. This meaning was used in 3.3.2 in the discussion of the intonation of anybody, where it was shown how such a meaning can interact with idiosyncratic properties of any. But 'contrast' also seems to be a further application of this same 'qualified' or 'concessive' meaning. 'Contrast' might with some plausibility be said to be inherently concessive (or perhaps 'concession' could be said to be inherently contrastive): 'although you say/imply etc. X, you mean/should have said etc. Y'.

This discussion does, of course, illustrate both the difficulties and dangers of generalising the meanings of intonation patterns.

It is regrettably all tooeasy to manipulate labels in this way, in what might seem to be a desperate attempt to prove that all the various meanings are in reality the same. This is not the intention here, however. What is being claimed is not that 'contrast', 'concession', 'hesitancy' etc. are all different facets of the same attitude, but rather that none of these is really the meaning of the tone in question. The links between the various meanings that have been made here are made in an effort to understand how writers on the subject could have come to interpret this more general meaning in the particularly specific way that we find in the literature.

Generalising from all this, therefore, it appears that we may consider tone 4 to be the 'qualified' tone; it is basically assertive but it points to or implies qualifying information which restricts the validity of the assertion. In textual terms it is therefore more 'closed' than 'open', but it suggests that there is further relevant information at issue.

As we have noted, this tone is not common in questions. This reinforces the interpretation that this is basically an 'assertive' tone. O'Connor and Arnold nevertheless give it as 'an intensified variant' of the low rise in certain questions, e.g.

//4 <u>is</u> it //

//4 <u>did</u> he //

This, they say, indicates 'surprise' or 'interest'. However, these meanings seem less than apt here. In the first place there is certainly an 'assertive' element here, reminiscent of tone 1 rather than 2. Secondly, the fall-rise seems to contribute not 'surprise' but simply the element of 'contrast' or 'qualification' that we have observed elsewhere

As with the low rising tone, it is interesting to consider possible German equivalents of this tone. Again there are no real intonational equivalents, but it is also not easy to find equivalents of other kinds. One case which might be mentioned, however, is given by Trim (1964). He suggests that an English utterance with tone 4 may be equivalent to a German utterance with inverted word order:

// 4 I'm <u>tired</u> //

and // 2 <u>müde</u> /1 <u>bin</u> ich //

There is some justification for this assertion, but the correspondence must be seen in a rather wider context. The structure exemplified by the German example here is quite common in German as a means of indicating contrast. A further example is given by Pheby:

// 2 in Ber<u>lin</u> / 1 <u>kannst</u> du das //

and others may easily be constructed:

// 2 <u>Tee</u> / 1 <u>trinke</u> ich // (aber nicht Kaffee)

// 2 <u>le</u>sen / 1 <u>kann</u> ich es // (aber nicht schreiben)

We have already seen (9.6.3) how German may use initial position as a means of giving extra prominence to an item, and that this structure may often correspond to the English device of placing the item in <u>final</u> position with a following minor tone-group. Where the German examples given here differ from those given earlier, however, is that they have a separate tone-group, which, of course, gives them still more prominence. This is therefore an appropriate intonation structure for sentences containing a contrastive item. English,

however, prefers to mark contrast tonally, with tone E4. Thus, though there is certainly comparability of implication here, the two structures are not really equivalent: the German structure gives an item greater prominence by thematisation and by a separate tone-group; the English structure adds a more specific connotation by means of tone E4. The total effect, given a specific utterance in a specific context, may well be similar: the utterance becomes contrastive, with the contrast localised in the initial item in German and in the item that bears the tonic in English.

German also has modal particles which may be used to convey a 'concessive' implication: zwar, allerdings, and freilich. Zwar normally only occurs in explicitly concessive sentences where the second part, introduced by the correlative aber, is actually present. Allerdings may, on occasion, resemble tone E4 in its function though its status as a particle may be in doubt. There are similar adverbials in English which may be used in an analogous way, e.g. certainly, as in:

// 4 we can certainly try //

10.3.6 The rising-falling tones (E5, G4)

The rise-fall in both languages has clear affinities with the simple fall. Some writers do not, therefore, distinguish them at the primary level of differentiation. Palmer (1922) regards the rise-fall as an 'intensified' variant of the fall, and Schubiger treats it as 'not essential'. Both Armstrong and Ward and Kingdon state that the rise-fall can 'replace' the simple fall. For German, it is not discussed at all by von Essen, though both Trim and Pheby

give it separate tonal status, as do most of the more recent writers on English.

As far as the meaning of this tone is concerned, Armstrong and Ward say that it "gives a greater degree of emphasis"; Schubiger gives it the meaning 'teasingly reproachful' in both statements and wh-questions; O'Connor and Arnold give, as usual, a longer list. In statements it is 'impressed', 'awed', 'complacent', 'self-satisfied', 'smug', 'challenging', 'sensorious', 'disclaiming responsibility'; in other sentence types a selection of these meanings is given, though in questions there is, in addition, a note of 'challenge' and 'antagonism'. Halliday puts this tone in the system of 'commitment' with the low rise, the former being 'committed', the latter 'uncommitted' in both declarative and interrogative clauses. In imperatives it is 'insistent'.

For German, Pheby (1974) gives the meaning of the rise-fall in statements and answers as 'ausdrücklich', 'zuversichtlich' (= confident, assured, etc.), or also 'trotzig' (= defiant). He later (1975) gives the meaning 'verbindlich' (= courteous) in the same sentence types.

This tone was not particularly common in the data examined; in fact it was extremely rare in the English data, though this should not necessarily be taken as a reflection of overall relative frequency in the two languages. Some examples are:

<u>English</u>

1. // 5 with en<u>tire</u>ly different / 3 <u>aims</u> //

German

1. // 4 offenbar veranlasste ihn seine schlechte Gesundheit aufs Land zu ziehen //

2. // 2 selbstredend / 4 gedenkt sie dabei mehrere Interessenten gegeneinander auszuspielen //

3. // 2 das Verhalten einer Person / 2 die trinkt / 4 ist oft seltsam /,

4. // 4 er hat anscheinend keinen guten Ruf im Dorf //

5. // 4 Ihr Vertrauen ehrt mich Inspektor //

6. // 4 erlauben Sie dass ich mir eine Pfeife stopfe Sir //

7. // 4 aber bitte /4 natürlich //

8. // 4 mm //

The following examples for English are taken from O'Connor and Arnold:

// 5 I did //

// 5 why for heaven's sake //

// 5 hasn't she done well //

// 5 they will be pleased //

// 5 suggest it to him //

In terms of the present approach, which attempts to find more general meanings than are supplied in the literature, it does not seem difficult to establish the nature of the meaning of this tone. In view of the affinity with the simple fall, the rise-fall clearly has a similar kind of textual connotation, viz. 'closed' or 'self-sufficient'. In addition, however, there is evidently a further element in its meaning. In all cases there appears to be a note of personal involvement or commitment to the utterance, which can

evidently be given a variety of interpretations in different contexts. The meaning 'impressed' etc., given by O'Connor and Arnold, is one such interpretation, but it can also easily acquire negative connotations in cases where the utterance suggests disagreement; here it can become 'confident' or 'complacent', and even 'challenging', 'defiant', or 'reproachful'. These latter meanings do nevertheless appear to be interpretations of the basic meaning derived from the particular context and not part of the basic meaning itself. Another connotation which may be similarly derived is 'sarcasm'. An example of this is sentence 5 of the German examples given above. It will be recalled from the discussion in 3.6 above that 'sarcasm' is an inappropriate meaning for the intonation pattern here, even if the total effect of the utterance is sarcastic. The intonation pattern has the function of indicating personal commitment which implies <u>greater</u> rather than <u>less</u> sincerity. The fact that it acquires a negative connotation here is entirely due to the context. The implication remains ambiguous, as it in fact <u>must</u> do if the sarcasm is to be successful.

It must be emphasised, however, that the connotation of personal involvement or commitment must be seen in textual not propositional terms. The use of the rise-fall does not imply commitment to the utterance as a proposition, i.e. to its truth or validity, but only to the fact of its being uttered. The speaker is thus not implying 'I really believe this', but only 'I really want to say this'. In this sense Halliday is certainly right to oppose it to the low rise in English, which appears to have a complementary meaning: The

'involvement' of tone E5 reinforces the textual importance of the utterance, while the 'non-assertiveness' of tone E3 might be said to weaken it.

10.3.7 The level tones(E6, E3)

There is considerable doubt about the status of the level tones in major tone-groups. Though a level tone is widely recognised for German, its function is generally seen as 'weiterweisend', and it is deemed to occur typically in 'non-final' (i.e. minor) tone-groups. In English, the existence of a level tone has rarely been acknowledged in either major or minor tone-groups.

Nevertheless, the existence of a level tone in independent utterances in German has been noted. Pheby illustrates its use in 'listing' questions:

// 3 möchtest du Fisch / 3 oder Wurst //

and also in the following utterance:

// 3 doch //

In the former case it is given the meaning "weiterweisend", and in the latter the more modal meaning "glatter, autoritativer Widerspruch". The 'non-final' implication of this tone is nevertheless recognised, even in this latter case, since here "wird eine Äusserung mit dem 'starken' Widerspruch selten abgeschlossen".

A number of instances of level tones were encountered in the data in independent tone-groups. The following are examples:

1. // 6 everything goes you know / 6 everything goes //

German

1. // 3 entschuldigen Sie Inspektor / 3 aber ich lebe ausserhalb des

Dorfes wie Sie sich überzeugen konnten //

2. // 3 mein Gott //

3. // 3 wollen Sie noch ... //

4. // 3 Sie meinen doch nicht dass ... //

The last two German examples are best left out of consideration, since the speaker is interrupted. They can thus be regarded as minor tone-groups forming part of an incomplete paratone-group. This is not true of the other examples, however, which are complete in themselves. Further examples may easily be constructed; the level tones often occur in greetings:

// 6 morning //

// 3 guten Tag //

and also in various kinds of exclamation such as 'good', 'fine', 'sure', 'yes'; 'schön', 'gut', 'ja', etc.

It is clear, then, that level tones do occur in major tone-groups, albeit rarely, and that G3 is probably more frequent than E6 in such tone-groups.

It is not easy to characterise the meaning of these tones in major tone-groups. There is certainly an affinity with the English low rise (E3), in German as well as English, since both are basically unassertive and also without the 'appeal' element of the high rise. It is thus possible that G3 may occasionally be more or less equivalent to E3, but the equivalence can hardly be considered consistent. In English, E6 seems to differ from E3 partly in that the unassertiveness is rather more positively expressed in the former than in the latter. The non-final, forward-pointing implication

that characterises this tone in minor tone-groups (cf. 10.4) also seems to be present here, suggesting that the situation is in some way incomplete. It is perhaps this that makes this tone available for use in greetings and the like, as it is casual, and in no way aggressive.

. . Since this tone appears to be more frequent in German than in English it is perhaps not quite equivalent in meaning in the two languages. In particular the use of this tone in the contradictory utterance doch, cited by Pheby, has no counterpart in English. Here, English would probably prefer tone E4 for an equivalent contradiction, as in e.g.:

// 4 oh yes he is //

It is difficult to judge, however, the extent to which this correspondence is systematic and consistent, and the extent to which it is brought about by peculiarities of doch itself. In any case this tone is so rare in major tone-groups in both languages that few serious conclusions are justified.

10.3.8 Combined types

As has been suggested above, the modal meaning of the tones in major tone-groups is best seen as a property of the whole paratone-group. In paratone-groups which contain more than one major tone-group, therefore, we should expect, and indeed generally find, that all the major tone-groups are characterised by the same tone. In the data examined, by far the great majority of all such paratone-groups had the same tone for all major tone-groups.

Tone-concord is not obligatory, however, and a number of cases were encountered where it did not apply. This naturally raises questions about the meaning of the tones in such cases, since the occurrence of different tones in major tone-groups undermines the view of a unitary modal meaning for the whole paratone-group.

The most common combinations of different types were those involving a fall and a high rise (E1 and E2, G1 and G2), and a fall and a rise-fall (E1 and E5, G1 and G4). Other types occurred only rarely and were in any case suspect. The following are some examples from the data of these combinations.

<u>English</u> <u>E1 and E 2</u>

1. // 2 Dr. Beard is this where we should <u>start</u> / 1 with the thought that there's often in the past been an inadequate examination of the <u>purposes</u> / 1 of the ob<u>jectives</u> / 2 of what is being taught in a particular <u>course</u> //

2. // 1 do you sometimes find there's re<u>sis</u>tance / 4 to the sug<u>ges</u>tion/ 6 that a uni<u>ver</u>sity teacher / 6 or a teacher in a poly<u>tech</u>nic / 2 should define the aims of what he's trying to teach in a particular <u>course</u> //

3. // 1 Willem van der <u>Eycken</u> / 2 is this your ex<u>peri</u>ence //

E1 and E5

4. // 4 having a class of say fifty people / 5 with entirely different / 3 aims / 1 and sometimes quite a range of ability / 3 within that group / 1 makes the objectives extremely difficult in fact to specify //

German G1 and G2

1. // 1 dafür kann ich von mir aus sagen /2 dass ich sehr viel Zeit für meine kleine Tochter von sieben Jahren aufwende //

2. // 1 wissen Sie auch /2 seit wann sich Mrs Richmond dem Trunk ergeben hat //

3. // 1 wenn du fertig bist mit der Referendarzeit da kriegst du glaub' ich kein Geld wenn du nicht vorher gearbeitet hast und du bist dann arbeitslos / 2 oder //

4. // 1 das ist ja enorme Neuerung / 2 eh //

G1 and G4

5. // 2 Bemühungen sich selbständig zu machen / 3 und sich etwas von dem Haushalt zu lösen /3 sich zu interessieren / 2 für das was ihnen angeboten wird /3 in der Presse / 3 im Fernsehen / 3 im Rundfunk / 4 und sich nicht nur / 1 auf dem Haushalt zu beschränken //

6. // 3 die Bauern wenden sich nur an ihn / 4 weil er der einzige Tierarzt im Umkreis von fünfzig Meilen ist / 1 aber sie tun es ungern und widerstrebend //

7. // 2 er hat mir versichert / 4 das sei lediglich ein Ulk gewesen / 3 ein schlechter Scherz / 1 den sich gewisse Kollegen mit ihm geleistet hätten //

8. // 3 und heute Abend bin ich hier / 3 um über gewisse Personen /
/4 Ihre Meinung zu hören / 1 weil ich überzeugt bin dass Sie
nicht voreingenommen sind / 3 und weil ich hoffe / 1 dass
Sie freimütig und offen mit mir sprechen werden //

9. // 2 ich bin bei ihr gewesen / 4 und habe die eindrucksvolle
Sammlung von Gewehren gesehen / 2 die in ihrem Salon / 1 an der
Wand hängen //

10. // 4 die Versuchung ist gross für eine Frau / 1 die gezwungen
ist / 1 ihren ganzen Besitz nacheinander zu verkaufen //

The two kinds of combination exemplified here, where a fall is in one case combined with a high rise and in the other with a rise-fall, appear to be rather different in kind, and this may no doubt be related to the kind of meaning that these tones can be said to have. The meanings of the fall and the rise are in opposition: one is an 'open' the other a 'closed' connotation, whereas the fall and the rise-fall are not opposed in this sense; the rise-fall can be said to contain the meaning of the fall, but with an additional connotation of commitment or involvement. Thus the combination of fall and high rise involves what at first sight appear to be incompatible connotations, while this does not apply to the combination of fall and rise-fall.

A characteristic case of the former is the tag-question, as in numbers 3 and 4 of the German examples. This particular structure was not represented in the English data, but it is nevertheless very frequent in both languages. In this type of sentence a 'closed'

assertion is first made and only then does a related 'open' utterance follow. The effect is thus not the same as that of an 'open' utterance by itself, since the 'closed' part contains a 'closed' presupposition for the 'open' part. The effect is also not that of an 'open' utterance with a declarative sentence structure, or of a 'closed' utterance with an interrogative structure. The interaction of mood with the 'open' and closed' connotations is thus complex; the following, though related, are all different:

(a) //2 are you <u>going</u> //

(b) //1 are you <u>going</u> //

(c) //2 you're <u>going</u> //

(d) //1 you're <u>going</u> /2 <u>are</u> you //

The differences between (a), (b) and (c) have been noted elsewhere. The crucial point about (d) is that it combines not just two different elements of sentence mood and textual connotation but <u>two different textual connotations</u>. Thus the addressee is being invited to respond (through the interrogative mood and the tone of the second part) to the statement (declarative mood) put forward as an assertion (tone 51) in the first part.. In all the other versions one or other of these elements is lacking.

In German the only difference here is in the syntactic structure of the tag. In other respects the factors involved are identical. In English, but not in German, the tag may also have the falling tone, though generally with opposite polarity from that of the main clause; this adds yet another possibility here.

In tag-questions, then, the opposition between the meanings of the fall and the rise are exploited in order to ask the question in a

particular way. As the above examples from the data show, not all utterances with this combination are tag-questions. In some ways the cases which do not involve tags are a little unusual and seem to involve a conflict rather than a collaboration of fall and rise. All the English utterances were made by one speaker in the context of a formal interview, where the speaker was the interviewer and thus expected to ask leading questions. In number 1 of the English examples the speaker begins with a question, to which he adds more information with a complicated qualified appositional phrase. The question thus turns into a statement; the open connotation into a closed one; and only in the final tone-group does the speaker revert to the open connotation once more. The result is not particularly convincing, and is typical of somewhat contrived questioning where the speaker wishes to make a point as well as ask a question. A similar state of affairs is found in example 2. In example 3 the speaker prefaces his question with an address, identifying the addressee. This is also found in a less formal context, but we would generally expect the vocative expression to have the rising tone, too.

These cases of fluctuation between fall and rise, giving a combination of these two within the paratone-group, thus seem to arise from an ambiguity of textual function: the speaker wishes to make an appeal to his listener (usually in the form of a question) but he also wants to impart information in an assertive sense.

Example 2 of the German sentences contains a similar conflict, but here between an 'assertive' question with tone C1, with which the utterance begins, and a more 'open' appeal in the second part.

Here it appears that the speaker is changing his mind, and deciding to finish on a 'softer' note than he began.

The other major combination is of a fall with a rise-fall. In all the cases given here in both languages the rise-fall *precedes* the simple fall. This seems to be more common than the reverse order. It appears that the speaker makes his point, as it were, with the more committed tone, and, having done so, reverts to the less evocative simple fall.

Other combinations of different tones in major tone-groups in a single paratone-group are less common. Of these the most frequent is perhaps the English sequence E1 + E4. There are no convincing examples of this combination in the data, but plausible ones are given by Halliday (1970a, p.94):

//1 you never <u>will</u> find out / 4 if you don't <u>lis</u>ten //

//1 I like the <u>hard</u> apples / 4 <u>best</u> //

//1 it's a waste of <u>time</u> / 4 if you ask <u>me</u> //

Of particular interest here is the fact that the kind of structure where this combination is often found, such as sentences with final adverbials, are precisely those in which we often get the structure E1 + E3. In some respects tone E4 here seems to be a 'stronger' version of tone E3, and the sequence E1 + E3 could certainly be used in all the above examples. One possible interpretation of this, which may have something to recommend it, would be to allow tones in following minor tone-groups to be E4 as well as E3, and refer the choice between them to the system operating in the postparatonic.

(The problem of how to treat this sequence does not, incidentally, arise only in the present framework; to consider E3 and E4 as structurally analogous here would force Halliday to recognise a tone 1 4 as well as a tone 1 3).

There are reasons for not adopting this approach, however. With the sequence E1 + E3 the basic implication of the paratone-group remains that of E1, but this is not really true of the sequence E1 + E4; the 'concessive' connotation of the latter tone seems to be just as important as the 'closed' connotation of the former. In this respect, therefore this sequence resembles E1 + E2. Like the sequence E1 + E2, the sequence E1 + E4 seems to be an alternative way of conveying an overall impression analogous to that of the second tone, but with an additional assertive element provided by the preceding falling tone. The first example given above is thus related, though not identical, to:

// 4 you'll never find out if you don't <u>lis</u>ten //

10.4 The primary systems in minor tone-groups

Minor tone-groups occur either before or after major tone-groups in English paratone-groups and only before them in German. Ignoring the possibility of treating a final tone E4 as being in a minor tone-group in the case referred to in the preceding section, there is no choice of tone in the postparatonic in English, and hence no 'system' of tones can be set up here. In both languages, therefore, we are concerned with the tones in 'non-final' minor tone-groups.

One advantage of establishing the paratone-group with its elements of structure is that the resultant classification of tone-groups into major and minor simplifies the statement of the meanings of the tones. If we do not make this distinction, then we are forced to include in the meaning of tones references to a 'continuative' or 'linking' function, which is clearly of a different order from the 'modal' meaning otherwise associated with the tones. By separating the occurrence of tones in major and minor tone-groups we are able to exclude such purely structural information from the modal meanings proper.

Apart from recognising the structural rôle of the tones in these tone-groups as 'non-final', few writers on the subject clarify the differences in meaning that can be conveyed by the different tones in this position. Some writers, in fact, do not appear to recognise a 'system' here at all, since they consider that only one tone-type can be used in this way. O'Connor and Arnold, for example, only mention occurrence in non-final sense-groups in connection with their 'tone group 8', which has a high rising nucleus.

Most other writers, however, note that more than one tone-type can occur in non-final tone-groups, but complete agreement does not exist as to which tones actually occur here. Though O'Connor and Arnold allow only the high rise to occur here, Kingdon and Halliday do not allow this tone to appear here at all, except in one type of structure. Kingdon writes - (p. 69) "when it occurs as an initial tune before groups bearing one of the statement tunes there is inevitably a break between it and the tune which follows" - i.e.

it is major not minor. The only exception to this given by both Kingdon and Halliday is the alternative question, in which the first part has the high rise and the second the fall.

There is no discussion in the literature on English intonation as to the difference in meaning between tone E2 and E3 in minor tone-groups, since writers do not recognise that both can occur here in the same kind of structure. The relationship between the simple rise (E2 or E3) and the fall rise (E4), on the other hand, is given more attention. Both Palmer and Armstrong and Ward mention a difference in meaning here: the latter see the fall-rise as an 'emphatic' variant of the simple rise; Palmer says that the fall-rise is 'less aggressive' than the simple rise, though both may indicate 'contrast'. Kingdon recognises a 'prelusory' function for the low rise: "its function is to indicate that the utterance is not finished and that another group is to follow ... Apart from the indication that the utterance is unfinished it conveys no feeling of its own." The fall-rise, on the other hand, "occurs with great frequency as the first group of a combination", and it implies not only 'continuation' but also 'insinuation'. For Schubiger, either the rise or the fall-rise may occur; the rise is the basic form, while the fall-rise "is a means of giving more prominence to the nucleus". But "here, too, there is no specific connotation".

Halliday gives a rather more explicit formulation of the contrasts here. Where the first tone-group is a dependent clause, or also the theme, tone 4 is 'unmarked', tone 3 is 'confirmatory'

and tone 4 is 'contrastive'. If the first tone-group is a co-ordinate clause, however, tone 3 is 'unmarked'. Thus tone 4 is neutral for 'dependence' and tone 3 for 'co-ordination'. Halliday attempts to explain this further (1970a, p. 30): "4 & 1 expresses an unequal relationship between the two parts of the utterance; one part (tone 1) is presented as the main information and the other (tone 4) as some kind of accompanying circumstance. Similarly 3 & 1 expresses a combination of two pieces of information of which one (tone 3) is however incomplete by itself, and perhaps therefore of secondary importance." The difficulty here is that of distinguishing between information which is 'dependent' and information which is 'of secondary importance'.

Only Jassem recognises a level tone, one of whose occurrences is in non-final tone-groups. He does not clarify how its meaning differs from that of the low rise, however. The latter "is used to indicate that something more is to follow", whereas the former "leads on to something else".

For German, von Essen gives the level tone as the norm in non-final tone-groups, with the label 'weiterweisend' or 'progredient'. In 'Doppelfragen' (i.e. alternative questions), however, either the level or the rising tone may occur, though no difference of meaning is given.

Pheby follows Halliday in seeing differences of tone in minor tone-groups as reflecting different kinds of connection between the tone-groups. For him the level tone is 'einfach', the rise is

'assoziativ', and the fall-rise (in the present work interpreted as a variant of the simple rise) is 'dissoziativ'.

Before examining these meanings in more detail we may consider some of the evidence from the data examined in this study. Many paratone-groups had no minor tone-groups at all; in some there was a single minor tone-group. Of those English cases with one minor tone-group, 43% had tone E4, 31% tone E2, 17% tone E3, and 9% tone E6. In German the percentages were 63% with tone G2 and 37% with tone G3. With more than one minor tone-group, <u>both</u> languages agreed in having tone-concord in 58% of cases; in English half of these had tone E4 and half tone E2 (there were no instances of tones E3 and E6 here); in German 58% of those with tone-concord had tone G2 and 42% tone G3. In those paratone-groups without tone-concord in English, the most prevalent combinations were with tones E2 and E4, and E3 and E4.

As a very general conclusion, therefore, we may say that tone E4 is the most common tone in minor tone-groups in English, with tone E2 the second most frequent; in German tone G2 is the more frequent of the two tones available here. Tone-concord in minor tone-groups is more frequently encountered than combinations of different tones in both languages.

If these figures are representative, then a number of claims made in the literature must be false. Firstly, it does not seem to be true that the high rise (or, for that matter, the low rise) does not occur in minor tone-groups; all the 'non-falling' tones were found in the data in such tone-groups. Secondly, the rise seems

more usual in German minor tone-groups than the so-called 'weiterweisend' or 'progredient' tone C3. Thirdly, the level tone seems to deserve more attention than writers on English usually accord it, since, though not particularly common, it certainly seems to occur in a fair number of cases in minor tone-groups.

One question that we must consider is whether or not there is any correlation between the occurrence of a particular minor tone and the major tone which follows it. In fact, where the tone of the major tone-group is E2 or G2, there does seem to be a tendency to have tone E2 or G2 as the minor tone, too. But there are difficulties of analysis here, since the sequence E2 + E2, or G2 + G2, may also be analysed as co-ordinating as well as subordinating. However, the most frequent tone in major tone-groups by far, in both languages, was the simple fall, and there does not seem to be any restriction on the tone that may precede it in a minor tone-group. There is thus little evidence for the tones in the minor tone-groups being determined by that of the major tone-group. It might also be noted that there is no evidence for tone-concord between tones in minor tone-groups preceding different major tone-groups in the same paratone-group; the choice of tone in minor tone-groups seems to be independent for each major tone-group in the paratone-group.

We may return now to the meanings of the tones in minor tone-groups. It will be helpful to begin with some examples from the data to illustrate the possibilities here.

English

E2 + E1

1. //2 the existence of new aids / 2 like closed circuit television / /1 has offered alternative /1 or supplementary approaches //

2. //2 they / 1 are not strangers to the residence /1 since they've stayed there before //

3. //2 and this doesn't mean necessarily / 2 that he would simply be able to state a formula of coures / 1 but it might be some special skill / 1 that he's acquired //

4. //2 I went to Twickenham /2 peacefully to demonstrate / 1 against the Springboks //

5. //2 I've nothing against the individuals who play cricket / /1 I've nothing against the individuals who play rugby football//

E3 + E1

6. //3 the 'Beau Regard' / 1 is a small and unpretentious / /1 private hotel / 1 on the south coast of England //

7. //3 well this raises the question you see / 1 who you are teaching //

E4 + E1

8. //4 mustn't disturb you / 1 must I //

9. //4 one of the complaints and you hear this even today / 4 from teachers / 1 is that students work only for examinations //

10. //4 and when one enquires / 4 why they object so strongly to this / 4 they say that what is valuable in the course / 1 is being neglected by the students //

11. //4 and my answer always /1 is then why don't you assess what is valuable //

12. //4 so that it isn't just a matter of the information one would put across to students / 1 but also of the skills they would acquire //

13. //4 now the method of teaching / 4 involved /4 in that decision/ 1 is very different / 1 to the method of teaching that might be adopted if you accepted so many A levels as an entry qualification //

E6 + E1

14. //6 ... research / 1 or other activities //

15. //6 ... to look at the intention / 1 and method of what's being taught //

German

G2 + G1

1. //2 ich habe sechs Kinder / 1 und bin damit ganz beschäftigt //

2. //2 nur ob es das heute schon bei dem Grossteil der Frauen ist / 1 das möcht'ich bezweifeln //

3. //2 vor einem Jahr ungefähr / 2 hat Doktor Darlington / 1 ganz plötzlich seine Praxis in Edinburgh verkauft //

4. //2 es handelte sich nicht um eine Vernehmung sir / 1 sondern nur um eine Unterhaltung //

5. //2 um so mehr als er mir sagte / 2 er habe die Briefe zerrissen / 1 und könne Sie mir deshalb nicht mehr zeigen //

6. //2 in Braunschweig und Hannover / 1 war glaub'ich ganz schön was los //

7. //2 wenn du das schon in der sechsten Klasse Oberschule weisst / /1 dann tut es natürlich den Klassengeist unwahrscheinlich beeinflüssen //

8. //2 ich sehe / 1 Sie haben eine ganze Menge erfahren Inspektor //

9. //2 es gibt niemanden in Rothbury / 1 der das nicht weiss //

10. //2 seine Gattin dagegen / 1 rührte nie ein Glas an //

11. //2 ich habe mir nie erlaubt / 1 danach zu fragen //

12. //2 Ihre Theorie / 1 entbehrt jede Grundlage //

C3 + C1

13. //3 denn das Ziel / 3 deutscher Frauen / 3 war aus langer Zeit / /3 gerade aus niederen Klassen / 1 war es nicht arbeiten zu müssen //

14. //3 Leeds Mansion / 3 ist ein kleines Haus / 3 mit dicken Mauern /1 das macht mich immun gegen solche / 1 armselige Kleingeisterei //

15. //3 Mr. Leeds / 1 ich glaube wir missverstehen uns //

16. //3 ich weiss nicht ob das nur in Niedersachsen betrifft / /1 aber ich glaube schon //

17. //3 mein Vater kennt dich doch / 1 das ist kein Problem //

18. //3 sie begnügte sich mit Kaffee /3 oder Tee / 1 je nach der Stunde ihres Besuchs //

The variety of syntactic structures encountered here in both languages is considerable, which suggests immediately that the occurrence of the various tones in minor tone-groups is not directly dependent on the syntactic structure. In fact, we could take all the above examples and systematically substitute all the available tones

for the ones that actually occurred in the data, and all the utterances would be acceptable. Not all would perhaps be equally likely, but all would be possible.

In order to ascertain the significance of the occurrence of the different tones in minor tone-groups we may take some of the typical structures and see what effect changing the tone will have. For English, three such structures will be taken by way of exemplification: a co-ordinating sentence, a subordinating sentence, and one with a separate tone-group for the theme. These are all illustrated in the above examples, but for convenience simpler, constructed, examples will be taken:

(a) // Mary is having a holiday next week / and she's going to Majorca //

(b) // when Mary has a holiday / she goes to Majorca //

(c) // Mary / is going to Majorca //

It must be stated at the outset that the differences between the different tones in the minor tone-groups here are very difficult to make explicit; in all cases there is clearly a 'linking' function involved, but beyond this the differences are rather elusive. For the co-ordinating type (a) the least 'marked' can perhaps be taken to be the sequence E3 + E1; this seems to convey nothing more than that the clauses are linked, and adds little or nothing to the syntactic information. E2 + E1 is not always easy to distinguish from E3 + E1, both phonologically and semantically. It would be possible (though this approach will not be adopted here) to establish only

one simple rise in minor tone-groups at the primary level of differentiation, and relegate the difference between the high and low rise here to the secondary level. This would draw some support from the disagreements in the literature as to which actually occurs here. There is nevertheless a difference between high and low rise in this position: E2 sounds somehow 'stronger' and more 'emphatic' than E3. The speaker appears in the former case to be drawing attention to the juxtaposition of the two clauses and appears to be linking them as complementary parts of the proposition. For this reason this sequence seems especially suitable for adversative or alternative types of co-ordinating sentence, such as number 12 of the English examples (though in the data this example actually had tone E4). We also recall that this sequence is acknowledged by several writers to occur in alternative questions and it is also found in closed lists. In both these cases there is complementarity of the parts which is reinforced by the use of tone E2 in the minor tone-group.

The effect of tone E2 in co-ordinate sentences, then, is to imply complementarity of the parts. This can easily be interpreted in appropriate contexts as stating the obvious, or even as impatience, aggression, etc. But these meanings are contextual interpretations of a basically simple textual connotation.

The sequence E4 + E1 in sentences of type (a) has a rather different meaning. It is not very common here, but it is nevertheless possible. There appears to be a note of 'condition' or 'concession' about the utterance, which is reminiscent of the meaning of tone E4

in major tone-groups. Again this sequence might be regularly found with adversative sentences (such as example 12) with a concessive implication: 'although X, nevertheless Y'.

The sequence E6 + E1 conveys yet another impression. This time the note is of a self-evident connection or link between the parts which is not open to question. Like E2, E6 is thus found in closed lists. It is far less frequent than E2, however, and is less forceful.

When we turn to sentences of type (b), with a subordinate clause, the occurrence of these tones is slightly different, but it can easily be related to the occurrence in type (a). The 'concessive' or 'conditional' implication of tone E4 is especially appropriate in this type of structure, since the syntactic relations here are often of a similar kind. Tone E4 implies 'although X, nevertheless Y', or 'if X, then Y'. There is thus an underlying impression of 'dependence' of the second information unit on the first (cf. Halliday, 1967a, 1970a).

Although the sequence E4 + E1 is often most appropriate for sentences of type (b), other sequences may also occur here. The simple linking rôle of E3 in the first tone-group may be used to play down the concessive or conditional aspect of the relationship. Tone E2 carries, as before, the implication of complementarity, of a necessary connection between the parts. The same applies to tone E6, with the reservations mentioned above in connection with type (a).

Where the theme has a separate tone-group, as in type (c), the syntactic relationship between the information units is of a rather different kind from that found in types (a) and (b). The implications of the various tones in the first tone-group seem nevertheless to be identical. Tone E3 indicates simple linkage of the parts; tones E2 and E6 assert their complementarity, while E4 again adds a note of condition or concession: 'if we consider X, then X is/does Y', etc.

The claim advanced here for the meanings of the tones in minor tone-groups in English, therefore, is that it is unnecessary to establish different systems for different kinds of syntactic structure in the way that Halliday, for example, does. Halliday treats tone E4 as 'unmarked' for dependent clauses and for themes with a separate tone-group, but tone E3 is 'unmarked' for co-ordinate clauses. In the former types of structure tone E3 has a 'marked' value, viz. as 'confirmatory'. In terms of Halliday's approach, postulation of such 'neutral' relationships may indeed be justifiable, but it nevertheless seems clear that a consistent meaning may be proposed for all the tones in <u>all</u> such structures, with the additional observation that certain of these tones may,by virtue of their meaning, be more readily found in certain types of sentence because their textual connotation reinforces the syntactic relationships. The result in terms of what is regarded as the usual tone in specific sentence types may be the same, but the approach to the status of the relationship between the sentence structure and the tone is rather different.

It will also be noticed that although tone E3 is here given the 'unmarked' meaning of 'simple linkage' or the like, it is much less

frequent than either tone E4 or tone E2. The explanation for this must presumably be that speakers use complex paratone-group structures less frequently to indicate simple linkage of information units than to indicate that one information unit is dependent on another or complementary to it.

German has only two tones available for use in minor tone-groups. Similar principles apply here to those found in English; again there is no absolute syntactic constraint on the occurrence of these, and all the German examples given above could have either tone. The level tone G3 is much more frequent than its phonetically similar counterpart in English, and its meaning is consequently less specific; in fact, it appears to have a similar connotation to the English tone E3, which has no phonetically similar counterpart in German. In other words, tone G3 can be seen as the simple linking tone. Tone G2 is similar in implication to tone E2 in English; it is 'stronger' than G3, and suggests complementarity of the major and minor information units. As we have seen, Pheby treats the fall-rise and the simple rise as separate tones and gives them different though related functions: the former is 'dissoziativ', the latter 'assoziativ'. With the simple rise (G2) "wird eine vorangehende Möglichkeit vom Sprecher wieder aufgenommen"; the fall-rise (G2), however, "impliziert eine Trennung von allem Vorangehenden und die Einführung einer neuen Alternative". Regardless of the validity of this distinction (on which see below, 10.5), however, both these forms seem to have in common an implication that they form part of a complementary structure. As in English, tone G2 is frequent in both alternative questions and closed lists.

As with the tones of major tone-groups, it is interesting to consider how German expresses implications similar to those conveyed by the English tones for which it has no corresponding forms. As suggested above, tone G3 can perhaps be considered as analogous in its function here to E3 rather than to E6. The chief question here, therefore, is what is the equivalent of tone E4 in minor tone-groups. One possible equivalent would again be a particle of some sort; in cases of overt concession zwar could be used in the first information unit with a correlative aber in the second, but tone E4 is rarely as specific as this. In the majority of cases there is probably no consistent equivalent to indicate informational 'dependence'.

One final question that must be broached is the relationship between the meaning of the tones occurring in minor tone-groups and that of the same tones occurring in major tone-groups. To be strictly polysystemic, of course, one would not need to equate the tones in the different classes of tone-group, either phonologically or semantically. As we have seen, however, there is some justification for relating the tones of minor tone-groups to certain of the tones of major tone-groups: the same set of 'non-falling' tones can be established in both, and this applies in both languages, despite the fact that the tones recognised for each language are different. There is admittedly a possibility of conflating the two English rising tones in minor tone-groups, but this is not a very serious proposal. Phonologically, therefore, we may equate the tones of minor tone-groups with some of those occurring in major tone-groups.

Semantically, however, the situation is different, and in this study the meanings of the tones in major and minor tone-groups are

in principle kept apart. It is nevertheless interesting to note certain semantic parallels. These parallels are not particularly surprising, as it would be unusual not to find similarities between the meanings of phonetically and phonologically similar pitch-types in different structural rôles in utterances. The most obvious relationship is with tone E4, which contains elements of 'concession' in both cases. With tone E2 the connection is less evident, but we might see some analogy between the 'appeal' element of the meaning of this tone in major tone-groups and the notion of 'evoking' a complementary part in minor tone-groups: both have an 'open' connotation, but in the case of minor tone groups the 'appeal' is immediately satisfied by the following major tone-group. It will also be recalled that a number of writers, beginning with Coleman (1914) have explained the typical use of tone E2 in yes/no questions by seeing it as the first part of an alternative question. e.g. // 2 do you take <u>sugar</u> // may be seen as elliptical for // 2 do you take <u>sugar</u> / 1 or <u>not</u> //. Suggestions such as this, though opening up possibilities for explanation, are nevertheless somewhat too speculative for discussion in this study. Consideration of the relationships between the meanings of the tones in major and in minor tone-groups, therefore, must be restricted to the above remarks, inconclusive though they may be.

10.5 <u>The secondary tone-systems</u>

Distinctions of meaning conveyed by different forms of the same basic tone are by definition. 'secondary' since it is precisely because of this secondary status that the forms are regarded as

variants of one tone and not independent tones. Assessment of distinctions of meaning as 'primary' or 'secondary' is naturally rather subjective, and this is a major cause of the different groupings of phonetic pitch-types into tones that we encounter in the literature: what for one writer is a primary distinction, necessitating a distinction of two tones, is for another merely secondary.

The secondary distinctions recognised are of several types. Some parameters of variation characterise utterances as a whole, for example overall range or height relative to the speaker's range. These can be assigned to the paratone-group as a whole, or even to whole discourses (cf. Brazil, 1975). Other parameters are more restricted, however, and those that are restricted to the tonic portion of tone-groups can be assigned to 'secondary systems' of tones.

Of the various phonetic parameters used to distinguish pitch-types, viz. direction, complexity, range, and height (cf. 5.3 above), not all are used for the distinction of secondary tones. Pitch direction (i.e. the direction of the final part of the tone) is not used at all here; pitch movements differing in final direction are always treated as separate primary tones. Complexity is used only rarely: Palmer and Halliday group pitches differing in this parameter together, but most other writers do not. Range is used by all recent writers on English to distinguish different tones with the simple rise, but elsewhere it is used only to distinguish secondary tones. Height is seldom used anyway, and usually only as a secondary criterion.

Of importance, too, is whether or not the parameter used allows discrete categories to be recognised. Final pitch direction and

complexity clearly do, whereas range and height do not, at least not without other factors being taken into account. The importance of this is that phonetic discreteness and 'gradience ' (Bolinger, 1961a), may be paralleled by semantic discreteness and gradience (cf. Trim, 1964). The primary tones are discrete, which means that in the case of the English high and low rise we must impose a categorical distinction on a phonetic continuum, but this is not necessarily true of secondary tones, and it is possible to consider that a given discrete tone may be susceptible to phonetic variation along a continuum, with a corresponding continuity of meaning. This naturally depends not only on whether the phonetic variable is a continuum, but also on whether the semantic variable is interpretable in non-discrete terms.

The most widely recognised phonetic parameter for the distinction of secondary tones is <u>range</u>, and most writers recognise variants differing in range for at least one tone. The most frequently encountered semantic parameter for the distinction of secondary varieties of tones is <u>emphasis</u>, which is usually correlated with range. So close is the connection between differences of range and differences of emphasis, that some writers, e.g. Kingdon, use 'emphatic' as an apparently phonetic term, to mean having wider range and increased 'stress'. As a semantic term, 'emphasis' is unfortunately rather vague, but it is difficult to do without it or to replace it by another term which is not equally vague.

Different kinds of 'emphasis' have been recognised. Coleman (1914) distinguishes between 'prominence' and 'intensity' as types of 'emphasis', and Armstrong and Ward adopt this distinction.

'Prominence' is "emphasis which is used to bring one or more words into special prominence, generally for contrast"; it is presumably to be equated with tonicity. 'Intensity', however, is "emphasis which adds intensity to the meaning already contained in a word or sentence". Even if we restrict 'emphasis' to this latter type, however, its scope still seems intolerably wide. Armstrong and Ward give a variety of intonational devices for indicating it: "widening the range of intonation of the whole sentence"; "widening the range of intonation from the intensified (sic) word to the end of the sentence, the rest of the sentence being pronounced with normal stress and intonation"; "lowering and narrowing the whole range of intonation". Of these, only the second seems to fall within the scope of secondary tone, as it is restricted to the tonic. According to Armstrong and Ward, emphasis may also be achieved within the tonic by other means: "the effect of emphasis on the last word is obtained by making the pitch fall from a greater height than when pronounced unemphatically" and 'additional emphasis' may be accorded to the already emphatic fall-rise version of 'tune II' by making it 'rise-fall-rise'.

In addition to this gradient feature of emphasis, however, a number of writers recognise distinctions of a discrete kind for secondary tones, even where the phonetic parameter involved is a continuum. Jassem, for example, distinguishes 'full', 'high' and 'low' variants of the simple fall and rise (cf. chapter 5), which differ in range or height. The 'full' forms are said to "carry an element of <u>newness</u> or <u>unexpectedness</u>" which is absent in the 'low'

and 'high' forms. The 'high' forms differ from the 'low' in being 'reduced'. A similar characterisation is offered with the complex tones, where 'high' variants indicate 'newness' or 'unexpectedness', but 'low' forms do not. Though 'new' and 'unexpected' could, of course, be taken to form semantic continua, this is apparently not Jassem's intention; he sees this as a discrete distinction.

Halliday also discusses in more specific terms the rôle of secondary tone-systems, and concludes that there are two categories of meaning here: "in some cases the differences between a pair, or set, of secondary tones is mainly a matter of 'key', the degree of forcefulness or emotional intensity of the utterance. In others the different secondary tones express what are clearly different meanings" (1970a, p. 31). In the category of 'key' differences come the varieties of tones E1 and E5; in the category of 'semantic' distinctions come the varieties of tones E2 and E4. Though Halliday does not clarify these remarks, it might be possible to relate 'key' to gradient distinctions and 'semantic' to discrete distinctions. This is, however, by no means certain; in any case Halliday adds a rider to the above statement (loc.cit.): "actually, this is not a very real distinction"; it is made merely "as a convenient basis for classification".

In what follows we shall consider the meaning of the various secondary tones. The phonological systems postulated were given in chapter 5, above, and summarised on page 349. Not all the tones were given secondary varieties (called 'sub-types' on page 349); those without are E3, E6 and G3. This does not mean, of course,

that no differences in pitch are discernible here, but only that no discrete types can be established. The same applies, of course, in respect of the tones for which sub-types are recognised: the fact that, for example, three variants of simple fall and two varieties of high rise are recognised in both languages means only that categorical distinctions can be made here in such a way that three different falls and two different high rises can be established. Other distinctions which are audible but which are not reflected in the establishment of secondary tones are of a non-discrete kind; this applies principally to pitch range. For further discussion of the phonological bases for the distinctions made see chapter 5.

It will be evident, then, that those varieties of the tones that are here given recognition as 'secondary tones' either involve the use of a non-continuous feature or they involve imposing a discrete categorisation on a phonetic continuum. In either case the implication is that the semantic correlate of secondary tonal distinctions is likewise resolvable into discrete categories. This does not mean, however, that the meaningfulness of non-discrete categories, nor, indeed, the non-discreteness of meaningful categories, is denied. The validity of what Trim (1964) calls "the representation of some kind of semantic continuum by a parallel phonetic continuum" seems beyond all doubt. In the present study, however, secondary tonal distinctions are not considered to be of this kind; they are discrete categories. All the secondary tones may be further modified, however, by non-discrete parameters, especially range and height. The decision to consider the discrete variants but not the non-discrete ones as secondary tones is largely a matter of convenience;

it is partly purely terminological, but it also has the advantage of allowing us to remove these non-discrete factors from consideration and thus simplify the system. The meaning of the non-discrete variables will not be considered in detail. The most important one, range, is probably best described in terms of the admittedly vague term 'emphasis', which could perhaps be glossed as 'relative communicative weight' or some such phrase.

For the simple fall some writers have a two-fold distinction: high/wide v. low/narrow, though some establish a three-term system including 'mid'. Jassem has three forms: 'high', 'low' and 'full', where the first two are differentiated by height rather than range. Palmer also has three forms, but one of these is the rise-fall. The status of the remaining two - a wide and a narrow fall - is not quite clear, since the former occurs with a low head and the latter with a high head. The latter is said to be 'less categoric' than the former. Kingdon has also three forms: one is said to be 'moderate' and another 'strong', but he relates their use to 'tonatic context'. The third form has much wider range and is labelled 'emphatic'; it is "the most energetic and decisive tone". O'Connor and Arnold have two forms; the 'wide' form is "more lively and interested, always more airy and lighter in mood", with a note of "personal participation". Halliday's three-term system has 'mid', 'wide' and 'narrow'; the first is "neutral", the second "new" or "strong or unexpected", and the third "given" or "mild or expected".

For German, both Trim and Pheby have a two-fold distinction based on range. Pheby labels the forms "nicht emphatisch" and

"emphatisch", or "nicht kontrastiv" and "kontrastiv", according to the system in which they are regarded as participating.

With the exception of Halliday, none of these writers makes it clear on what basis the distinction is made, particularly why two (or in some cases three) forms are recognised and not more, since the parameter used - range - is clearly a 'gradient' feature. As discussed in chapter 5, Halliday bases his distinction on the relationship between the start of the fall and the pitch of the pretonic: 'wide' thus means 'starting higher than the end of the pretonic', 'mid' means 'starting at the same height' and 'narrow' means 'starting lower'. Thus Halliday is the only writer to give criteria which allows discrete categories to be established. His analysis is adopted here, giving three secondary tones: E1, E1+ and E1-. Exactly the same categories can be established for German, giving G1, G1+ and G1-. Both E1+/G1+ and E1-/G1- are susceptible to further differentiation by range, but this does not allow further discrete categories.

In the data the wide forms E1+ and G1+ were the most common, and the narrow forms E1- and G1- were the least common. Some examples of each may be given here:

English

Tone E1

1. / 1 in higher education in this country /

2. / 1 on the south coast of England /

Tone E1+

3. / 1+ and leave it at that /

4. / 1+ yes I could have told you quite a lot /

Tone E1-

5. / 1- I don't know how you do it /

6. / 1- I really don't /

German

Tone G1

1. / 1 und das möcht'ich meinen Kindern an sich ersparen /

2. / 1 er behandelte vor allem Schosshündchen Katzen und Kanarienvögel /

Tone G1+

3. /.1+ hat anscheinend keinen guten Ruf im Dorf /

4. / 1+ natürlich haben Sie ihm das nicht geglaubt /

Tone G1-

5. / 1- sie tun es ungern und widerstrebend /

6. / 1- natürlich /

Tones E1 and G1 may be taken as the unmarked form in each case. Tones E1+ and G1+ have an additional element which, as we have seen, is often called 'emphasis'. However, the meaning of this tone appears to be more 'local' than this, and it is categorically distinct from the neutral form; it is therefore not just a matter of being more 'emphatic'. The effect is to draw attention to the item on which the nucleus falls, to single it out in some way. Halliday's terms 'new' and 'unexpected' capture something of this, though of course the nucleus must in any case fall on a 'new' item. We could also say that this tone 'specifies' the nucleus as being textually more significant than it would be with the unmarked fall. This is rather different from the vaguer distinction of meaning convayed by different

heights of fall within the E1+ or G1+ category, which is a gradient.

Tones E1- and G1- have a different effect, which one might see as the opposite of that conveyed by the wide fall: they 'play down' the significance of the tonic, implying, as Halliday says, something 'expected'. It is thus appropriate in, among others, rather 'deflating' remarks such as number 6 of the German examples. In appropriate contexts it may imply wilful restraint, hostility, even disgust; but these are interpretations of the basic meaning, which is in all cases that of 'toning down' or reducing the significance of the tonic, and of the information that it contains.

In all these varieties, of course, the meaning of the simple fall (cf. 10.3.2) is present, and the distinctions made at the secondary level do not interfere with this connotation.

The situation with the simple rising tones is not quite the same as with the falling tones. In English, range of pitch movement is generally used to distinguish <u>primary</u> tones, and thus is not available to the same degree to distinguish secondary tones. For this reason, some writers (e.g. Palmer, 1922) do not distinguish secondary tones at all for simple rising tones. Kingdon (1958) does, however, recognise 'emphatic' forms of both the high and the low rise. Halliday makes a secondary distinction with the high rise but not with the low one, but his two versions of the former differ in complexity rather than range.

For German, Trim recognises the high and the low rise as separate primary tones; Pheby treats them as secondary varieties of a single tone.

As far as the meanings of these forms is concerned, Kingdon's 'emphatic' high rise indicates 'surprise or shocked reaction'; Halliday's 'broken' tone E2 "specifies the point of the query" (it will be recalled that this tone is largely restricted to interrogatives). Pheby's meanings for German are 'weak' for the narrower version and 'strong' for the wider.

The present study follows Halliday for English and has an analogous distinction for German. Thus E2 and G2 are simple high rises, while E2 and G2 have a fall on the nucleus and the high rise comes later (cf. chapter 5). Within the simple form we do find differences of range (especially in German, where there is no 'low' rising tone) but this is a gradient with no discrete categories. There is no continuity between the simple and the 'broken' rise.

Some examples of both types of high rising tone from the data are given below:

English

Tone E2

1. / 2 still at it /

2. / 2 no I didn't regret all those hours of study at the time /

Tone E2

3. / 2 when you were at Sandhurst /

4. / 2 did you get the sword of honour /

German

Tone G2

1. / 2 können Sie das bestätigen /

2. / 2 und welchen Eindruck hat er auf Sie gemacht /

Tone C2

3. / 2 er hatte in Edinburgh studiert /

4. / 2 das ist alles was Sie gehört haben /

Auditorily different types of the simple form in both languages could be recognised (see chapter 5), of which some seemed 'stronger' than others, but no qualitative difference of meaning was involved here. The 'broken' form, however, does seem to be qualitatively different: it resembles the wide form of the simple fall in drawing attention to the nucleus. Halliday's remark that it "specifies the particular point of the query" is appropriate as a characterisation, provided that we generalise it beyond questions; it makes the nucleus 'unexpected'.

The semantic distinctions indicated by the secondary forms of the high rising tones are thus parallel to those indicated by the secondary forms of the fall, except that in the latter case a three-fold distinction is available and in the former only a two-fold distinction. There does not appear to be an equivalent 'down-toning' form of the rise corresponding to the narrow fall. Despite the semantic similarity here, the phonetic forms are not parallel, however. It would in any case be difficult to have different ranges of rise with the starting point at different heights relative to the end of the pretonic, since rising pitches always begin relatively low in order to obtain the necessary space for the rise. It would be possible, of course, to have differences in the onset of the falling phase of the broken form which would be entirely analogous to the variants of the simple fall. The narrow form of the broken rise, with a falling phase starting lower than the end of the pretonic,

would probably be indistinguishable from the simple rise, but forms with a mid and wide fall would in theory be available. However, distinctions of this sort do not seem to be exploited; the 'mid' form appears to be the only one to occur.

Both Trim and Pheby recognise a fall-rise tone for German. If this form is to be interpreted as a 'broken' form of the simple rise rather than as a tone in its own right, then we must justify this semantically. Pheby sees this form as 'implikativ' in questions (though neutral in wh-questions if the nucleus is on the question word). In minor tone-groups it is 'dissoziativ'. However, there does not seem to be any evidence for a genuine 'modal' distinction here, such as that found in English with tones E2 and E4. The increased 'prominence' given to the nucleus by the 'broken' form (G2) may be susceptible to a variety of more specific interpretations in individual contexts, and these might well include 'dissoziativ' (which implies no more than that the tone-group in question has greater independence). Furthermore, both varieties of the rise in German appear to have the same 'primary' meaning, unlike tones E2 and E4. It thus seems appropriate to treat the fall-rise in German as a variant of the simple rise.

In the case of the simple fall and the high rise, therefore, English and German have a parallel system of secondary tones. The same can probably be said of the rise-fall. As discussed in 5.5.2, it is possible to distinguish a 'weaker' and a 'stronger' variety of rise-fall in both languages, and this difference is recognised as a categorical distinction in the table of tone-systems given on page 349. Nevertheless, the status of this distinction is less secure

than that of the distinctions discussed so far. The 'strong' form is in any case rare; no instances of it occurred in the data in either language. Though both the 'weaker' and 'stronger' forms are clearly distinct in their most characteristic forms (the former has a simple rise + fall shape, the latter has a level or falling phase before the rise), it is not certain that these are not simply points on a continuum rather than discrete types. Semantically, it is also difficult to tell if we should establish a discrete opposition here; the fall-rise is in any case a rather 'prominent' tone, and it is not easy to say if the difference of meaning between the forms is a discrete one of 'specifying' or 'drawing attention to the nucleus' versus 'non-specifying', or whether it is simply a gradient feature of 'strength' or 'emphasis'.

One more tone for which secondary forms are recognised is the English fall-rise E4. The phonetic specification of the difference between the variants differs somewhat from writer to writer. Jassem simply has two forms of fall-rise differing in range. Halliday's forms are phonetically rise-fall-rise, where the 'stronger' one "falls more steeply and over a wider range" (1970a, p.18). Palmer and Schubiger have forms differing in complexity: a fall-rise versus a rise-fall-rise. Kingdon, however, has 'emphatic' forms of both fall-rise and rise-fall-rise.

Palmer takes the 'stronger' form to be the usual one and gives no meaning for the 'weaker' variant; Kingdon's 'emphatic' fall-rise has a "stronger sense of contrast" than the unemphatic form, while the rise-fall-rise is "insinuating and optimistic" in its normal

form, and has "the strongest degree of insinuation" if emphatic. For Halliday, in those cases where tone 4 is the neutral tone, tone 4 is "contrastive", "exclusive", "expressing strong reservation". Or, as he expresses it elsewhere: 4 = if; 4 = only if.

In the present study it is claimed that tone E4 always has a non-low phase before the fall, which may be level or rising. It is not altogether clear, however, if we can make a categorical distinction here between the form with a level phase and the form with a rise. If, as suggested in the summary of tone-systems given on page 349, we accept a discrete opposition, it might be possible to relate the forms in a similar way to that adopted with the variants of the simple fall and the high rise, with the 'stronger' form having an additional 'specifying' element. It seems in any case that the simple form E4 is just as 'contrastive' as E4, in spite of Halliday's remarks. The same 'primary' meaning can be associated with both forms.

Examples from the data in which the distinction could be recognised are the following:

English

Tone E4

1. / 4 a sprightly spinster of uncertain age /
2. / 4 mustn't disturb you /

Tone E4

3. / 4 course when I was at Sandhurst /
4. / 4 came quite close to it though /

A number of writers distinguish secondary tones for other tone-types. Jassem has a high and a low variety of level tone, and Kingdon has an 'emphatic' form of the low rise. In the present study such distinctions are not recognised as being discrete, however, and therefore no secondary tones are established to accommodate them. They must be referred to gradient features of range or height.

10.6 The pretonics

Writers differ in their views on the status of pretonics. Most establish a set of distinct forms, which may then be combined with the different tones to produce whole 'tunes' or their equivalent. Generally, certain restrictions in these combinations are recognised: not all pretonics combine with all tonics. Other writers, especially Halliday and those who follow his lead, regard the pretonics as secondary distinctions of tones, so that the system of pretonics may differ from tone to tone. The differences between these two approaches is to a large extent theoretical rather than practical, however, since the same combinations of pretonic type and tonic type emerge as a result.

There are implications here for the meanings of the pretonics, however. A polysystemic view such as Halliday's will naturally tend to treat pretonic distinctions as a means of further qualifying the basic meaning of each individual tone, whereas an approach which establishes a single system of pretonics will tend to ascribe to each pretonic a constant meaning which will be to a large extent independent of the meanings of the tone with which it is combined.

The danger with the first approach, as elsewhere with a consistently polysystemic treatment, is that it makes generalisations difficult; the danger of the second approach is that it may be insufficiently sensitive to contextual conditioning. The justification of either approach will depend on the extent to which both generalisations and contextual conditions can legitimately be recognised in the system. In keeping with the attempt to find the widest possible generalisations which has been made elsewhere in this study, a single system of pretonics will be assumed here in the first instance.

In 6.2, above, the various pretonics recognised in the literature were discussed in some detail from a phonetic and phonological point of view. It will not be necessary to recapitulate this discussion here, except in so far as it is relevant for a discussion of the meanings. Although writers differ considerably in the sets of pretonics they establish, they are generally agreed that, with most of the tones at least, a pretonic which is high or mid level (or with a gradual fall or rise) is to be taken as the norm. For the most part, therefore, this pretonic is accorded no particular meaning. Other types of pretonic contrast with this basic type in various ways. Armstrong and Ward recognise a low level pretonic (though they restrict it to occurrence before a rising nucleus); this allows the 'implication' to be "more strongly expressed". Palmer, on the other hand, sees the distinction between his 'Superior Head' and 'Inferior Head' to be a matter of the 'distribution of prominence' regardless of the nucleus with which it combines: with the former the prominence is distributed over both head and nucleus, with the latter it is confined to the nucleus. Kingdon's remarks are similar: his low

Head is said to give more prominence to the nucleus. O'Connor and Arnold likewise distinguish a Low Head from a Stepping (i.e. high) Head; characteristically, their description of the meaning of the distinction is more detailed. For example, their tone group 2, with a Stepping Head and a narrow fall, differs from tone group 1, which has a Low Head and a narrow fall, in being 'more ponderous' and 'more emphatic' or 'more insistent' according to the sentence type. Their tone group 4, with a Steppping Head and a wide fall, differs from tone group 3, with a Low Head and a wide fall, in avoiding the 'disgruntled effect', 'surprise and displeasure', 'impatience or querulousness', or 'affront' of the latter, according to sentence type. With a low rising nucleus, tone-group 7, which has the Stepping Head, differs from tone-group 6,which has the Low Head, in not implying the latter's 'criticism', or 'scepticism', and in being 'rather brighter', 'not so reserved', more 'bright and friendly'. A low pretonic is only recognised by Halliday in conjunction with the simple rising tones. With tone 2 it is "intense, showing surprise or concern"; with tone 3 it "expresses unconcern or uncertainty".

In addition to the 'high' and 'low' pretonics, other types are also recognised, though less widely and less uniformly. Armstrong and Ward note the occurrence of a type with rising unstressed syllables which, they say, has an "element of surprise,cheerfulness, enthusiasm or more interest". Kingdon also has rising heads: the high rising form occurs only before a high rising nucleus, and indicates 'surprise' or 'mystification'; the low rising head occurs before the low rising, falling, or falling-rising nucleus, and in

a variety of sentence types. In each case the meaning given is slightly different, but the labels used include 'friendly', 'patient', 'long-suffering', 'mystification', 'expostulation', 'wonderment', 'archness'. Halliday has two sorts of pretonic involving rises, which occur before tone 1: the 'uneven', or 'bouncing' pretonic, and the 'listing' pretonic. The status of the latter is not altogether secure, however, since he also gives an alternative interpretation of this form, namely as a sequence of tone-groups, each with a low rising nucleus (1970a, p. 32). The 'bouncing' pretonic is given the meaning 'forceful or querulous'. Pheby also gives a form with rising feet for German, occurring before tone G1+. He calls it 'expressiv'.

A form with falling feet is also recognised by some writers. In the examples given, however, it is often difficult to disentangle cases which have a genuine falling pretonic from those which have a separate tone-group with a falling nucleus. Kingdon gives the falling pretonic the meaning 'emphasis' before most nuclear tones; O'Connor and Arnold recognise it only before the fall-rise, where it is the normal pretonic. Halliday's neutral pretonic before tone 4 is also similar.

One final type of pretonic that may be mentioned is one which begins low and rises gradually throughout its length. This is Palmer's 'Scandent Head'. It occurs 'almost invariably' before the low rising nucleus; elsewhere it indicates 'more animation'. It shares with Palmer's 'Superior Head' the role of distributing prominence over both head and nucleus. Other types of pretonic are

also recognised, especially by Kingdon, but they can almost always be convincingly analysed differently, either as variant forms of one of the other types or as independent tone-groups rather than as pretonics.

From this brief survey of meanings given to the pretonics it will be evident that there is some difficulty here. There is nothing like a consensus on the meanings, or even the type of meaning, that pretonics can be said to have. Sometimes, as in the case of Palmer, among others, the different pretonics are said to involve differences of 'prominence'; elsewhere the differences are of 'intensity' or 'emphasis'; in other cases there are attitudinal connotations such as 'impatient', 'friendly', 'surprised', etc. Not only are these meanings rather different from one another, but they also appear to overlap with the meanings given to other systems, such as tonicity and primary or secondary tones.

We may begin to approach these problems more systematically by establishing a system of pretonics. Such a system was set up in chapter 6, and summarised in table 9 of 6.6 (p. 400). The pretonics were established according to two criteria: the shape of the foot and the shape of the pretonic as a whole. Using the first of these it is possible to recognise three types, with level, falling, and rising feet respectively. It was not found necessary to sub-categorise the last two of these according to the pretonic shape, but the level foot type was divided into five classes: high or mid level, falling, rising from mid, low level, and rising from low. The first three of these can be grouped together as variant forms of a basically 'high' type, and the last two as variant forms of a

basically 'low' type. In all, then, we may recognise four main types of pretonic, the first two of which have variants:

(1) Level feet (a) high/mid level sequence
(b) falling sequence
(c) rising sequence from mid
} = HIGH

(d) low level sequence
(e) rising sequence from low
} = LOW

(2) Falling feet = FALLING

(3) Rising feet = RISING

The alternation between 1(a), 1(b) and 1(c), and between 1(d) and 1(e), is probably largely conditioned by the nature of the tonic. The pretonic will often drift up to a high onset of the tonic, and down to a low onset. In any case, these are probably not discrete categories. In addition, there are, of course, differences in overall range etc., which will be ignored here.

The rôle of the pretonic will be discussed in terms of this basic system. Examples from the data of these types before the tones with which they are regularly found to occur are given below.

English

I High pretonic

(a) with tone F1

1. / 1+ I think we can learn a great deal /
2. / 1+ why don't you assess what is valuable /
3. / 1+ a particular example that springs to mind is the situation at Stirling /

4. / 1 well I take a very different view /

5. / 1 and I want to look black Africans in the eye /

6. / 1 they're not a political body /

7. / 1- it might be very difficult /

8. / 1- who you are teaching /

(b) with tone E2

9. / 2 when you were at Sandhurst /

10. / 2 I've nothing against the individuals who play cricket /

11. / 2 the scientists seem to take to this quite well /

12. / 2 he would simply be able to state a formula of course /

13. / 2 something which only the individual teacher can tackle /

(c) with tone E3

14. / 3 everything does you know /

15. / 3 I don't think I could do it /

16. / 3 they are doing their duty /

(d) with tone E4

17. / 4 there was a considerable amount of complacency /

18. / 4 indeed I think it would be a tragedy /

19. / 4 are things being done /

(e) with tone E6

20. / 6 I used to be up in my room /

21. / 6 we don't in fact stop the Bolshoi Ballet coming /

II Low pretonic

(a) with tone E1

22. / 1+ and leave it at that /

23. / 1+ they feel this is undesirable /

24. / 1+ but that doesn't for one moment preclude doing the exercise /

(b) with tone E2

25. / 2 not that it did much good later on /

26. / 2 I don't think it would be fair to say that this is general /

27. / 2 is this your experience /

(c) with tone E3

28. / 3 has encouraged enquiries /

29. / 3 the time spent /

(d) with tone E4

30. / 4 except that they made me battalion adjutant /

31. / 4 because I was good at paper-work /

32. / 4 a large medical treatise /

(e) with tone E6

33. / 6 a teacher in a polytechnic /

34. / 6 in a departmental context /

III Falling pretonic

(a) with tone E1

35. / 1+ it is not for them to judge /

36. / 1+ now I agree with you that you can do it where skills are involved /

37. / 1+ you could then make assumptions about prior knowledge /

38. / 1 I don't know how you do it /

39. / 1 I really don't /

(b) with tone E2

40. / 2 I'm afraid not /

41. / 2 I did jolly <u>well</u> /

42. / <u>2</u> Dr. Beard is this where we should <u>start</u> /

(c) <u>with tone E3</u>

43. / 3 then the students would <u>work</u> /

(d) <u>with tone E4</u>

44. / 4 came quite <u>close</u> to it though /

45. / 4 as far as the MC<u>C</u> is concerned /

46. / 4 and one of the complaints and you hear this even to<u>day</u> /

47. / 4 I feel sure if they <u>did</u> this /

48. / 4 it's all right having a class of five <u>people</u> /

49. / 4 having a class of say <u>fif</u>ty people /

(e) <u>with tone E6</u>

50. / 6 everything <u>goes</u> /

IV <u>Rising pretonic</u>

<u>with tone E1</u>

51. / 1+ the increasing pressure of <u>num</u>bers /

52. / 1- with the increase in numbers in uni<u>ver</u>sities /

<u>German</u>

I <u>High pretonic</u>

(a) <u>with tone G1</u>

1. / 1+ je nach der Stunde ihres Be<u>suchs</u> /

2. / 1+ einen von ihnen erwartet sie in diesen <u>Ta</u>gen /

3. / 1+ der Mann hat vermutlich eine bedeutende <u>Sum</u>me in seiner Brieftasche /

4. / 1 vielleicht hätten Sie das tun sollen /

5. / 1 sie verkauft von Zeit zu Zeit eines der Möbelstücke /

6. / 1 Ihre Beweisführung ist nicht stichhaltig Inspektor /

7. / 1- die ihn schon erwartet /

8. / 1- entbehrt jede Grundlage /

(b) with tone G2

9. / 2 er kommt Samstag Vormittag /

10. / 2 ich kenne Mrs Richmond gut genug /

11. / 2 nach dem Tod ihres Mannes /

(c) with tone G3

12. / 3 sie begnügte sich mit Kaffee /

13. / 3 sie ruft einen Antiquitätenhändler /

14. / 3 der Mann im Gabardinmantel /

(d) with tone G4

15. / 4 dass Mrs Richmond noch eine weitere Leidenschaft hat /

16. / 4 habe die eindrucksvolle Sammlung von Gewehren gesehen /

17. / 4 oft seltsam /

II Low pretonic

(a) with tone G1

18. / 1+ dann hat sie sich inzwischen aber sehr verändert /

19. / 1+ das spottet jeder Logik /

20. / 1+ ich trag'Ihnen nur vor was ich erfahren habe /

21. / 1 lassen wir das erstmal auf sich baruhen /

(b) with tone G2

22. / 2 was ist schon dabei /

23. / 2 warum nicht /

24. / 2 sie könnte zwar keiner Fliege was zuleide tun /

25. / 2 von dem sie mehreren Personen /

(c) with tone C3

26. / 3 von dem sie sich trennen will /

27. / 3 statt einen einzigen Möbelstück /

28. / 3 übrigens wäre ein Antiquitätenhändler /

(d) with tone C4

29. / 4 die Versuchung ist gross für eine Frau /

30. / 4 vielleicht hatte er Bedenken /

III Falling pretonic

(a) with tone C1

31. / 1+ als ihr Mann noch lebte /

32. / 1 enthält Ihre Schlussfolgerung einen weiteren Irrtum /

(b) with tone C2

33. / 2 wobei ich feststellen konnte /

34. / 2 seine Gattin dagegen /

(c) with tone C4

35. / 4 sein Tod hat sie in grosse seelische Not gestürzt /

IV Rising pretonic

(a) with tone C1

36. / 1+ Sie haben eine ganze Menge erfahren Inspektor /

37. / 1+ sei einer dieser Händler gewesen /

(b) with tone C2

38. / 2 wissen Sie wovon Mrs Richmond lebt /

39. / 2 und wo ist da ein Zusammenhang mit Ihrem Verbrechen /

40. / 2 die Verdisungsgefahr ist gross /

As discussed in chapter 6, there are certain restrictions on the occurrence of individual pretonics with specific tones, though these are more of a probabilistic than an absolute nature. The falling and rising pretonics are in any case infrequent, so that their non-occurrence in the data before certain tones is not necessarily an indication that they cannot occur here. The distinctions between falling and rising pretonics and falling and rising variants of high or low pretonics may also be neutralised if there is only one foot in the pretonic (cf. 6.4.1, above). It is therefore often necessary to go beyond examples attested in the data in order to establish the distribution of individual pretonic types.

With the simple falling tones E1 and G1 all four pretonics seem to occur in both languages. The high pretonic can be taken as neutral, both on grounds of frequency of occurrence and also meaning. The other pretonics can be considered as conveying some sort of implication which the high pretonic does not, but it is not easy to establish what that implication is. It is certainly true that, as Palmer suggests, the low pretonic has the effect of reducing the informational status of the pretonic and by contrast increasing that of the tonic. This is especially so since the low pretonic is almost necessarily followed by the wide version of the falling tonic. The German example 21 is an exception, but here it would be possible to interpret the pretonic as high but with reduced overall range for the whole tone-group. O'Connor and Arnold give meanings of a more

attitudinal kind, but it seems reasonable, in view of their tendency to incorporate contextual features in their meanings, to regard these as 'interpretations' of the meaning 'lack of prominence' in particular instances. Giving reduced force to the pretonic, and thus playing down its informational rôle, can easily be interpreted on occasion as an 'impatient', 'disgruntled' or 'critical' gesture ("why bother me with something so trivial"). Their label 'surprise' is probably to be associated with the relative prominence given to the nucleus by the non-prominent pretonic, rather than with the pretonic as such.

The rising pretonic with falling tones has a very lively effect, for which Halliday's term 'forceful' may be appropriate. His alternative term 'querulous', and also the terms used by O'Connor and Arnold, are too restricted to particular types of sentence and are thus insufficiently general. (We may follow Halliday's alternative analysis of his 'listing' pretonic, which treats it as a sequence of tone-groups, each with tone E3).

The falling pretonic is not common with the simple fall, but it also seems to contain a somewhat 'forceful' element. The continual 'downward' tendency of this pretonic differs considerably in its semantic impression from the 'upward' tendency of the rising pretonic. As with similar pitch features in the tonic, the rise has a more 'evocative' connotation, with more animation, than the fall, which has a somewhat more ponderous effect.

These rather impressionistic descriptions could certainly be made neater with a single label for each, but this would not

necessarily be any more accurate. We might give, for example, the following system of meanings for the pretonics before the simple falling tones:

high = neutral
low = reduced force
falling = increased force
rising = increased force with animation

but it is by no means certain that the element lacking in the low pretonic is the same as that which is added by the falling and rising pretonics, and animation is less than adequate as a designation of the distinction between the fall and the rise.

With the simple rising tones there is a very similar pattern of occurrence of the pretonics, and, despite remarks in the literature to the contrary, there does not appear to be any necessity to treat their meanings differently. The high pretonic can, on statistical and semantic grounds, be considered 'neutral'; the low pretonic creates a very similar effect with the rise as with the fall, giving much less prominence than the high pretonic. Unlike the falling nuclear tones, however, rising nuclear tones do not receive any greater prominence with this pretonic since the pitch contrast between the pretonic and start of the nucleus is <u>less</u> than with the high pretonic, as the tonic begins low. The only exception to this would be the 'broken' rise; but the combination of a low pretonic and a broken high rise is unusual (number 25 of the German examples is exceptional, and sounds a little odd).

The reduction of prominence in the low pretonic may again often give the impression of stating the obvious, which, when coupled with the 'open' or 'appeal' element of the high rise, may account for some of the interpretations given as meanings in the literature, e.g. Halliday's 'surprise' or 'concern', or Pheby's 'skeptisch'. In conjunction with the non-assertive connotation of the English low rise, this pretonic is given the meaning 'unconcern' or 'uncertainty' by Halliday, which is likewise readily derivable from the reduced force of this pretonic.

With the level tones G3 and E6 the rising pretonic does not seem to occur in either language. The forceful and evocative significance of this pretonic may well be incompatible, except in rare cases, with the meaning of this tone. In contrast, however, both the low and the falling pretonics are very common here in the German data; they both occur <u>twice</u> as frequently as the high pretonic. In the English data, however, the distribution of high, low and falling pretonics is roughly the same here as with the other tones considered so far, but since this tone is very rare in English these results are of little significance. There may, of course,be a purely phonetic reason for the prevalence of low and falling pretonics before the level tone in German: both these pretonics end low, and this may be preferred in order to obtain the necessary contrast with the pitch of the tonic; since the latter is level, it might otherwise be insufficiently identifiable in the tone-group. However, the high pretonic is not impossible here, and the semantic significance of all three occurring pretonics before this tone appears to be the same as elsewhere, so that we might also suggest that there is a semantic preference for these combinations of pretonic and tone.

There is also a distributional difference with the English tone E4. Again the rising pretonic does not seem to occur, even with the 'stronger' form of this tone with wider range. Here the falling pretonic is very common; in the data examined it was just as frequent as the high pretonic. The low pretonic was rare. The falling pretonic was common with both the narrower and wider form of this tone. On grounds of frequency of occurrence it would perhaps be justifiable to regard the falling type as the neutral pretonic before tone E4, but it is difficult to explain why this should be the most frequent form, on either phonetic or semantic grounds. Halliday notes that with both the 'complex' tones the pretonic feet seem to anticipate the shape of the tonic, but he does not give any reason for this, and one would be hard to find. Despite this, however, it is difficult to discern any differences of meaning in the same pretonic before these tones. Again we may perhaps look to semantic compatibility rather than to phonetic conditioning.

As a general conclusion on the meanings of the pretonics, therefore, we may state that in both languages four types can be recognised, and they appear to have the same kind of connotation in both languages. It must, of course, be borne in mind that, as discussed in chapter 6, the phonetic specification of the 'same' pretonic is not identical in the two languages; the similarity of function, however, constitutes strong evidence for asserting that they are phonologically the 'same', however difficult it may be to interpret such 'equivalence' across languages.

The meaning of these pretonics appears to be in general terms related to the degree of importance to be attached to the pretonic and to the force with which it is expressed. In view of the connections noted between specific tones or variants of tones and the occurrence of individual pretonics, it might be more satisfactory to consider this meaning not to be restricted to the pretonic as such, however, but to extend over the whole tone-group, i.e. to regard the combination of pretonic and tone as together forming a semantic entity which applies to the tone-group as a whole. However, such is the complexity of the interaction of the various phonological and semantic parameters here (tonality, tonicity, primary and secondary tone, pretonic) that it is difficult to decide on the allocation of meaning to different parts of the tone-group. For example, if the low pretonic indicates reduced force, and the wide fall indicates special prominence, how do we distribute the combinations of these two meanings in the tone-group, and how do these meanings relate to that of the location of the tonic itself? These matters are so complex as almost to defy a solution.

Finally, it must be concluded that there is little evidence for different meanings being attached to the same pretonic, either in combination with different tones, or in different types of sentence.

10.7 The prehead

The status of the prehead was considered in 6.7, above. As mentioned there, a number of writers recognise a system of distinct preheads: O'Connor and Arnold, though for the most part allowing the different preheads to be in complementary distribution, nevertheless

establish a contrast between a 'high' and a 'low' form, while Kingdon has a system of no less than seven preheads. For O'Connor and Arnold the norm is the low prehead in most cases, while the high one can occur as the norm where it is equivalent to a high pretonic. Where it contrasts with the low prehead, however, its effect is "to add vivacity, liveliness, excitement and vehemence to whatever other attitudes the tunes in question normally express" (1961, p. 71). Kingdon's 'Normal Prehead', which is low, "adds no meaning to the tune which follows" (1958, p. 12), but there is also a 'High' and a 'Low' prehead used before a low and a high tone respectively; these produce 'emphasis through pitch contrast'. Other 'special' preheads may be rising or falling as well as level, or may be 'homosyllabic' with the tonic syllable itself, producing a rapid initial glide. For the most part these devices are said simply to produce 'emphasis', but in some cases Kingdon ascribes to them a modal function. A 'high descending' prehead, for example, expresses 'impatience' before an emphatic low rise, and 'disapproval' before an emphatic high rise.

In the present study it is recognised that a pretonic may be less than a foot in length, in which case the 'remiss' part of the foot may still have pitch characteristics appropriate to a high, low, falling, or rising pretonic. This accounts for most of the preheads described by Kingdon. More difficult, however, are cases with a full pretonic containing salient syllables and with one or more weak syllables preceding it. As discussed above, it is not always possible to interpret the variations in pitch here as dependent

on the context, and a measure of independence must be allowed to the prehead in such cases. The 'system' can probably be reduced to a 'high' v. 'low' dichotomy.

The 'low' prehead is by far the more frequent of the two, occurring regularly before high, low, falling or rising pretonics. Semantically, it adds nothing. The 'high' prehead occurs in only a minority of cases, and generally before a high or falling pretonic, when it is usually at the same pitch as the following salient syllable. Here, too, it is almost a free variant of the low form. The prehead only acquires a special significance if it is <u>higher</u> than the pretonic, i.e. if it is high before a low pretonic, or, in rare cases, higher than a high or falling pretonic. Before a rising pretonic the status of a high prehead is somewhat ambiguous, as it may simply be the high pitch of the remiss part of an incomplete rising foot rather than a prehead as such.

The following are a few examples from the data, transcribed phonetically, to show the possible contrasts here.

<u>English</u>

<u>High pretonic, low prehead</u>

1. // 1 ^ it was e/nough to /<u>point</u> // = // .../— · / ⁀ //

<u>High pretonic, high prehead</u>

2. // 1+ ^ or /simply /<u>skimped</u> // = // · /— : / ⁀ //

<u>Low pretonic, low prehead</u>

3. // 1+ ^ as op/posed to /<u>teaching</u> // = // ../_ . / ⁀ . //

<u>Low pretonic, high prehead</u>

4. // 1+ ^ and /leave it at /<u>that</u> // = // · /_ .. / ⁀ //

German

High pretonic, low prehead

1. // 1 ^sie ver/kauft von /Zeit zu /Zeit /eines der /Möbelstücke //

= // ../— ·/ — · /— /—··/⌒... //

High pretonic,high prehead

2. // 1+ ^die /uner/freuliche Ge/wohnheit /hat /^ zu /trinken //

= // ·/— · /—··· /— ·/— / ·/⌒ . //

Rising pretonic, low prehead

3. // 2 ^und /wo ist /da ein Zu/sammenhang mit /Ihrem Ver/brechen //

= // . /__ · /__ .. /__ ..·/__ .. /—·//

Rising pretonic, high prehead

4. // 1 ^Sie /haben eine /ganze /Menge er/fahren In/spektor //

= // ·/_..·/_· /_·· /⌒.. /_. //

It is clear from examples of this sort that where the preheads differ in their meaning at all the difference, as Kingdon observes, appears to arise from the pitch contrast between the prehead and the onset of the tonic. By being at a contrasting pitch the prehead emphasises the pitch level of the following pretonic. This applies especially to the low pretonic, as in the fourth English example, where the low level is especially emphasised by the preceding high pitch, and this draws attention to the reduction of prominence indicated by this pretonic. There is also a rather livelier note achieved by the pitch change. This kind of contrast is not often exploited, however, and cases of this sort are not common.

10.8 Tone systems and 'modal particles'

A number of writers have drawn attention to the relationship between intonation patterns and the so-called 'modal particles' of German. In particular, comparisons have been made between the use of these particles and the use of certain tones in English. Naturally, remarks of this kind are usually made by those who write on German from the point of view of the English learner (e.g. Collinson, 1938, 1953; Eggeling, 1961; Hammer, 1971) or those who write on English from the point of view of the German learner (e.g. Schubiger, 1935, 1958, 1965). English-speaking writers writing on English or German-speaking writers writing on German, have less cause and less opportunity to draw such comparisons. There have also been attempts to relate German modal particles to those of other languages (Arndt, 1960), and also to relate them to German intonation (e.g. Krivonosov, 1965a, 1965b, 1966).

Unfortunately, few of these discussions are really systematic. They often amount to no more than somewhat random observations on the rôle of individual particles with ad hoc equivalents in English. This is largely due to difficulties inherent in the particles themselves (not to mention those inherent in intonation). The present discussion must likewise be somewhat selective and superficial, as a detailed analysis of these particles and their rôle would require a separate study.

The first difficulty is that of identifying the particles themselves. Most German grammarians do not isolate any class of words of this type, but include them among the adverbs or the 'Modalwörter' - the latter class not being co-extensive with the particles

discussed here. A number of writers (e.g. Erben, 1964, p. 157) do isolate them as at least a sub-class of adverbs, while Admoni (1970) and Schmidt (1967) give a rather more structured classification. Some recent pedagogical grammars (e.g. Helbig and Buscha, 1974; Hammer, 1971) give useful lists of various particles, with examples. In all these cases, however, the class of words discussed is somewhat wider than that with which we are concerned here.

The fact that a class of 'modal particles' is not usually isolated is not due to the inadequacies of the grammars just cited; the problem is that both syntactically and semantically such a class is somewhat dubious. Modal particles shade off into other types of word, generally time or manner adverbs, and most of the particles themselves can be used in several ways, some of which can be described as 'modal', others not. It is also naturally difficult to say what is or is not a 'modal' use.

Despite this, however, there is some advantage, for the purposes of the present study at least, in treating the 'modal particles' as a recognisable category. The main criterion for the identification of these particles in their modal use is semantic, though this may be reinforced by syntactic, and even phonological, criteria. The major particles that fall into this category are probably the following: doch, ja, denn, schon, (ein)mal, nur, auch, eben, wohl, aber, etwa, so. Others are less certain because they appear to be rather more 'lexical', e.g. eigentlich, allerdings, freilich, nämlich. Still others are perhaps also modal, but their function is of a rather more syntactic kind, e.g. also. Some of these appear to be restricted in their occurrence by the sentence mood

(or perhaps the sentence function): doch does not usually occur in questions, while denn usually occurs only in questions. Mal is found principally in commands.

Not all of the above particles occurred in the data. The following are examples of those that did. The particle is identified by capitals.

doch

1. / 2 und die moderne junge Frau von heute die arbeitet DOCH sehr viel mit /
2. / 1 sie sollten DOCH ein bisschen mehr lernen /
3. / 4 aber das macht DOCH nichts
4. / 3 Sie meinen DOCH nicht dass ... /
5. / 1 das ist DOCH ganz natürlich /

ja

6. / 1 aber Niedersachsen ist JA auch konservativ /
7. / 1 das ist JA enorme Neuerung /
8. / 1 ich weiss JA wie das aussieht in Schottland /
9. / 1 da kriegt man JA keine Unterkunft /
10. / 1 es war JA wirklich gut /

denn

11. / 2 wo ist DENN das /
12. / 2 haben Sie DENN auch schon selbst mit Dr. Darlington gesprochen /
13. / 1 wie ist DENN das eigentlich/
14. / 1 was macht ihr DENN so in den Ferien /

(ein)mal

15. / 1 was sie für sich MAL ausgeben kann /

16. / 4 wenn Sie zur Abwechslung MAL meinen Tabak probieren wollen /

17. / 1 MAL was anders /

18. / 1 Mr. Leeds nehmen wir EINMAL an /

schon

19. / 2 das ist SCHON so /

20. / 2 was ist SCHON dabei /

eben

21. / 2 weil man sie EBEN machen muss /

nämlich

22. / 1 das ist NÄMLICH eine Mischung die ich mir eigens in London herstellen lasse /

eigentlich

23. / 1 wir wollen EIGENTLICH nur Schottland sehen /

24. / 1 ich war EIGENTLICH noch nie weiter /

auch

25. / 1 ich will Sie AUCH gar nicht überzeugen Sir /

We may turn now to the meanings of these particles. A brief characterisation is given here for each one, though it is not claimed that the labels are necessarily entirely adequate. The difficulties of generalisation and 'interpretation' are of a very similar kind to those encountered with intonation patterns and the solutions are similarly rather unsatisfactory. The various works cited so far in this section have been drawn on extensively here, though the meanings they give have not always been adopted.

Doch

This particle has an adversative force, and is widely used in utterances which contradict a previous utterance, or which imply that the previous utterance contains a false assumption. As Schubiger (1965) puts it, it has the meaning "by the way you talk (or act) one would think you didn't know (or were ignorant of the circumstances)".

Ja

Like doch, ja links an utterance to previous utterances or presuppositions, but without the 'adversative' implication. Thus, instead of drawing the listener's attention to something which contradicts his previous assumptions, it "draws the listener's attention to some circumstance he may be expected to know or to agree with" (Collinson, 1953). "It is most frequently inserted in a statement which is explanatory, or which assumes that the person addressed knows the facts, although he may have forgotten them at the moment" (Eggeling). A suitable label to contrast with the force of doch might thus be confirmatory.

(ein)mal

The main use of mal is in commands, where it gives the connotation of a suggestion rather than a demand. The 'suggestion' element is also present in other types of utterance, as in examples 16 and 17.

schon

The temporal connotation of the adverb schon ('already') is not completely absent in its use as a modal particle, but instead

of the notion of a temporal prerequisite we have a more general one "pointing to a minimum requirement" (Schubiger, 1965), to which the utterance commits itself. It thus may suggest that whatever else may occur or exist, this utterance, or at least its presuppositions, is valid or applicable. It thus "emphasises the adequacy of an item to produce a result" (Collinson, 1953). This connotation may be subject to a variety of interpretations, the main one of which is "giving a note of preference or encouragement to an imperative or its equivalent" (Hammer); "perhaps its most characteristic use in familar conversation is to encourage or reassure" (Collinson, 1953). The notion of an assured minimum requirement or attainment can also have concessive meaning, however, if followed by an appropriately adversative item; here "it has the force of 'I admit, I grant you' " (Eggeling).

denn

This particle is largely confined to questions. Its meaning, however, is hard to pin down. Schubiger (1935) writes, rather unhelpfully, that "denn is quite common in questions. Questions are always more emotional than statements. So this particle is inserted." Others are more specific; for Collinson (1938) it indicates "lively interest in his partner's communication", or may sometimes indicate impatience. Eggeling's formulation, which is also quoted with approval by Hammer, is very similar: "inserted in a question, denn implies lively interest or impatience on the part of the questioner, or makes the question less abrupt", while Helbig and Buscha give its meaning as "Verstärkung einer Frage, zugleich subjektive Anteilnahme".

There is, of course, an apparent contradiction between the 'positive' attitude implied by 'lively interest' or 'less abrupt' and the 'negative' one implied by 'impatience'. This suggests that the above meanings have not quite captured the significance of this particle. In fact it seems that denn has in some way a similar meaning to doch or ja in statements, but without the adversative element of the former and the confirmatory element of the latter: it refers back to the previous utterance, as though to say 'in view of this, granted this, despite this, etc., what about ... '. Its function is thus similar to the less frequent but analogous particle then in English questions. Schubiger (1935) suggests that it may occur "in questions following upon a negative or hypothetical statement", and also (1965) goes as far as to regard it as the equivalent of doch in wh-questions. Both the notion of lively interest and that of impatience seem derivable from this basic meaning in appropriate circumstances.

eben

The independent adverbial use of this particle in the sense of 'exactly' is also reflected in its meaning as a modal particle, where it is 'begrenzend und identifizierend' (Admoni). It indicates "confirmation of something about which there is no arguing, which has to be taken as a fact" (Schubiger, 1935), or the "resigned acceptance of a situation or the necessity for such an attitude" (Hammer). It may thus also be said to have 'explanatory' force (Eggeling).

nur

Like schon, nur implies a minimum requirement, though in a slightly different way. In imperative sentences it implies 'that's all you have to do', and may thus be encouraging or reassuring. Unlike schon, however, it appears to contain a conditional element ('if you just do this, then ...') which can, on occasion, lead it to "express an exhortation or warning" (Hammer).

wohl

This might be called the presumptive particle. The speaker "puts forward a presumption and expects it will be confirmed" (Collinson, 1938). This implies probability, but also an element of 'uncertainty' (Hammer) and 'conjecture' (Eggeling). In suitable contexts, when followed by aber or its equivalent it is likely to take on concessive force.

etwa

If wohl conveys probability, etwa is "the particle of possibility" (Collinson, 1938). It suggests that "something may conceivably happen" (Eggeling). In a negative utterance it "often implies that a certain conclusion has been, or might be, drawn" (Hammer), and thus corresponds to the English 'surely (not)' (Eggeling).

auch

As a modal particle auch retains something of its full meaning of 'also' since it implies that what is said is additional to, and relevant for, what has gone before. It thus may be "often used to confirm a previous statement" or have "explanatory force"

(Eggeling). With different sentence functions it may be interpreted in different ways: 'be sure to ...' in commands, 'are you sure ...' in questions, or 'to be sure ...' in statements (Collinson, 1938). It may be "emphatic confirmation ... of a tentative statement" or "resigned acquiescence" (Collinson, 1953); it may "correct a false impression" or "reinforce a request or admonition" (Hammer). All these are derivable from the basic additive connotation.

aber

Like auch, aber implies an addition to a previous utterance, but it implies contrast. In some cases it may be equivalent to doch, but it may lack the adversative, contradictory force of the latter. The modal particle is often difficult to distinguish from the co-ordinating conjunction.

eigentlich

The independent meaning of eigentlich is 'properly', 'really', etc. There is something of this meaning in its use as a modal particle (cf. English really) as it can signify "contrary to appearances, expectations, or later developments" (Hammer). This meaning is generally hardly present, however, and its function may often be that of focussing on a topic in a rather tentative way. As Collinson (1938) puts it: " a speaker wishing to introduce a new topic or change the subject feels his way with a question which, to avoid brusqueness, is provided with an introductory formula and padded with a particle like eigentlich". In questions, "colloquially it may mean no more than 'tell me' ".

allerdings/freilich

Both these particles (as also 'zwar', which is more restricted syntactically) imply concession, with the connotation 'nevertheless' etc.

nämlich

The meaning 'namely', which this has in one of its functions, is also present in somewhat weakened form in its modal use, where it has explanatory force (= 'you know', 'you see', etc.).

so

This particle can hardly be assigned a meaning at all. It often occurs in rapid colloquial speech as a kind of filler. The most that can be attributed to it by way of meaning would be 'casualness', etc. (Hammer). A characteristic example is 14.

Having surveyed, albeit briefly, the main 'modal particles' we may consider their relationship to intonation patterns. Discussions of their relationship to German intonation are rare; though a number of writers suggest that there is interaction here. Hammer, for example, says of ja that "with suitable intonation, it may express protest or indignation", though no indication is given of what this 'suitable intonation' might be. A more explicit account is given by Krivonosov (1965a, 1965b, 1966). He considers the particles denn, schon, ja, doch, and auch, and their relationship to the range of the intonation pattern. He sees these two as having a similar function, so that in written German, where intonation is necessarily absent, these particles "treten als ein Signal der entsprechenden Intonation und damit der entsprechenden Bedeutung auf".

Furthermore, in spoken German the presence of modal particles, with the same meaning as the intonation pattern, takes some of the burden of meaning away from the intonation: "dadurch wird die Bedeutung der Intonation als eines Ausdrucksmittels der subjektiv-modalen Bedeutung gemindert".

Krivonosov compares the intonation of sentences with and without <u>denn</u>, <u>doch</u>, <u>schon</u>, and <u>auch</u> and concludes that with the particles the sentence is uttered at a higher pitch, with greater pitch range, and with more dynamic stress. Furthermore, "ein und derselbe Satz mit und ohne die modale Partikel kann unmöglich gleich gesprochen werden". An exception to this is the particle <u>ja</u>, which is not normally accompanied by such differences of intonation.

Krivonosov's interpretation leadsto a serious contradiction, however. On the one hand he is able to assert that, on account of the wider pitch range of utterances containing modal particles, "die Intonation der Sätze mit den modalen Partikeln ist viel emotioneller als im Satz ohne die modalen Partikeln". On the other hand, however, the assertion that modal particles reduce the rôle of intonation leads to the directly opposed conclusion that the intonation in such cases is <u>less</u> emotional: "Andererseits ist die Intonation der Sätze mit den modalen Partikeln weniger emotionell als die Sätze ohne die modalen Partikeln".

The source of this confusion is evidently the view that the presence of (emotional) modal particles automatically reduces the

'emotional' rôle of intonation. If this were so, then we would expect that the more 'emotional' the particle, the less 'emotional' would be the intonation, and vice versa. Yet the discussion of ja shows the reverse: this particle does not, according to Krivonosov, bring with it a more emotional intonation pattern, but this cannot be, as his approach implies, because it is especially 'emotional' and therefore takes away from the intonation the burden of indicating the emotionality of the utterance; it is the reverse: ja is a rather weak, unemotional particle.

The resolution of this contradiction would seem to be quite straightforward: if it is true that sentences with modal particles have a livelier intonation pattern than those without them, then it is simply because both particles and intonation are the markers of more 'emotional' utterances and are thus likely to co-occur. There seems to be no evidence for a transfer of meaning from one to the other.

Krivonosov's basic claim that utterances containing certain modal particles are always characterised by greater intonational range is in any case debatable. Though it is likely that 'emotional' or 'emphatic' utterances will be characterised by a variety of features, including particles and more 'emphatic' intonation, it is certainly not the case that all utterances containing certain modal particles must have such an intonation.

The same thing can be said of the relationship between modal particles and individual tones. Since many questions have tone G2,

and since denn is regularly found in questions, we might be tempted to see denn as necessarily entailing the use of tone 2. However, denn also occurs in questions which do not have tone 2, and 2 occurs in questions which do not have denn. The conclusion is thus unfounded.

In short, then, modal particles are essentially independent of intonation, though this does not, of course, preclude the existence of certain tendencies towards co-occurrence of individual particles and individual intonational features.

Of some interest in the present study is the relationship between German modal particles and English intonation. The equivalence of the function of certain particles and certain English tones is a particularly attractive possibility, especially since German, with its smaller number of tones and less complex paratone-group structure, might be thought 'deficient' in intonational means of expression. To compensate for this by finding equivalent means of expression in the modal particles would go some way towards redressing the balance.

The most explicit discussion of these relationships is found in Schubiger (1965). She takes a number of German sentences with different sentence functions, most of which contain the particle doch, and relates them to English sentences with a variety of intonation patterns. The most important correspondences given are described in what follows.

In statements, Schubiger equates the German particle with an English pattern which has:

(i) a low pretonic and a wide falling nucleus, e.g.

that's ,just what I \said

= das hab'ich doch eben gesagt

(ii) ("if the surprise or protest is vivid")

a rising pretonic and a wide falling nucleus, e.g.

/justice /can't be \bought

= die Gerechtigkeit kann man doch nicht kaufen

(iii) ("if the retort is chiefly a protest against the interlocutor's inconsistency")

a low pretonic with a low rising nucleus, e.g.

it was ,all ,right /yesterday

= gestern war's dir doch recht

(iv) ("a challenging or sensorious attitude")

a rising-falling nucleus, e.g.

you didn't ^ask me

= du hast mich doch (or ja) nicht gefragt

(v) ("more mildly argumentative")

a falling-rising nucleus, e.g.

Vsomebody's got to do it

= jemand muss es doch tun

In commands we find not only <u>doch</u> but also (in rejoinders) <u>eben</u>. The equivalent intonation patterns are said to be the following:

(vi) a low pretonic with a wide falling nucleus, e.g.

,try and ,find an\other

= such eben noch eine zweite

(vii) a rising-falling nucleus (see (iv)), e.g.

take an^other one

= nimm eben einen anderen

(viii) a low pretonic with a low rising nucleus, e.g.

,don't ,do _that

= tu das doch nicht

In questions the particle is <u>denn</u>. In wh-questions we find the following correspondence:

(ix) a low pretonic with a wide falling nucleus, e.g.

_what's it got to do with\ us

= was geht denn das mich an

In yes/no questions we get a (low) rising intonation:

(x) ,is it so ,very sur_prising

= ist es denn so erstaunlich

On the basis of pairs of sentences of this kind, Schubiger is able to draw parallels between the use of certain modal particles in German and certain intonation patterns in English. There are, however, a number of very dubious aspects to her conclusions. One serious methodological deficiency is that Schubiger never once gives any indication of the intonation of the German sentences. This gives the impression that whereas English has intonation, German has modal particles, and hence it is all too easy to relate the one to the other. If we add the intonation to the German sentences, too, then the case for equating German particles and English intonation becomes far less strong. In the first place it will be observed that the majority of the intonation patterns given here for English also occur in German, and with the same connotation. This applies to all but

(iii), (v), (viii), and (x). In all those cases where German possesses equivalent patterns, correspondence between the German and English versions will only be maintained if the German utterance has the same intonation pattern as the English. In cases (i), (vi) and (ix), for example, which all have a low pretonic with a wide falling nucleus in English, the German sentence given here as equivalent will only be so if it, too, has a low pretonic and a wide falling nucleus. If it has, say, a high pretonic and a mid falling nucleus, equivalence can be restored by giving the English sentence a high pretonic and a mid falling nucleus. In no sense, therefore, can the modal particle be regarded as the German way of expressing what English expresses through intonation: both languages use intonation here in the same way. The most that could be said is that the modal particle will occur in a sentence of a given type, and that this type of sentence may be characterised by a certain intonation pattern in both languages.

Comparison of modal particles and intonation patterns becomes more justifiable in those cases where the English intonation pattern has no counterpart in German, viz. where English has tone E3 or E4. Here we could at least argue that the English intonation pattern may be equivalent to a combination of intonation pattern and modal particle in German. There are sometimes difficulties, however, in ensuring that the versions are actually more or less equivalent, especially in the absence of any intonation marking for German in Schubiger's paper. In case (iii), for example, the German sentence could have various versions, differing in tonicity. If the nucleus is on <u>recht</u> the equivalent English version would probably have two

tone-groups, with tones E1 and E3 (cf. p. 504, above for the relationship between following minor tones in English and thematisation in German). Equivalence would only be obtained with the nucleus on <u>gestern</u>, as in the English version. But what tone would this version have in German? In fact, the correspondence is made more confusing here by Schubiger's admission that she is handicapped by her use of O'Connor and Arnold's notation. She implies that the tone intended here in English is not the low rise proper (E3) but a wider version - presumably a fairly narrow form of tone E2. This being so, the most likely equivalent in German would likewise be the high rise, G2. Again, therefore, it becomes difficult to equate the modal particle with the intonation.

Case (v) is somewhat different. Here there is certainly no equivalent German tone, and the most likely tone for the German sentence would be G1. This would leave the way clear for equating tone E4 with tone G1 + <u>doch</u>. This interpretation seems very unrealistic, however, since the connotation of <u>doch</u> does not seem to be very close to that of E4. Furthermore, tone G1 + <u>doch</u> occurs elsewhere (with cases (i) and (ii), for example) where it is not at all equivalent to E4.

In short, then, despite Schubiger's claims, it appears that there is <u>no</u> English intonation pattern that is equivalent to <u>doch</u>. The equivalences given by Schubiger depend on choosing the same intonation pattern for the German sentence as for the English, as far as the tone-systems of the two languages allow.

In fact, this lack of connection between modal particles and intonation is not really surprising, if we examine the meanings of these particles as set out above. Very few of these have a meaning which is in any way comparable with that of the intonation patterns discussed earlier in this chapter. There are one or two exceptions, however, where a connection is more plausible. The particle mal, for example, has a 'suggestive' meaning, especially in an imperative; it implies that the utterance is put forward in a mild and non-assertive fashion. This is rather similar to the meaning of tone E3. Other particles which have a similar kind of meaning are ja and schon, which, being 'confirmatory', have the same element of non-assertiveness. We might thus consider that there is at least a measure of comparability between English utterances with tone E3 and German utterances with one or other of these particles (cf. the examples given in 10.3.4, above). Other particles whose meaning has some affinity with an English intonation pattern are allerdings, freilich, and zwar. As noted above, these have concessive force, which is one of the interpretations, in appropriate circumstances, of the meaning of tone E4 (cf. 10.3.5).

In all these cases of equivalence, however, it is notable that the German modal particles are far more specific in their meaning than the English intonation patterns. The English tone E3 has a much wider and more general meaning than mal, ja, or schon, since it simply implies a non-assertive utterance while the particles are restricted to a confirmatory rôle, and then only of a particular kind. Similarly, the meaning of tone E4 is not restricted to concession.

In conclusion, therefore, the claim that German modal particles are equivalent to English intonation patterns must be rejected as being far too strong. Although there are affinities in a number of cases, the meanings of intonation patterns are of a more general, and therefore a rather different, kind from those of the particles. From this we must conclude that the connotations conveyed in English by certain intonation patterns and in German by modal particles are simply not usually expressed in the other language, at least not in any consistent and regular fashion.

10.9. Conclusion

In this chapter we have considered the meaning of several phonological variables involving pitch features within a given prosodic structure. Without attempting to recapitulate the findings in detail, we may now attempt to draw together the main features of the discussion into a general conclusion.

The traditional term for this aspect of intonational meaning is the indication of 'attitude'. It will be clear from the discussion in this chapter, however, that 'attitude' is not a very apt designation for the kind of meaning involved here. It implies that the speaker uses intonation to indicate his opinions, moods, feelings and so on. Although such 'attitudes' may well be indicated by various features of utterances, including some features of pitch, the kinds of meaning that we have considered here are of a rather different type: they relate to the textual rôle of the utterance.

Taking the last three chapters in this study together, we may

draw the conclusion that all the major intonational variables are bound up with textual aspects of utterances rather than with their propositional content. 'Modality' differs from 'information structure' (chapter 8) and 'information focus' (chapter 9) in that it is not concerned with the structure of the 'message' (cf. 3.6) but rather with its rôle, or with the rôle of the individual parts of the structure in the structure itself.

Although we may regard the different variables involved in indicating this rôle together as having a 'modal' meaning, this meaning is itself complex, and susceptible to division into types, which are associated with the various systems operating at various points in the structure. The chief variable here is tone-choice, but this must be seen in conjunction with the rôle of the tone-group in the larger structural unit of the paratone-group. The specific implications conveyed by the different tones cannot be separated from the rôle that the tone-group has in this larger unit. The greatest independence of function is found with tones in major tone-groups; here the meaning of the tones relates the paratone-group as a whole to its textual context, indicating whether the speaker wishes to accord to his utterance an 'assertive' element, an element of 'appeal', an element of personal 'involvement', and the like. The connotation in minor tone-groups is more restricted, and more narrowly textual, since it relates to the rôle of the tone-group in the paratone-group in question, and indicates its connection with the major tone-group to which it is subordinated. Pretonic choices are also more restricted. They are limited to indicating greater or less prominence, animation, etc., within the tone-group.

This summary characterisation is, of course, rather general, and may thus perhaps be considered to be of little value. The view adopted and advocated in this study, however, is that such generalisations about the meaning of intonation, which attempt to see intonation in broad textual terms rather than relating it more specifically to contextualising features of individual utterances, are not only justifiable but also essential if we are to avoid the pitfalls of traditional descriptions of intonation. Most such descriptions attempt to make the meaning of intonation as precise as possible by relating it to a variety of contextual features. Far from making the meaning of intonation more precise, however, this approach simply obscures it by illegitimately including meanings as intonational which are not the property of the intonation patterns at all.

For this reason, then, the present chapter has deliberately avoided establishing a complex framework of contextual features in terms of which to examine the meaning of intonation. No attempt has been made to deal separately with the intonation of different sentence types, whether those differing in sentence mood or those differing in sentence function. On the contrary, where cases of apparent contextual conditioning of this sort have been encountered, attempts have been made to find alternative explanations which do not require such conditioning. If the overall effect of a given intonation pattern with a given sentence type appears to be different from that obtained with the same intonation pattern and a different sentence type, this is, it is claimed, not because the intonation

pattern has a different meaning in the two cases, but because the same basic intonational meaning may interact differently with different features of the syntactic context.

This approach is entirely in keeping with that adopted in the preceding two chapters. In all cases the more specific meanings claimed for intonation in particular contexts can be derived from the interaction between a more consistent and more general intonational meaning and a variety of non-intonational features which may differ from context to context. The features with which intonation interacts are also different for different aspects of intonational meaning. In the case of information distribution intonation interacts with the relative independence and degree of cohesion and integration of syntactic items; in the case of information focus it interacts with the 'lexical' or 'grammatical' status of the items and their ordering; in the case of modality it interacts with sentence mood, sentence function, and related elements such as modal particles. These interactions are complex, but they should not be allowed to obscure the basic independence of intonational features as devices in the textual articulation of utterances.

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