SOME ASPECTS OF THE ROLE OF INTONATION IN ENGLISH VERSIFICATION

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The growing interest in the study of versification, resulting from the concern with the findings in linguistics and exemplified in the increasing number of works on metre and verse, has brought into the open some of the topics which have for long been only rarely dealt with. One of the issues to be recognised and raised recently is intonation. As early as 1930 an attempt was made to emphasise the need for and the importance of incorporating the study of intonational phenomena into the actual study of versification. (Wilson 1930) The point was further considered by W. Schramm (1935), who was mainly preoccupied with the comparison between prose and verse intonation. He maintained among other things, that the contours of verse lines tend to organize themselves around the phrase, thus contributing to verse rhythm. He also recognised the influence of syntax and rhyme on verse intonation.

But it is only recently that experiments in poetry recitation have been carried out, (Van Caspel 1970: 244) thus providing verifiable data for some valid observations. They showed that the syllable pitch series, forming the verse melody, did not produce a paricularly striking profile. In many cases the melody curve remained within the boundaries of normal every-day speech. The results of the experiments suggest that it is intonation, rather than the sound intensity, from which the hearer derives the experience of rhythm. The problem of whether the metre in English verse has features of pitch is also treated by Buiskool (De Groot 1968: 542) whose unpublished experiments seem to support this hypothesis.

The observations alluded to above apparently contrast with the views expressed in T. Sebeok's *Style in Language*, (1964) where the answer to the problem of whether intonation is relevant to metrical anylysis, although showing a certain divergency of opinion, emerges largely in the negative. The issue was further considered in a recent article which, however, does not

seem to have contributed to the argument in any substantial way. (Taglicht 1971: 116–122)

What has been said so far clearly implies that it is important to reconsider the point at issue and, possibly, obviate some of the difficulties involved, in order to arrive at a roughly uniform presentation of certain aspects of non-segmental phenomena pertaining to metrics.

After an introductory discussion of the reasons which may account for the difficulties hindering developments in the field, an attempt will be made to present a review of various fundamental concepts required for a study of this type, relating these to the general framework of metrical organization as a whole. In conclusion the present author will try to assess the relevance of non-segmental phenomena to metrical analysis, as well as to offer some suggestions for future research.

It is evident that there still exists a number of questions which have neither been asked nor answered; the following remarks can by no means be taken to be either exhaustive or conclusive. In its general conception, then, the paper is selective rather than inclusive, and tentative rather than final.

As has already been pointed out, prosody (≠ versification) has long remained peripheral in the study of metrics, and occasional statements coming from different authors have generally denied it any significant role in metrical considerations. The only exceptions were few 'second hand' reports that have been unlikely to wield a substantial influence upon metrics (De Groot 1968:542). The reasons for the rejection of non-segmental phenomena from versification may be roughly classified into the following two major points:

1) No apparent distinction has been made in metrical studies between such components of intonation as prosodic features of tone, pitch, rhythmicality, speed, loudness and tension, and paralinguistic features comprising voice qualifiers (whisper, husky, falsetto, etc.) and voice qualifications (laugh, cry, giggle, etc.) (Crystal 1969). Needless to say, it is only the first three properties (tone, pitch, rhythmicality) which are least subject to idiosyncratic variation, being thus of primary interest for metrical investigation. Lack of this differentiation may probably account for depriving intonation of its function in metre, on the grounds that metre cannot schematize intonational levels (Sebeok 1964:203), which is largely true if all the non-segmental features are to be treated *in toto*.

2) Most of the existing theories of versification seem to have separated stress and intonation as different phonemic entities whereby the latter is seen to be irrelevant to English metrics. But in terms of some more recent analyses of nonsegmental phenomena in English, a direct connection between stress and intonation is envisaged. It was proved (Bolinger 1965; Fry 1958: 126–152), for instance, that the primary cue and a determinative factor of

what is usually termed 'stress' in an utterance, is pitch prominence, one of the main component parts of intonation.

Assuming the validity of the preceding observation pertaining to the primary role of pitch as a cue to stress, the present analysis[1] will be concerned with an explication of non-segmental features functioning in verse, using the former as a starting point for the discussion which follows.

It is believed here that an intonational analysis of verse may be carried out in two successive stages, covering different aspects of the workings of intonation in verse: a) procedures at this stage will focus on the interrelation between non-segmental phenomena and the level of verse instance[2]; b) the analysis will aim at establishing the interaction between the non-segmentals and the whole of metrical organization in actual poems (encompassing the units of hemistichs, verse-lines and stanzas).

In connection with the first point it should be said that the possibility of following the procedure employed here was opened up with the appearance of a theory propounded first by Halle and Keyser (1966: 137–219), and duly developed by a number of other authors (Beaver 1968; Freeman 1968; Hascall 1968). For reasons of space and clarity it has been considered inexpedient to embark here upon a lengthy discussion of the theory, but a brief illustration of its rules of prosody in combination with the rules of stress, seems necessary at this point.

The fundamental distinction for metrics is, according to the theory, the distinction between the metre of a poem, and the *mapping* or actualization of this metre by concrete sequences of sounds that make up the lines of the poems. The rules mapping the abstract pattern onto the actual verse-line place a constraint on the number of *metrical positions* in the line (*even* vs. *odd*) and specify the conditions under which a metrical position may be occupied by a syllable. Even positions, in contradistinction to odd, are those which may be occupied by *stress maxima* (i.e., syllables bearing a stress determined by means of a series of linguistically determined rules). For further elucidation of the point, the familiar lines from *Hamlet* may serve as an example:

1 2 3 4 5 6 7 8 9 10
On that this too too solid flesh would melt,

1 2 3 4 5 6 7 8 9 10
Thaw, and resolve itself into a dew.

[1] The term *analysis* has been used in a number of different senses in the studies devoted to intonation as such. And thus there exist *auditory analysis*, *acoustic analysis*, *analysis* in a statistical sense, and *analysis* in the sense of some kind of structural description. It is in this last sense that the term will be used here.

[2] For the distinction between *verse design*, *verse instance*, and *verse delivery*, see R. Jakobson's *Linguistics and Poetics* in Sebeok 1964.

Both lines have ten positions occupied by syllables, and the rules call for stress maxima to fall on even numbered positions. The syllables that could, by virtue of their linguistically determined stress, carry stress maxima are: *oh*, the first syllable of *solid*, *flesh*, *melt*, *thaw*, the second syllables of *resolve* and *itself*, and *dew*. These are either the syllables carrying stress in polysyllabic words (*solid*), or else they are non-reducible full-vowelled monosyllables (*melt*). After further application of the rules there remain only three positions for stress maxima, positions 6 and 8 in line one, and position 4 in line two:

On that this too too ^{6}solid ^{8}flesh would melt,

Thaw, and ^{4}resolve itself into a dew.

It is at this stage, after the metrical points carrying stress maxima have been identified, that the question of non-segmental features may enter into consideration. Following the remarks made above, it may be inferred that the identified stress maxima, being pitch prominent, will have a significant bearing on the intonational pattern of the two lines. Its exact characteristics (whether the pitch is high-levelled or low-levelled, gliding or static) cannot be specified yet with a sufficient degree of certainty, and are now left for definition by an individual vocal interpretation. Nevertheless, the choice of a particular type of pitch in a delivery will be limited to some extent by stress maxima, or rather their alignment in a line, as well as sense content, the absence or presence of junctures, the relative length of verse-lines, etc. It seems that some kind of statistical method to establish the way in which the slots of stress maxima are filled in individual recitations, might be helpful, provided a representative body of instrumental data gathered from metrically acceptable interpretations becomes available.

It is felt, however, that a quantitative method would not entail any fundamental disagreements with the procedure based on special rules for the assignment of stress maxima, besides its being highly cumbersome to apply.

In connection with the second point mentioned, it should be said that this other type of analysis seems to be much more complex than the former concerned mainly with pitch patterning of metrical positions, because it aims at relating intonation, in its schematic form, to a broader framework of hemistichs, lines and whole stanzas, while at the same time incorporating the procedures outlined above.

It seems advisable at this point to discuss briefly the relevance of verse-line for the metrical and tonal structure of a poem. This paper assumes that the division of metrical structure into equivalent rhythmical units of verse-lines, hemistichs and stanzas is fundamental, the syntactic structure being subordinated to it. At the summit of the hierarchy of these elements is the verse-line

which remains a point of reference for other segments and is directly related to the principles of syllable count, sound and stress arrangement governing a given type of verse (Dluska 1962). Different metrical systems employ different ways of organizing these elements, thus none can be used to characterize the general specific quality of metrical organization as such. It has been assumed then that that specific quality of the metrical organization, its *differentia specifica*, lies in the sphere of intonation. Thus the consecutive parts of the metrical structure are treated as tonal units which will show some kind of tonal independence conditioned by their relative position (whether constituting verse-lines or whole stanzas)[3].

Procedures for this kind of analysis were first suggested by Mukařovský (1933). According to him they might be carried along the following lines, covering the three aspects of:

a) graphically structured verse discourse as compared with identical discourse but not broken into verse-lines and unrhymed;

b) graphically structured verse discourse and syntactically analogous prose passage showing similar emotional quality;

c) graphically structured verse discourse as compared with prose fragments only, again, sharing a similar emotional character with verse.

The comparison suggested by Mukařovský (1933), may help clarify the main differences between speech intonation and its counterpart in verse, where the latter appears to differ mainly by its uniformity and regularity in the arrangement of pitch patterns. To illustrate this point, an example of a nursery-rhyme is used here owing to the relative simplicity of syntax and vocabulary:

Where are you ^going to, |
My little cat? |
I am going to \town |
To get me a \hat. |
/What? A /hat for a /cat? |
A /cat get a /hat? |
Whoever could \think |
Of a \cat with a \hat! |

It will be noticed that there is nothing unusal or peculiar about the arrangement and type of tone in particular tone-groups marked off by vertical strokes; unusual in the sense of possessing some uncommon quality not to be

[3] The problem of the tonal organization of whole stanzas, owing to its complex character, will not be treted within the scope of this paper.

found in speech. The native speaker of English would find it perfectly acceptable[4] and natural to express his curiosity in this way: *A hat for a cat?* though an addition of the next questioning remark using the same type of tone and tonicity is less likely to take place; were it to appear by itself, it would again remain quite natural. Why then do the two successive lines in the poem carry identical tone and tonicity? The following three features of metrical organization seem to account for the phenomenon, viz. rhythm, rhythmic and syntactic parallelism as well as verse-line division which by some means of *inertia* (Zhirmunskij 1966) combine to bring about the uniformity of tone arrangement. To take another example from the same nursery-rhyme, its last two lines may be considered:

Whoever could\think
Of a\cat with a\hat!

Again it will be noticed that the occurence of this type of tones in succession (non-nuclear glides in a rhythmic relation, or glissando as it is termed) is possible in conversational prose but not at all frequent[5]. Were the exclamation part of conversation, it would be still more unlikely to be encountered in the present shape. The word *hat* would not be uttered with a low fall which in the poem is necessitated by its final position in the line, the fairly low fall here being, in turn, essential for the appearance of glissando.

Almost all tone-groups of this and other poems, when put into the prose context of conversation, will differ markedly from their counterparts in the original environment (i.e. metrical structure); they will show a greater variety of pitch range (e.g. from a drop followed by a booster to a drop again), whereas the same phrases ordered metrically do not show such divergences of pitch range. They will tend to receive some uniformity in their succession of pitch patterns and possess a sing-song quality at the simplest. Here it should be emphasised once more that the metrical organization of verse into lines is most essential for verse intonation where a verse-line may be regarded as its basic unit.

Following this assumption, the intonational analysis of verse may yield a number of observations concerning the relationship between syntax and verse-line division as performed on the level of intonation[6]. For instance, metrical structure may lead to the breaking of sentence intonation, thus restructuring consecutive parts, often differentiated in the hierarchy of syntactic relationships, into parallel units. In other words, under the influence of metrical intonation, the boundaries of a syntactic whole will tend to be blurred. The following passage from Wordsworth's *Daffodils* may serve as an illustration of this fairly widespread phenomenon:

I wondered lonely as a\cloud |
That floats on¯high |o'er vales and\hills |
When all at¯once |I saw a\crowd |
A\host, |of golden\daffodils; |
Beside the¯lake, |beneath the\trees |
\Fluttering and\dancing in the breeze. |

It can be observed here that the tone-groups of the lines, though syntactically related in different ways, do not show such a difference in their tonal subordination running parallel to the syntax but are coordinated in another way independent of grammar. The presence of level tones occuring on the words ***high***, ***once***, ***lake*** instead of rising or falling tones, is especially significant.

The relationship is also significant when the end of a syntactic group or a phrase coincides with the end of a verse-line; the final pitch series of such a group will be more forcefully marked owing to the workings of metrical structure. However, this type of reinforcement seems to be more of an expressive than of structural character, i.e., in the case of a delivery it would be facultative. Consequently, if not broken into verse-lines, the final tones of the lines from Blake's *Tiger* would receive less emphasis, or prominence:

Tiger! Tiger! Burning¯bright
In the forests of the¯night
What immortal hand or\eye
Could frame thy fearful\symmetry?

Similarly, under the influence of metrical intonation, the rhythmic-syntactic break of the caesura will be strengthened. At the same time the range of the pitch break falling on the caesura will tend to be distributed evenly through-

[4] The word *acceptable* is employed here in the same sense as it is used by Chomsky in *Aspects of the Theory of Syntax p. 10* where it is taken "to refer to utterances that are perfectly natural and immediately comprehensible without paper-and-pencil analysis, and in no way bizarre or outlandish".

[5] For quantitative data on the distribution and occurence of particular tone arrangements and movements of pitch see D. Crystal's *Prosodic Systems and Intonation in English*.

[6] A short study on these lines has already been carried out in this country by L. Pszczołowska and Z. Kopczyńska. It appeared in *Poetics*, Warszawa 1961. The next few statements which follow are largely based on their paper. It should also be noted at this point that all of the examples of English verse here quoted and analyzed exemplify traditional, more or less conventional forms in rhyming stanzas (with the exception of the lines from Shakespeare). The limitation in the range of examples (e.g. nothing is said about free verse where intonation surely plays an important role) results from the complexity of the point at issue the thorough treatment of which would require a much greater scope than here possible.

out the lines despite differences in the syntactic grouping. An illustration of the point may be found, for instance, in Blake's *The Chimney Sweeper*:

When my Mother ¯ died | I was very young,
And my Father ¯ sold me | while yet my tongue
Could scarcely ¯ cry | "weep!weep!weep!weep!"
So your chimneys I ¯ sweep|, and in soot I sleep.

It may be observed that all final stressed syllables of the pre-caesurial hemistichs are equally level-pitched, though none of the syntactic units in question can be considered identical. Indeed, such words as *died* and *sold* might occur with fall-rise glides, but both the gliding quality as well as any differences in prominence would be a feature of a prose-like recitation of the stanza where pitch and intensity would be determined by syntax and sense alone. Thus the initial parts of the first two lines might look like the following:

When my Mother ˅ died |
And my Father ˅ sold me |

But here, it the potency of the poem, the existence of level stresses equally prominent can be accounted for by the strong pull of metrical structure in the whole of the poem.

Further consideration of the problem of pitch signals in the pre-caesurial position leads to the establishment of their relations to the pitch signals in the final position of the line. The existence of a hierarchy of pitch signals may be inferred here, once the primary role of the verse-line in metrical intonation has been assumed. The pitch signal in the position which marks a verse-line off from its equivalent units, i.e. final position, will necessarily be more prominent than that of the caesura seperating hemistichs, the subordinate, or component parts of the line. The phenomenon may best be seen in those lines where the hemistichs constitute parallel syntactic units, as in "The Rime of the Ancient Mariner":

The ship was ¯ cheered, | the harbour ¯ cleared, |
\Merrily did we drop |
Below the \ kirk, | below the \ hill,
Below the ` lighthouse top. |

The differences in prominence are indicated here by two factors. First, as in the case of *cheered* and *cleared* which may receive static tones, the difference may be achieved by the workings of pitch height — lower for *cheered* and higher for *cleared*. When interpreted in terms of loudness, the two words may be referred to as 'piano' and 'forte' respectively. In the third and fourth lines the differences in prominence might be interpreted either in terms of ('wide') and ('narrow') pitch range, or, in terms of its ('rate') or ('angle') (Crystal 1969). Graphically the situation may be represented as follows:

/ ↝ / — indicating wide pitch range, where the fall (or any other tone) is more prominent than / ↘ / — indicating narrow;
/ ↘ / — being more prominent than the less angular / → /.

In prose context the syntactic parallelism of coordinated phrases would require equal prominence of pitch signals (of whatever type) except for the last one in a series, whereas in verse, the metrically subordinated phrase (in pre-caesurial position) will be less pitch prominent. Thus in prose *kirk hill, lighthouse top* may be schematically represented in one of the following ways:

/ ↗ / ↗ / ↗ / or / ↝ / ↝ / ↗ /

where only lighthouse top is more prominent. In verse the pitch signals of the same words may be shaped like this:

↗ / ↗ // ↗ // or ↗ / ↗ // ↗ //

in terms of angularity, where the double bar stands for the end of the line and single bar for the caesurial break.

The role of intonation in verse can be observed in cases of disparity between syntactic and tonatic units (i.e., when enjambment appears). In all those instances the end of the line and the corresponding pitch break will fall at a place which is not signalled by syntactic grouping, and thus in the middle of the tone group. When split by clausula the pitch signal of the final syllable of the broken tone group would, in prose, correspond to the insertion of a parenthetical expression into the tone group and would be characterized by the presence of a level, or a moving-up tone on stressed syllables (if the clash were strong enough), and a high, sustained pitch of the unstressed ones, all of which would be followed by a pause of some kind.

Two stanzas from Shelley's *Ode to the West Wind* will serve as an example of the break in the tonatic units with a final stressed syllable in the clausula:

The winged seeds, where they lie cold and low,
Each like a corpse within its grave, until
Thine azure sister of the Spring shall blow
Her clarion o'er the dreaming earth, and fill
(Driving sweet buds like flocks to feed in air)
With living hues and odours plain and hill.

Without using the tonetic stress mark system (Kingdon 1959), the pitch of the run-on lines might be represented by prose substitution as follows:
...*until* (and not before) thine azure sister of the spring shall *blow* (but not whistle) her clarion over the dreaming earth, and *fill* (driving sweet buds like flocks to feed in air) with living hues and odours plain and hill.

The underlined words in the passage, due to the influence of the following parenthesis, are sustained in their pitch and followed by separate tone units

after which the next tone unit starts with the original pitch of the syllable immediately preceding the parenthesis. Apart from the level and rising tones mentioned above, falling tones may also be used for the sake of emphasis. But this is already a question of individual interpretation of a text.

In the verse-lines quoted above the function of parenthetical phrases is fulfilled by the line endings and their presense is substituted by the existence of pauses which seem to vary according to the relative distance between the constituent phrases of the broken tone unit. The pause after the second line may be longer than the pause after the third, where the component part of the split tone unit belongs to another part of the poem's metrical structure (i.e. separate stanza). Needless to say, a word occupying the position of a pitch sustension in the final position of a line or a contrast in pitch (line 4), will receive additional prominence within the framework of the poem.

The example quoted above as well as the examples in the foregoing paragraphs seem to support the assumption that there exists some correlation between the 'grammatical' and the metrical intonation, similar to the overlapping of the metrical with the syntactical schematization; the pitch patterning of a line may run parallel to the grammatical intonation resulting from the syntactic structuring and word content (the pitch pattern being modified by metre), or it may depart from it.

Analogously to the primary role of the metrical schematization in verse, it seems correct to ascribe a similar role to the metrical pitch patterning, as opposed to the intonation based solely on syntax and sense content. The former constitutes a kind of structure superimposed on metre, which by constant reccurence of similar or identical pitch patterns produces verse rhythm. Under such circumstances intonation partly loses its grammatical and referential character of speech as it comprises verse-lines, its segmentary units, and subordinates them to the metrical ordering. The existence of specific metrical intonation is an ineluctable phenomenon determined by the interaction of semantic and syntactic elements together with the structural modifiers of verse.

The above discussion of non-segmental properties functioning in verse was an attempt to point to the possibility of a semantic analysis of the poem based entirely on accent (as opposed to the purely formal discussion of versification where the gap between the thought content, mood, imagery, etc., cannot be bridged).

In choosing a system of transcription to reflect the pitch phenomena functioning in verse, certain points have to be borne in mind. A study of this kind does not usually require a system of notation that is very accurate in depicting all the non-segmental properties, most of which are irrelevant in the case of verse and would refer to the actual phonetic realization of a poem. Moreover, a detailed notation would be of no practical value to a literary analysis as it

would cover various degrees of significance and non-significance, being thus an end in itself. Consequently, any intonational analysis of a poem is bound to be carried out in very general terms unless substantiated with a corpus of instrumental data which would enable us to establish invariant features of tone and tonality present in verse-lines.

As has been repeatedly underlined, pitch patterning can only be objectively discussed with reference to those stress slots which are definitively invariant. The question concerning the exact patterning of invariant features in metrical intonation remains open pending a completion of a systematic body of instrumental results.

The traditional terminology pertaining to intonation as used in linguistics has been found defective in some cases e.g. with such terms as *tune*, *nucleus*, *body*, *tail*, etc. They cannot be applied to verse-lines which are purely formal units of discourse as opposed to speech segmentation where these terms reflect prosodic phenomena satisfactorily. The formulation of terminology adequate to the description of metrical intonation appears to be imperative for future research in the field.