

ENGLISH INTONATION: A NEW APPROACH

BY

W. R. LEE



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*Institute of Education,
University of London*



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Summary

Intonation plays a number of different roles in English, and each of these requires a different approach. Three major roles are identified and examined, and the possibility of a fourth is suggested. There is incidental consideration of the extent to which intonation in English can differentiate sentence types. An outline analysis of particular stretches of speech into intonation units is also made.

I

Intonation in English has been variously described as, among other things, a means of distinguishing sentence or clause types¹⁾, emphasizing words and phrases or giving them prominence²⁾, connecting the parts of a sentence³⁾, connecting sentences with each other⁴⁾, determining word-classes⁵⁾, pointing contrasts⁶⁾, reflecting the measure of a speaker's vivacity⁷⁾, revealing a speaker's character or attitude⁸⁾, and expressing or arousing a variety of emotions or sentiments⁹⁾. Some writers on intonation have concerned themselves with several of its roles, others have stressed the importance of one or two. From what has been said during the past few decades no very clear and general agreement as to the functioning of pitch-change in English emerges. Clearly, however, it has more than one kind of work to do. To begin with, we shall try to distinguish at least three diffe-

¹⁾ See A. M. Bell, W. Viëtor, D. Jones, H. E. Palmer, L. Armstrong and I. C. Ward, M. Schubiger, L. Bloomfield, R. Kingdon, etc.

²⁾ See Bell, H. O. Coleman, A. and W., Palmer, Schubiger, Kingdon, etc.

³⁾ See J. E. Murdoch (Analytic Elocution, 1884), Schubiger, etc.

⁴⁾ See Bell, Bloomfield (parataxis), etc.

⁵⁾ See Schubiger.

⁶⁾ See Bell, H. Klinghardt and G. Klemm, Jones, Schubiger, etc.

⁷⁾ See O. Jespersen (Lehrbuch der Phonetik, 1904), etc.

⁸⁾ See Palmer, K. L. Pike, Kingdon, W. Jassem, etc.

⁹⁾ See T. Sheridan (Lectures on Elocution, 1762), J. Rush (Philosophy of the Human Voice, 3rd edn., 1845), Murdoch, G. L. Raymond, (Orator's Manual, 1879), C. J. Plumptre (Lectures on Elocution, 1883), Bell, Viëtor, Palmer, Bloomfield, Schubiger, C. A. Bodelsen ("English Studies", 1943), Pike, Kingdon, Jassem, etc.

rent roles which it can take. We shall then discuss whether it may operate as a connective means and as a means of differentiating types of sentence. We shall consider also how it can be examined and discussed in its major roles. And finally, we shall outline a method of breaking up particular stretches of speech into tonal units.

II

The DIFFERENTIAL role of intonation in English has been insufficiently studied. Because pitch-changes are employed mostly in other ways, there has been a tendency to pass it over as unimportant. But *They don't admit* ∨ *any students* can differ from *They don't admit* \ *any students* in the same sense as ↑ *John writes to* \ *Mary* differs from ↑ *Mary writes to* \ *John* ¹⁰). Here we are concerned with meanings which can be readily re-expressed in terms that all native speakers of at least one kind of English would find acceptable ¹¹). The first means "They admit some kinds of student but not all kinds" and the second "They admit no students". The third and fourth sentences may be re-phrased "It is to Mary that John writes" and "It is to John that Mary writes". Word-order is used syntactically to distinguish these two statements, and intonation syntactically to distinguish the previous two. Word-order, stress, etc., are identical in the first two, where only the intonation pattern differs, and intonation, stress, etc., in the second two, where only the word-order differs.

A number of similar contrasts will now be examined and an attempt made to define the patterns involved. It will be seen that when intonation is used thus the intonation of the whole utterance has a pattern aspect and an aspect of variation.

¹⁰) The implications of the tone-marks are as follows: \ implies a pitch-fall on the next syllable, followed by a low level or perhaps slightly rising pitch-line until the next mark or a full stop is reached; / a rise on the next syllable, or beginning from it and continuing similarly; ∨ a fall and a rise on the next syllable, or a fall on the next syllable and a rise beginning immediately afterwards; ↑ a relatively high pitch at the beginning of an utterance, or an upward jump; - the sustainment of a relatively high pitch-line, although there may be some descent from ↑. It is assumed that a comparatively strong stress always falls on the syllable following a tone-mark. Other such stresses are generally unmarked in our examples.

¹¹) The English here dealt with is fairly generally spoken by "educated" Londoners.

1. Firstly, a closer look is taken at a contrast already quoted.

A1. *They don't admit* √any students [but only students of a certain kind].

AB1. *They don't admit* \any students. [They admit no students].

At first sight the contrast associated with the two meanings (let us call them A and B) appears to be a simple one, viz. between a fall-rise and a fall on any. In certain contexts, however, AB1 may have the same meaning as A1. This would be so if previous reference had made it clear that students were admitted – “Yes, they do admit students, but not \any students”. If some kind of kinetic tone (rise, fall-rise, fall) is used at *students*, absurdity in this kind of context results; such a pattern suits only with meaning B, viz. that no students are admitted. Thus

B1. *They don't admit* \any /students

B2. *They don't admit* \any √students

and B3. *They don't admit* \any \students

are in all contexts statements with meaning B. Of course, there are also shades of difference in usage between any two of these utterances, but such detail need not be entered into now.

Meaning B is also apparent, provided that a kinetic tone occurs on *students*, when a rise is used at any, as in

B4. *They don't admit* /any \students

B5. *They don't admit* /any √students

B6. *They don't admit* /any /students

(B6 can also, in some contexts, be a question).

Meaning B is still apparent if an upward pitch-jump replaces the rise at any, or if at any a high pitch-line is relatively well sustained, or even if any merely continues a medium or low pitch-line, as in

B7. *They don't admit* ↑any \students

B8. *They* ↑don't ad-mit -any \students

B9. *They* _don't ad_mit _any \students¹²) etc.

Al can have meaning A only, viz. that not all students are admitted. However, if this fall-rise is followed by a fall or fall-rise on *students*, the meaning, without contextual guidance, is ambiguous. Thus

AB2. *They don't admit* √any \students

may either be a somewhat emphatic way of saying that no students

¹²) It is not, of course, necessary that both *don't* and *-mit* should be stressed.

are admitted, or may have meaning A – “They are very particular about staff and *EVEN* about students”. The intonation alone is an ineffective means of distinguishing the two.

There is similar ambiguity if a fall on *any*, unaccompanied by a kinetic tone on *students*, is preceded by a kinetic tone on *-mit*, as in

AB3. *They don't ad/mit \any students.*¹³⁾

AB4. *They don't ad_v/mit \any students.*

AB5. *They don't ad_v/mit \any students.*

These will carry meaning A if previous reference has precluded the possibility of meaning B, and vice versa.

The use of additional kinetic tones on *They*, *don't*, or *admit* still leaves meaning A in A1 and B in B1–6 unambiguously present, and does not affect the ambiguity of AB1–5.

Variations in the *DEGREE* of stress do not affect this differentiation of A and B. Compare *students*, for example, in AB1 and B1: in the former *stu-* may be more strongly stressed than *an-*, although *stu-* has a low level pitch, while in the latter it may be less strongly stressed, although it has a rising pitch¹⁴⁾.

The facts are complicated, and not every intonation that could be used has been shown. Nevertheless enough has been said to make the patterns visible, viz. (A) a fall-rise at *any*, with the rise continuing to the end, and (B) a fall, rise, “jump”, or sustainment of pitch (i.e. anything apart from a fall-rise) at *any*, followed by a “turning” or “bending” of the pitch-line¹⁵⁾. With the present example, the opposition may be indicated thus:

A. *They don't admit* ^{FR}..... *any students.*

B. *They don't admit* ~~FR~~..... *any* ^K*students*¹⁶⁾.

¹³⁾ An upward jump may occur in place of the rise (*ad[↑]mit*). These two intonation features are interchangeable in such circumstances. See also K1.

¹⁴⁾ Syllables following a tone-mark are, of course, to be taken as stressed (i.e. given relatively strong stress). If *any* were unstressed (i.e. weakly stressed) the only meaning possible would be B.

¹⁵⁾ These are unsatisfactory terms but it is difficult to suggest others. What is meant is that the pitch-movement begun at *any* is not continued at the next stressed syllable.

¹⁶⁾ *F* = fall, *R* = rise, *FR* = fall-rise, *F/R* = fall or rise, *R/FR* = rise or fall-rise, etc. A deleted symbol implies that the intonation feature concerned cannot be used at that point in the utterance: thus ~~FR~~ indicates that a fall-rise is not possible at *any*. A superscript dotted line shows that an intonation feature, or its absence, must continue for the length marked.

Many examples could be found of utterances such as these, involving a negative and *any* (or a compound of *any*), in which a similar contrast of intonation patterns can be differentially used¹⁷). The present intention is merely to illustrate such usage, and no attempt will be made, therefore, to delimit the whole field within which the opposition is effective. At the moment it suffices to say that only main clauses which are statements are affected.

2. Intonation is used similarly to help distinguish between "alternatives" and "examples"¹⁸). To illustrate, we confine ourselves to questions.

C1. *Did you try at /Robinson's or /Johnson's or \Browning's?*
[At which shop did you try?]

C2. *Did you try at /Robinson's or \Johnson's or \Browning's?* [Ditto.]

D1. *Did you try at /Robinson's or /Johnson's or /Browning's?* [Did you try at some such shop?]

D2. *Did you try at \Robinson's or \Johnson's or \Browning's?* [Ditto.]

The pattern suited to meaning C involves the use of a fall on the last "alternative" or "item of choice" as its primary feature. A rise would normally be used on the other items. In C2 *Browning's* is perhaps an afterthought: the alternation of rise and fall is established by */Robinson's* and *\Johnson's*.

Meaning D is usually associated with the use of either a fall or a rise on all the items.

Various tones can be used in the first part of the sentence, which lies outside the pattern. A short pause is possible after each item in both C and D, and has not been marked. The opposition may be indicated thus:

C. *Did you try at ^RRobinson's or ^{R/F}Johnson's or ^FBrowning's?*

D. *Did you try at ^RRobinson's or ^RJohnson's or ^RBrowning's?*¹⁹)

OR- *^FRobinson's or ^FJohnson's or ^FBrowning's?*

¹⁷) Cf. A. *She won't speak to ^{FR}anybody*, and B. *She won't speak to ^{F/R}anybody*. As there is no second stress in *anybody*, only a rise or a fall can be used at *an*- and there is no "bending" of the pitch-movement.

¹⁸) See my "Intonations involving Choice and Exemplification", in "Le Maître Phonétique", Nos. 99-100, International Phonetic Association.

¹⁹) Again, ↑ may be substituted for the rise. D can also be spoken as one phrase, without pause, on a falling, rising or level tune, with a final fall or, preferably, rise, as in ↑ *Did you try at -R's or -J's or /B's*. *Did you try at -R's or -J's or /B's*, etc. Such intonations might be used with this meaning in rapid

3. Differential use of intonation is also found in certain utterances containing a negative and a clause of reason ²⁰).

E1. *He didn't go to ^KHolland | because his ^FDutch was weak.* [He didn't go.]

F1. *He didn't go to Holland because his ^{R/FR}Dutch was weak.* [He went for some other reason.]

Here some kinetic tone at *Holland* and a fall at *Dutch* are usually associated with meaning E. *Holland* may also be followed by a pause ²¹). If the context has strongly suggested meaning F, however, this pattern may nevertheless still be heard, especially with a fall on both *Holland* and *Dutch*. With meaning F there is normally no pause after *Holland*, and the only kinetic tone, a fall or fall-rise, occurs at *Dutch* and continues to the end. But this pattern may also be used (with a rise only) when the context has made it clear that the utterance is a question ("Are you saying that because his Dutch is weak he failed to go to Holland?"). The patterns of E1 and F1 are thus only potentially opposed: intonation can show whether E or F is meant if context has not already done so. Moreover, it is not intonation alone which is concerned here, but pause and intonation together.

4. There is another opposition of this kind in

- G1. *She won't consult \one doctor.*
- G2. *She \won't consult \one doctor.*
- G3. *She \won't consult \one doctor.*
- G4. *\She won. consult \one doctor.*
- G5. *She won't con\sult \one doctor.*
- G6. *She won't consult \one \doctor.*
- G7. *She won't consult \one /doctor.*
- G8. *She won't consult \one \doctor. etc.*
- and H1. *She won't consult \one doctor.*
- H2. *She \won't consult \one doctor.*
- H3. *She \won't consult \one doctor.*
- H4. *She won't con\sult \one doctor.*
- H5. *\She won't consult \one doctor, etc.*

speech, although a final fall here could give rise to ambiguity, especially if the pitch-line were low.

²⁰) See my "Points concerning Intonation and Negatives", in "Le Maître Phonétique", No. 105, 1956.

²¹) Potential pause is shown by an upright line, here placed after *Holland*.

Meaning G is that no doctor will be consulted, H that one will not be enough. The basic intonational contrast is between (G) a fall at *one*, whether or not followed by a kinetic tone at *doctor*, and (H) a fall-rise at *one*, continuing to the end. If the context precludes meaning G, certain of the G patterns (e.g. 1, 2, 3) may, exceptionally, be heard in association with meaning H, but the reverse does not apply to the H patterns. Patterns involving a fall or fall-rise at *doctor* after a fall-rise at *one* may occur with either meaning.

GH1. *She won't consult √one \doctor.* [Either (a) an emphatic way of saying G, or (b) equivalent to "She consults many people when she's unwell and even goes to more than one doctor".]

Intonation is thus CAPABLE of distinguishing meanings G and H, and for this kind of utterance the opposed patterns may be shown thus:

G. *She won't consult Fone doctor.*

H. *She won't consult FR⁻⁻⁻⁻⁻one doctor.*

There is not necessarily a stronger stress on *one* in H than in G. Only statements are concerned. The opposition does not, for instance, hold in subordinate clauses (*If she won't consult √ one doctor...* can have only meaning G). Such facts suggest a line of further investigation.

5. Restrictive and non-restrictive clauses may be accompanied by a characteristic pattern of intonation and pause²²).

I1. *And the /children | who were /lucky | got presents.* [All the children were lucky and all got presents.]

J1. *And the children who were /lucky | got presents* [but the unlucky children did not].

Meaning I is also apparent in

I2. *And the √children | who were √lucky | —*

I3. *And the /children | who were \lucky | —*

I4. *And the \children | who were /lucky —*

and I5. *And the \children | who were \lucky —*

Of these last, the intonation of I2 is more often heard than the others²³). Similarly J1 and J2 are the commonest patterns associated with meaning J.

²²) See W. Ripman, *English Phonetics*, p. 157 (22.33); Schubiger, *Role of Intonation*, p. 40; A. S. Hornby, *Oxford Progressive English for Adult Learners*, II, p. 103.

²³) There appears to be a tendency for the kinetic tones at the ends of the

J2. *And the children who were* √*lucky* —

J3. *And the children who were* *lucky* —

Got presents can, of course, be treated in various ways; it is outside the sequence within which the contrast is operative.

Meaning I is signalled by kinetic tones at both *children* and *lucky*. A pause is possible after *children* and, if made there, must also be made after *lucky*. Meaning J is signalled by a kinetic tone on *lucky* and the absence of a kinetic tone on *children*; equally important is the fact that no pause may occur until *lucky* is reached.

I patterns may perhaps be occasionally used with meaning J where the context has made plain beyond all doubt that only meaning J is possible.

The tonal opposition may be shown thus:

I. *And the* ^K*children* | *who were* ^K*lucky* | — ²⁴)

J. *And the* ^K*children* *who were* ^K*lucky* | —

6. There are two kinds of comparison, for which satisfactory names have not yet been found, that are commonly made with the help of intonation ²⁵).

K1. *Jill prefers* /*riding* to *swimming*. [She enjoys swimming but likes riding still more.]

L1. *Jill prefers* *riding* to /*swimming*. [She is not keen on swimming, nor necessarily on riding, but at least she likes riding more.]

Meaning K appears also in

K2. *Jill prefers* √*riding* to *swimming*.

There may even be a "straight" intonation line (descending, ascending, or level) from *Jill*: e.g.

K3. *Jill prefers* *riding* to *swimming*.

Meaning L appears also in

L2. *Jill prefers* *riding* to √*swimming*.

The basic contrasting patterns associated with K and L meanings respectively are thus (in K) a fall on the second "item" of comparison (*swimming*) and (in L) a fall on the first "item" together with a rise or fall-rise on the second "item"

two phrases to be the same. With I3 and I4 there is danger of confusion with meaning J, and the pause becomes more necessary.

²⁴) The line joining the two potential pauses is meant to indicate that one is unlikely to occur without the other.

²⁵) See my "Intonation Patterns of Two Kinds of Comparison in English", in "Le Maître Phonétique", Nos. 103-4, 1955-6.

Certain patterns which might be used here are neutral to K and L, e.g.

KL1. *Jill prefers /riding to \swimming.*

KL2. *Jill prefers \riding to \swimming.*

These could only be taken definitely one way or the other (as K or L) if there were firm guidance from context.

The opposition can be summarised:

K. *Jill prefers ~~R~~riding to ^Fswimming.*

L. *Jill prefers ^Friding to ~~R/FR~~swimming.*

It may clearly be seen from the above six types of contrast that the resources of intonation can be called upon in various circumstances to signal which of two possible meanings is present. The meanings here concerned can be called "objective". The differentiation is of the same clear and unmistakable kind, when the appropriate patterns are used, as that between $\uparrow$ *John writes to \Mary* and $\uparrow$ *Mary writes to \John*. It is not a matter of the "feeling" or "colour" of the utterance, or of mood or emphasis; it is not, one might say, a question of "subjective" meaning at all. Where intonation is used in this manner the distinctly opposed patterns are associated with meanings which can readily be re-phrased. There is no doubt that *He won't go \anywhere* means that he is particular as to where he goes, and that *He won't go \anywhere* means "He'll go nowhere". This is true at least if we have to rely on intonation alone and have no firm guidance from context.

Compare the possible functioning of intonation in this pair of examples, however, with its functioning in *He won't go \everywhere* and *He won't go \everywhere*. Intonationally the pairs are identical, but whereas the difference between the former two can be plainly stated, that between the latter two cannot. These are certainly in some sense "different in meaning", but the difference is not the same kind of difference as between the former two; it concerns a shade of meaning which cannot readily be defined. Re-phrasing does not help, for both mean "It isn't everywhere that he'll go". The "objective" meaning is the same in both, the "subjective" meaning different. Moreover, we need a context before we can try to say what these "subjective" meanings are. Some perhaps would find *He won't go \everywhere* cautionary or reproachful, some pitying or scornful, while others would hear it merely as a more emphatic, or possibly a less emphatic, form of *He won't go \everywhere*. Judgments vary

according to the nature of the context, real or imagined. We are now in the realm of moods and atmospheres and affects, things which can with difficulty be seen and named by everybody alike²⁶). The non-differential work of intonation has therefore to be discussed in another way from the differential.

Where intonation works differentially, there is a pattern aspect and an aspect of variation about the pattern. The pattern itself is not always rigid, as we can see, for instance, from paragraphs 3, 5 and 6. However, it is not the freedom to choose between versions of the pattern with which we are now concerned, but merely the fact that some features are pattern features while others are not. These constitute respectively the bound and the free aspects of the intonation sequence. G and H, which have no versions, may illustrate. These two sentences are intonationally bound because a fall must be used on *one* with the first meaning and a fall-rise must begin at *one* with the second meaning, if it is mainly intonation on which we have to rely. The limits of variation are wide: much can be done without obliterating the pattern. In both G and H

- (i) The extent of fall and rise in the pattern tones can be varied;
- ..(ii) Strong stresses other than that on *one* can vary in number and be variously placed;
- (iii) The intonation of syllables preceding *one* may vary greatly, for they can make a level pitch-line, begin low and rise, begin high and descend, or form an "irregular" line in several ways;
- (iv) In G a kinetic tone may occur on *doctor*.

What has been said of G and H applies also to the other examples. Thus in A the fall on *an-* and rise from it may be of varying degrees, there can be strong stresses on *they*, *don't* or *-mit*, and *They don't admit* can be treated variously. Similarly with C and D. In E and I there are two parts, each with its bound and free aspect, and the pauses may vary in length. The usefulness of the rise or fall-rise at *Dutch* in F or of the kinetic tone at *lucky* in J is diminished if a kinetic tone appears at some earlier point; otherwise the syllables preceding these kinetic tones may behave freely. And so on. In the free aspect of

²⁶) There is considerable diversity of view, among those who have written on intonation, as to what various features "express", "suggest", or "imply", and a detailed comparison of authors is instructive. See, for instance, my "Fall-Rise Intonations in English", in "English Studies", April 1956.

the phrase, when intonation is differentially used, is seen also its non-differential and non-syntactic usage.

Can a useful distinction be drawn between one kind of variation and another? Let us look again at G and H. *One* in G may be given a very high fall, thus lending an air of indignation or surprise or incredulity to the whole statement: or, since without a full context one cannot say which of these attitudes is involved, at least contributing an effect of prominence or emphasis. A similar "colouring" may result if *She won't consult* is pitched very high before a low fall on *one*. An "irregular" line (e.g. high pitches on *She* and *con-*, low on *won't* and *-sult*) also goes with lively interest of some kind and lack of detachment. If, on the other hand, *She won't consult* is pitched at medium level and the fall begins no higher, an impression of relative indifference is made. Using certain intonations speakers seem to be more implicated in what they say and what happens, and here intonation is involved in what may be termed its IMPLICATIVE usage. Relevant to this function are the range of pitches, the extent of rises and falls, and the abruptness and frequency with which the pitch-line is "turned". Much of its fluctuation registers the degree of excitement or of interest in what is going on. Perhaps Bloomfield had something of the sort in mind when he wrote: "Pitch is the acoustic feature where gesture-like variations, non-distinctive but socially effective, border most closely upon genuine linguistic distinctions" ²⁷). Intonation makes these latter distinctions, however, in its differential role.

But the uses of intonation are not exhausted by its differential and implicative work. Illustrating again from G, let us examine, for instance,

G2. *She \won't consult \one doctor.* (Contradiction).

G3. *She √won't consult \one doctor.* (Ditto.)

G4. *√She won't consult \one doctor.* [Other people may].

G7. *She won't consult \one /doctor.* [She may be willing to consult other people, but not a doctor.]

G8. *She won't consult \one √doctor.* (Ditto.)

G9. *√She \won't consult \one doctor.* (Contradiction. Contrast with other people).

With these utterances may be included

²⁷) L. Bloomfield, *Language*, London 1935, Ch. 7, 7.6.

- X1. *John writes to \Mary.*
 X2. *John \writes to Mary.* [He doesn't telephone or call.]
 X3. *\John writes to Mary.* [It is John who writes.]
 X4. *\John writes to \Mary.* [Who writes? John does, and to Mary.]
 X5. *\John \writes to Mary.* [Others call or telephone or do nothing, but John writes.]
 X6. */John \writes to Mary.* (Ditto)
 X7. *John \writes to \Mary.* [He may telephone or call upon others, or do nothing, but to Mary he writes.]
 X8. *\John writes to /Mary.* (Different from X3?)
 etc.

As between G and H utterances intonation is used differentially: as between one G utterance and another, or one X utterance and another, it is not. What the difference of meaning is between some of the G and X utterances is indeed hard to define, e.g. between G2 and G3, G7 and G8, G4 and G9, X5 and X6, or X3 and X8. Are G3 and G8 merely a trifle more emphatic than G2 and G7, or does the fall-rise add something else? Between X5 and X6 is there a definable difference at all? A full context would doubtless make it easier to decide, but the difficulty is always there with the implicative role – there is a difference of meaning, but what is it? Yet it cannot be argued that this role of intonation is unimportant simply because it is hard to discuss in “objective” terms.

However, not all the differences in meaning between the pairs just quoted are of this elusive nature. Some can be readily and “objectively” explained: that between G4 and G7, for instance, or between almost any two under X. But intonation is not used here differentially. The basic meaning in all the G examples is that no doctor will be consulted, and in the X that letters pass between Mary and John. What then are the differences, when they are not those referred to in the last paragraph? They are differences of emphasis or prominence – attention is directed to one part of the utterance rather than another, or possibly to two or more parts. Thus in X1 attention is focused on *Mary*, in this sentence by giving it a fall. The higher the fall the more prominent the word *Mary* is. *John* and *writes* have less prominence, although the degree of their prominence can be varied, e.g. *John* can be made prominent by giving it a high pitch. In X2 the focus is *writes*, in X3 *John*. In G2 intonation is used differentially

at *one*, but there is concentration also on the refusal (*\won't*). In G7 and G8 either a rise or a fall-rise gives greater prominence to *doctor*, so that a contrast with other people is implied. Intonation has in this way a "pointing" or DEMONSTRATIVE role, picking out syllables and words for particular notice. It can do this variously. In X1-X3 the device used is a fall with subsequent low level syllables continuing to the end of the phrase. In X4 this device is repeated, and by comparison with X3 *Mary* has more prominence. Have *John* and *Mary* equal prominence, however? A fall-rise gives extra importance in X5 to *John* (cf. X2), but which is more prominent – *John* or *writes*? There would probably be general agreement, however, that */Mary* in X8 is less prominent than *\John* or than *\Mary* in X4. Position in the utterance has to be taken into account, and as D. Jones has pointed out, prominence depends on a number of factors ²⁸).

The implicative usage is superimposed upon both the demonstrative and the differential, and all three may be observed in a single utterance, such as *\They don't admit \any students*. Here the fall-rise is differentially used and the fall demonstratively, while the implicative role is seen in the extent of fall and rise and in other unmarked features. The effect may be weakened or reinforced by gestures and facial expression, voice-quality, volume, speed, register, etc. Word-order is also involved.

Has intonation in English yet another role, distinct from these three? If it distinguishes sentence types or is connective, these functions may be regarded as at times differential, at times implicative. If it can determine word-classes, it does so again in its differential role. The intonation of the 'long piece', however, may be governed in part by the need to avoid undue monotony, and if this is so there is a fourth role here which might be called VARIATIVE ²⁹). It is not certain that a variative role could be successfully distinguished from the demon-

²⁸) See Outline of English Phonetics, 8th edn., para. 101. Jones regards intonation as a more important means of effecting prominence than stress and length.

²⁹) W. Stannard Allen, in *Living English Speech*, 1954, Ex. 50, speaks of avoiding "the monotony of a continuous descent". It is noteworthy too that R. H. Robins, in "Formal Divisions in Sundanese" (*Trans. Phil. Soc.* 1953), p. 118, says that "division into clauses", which he defines phonetically for Sundanese, "serves to relieve the apparent monotony" of this kind of sequence.

strative and implicative roles, but the possibility would be worth investigation. This role could be observed most readily, perhaps, in conscious art: there are ways of, say, reading a printed passage or speaking a part in a play which do a certain justice to the piece and are yet monotonous and dull. Examination of a long stretch of utterance would be needed, however, to follow this point up. An aesthetic influence may be at work, of course, in shaping the pitch-aspects of conversation too.

III

As a means of connecting or disconnecting words, phrases and sentences, intonation is often auxiliary and often plays no part.

1. *'Two times 'three plus 'one*³⁰. (a) $2 \times (3 + 1)$. (b) $(2 \times 3) + 1$. These may both have the same intonation, say a fairly high level tone on *two*, a lower one on *three*, and a fall on *one*. Nevertheless they can easily be distinguished if in (b) *three* is slightly lengthened, whether or not a slight pause follows, and if similarly in (a) more length is given to *times*. This may be looked upon as a differential use of rhythm. Intonation would reinforce the pattern if, for instance, *three* in (b) were given a rising tone.

2. $\uparrow$ *Have you seen -William and /Mary?* (I.e. William and Mary together, or a film of this name.)

(b) $\uparrow$ *Have you seen /William and /Mary?* (Two people, considered separately.)

The contrast is potential only.

3. (a) *Choose between $\uparrow A$ and /B | and $\uparrow C$ and \D.* (Choice of one pair from two pairs.)

(b) *Choose between /A and /B and /C and \D.* (Choice of one unit from four.)

4. (a) *A $\uparrow$ French \lady's maid.* (The maid is French.)

(b) *A $\uparrow$ French lady's \maid.* (The lady is French.)

In (a) *lady's* is closely linked with *maid* by low level pitches following a fall. In (b), if *French* has a high level pitch, *lady's* is closely linked with *French* by syllables at the same level or slightly descending. Note that stress plays a secondary part here, since *maid* in (a) and

³⁰ The upright lines indicate that the following syllable is stressed (i.e. has relatively strong stress).