

of sentence, there are two alternatives. In *We did as we were told, but it wasn't any use* the rise on the first nucleus points to the second sentence.

The choice of tune depends on various factors: the speaker's conception of the utterance (gradual or comprehensive), the impression to be made on the hearer, social considerations, etc. This is already the domain of style and would bring us to the problem of Intonation and Style of Speech.

21. Miss ELSIE FOGERTY (London): *Rhythm*.

Among the major terms employed in the discussion of various phenomena—Aesthetic, Mechanical and Physiological—none is used with a greater degree of vagueness than the term "Rhythm".

The suggestion on which this paper is based is that confusion exists between essential Rhythm and those patterns which are created by repetition out of Rhythm.

This suggestion can only be developed here in regard to speech, but if it possesses any validity it must be applicable to every other form of movement of which we have experience.

The *Oxford Dictionary* defines Rhythm as:

"The measured recurrence of arsis and thesis determined by vowel-quantity or stress, or both combined. Rhythmical or metrical form. The measured flow of words or phrases. The systematic grouping of notes according to their duration. Movement marked by the regulated succession of strong and weak elements, or of opposite or different conditions."

This is a definition of certain manifestations of Rhythm, not of Rhythm itself. Recurrence is given as the fundamental characteristic of Rhythm—a confusion between Pattern and Rhythm. The intolerable and irritating monotony of a series of single drum beats or detached notes, of a falling water-drop, of the reiterations of *echolalia*, or the repetitive hesitation of a *stammer*, are instances of repetition completely void of any natural or acquired Rhythm.

The definition, however, does indicate the presence of three constant factors in Rhythm: *First, the factor of Time*, present in measured recurrence, such as the isochronous interval between stress and stress, which forms the basis of English prosody.¹

Second, the element of Force, without which that temporal spacing would not be perceptible.

And third, the element of Space itself, without which the application of force is unthinkable. All lip, tongue and jaw movements in speech have a definite spatial character.

The fundamental conditions of Rhythm are time, force and space, combined under the direction of intention. These are also nothing

¹ Quantity is not a basic principle in English verse, though it is constantly used to reinforce stress; e.g.

"To find the place of souls that I desire."

SWINBURNE, *In the Bay*.

less than the fundamental conditions of movement itself. Of those forms of motion more especially which are appreciable by our sensory perceptions, and which we call vibration.¹ Sound and light chief among them.

Every movement demands for its performance a degree of force, a measure of space, and a passage of time. When these three elements are synchronized either with perfect automatic success, as in a machine, or under the exact guidance of intention, as in speech, the result is rhythmical.

An attempt made to trace this principle through every form of existing movement makes it possible to contrast clearly inertia and its basis in what we term the law of gravity, with movement based on the law of rhythm.

The following definitions may then be suggested.

Motion is the condition of a body when at each instant of time it occupies a different position in space. Motion always implies the existence of force. *Rhythm is the universal law of movement and implies the automatic, habitual or volitional synthesis of time, force and space in action.*

Pattern, auditive or visual, implies only the repetition of a selected group of movements at intervals sufficiently regular to strengthen our perception of their original rhythm.

All utterance is carried out by audible movement, movement in which therefore the elements of force, of space, and of time are uninterruptedly present; irregular timing as in "cluttering", spatial error as in lisping, exaggerated force as in shouting, hinder perfect rhythmic synthesis, and are fundamentally destructive of good movement. The elements of which a rhythmic sound pattern is built up must themselves be rhythmic.

Auditive Rhythms in speech, musical sound, song, verse-speaking or reading aloud are not perceived purely by the mechanism of the ear. They have to be "learnt",² kinaesthetically.

Rhythmic repetition stimulates the power of learning movements very much. The value of rhythmic training begins with the first models placed before the infant in cradle songs, nursery rhymes or "lilts"; since our memory of speech sounds is a kinaesthetic memory,³ the motor patterns presented to the child tend to arouse similar motor patterns in the listener. We feel rather than hear ourselves speak.

In applying these considerations to speech we have to distinguish three separate kinds of rhythmic impulse:

First. The rhythmic accomplishment of the movements of utterance, breathing, phonation, resonation, articulation, etc.

¹ "A particle which repeats the same movements at regular intervals is said to vibrate; and by such vibration a wave train is produced." P. J. LAUNCELOT-SMITH, *Heat, Light and Sound* (Dent).

² "Speech and music are characteristically human functions which cannot develop until cortical pathways make possible very rapid and complex learning." P. E. VERNON, "Auditory Perception", *Brit. Journ. of Psychology*, 1935.

³ H. BERGSON, *Matière et Mémoire*, p. 113.

Second. The *instrumental result* of these combinations in rhythmic patterns of sound.

Third. The *semantic or logical rhythm* which interprets thought in words and sentences, figures bound together by logical sequence and marked by force, time and spatial articulation.

Breath is the source of power in speech; without it the most vigorous articulation is inaudible.

There is no such thing as natural speech, but many individuals possess the nervous and sensory balance which makes excellence easy.¹ Disturbing elements are present in the conflict between vital and acquired functions, i.e. in respiration for speech, and for the physiological necessities of circulation; in the movements of swallowing, and of phonation; of mastication, and articulation.

The normal unit of logical and rhythmic utterance is the word, involving a standard of pronunciation. Selection of speech sounds is a matter of arbitrary usage. It is subject to geographical and social variation. It has no necessary relation to the "beauty" or "ugliness" of sound and no relation to its rhythmic nature except in very complicated verse patterns.² The question whether EItHer or EEther is the correct pronunciation, for instance, can be solved by counting heads, or perhaps we should say by counting what are regarded as educated heads. But the formation of sounds is a different matter. The indescribable noise uttered by a polite small cockney, when he is asked whether he will have an apple or a banana, is hardly capable of phonetic reproduction, but it implies faulty phonation, distorted spatial movement in resonance and failure in articulatory force. All easily corrected by rhythmic practice. The idea that a variant cannot be spoken rhythmically is as absurd as the idea that French is intrinsically more "beautiful" than Italian, or Italian than French. Each language represents a logical code of accepted sound figures; monopressures of breath, suited to duration; resonatory patterns (vowel sounds) often influenced by climatic conditions, and always built up on racial and derivative inheritance, and articulatory actions. Yet in every case the true growth of language has harmonized these elements into rhythmic forms, largely through aesthetic influences.³

Rhythmic speech must include at least quality of vocal tone, the cadence of a melodic line, the force and timing of phonation, a true resonator scale of vowel sound, and spatial precision in articulatory action; to expect any effective result in so complicated a process without a measure of genuine aesthetic training is as ridiculous as to think that the exercise of walking to and from work at some sedentary or mechanical occupation would be sufficient to develop

¹ The anatomical and physiological basis of rhythmic movement is the law of reciprocal innervation. The balance between antagonistic muscles in which relaxation must invariably balance contraction, and in which the synaesthetic transference between mental image and sense impression is completely carried out. See SHERRINGTON'S Note in "University of London Report on Voice and Breathing", *Lancet*, 1913.

² Those employing assonance, internal rhyme and marked cadence, e.g. the rhyme "wind" and "behind" in SHELLEY'S *Ode to the West Wind*, last two lines.

³ E.g. song in Italy; verse diction in France.

that perfection of human grace and movement which we see exemplified in the trained body of an athlete or a dancer.

An ideal standard of rhythmic utterance and language, expressing our exact mental intention, in speech, and often calling up in us a faculty of aesthetic expression, is among the most gracious and most characteristic of our human achievements.

The history of man's whole physical development illustrates this growth of power by the practice of purposive rhythms, rhythms which clarify and fulfil intention: sport, games, group actions; aesthetic rhythms which give delight: dancing, song and verse.

The general rhythmic character of a language is of primary importance to clarity.

Take the following list of words illustrating the very predominant falling (trochaic) accent in English speech:

<i>Glorious</i>	<i>Wisdom</i>	<i>Vigour</i>	<i>Famous</i>
<i>Golden</i>	<i>Mother</i>	<i>Splendour</i>	<i>Worship</i>
<i>Danger</i>	<i>Rapture</i>	<i>Glowing</i>	<i>Sapphire</i>
<i>April</i>	<i>Beauty</i>	<i>Primrose</i>	<i>Virtue</i>
<i>Music</i>	<i>Vital</i>	<i>Royal</i>	<i>Heaven</i>

They are selected almost at random from a book of verse. Their rhythmic figure is a simple succession of stressed and unstressed syllables with no fixed tonic accent and without much regard for quantity, that is for the duration of vowels or syllables. Read with the syllable equality of French stress, or with Welsh detachment, or Irish incantation, they would present a totally different pattern with a definite loss of logical significance. Compare French and English rhythm in a proper noun: English "Mediterranean", French "Méditerranée". The character of each word lies in its verbal unity, which establishes both its logical and rhythmic value.

Used as material for verse patterns, words give a supreme example of the distinction between rhythm and mere pattern.¹ It lies in the contrast between formal metric syllable pattern, and the measured pulse beat of rhythm, maintaining the verbal unity of words against the metric beat. Rhythmic pulse beat always includes the value of measured pause, equivalent to musical rest.

The basis of English word structure lies in our love of isochronous stress. Stress recurring at equal time intervals. To our ear a stress naturally carries with ease two light, or one heavy and one light syllable, at each side of a stress;² examples:

"Uñpremedìtated",

where a slight tertiary stress pleases us on the syllable "tà",

"Incomprehènsible",

where we are quite happy to leave three syllables "pre", "si", "ble", depending on the one stressed "hèn". Our verse unit consists

¹ A similar distinction is clear in the contrast between time and rhythm in music, e.g. 3/4 time and the rhythm of a waltz, based on the character of the dancer's movements.

² BRIDGES, *Milton's Prosody*, with a chapter on accentual verse (Clarendon Press). T. OMOND, *A Study of Metre* (de la Mare Press).

of the same carrying stresses, and so it easily maintains verbal unity.¹ It is rare to find a word of even five syllables in serious English verse.

This is the actual basis of our verse patterns, not an accidental one, but built up on our natural word rhythms.

1. The stresses of English verse must recur at regular intervals in time, and these stresses must be in themselves speech stresses falling on words which are stressed in the sentence as it is naturally spoken.²
2. Verbal unity must be maintained against the metric structure.

"Of mà'n's first disobèdience // and the frùit
Of thàt forbidden trèe." MILTON, *Paradise Lost*.

3. Each stress carries with it a certain number of syllables; not more than one heavy, or two light on either side.³

This basis of English verse rhythm can be appreciated more perfectly by an instant's comparison between a blank verse line and a splendid example of the French Alexandrine with its four tonic accents:

"Ye èlves of hills, bròoks, standing làkes and gròves."

"Romè l'unique objèt de mòn ressentimènt
Rome à qui vient tòn bras d'immòler mon amànt."

The strength of our monosyllabic words:

Love	Fate	Chance	Hope	Light	Day	Night	Faith
Death	Black	Red	Pale	Rest	Peace	Earth	Sky

¹ The one marked exception lies in words ending in a triplet of light syllables after a strong stress:

"Ruining along the illimitable inane." TENNYSON, *Lucretius*.

"Where bloom the unimàginable flowers." FLECKER, *Brumana*.

² *Rhythmic Scansion.*

Mòther of Hèrmes // and still yòuthful Màia
Mày I sìng tò thèe
As thòu wast hÿm-ned // on the shòres of Bàiae?
Or mày I wòd thee
In èarlièr Sicilian? // or thy smiles
Sèèk as they ónce were sòught // in Grècian isles,
By bàrds who dièd content // on pleàsant swàrd,
Leàving great vèrse // un-tò a litt-le clàn?

Metric Scansion.

Inversion of 1st foot Mò-ther of Hèr-mes // and still yòuth-ful Màia
Mày I sìng tò thee
As thòu wast hÿm-ned // on the shòres of Bàiae?
Or mày I wòd thee
In èar-li-èr Si-ci-lian // or thy smiles
Sèèk as they ónce were sòught // in Grè-cian isles,
By bàrds who dièd con-ten-t // on plea-sant swàrd,
Leàv-ing great vèrse // un-tò a litt-le clàn?

³ E. FOGERTY, *The Speaking of English Verse* (1923).

permits of great freedom in our metric structure and perhaps explains our love of categories. Examples:

"With Truth, and Peace, and Love shall ever shine." MILTON.

"Thou'rt slave to fate, chance, kings, and desperate men." DONNE.

"Silent, bare,

Ships, towers, domes, theatres, and temples lie." WORDSWORTH.

Notice in each of these examples the hurrying of the syllables at the end of the line with its effect of a more pressing force of thought.

Primitive love of strongly marked repetition—like the childish love of verbal patter, nursery rhymes, "counting-out" rhymes and jingles, all based on the element of repetition—leads up to the refrain:

Monday, Tuesday, Wednesday, Thursday, Friday, Saturday,
Sunday." (Old catch.)

All such early verse is strictly and rigorously metric to the ear, but the "correct" syllabification of lines in English verse belongs to the age of printing, when the "book men" triumphed over the singers: the late seventeenth and eighteenth centuries.

In examples of early verse, and particularly of verse influenced by ritual and intended for antiphonal delivery, we find the true regularity of structure:

"A Lyke-wake Dirge."

"This àè nighte, this àè nighte,
Every nighte and àlle,
Fire and flèet and càndle-lighte,
And Chrìste receive thy saùle."

Compare the rigidity of this pattern and its employment of pitch cadence which emphasizes the metre with a similar subject treated by modern poets in regular verse:

"This be the verse you grave for me:
Here he lies where he long'd to be;
Home is the sailor, home from sea,
And the hunter home from the hill."

STEVENSON, *Requiem*.

or with the free verse of:

"So be my passing!
My task accomplish'd and the long day done,
My wages taken, and in my heart
Some late lark singing,
Let me be gather'd to the quiet west
The sundown splendid and serene,
Death."¹ HENLEY, *Margaritae Sorori*.

¹ Lyric verse from its earliest days establishes a triple rhythmic pattern:

Pulse beat, sometimes syllabically fixed in "feet".
Linear Rhythm, the numbering of the pulse beats into metre, "Pentameter", "Hexameter", etc.

Stanzaic rhythm, ranging from couplet to sonnet or ode, and linked by rhyme in modern verse.

Blank verse unlinked by rhyme acquires a logical paragraph rhythm. Free verse has pulse beat and paragraph form, but no regular linear basis.

What is in effect happening here is that periodicity is taking the place of repetition; and that cadence, which includes the element of pitch variation and verbal phrasing, has ceased to correspond with metric stress and begins to mark the grouping of the logical units of thought. Rhythm is freeing itself from rigid pattern in our perceptions. If we turn to prose, the process is complete:

"A faint wind, more like a moving coolness than a stream of air, passed down the glade from time to time; so that even in my great chamber the air was being renewed all night long. I have not often enjoyed a more serene possession of myself, nor felt more independent of material aids."

Can we say that rhythm is any less present here though pattern is no longer assertive?

The element of which I have spoken last, pitch, may be described as the spatial element in music. In the movements studied to obtain the mastery of any instrument—to establish the "conditioned reflex" by which the musician performs—we find that a threefold training is required for the ear in perception, and for the motor centres in performance:

- (a) A training in the perception and regularizing of time;
- (b) A training in the grading and intensity of force;
- (c) A spatial training to obtain the requisite pitch.¹

The human voice depends for its pitch on an intensification of vibration brought about by the contraction of the vocal cords, and the spatial elements of sound-vibration include both the pitch of the note and its resonance as vowel sound. Among the greatest values of aesthetic speech study is the matter in which it emancipates us from the wearisome monotony of individual, social and even racial pitch inflections, without loss of significance.

Summing up certain practical conclusions: I have tried to establish the fact that the movements of speech are in their nature rhythmical, co-ordinating force, time and space. This implies that the principal errors in utterance are due:

1. To errors of timing in co-ordination and in pace.
2. To excess or failure of force as in bad breath control.
3. To errors in spatial adjustment, such as the substitution of labial for tongue action in consonant articulation, vowel resonance, or cadence.
4. To failure of synaesthetic order in the successive movements of speech, as in the case of stammering.

If this is true the correction of faults can be more rapidly carried out with less nerve strain, where the fundamental error in rhythm

¹ It is dangerous to accept this idea too readily, since so large a majority of the instruments known to us are keyed or stopped in some way which demands a training in finger movement, spatial in character. But, on a perfect string instrument like the violin, the spatial character of pitch in the lengthening or shortening of the strings by finger pressure to obtain more rapid vibration does become completely apparent.

behind a whole group of speech faults is removed,¹ rather than by concentration on individual correction of syllables or words.

Rhythm establishes a distinction between the selection and the formation of sounds; for instance, the cockney is not deliberately selecting the sound "pine" as a substitute for "pain" which would be a mere matter of choice, but is aiming at the one sound and producing an ill-formed combination of spatial movements which approximates to the second.

Aesthetic delight in speech, especially in its form of rhythmic patterns, is the best means of restoring vividness, beauty, and coherence to everyday language.

22. Miss BARBARA STOREY (London): *Phonetics and its relation to the aesthetic use of speech.*

By the term "the aesthetic use of speech" is meant any use of the spoken word which implies a speaker and an audience, as opposed to the normal interchange of conversation.

As a pianist needs to study harmony, as well as the technique which gives him control of arms and fingers, so the speaker needs to study the spoken word, in addition to the technique which gives him control over his voice and articulation.

The speaker, who might perhaps be termed a "speech-artist", is faced with a special difficulty in that his medium, the spoken word, is one which is in constant use, since it is the medium of daily conversation. He, himself, uses his medium when talking to his fellows; they use it; and, in both cases, this daily use is more or less an unconscious process. Talking and listening are natural gifts and, providing they serve their immediate purpose, are not studied or analysed.

When this normal process of talking and listening is extended to embrace conditions such as obtain in lecture halls, churches and concert halls, the spoken word has developed from its humdrum use as "conversation" into a medium for the use of the artist.

This implies that while its essence is unchanged, all its potentialities must be put to a finer, more varied use.

The speaker, therefore, needs to know:

- (1) What it is that conveys the full meaning of spoken words to the listener.
- (2) How to adapt the normal usages of speech for the purpose of speaking prepared words.

In the first case, the analysis of speech by Phoneticians makes plain the use of the sound attributes, length, stress and intonation. Without these, the listening ear receives only the "sense-value" of spoken words, and nothing of the feeling of the speaker.

Phoneticians are trained listeners, and no speaker can afford to neglect the needs of the listener.

¹ The rhythmic error of forced lip widening, for instance, may distort only the vowel "oo", but will influence all tone adversely.