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The nature of rhythm

The word rhythm is given such astonishingly wide application that if we could believe it really meant something, and the same thing in different contexts, we could accept it as a master-key for innumerable locks. Bridging the rhythm of marching feet to the rhythm of the universe - taking in, on the way, the rhythm of the seasons, the circadian rhythm of animal activities, the rhythm of work, primitive and industrial, and all the rhythms found or talked of in literature and most of the other arts - the word becomes a vast unsupported span. It may seem pedantic to want a definition, but the alternative is the endlessly extending use of the word to cover more and more processes, usually distinct from one another, occasionally even incompatible. Thus for some of the early industrial psychologists a rhythmical movement was one that flowed in smooth curves rather than having angular changes of direction, while for others a continuous circular movement precluded rhythm. The 'rhythm of the seasons' refers to regular timing and recurrence, or periodicity. In the 'rhythm of night and day' the regular alternation of phases is the main idea, their timing (at least in our latitude) being in continuous gradual change. The 'rhythm of life' and the 'rhythm of the universe' seem to be uplifting ways of referring to a coordination of component processes and perhaps an ordered progression of stages.

Vague and various and metaphorical uses of the word need not be objectionable in ordinary speech, where the context makes the speaker's intention as clear as need be. But in any attempt at literal statement it must be preferable to use the more accurate terms that the language already provides for these discriminable senses: terms such as ordering, structure, coordination, progression, regular alternation, smoothness, periodicity.



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For some writers, however, the faintly romantic or emotional overtones of the word rhythm seem to offer a welcome escape from the rigour of rational statement. Herbert Read (1943) quotes approvingly from the verbal elaborations with which Dalcroze supported his system of eurhythmics:

Life, in effect, is itself a rhythm, that is a continuous succession of multiple units, forming an indivisible whole. Individuality may also be regarded as a rhythm, for the combination of its faculties, many of them conflicting, constitute[s] an entity. But every life and every work of art that conforms only to the idiosyncrasies of the individual is arrhythmic, for the rhythm of art and life demands the fusion of all traits of character and temperament. (p. 66)

Susanne Langer (1953) casts her net equally wide when she claims that music organizes feeling in a way that gives insight into the 'subjective unity of experience; and this it does by the same principle that organizes physical existence into a biological design – rhythm' (p. 126). This – fairly typical of the loosely comprehensive use – makes 'rhythm' cover the multifarious processes guided by genetic coding, from the myelinization of nerve fibres to eyewatering, vocal utterance, walking, resistance to infection, aggression, fear, pubescence, social interaction, and so indefinitely on. All she seems to mean is that some kind of design can be identified in the life of an animal, and rhythm too is some kind of design. Used in such ways, the word is only a broad, reassuring gesture. A reader satisfied with that would do well to skip this chapter, in which a closer definition of the term is offered and a more matter of fact account given of the nature of rhythm.

But in literature need we trouble to define rhythm clearly or try to establish what effects it has and how they come about? In a reader's purely private commerce with a poem it probably makes no difference whether or not he knows, in an abstract way, anything at all about rhythm; he need only read sensitively and let the rhythm do its work. The situation changes if he once starts discussing the poem, drawing attention to the aspects he finds specially satisfying or feels doubtful about, seeking companionship in his enjoyment, trying to benefit from the insights of other readers. Whether in formal criticism or ordinary conversational exchanges, once the discussion gets beyond simple exclamations of pleasure or dislike we can only benefit by having a clear meaning for the terms we use and knowing what



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effects can reasonably be attributed to this or that feature of the work.

Rhythm, especially in poetry, has been given immense significance by literary critics, at times credited with particular effects, at others taken as a sign of some more general quality of the writing. In an early work of criticism F. R. Leavis (1932) commended the positive assurance of a poem he quoted, and added

The grounds for this positive note are not matter for debate – at any rate here. The assurance justifies itself; those rhythms are not to be dealt with by argument. (p. 208)

More recently Rachel Trickett (1967) in her study of Augustan verse quotes a passage from Dryden, *The Hind and the Panther*:

'Tis nothing thou hast giv'n, then add thy tears
For a long race of unrepenting years:
'Tis nothing yet; yet all thou hast to give,
Then add those may-be years thou hast to live.
Yet nothing still: then poor, and naked come,
Thy father will receive his unthrift home,
And thy blest Saviour's bloud discharge the mighty sum.

And her comment is that 'The rhythms of the final lines in the passage quoted above have an emotional intensity that recalls Donne...' We might agree that something in the mood and the estimate of himself recall Donne, but we might still wonder whether it is the rhythm of the lines that conveys the intense emotion; the question is hard to answer when the rhythm is inextricably bound up with the sense of the words.

Again, L. C. Knights (1976) in an illuminating study of Blake's early poems writes of 'My silks and fine array'

If proof of poetic genius were wanted it could be found in the subtly changing rhythms of this poem. No account in terms of shifts from iambic to trochaic, reversed stresses, and so on, can do it justice; all one needs to do is to see how tone and rhythm define meanings that could not otherwise be put into words. (p. 56)

Having made this general claim for the importance of the rhythm he points to one of its particular effects:

My silks and fine array, My smiles and languish'd air, By love are driv'n away; And mournful lean Despair Brings me yew to deck my grave: Such end true lovers have.



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In the fifth line, he says, 'The plangent tone that comes with the shift of rhythm...has just that shade of self-conscious self-awareness that warns us against identifying with the speaker, who unconsciously reveals, as well as expresses, herself.'

These are representative examples of the importance modern literary criticism attaches to rhythm, and the great potency claimed for it, including the power of conveying very subtle shades of attitude. How it does this, if it does, is a question to consider later. At the moment what must be examined is the nature of the thing to which such power is attributed.

Conventional literary criticism has not been as helpful as one might have hoped. Tillyard (1934) opens a chapter headed 'Rhythm' with the statement 'I use the word "rhythm" in a very wide sense to cover all the effects that the sound of the words commands'. In that case, one wonders, why use the term 'rhythm' at all instead of sticking to the better understood word 'sound'? At the opposite academic extreme, a very different concept of rhythm could be implied, as late as 1965, in a 'casebook' intended for American college students (Gwynn et al., 1965), where the commentary on one poem includes a section headed 'Rhythm':

Although the uniform trimeter seems jingly when it is read aloud, it is actually so varied in two kinds of feet as to barely allow a traditional foot label. With an almost equal number of anapests (31) and iambs (28, plus one truncated iamb beginning line 19), and with an exactly equal number of lines dominated by anapests or iambs, we must label the pattern mixed anapestic-iambic trimeter. (p. 131)

When I first thought about the subject very long ago, I. A. Richards' account in *Principles of Literary Criticism* seemed illuminating and thoroughly satisfying. 'Rhythm' he writes 'and its specialised form, metre, depend upon repetition and expectancy'. He goes on

The expectancy caused by what has gone before, a thing which must be thought of as a very complex tide of neural settings, lowering the threshold for some kinds of stimuli and raising it for others, and the character of the stimulus which does actually come, both play their part. (p. 135)

This still seems true. It becomes less satisfying, however, when you reflect that it applies equally to all perceptual experience that prepares you for something else: the sight of a comfortable arm chair before you sink into it, the smell of toast for breakfast, the crescendo



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and fading of sound as a jet aircraft goes over, the shade of trees on a hot day. It says too little specifically about rhythm. None the less it was in 1926 a refreshing change from the impression conveyed by a writer like George Saintsbury that rhythm was a system of iambs, trochees, dactyls, anapaests, cretics, amphibrachs, first, second, third and fourth paeons, and so on through the whole erudite labelling. Richards' approach was specially valuable and permanently valuable in its insistence that rhythm was an active process in a responding person.

In psychology this was already a well established view. It had been stated by James Ward, Fellow of Trinity College and Professor of Mental Philosophy who founded the Cambridge school of psychology, and his account (1918) is still an excellent starting point. He gave special attention to the subjective experience we have of a differentiation and grouping in a sequence of sounds which are objectively all alike and follow each other at perfectly regular intervals, the experience, for example, of hearing the ticking of a clock as tick-tock-tick-tock instead of tick-tick-tick. He has no doubt about excluding merely regular repetition from the concept of rhythm. He writes (drawing on the studies of T. L. Bolton, an American psychologist)

What is remarkable is that even a perfectly regular succession of sounds (or touches), qualitatively and quantitatively all alike, a series therefore devoid of all objective rhythm, is nevertheless apprehended by most people as rhythmically grouped – provided the rate lies between the limits of about 0.8" and 0.14". The slower of these rates leads to simple groups of two, replaced by groups of four or eight as the rate increases; groups of three and six also occur, though less frequently... With slower rates there was no grouping at all and with faster rates 'simply a periodic intensive change in the series'. (p. 228)

This was the conception of rhythm adopted by psychologists who investigated the subject in the early years of this century, for instance R. MacDougall (1903) and J. B. Miner (1903). They saw rhythmization as a form of unifying activity: a number of sensory impressions that might be merely a sequence can, if rhythmized, be perceived as a unit. Further, the unification is not mediated by other activities such as counting but is an immediate perception, an 'immediate fact of sensory apprehension' (R. MacDougall). In the same way, in visual experience, we have an immediate perception of an octagon or a hexagon – we may need to count the sides in order to label the



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figure but we experience it as a unit of a particular form without any auxiliary intellectual activity. Moreover in a rhythmical unit the individual sensory impressions are differentiated: some are salient, others subordinate, as in the simple tick-tock of a clock. In contrast, a brief burst of machine-gun fire may be heard as a unit but is not rhythmized; its component sounds are held together only by their nearness in time, not identified and related to each other by different degrees of perceptual salience.

A sequence of sensory impressions which are grasped with perceptual immediacy as a unit and at the same time differentiated among themselves may arise not only from sound but from muscular movement, as they do in dancing, or from movement and sound combined as in playing a musical instrument or speaking, or from imagined speech sounds and movements as in silent reading, or from seen movement as in watching a dancer or observing the climbing pattern of a wave or the stepping pattern of a wading bird at the water's edge. In listening to a speaker we fuse the sounds heard with images of the speech movements that produce them. Whatever sensory mode or modes may be involved, the experience of rhythm is the experience of a perceptually immediate grouping or unity in a sequence of impressions, together with a differentiation of the component members of the group. An important secondary fact, noted by many of the early workers, is that once rhythmization in a certain form has been established it readily recurs in the same form.

Although rhythmizing is an active process, something done to a sequence by the person who perceives it, the particular form of the patterning is generally determined, at least in part, by objective characteristics of the impressions. Only exceptionally, as in listening to a metronome or clock, is the rhythmizing purely subjective. In language it is obviously not. In speaking and listening and reading we are not creating rhythmical patterns at our own sweet will; the basic features of the spoken language control our rhythmizing while we speak, and the rhythms we perceive as listeners or silent readers are guided, and sometimes closely controlled, by objective features of the sound sequences and by the usages of the particular language. (The extent to which the reader has latitude to choose his own variant of the rhythm is a point I want to discuss later.)

The rhythms adopted in typewriting illustrate in a simplified way



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how the physical features of the medium in which we are making movements help to determine the rhythmical pattern of the movement (Harding, 1933). The expert typist, using all fingers in the orthodox way, establishes for any familiar word (or phrase) a pattern made up of quick runs and slight pauses peculiar to that word, and sticks fairly closely to it whenever the word occurs. By 'pause' I mean an interval between one letter and the next which is very slightly longer than the extremely brief intervals between letters that form a run. With a skilled typist working rapidly the rhythm of runs and pauses can rarely be identified by ear and has to be recorded mechanically, but then it shows up clearly and can be measured and accurately described. There are differences among typists in the degree to which the pattern is emphasized and the consistency with which it is maintained on recurrences of the word, but in the main the pattern of each word is determined simply by the layout of the keyboard and its relation to the possibilities of manual movement; in particular, successive strokes follow one another more rapidly if they involve an alternation of the two hands than they do if different fingers of the same hand are used in succession. The practised typist thus creates runs and pauses quite independent of pronounceable syllables. For example, 'capacity' runs c apa city, 'latent' runs la t ent, and 'strident' runs s t rid ent; and words like 'movement', 'statement' etc. are not given the division suggested by spelling but end with a rapid group, ement. There are other factors of less importance than the successive use of the same hand or alternate hands, especially the time needed for the long reach with the same hand between the top and bottom rows; so that 'minimum', for instance, has to be a fairly slow regular plodding. (In good typing the rhythms are expressed solely in runs and pauses, without differences of force - which would produce uneven impressions.)

In speech similarly the physical machinery involved in pronouncing particular sequences of sound establishes *some* patterning in the form of speed variations among syllables. But a more important source of patterning is provided not by the mechanical but by the customary features of the spoken language, in English notably accentuation. Divisions of sense, whether indicated by punctuation or not, add another element in the patterning of the flow of utterance. Over and above these are differences among speakers, not only in



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spontaneous speech but also in reading where, even in the absence of accidental hesitations, there are great differences in speed changes, length of pauses, elisions, lingerings, and degree of contrast between strongly and lightly stressed syllables. Whether verse adds another factor to determine rhythmical grouping, or only selects and organizes the natural rhythms of speech, is a question for later discussion.

If we ask what in more detail are the features that determine or suggest rhythm in English we dislodge a stone that will bring an avalanche of diverse answers on us. Differences of loudness, differences of stress (which need not be the same), differences of syllable length, pitch differences, pauses preceding or following a syllable, position in a time pattern, all of these have been suggested, and some disputed, by phoneticians and workers in allied disciplines. Moreover these various features of speech interact and modify each other in such a subtle and intricate way that the contribution of each to a total speech pattern may be almost impossible to distinguish. But though an analytic description can be almost defeatingly difficult, the upshot in experience is always much simpler - an awareness of different degrees of salience among the syllables that make up the unit of rhythm. The relative salience of a syllable can be determined by one or more of the objective features of the sound, and some of these are influenced by the sense. But usually in English a difference of stress is the main thing that gives a syllable its relative prominence in the rhythm unit, and some degree of pause is the thing that marks the end of one unit and the beginning of the next.

The mechanism of stress is explained by David Abercrombie (1965) in one of his succinct and lucid essays ('A phonetician's view of verse structure'). The air stream producing sounds comes in chest pulses (dependent on the intercostal muscles), each pulse constituting a syllable; in addition there occur less frequent stress pulses, more powerful contractions of the breathing muscles which coincide with one of the chest pulses and cause a greater and more sudden rise in air pressure.

In spoken language the division of the flow of sound into rhythmical units is an essential part of the skill of speaking, and a grasp of those units is equally necessary for listening with comprehension. As we all know, you can have a reading knowledge of a foreign



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language and still find the native speaker incomprehensible because the runs and pauses, the elisions and the lingerings, occur at unexpected points and create different divisions from those suggested by the printed words. In an accentual language like English a foreign speaker – for instance an Indian accustomed to an unaccented vernacular – can be strangely baffling simply by failing to make the expected stress differentiations among the syllables even though he pronounces them correctly. In fact W. Stannard Allen (1954), in a book called *Living English Speech: Stress and Intonation Practice for Foreign Students*, suggests that poorly enunciated words conforming to the right rhythm will often be more intelligible than correctly pronounced words wrongly rhythmized.

His exercises show that a great deal about speech rhythm can be conveyed by indicating merely the main stresses among the syllables of a word or phrase. Other specialists in language resort to ever more complicated notations in the effort to register the details of what goes on in speech. The fact seems to be that if we know English as a native language we can get a long way by indicating the main stress in each rhythm unit and the points of pause, sometimes well marked, sometimes minimal, which occur between rhythm units. Within the broad pattern of the rhythm there will be subtler shadings provided by such things as the length of syllables and different degrees of subordinate stress (such as the Trager and Smith (1951) notation records). Generally the context and sense will tell a native user of the language what subordinate stresses are called for (as well as what intonation or pattern of pitch). But an indication of the main stresses and the points of pause can often be useful in showing which of alternative rhythms one is choosing in a verse line or a phrase.

A rather difficult problem concerns the effect of a syllable's duration on the rhythm unit in which it occurs. It is tempting to simplify the complicated and controversial question of the stimulus features suggesting particular rhythms by reducing them all to stress and the time between stresses. This was the line taken by William Thomson (1923) in the monumental work that was so far ahead of current thinking in his day. He believed that only the onset or point of main force in each syllable and the time intervals between onsets were relevant to rhythm. Much later the same simplification was attempted by J. B. Davies (1971) who argued that the duration of a sound has



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no bearing on the rhythm of the sequence in which it occurs. He saw rhythm

as an order which the listener imposes upon sequences of tonal elements solely on the basis of their relative intensity, and their relative times of onset. It is argued also that changes in duration of elements in no way change rhythm, provided that accent and relative time of onset do not change. (p. 561)

He noted, in support of this view, that to clap the rhythm of a tune played on an instrument is a meaningful task, although in the tune as played all tones have duration.

Tempting though it is, this view is almost certainly an over-simplification. In the morse code, for example, it seems reasonable to consider each letter as a unit or sub-unit of rhythm. Here there are no differences of intensity in the component sounds, and the variations in the time of onset of each sound are not enough to mark all the differences that have to be perceived. It seems unreal to deny that the difference in length between a dot and a dash is relevant to the rhythm of a letter. Presumably Davies would argue that in

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the dashes are taken, rhythmically, as if each were a dot followed by a longer pause than a true dot. But the times of onset of the sounds are the same in the two letters

... and ..-

and to discriminate between them we are bound to perceive the longer duration of the dash. There seems no reason to deny the term 'rhythm' to the sound pattern of which this is an essential feature.

A similar conclusion is reached by looking at the stress patterns used by W. Stannard Allen to indicate the rhythms of spoken English. He uses simply a small and a large symbol to stand for the lightly stressed and the strongly stressed syllables, thus:

OooO send him away; hardly enough; pouring with rain.

But suitable as this is for Stannard Allen's workaday purposes with foreign students it conveys a wrong impression here and there by giving the same rhythm to phrases which, because of the duration of some syllables, sound different; thus, oOooo is made to cover not only 'it's necessary' and 'the railway station' but also 'a beautiful