

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.

Phoneticians have done, for speakers, what few speakers do for themselves—that is, they have made clear certain fundamental laws of the spoken word—laws which are unconsciously used in everyday speech by speakers, and unconsciously understood by listeners.

Whatever may be the use to which the spoken word is put, these fundamental laws must be observed, or the full meaning of the spoken word is destroyed for the listener.

Hitherto speakers have been inclined to neglect their medium, the spoken word, except in so far as they have studied the single sounds of speech. But the study of the single sounds of speech belongs, properly, to that part of a speaker's technique which is concerned with his mastery of his instrument, i.e. his voice and the action of his speech-organs. To study the spoken word no further is to limit his powers, as a pianist would do who never pushed his study beyond scales and arpeggios and Czerny exercises.

Consequently, speakers owe a great debt of gratitude to Phoneticians, who have made a scientific study of speech and made it possible for speakers to understand "listening". For the best speakers are those who not only understand listening but who can, when they speak, meet the needs of listeners.

Phoneticians, however, have not at present concerned themselves with the aesthetic use of the spoken word, except, perhaps, in the rôle of critical listeners, a very valuable rôle, provided they do not wish to reduce *all* speaking to the conversational level.

It is for the speech-artist to build on the solid foundation prepared by the Phoneticians.

The conditions under which the speech-artist speaks have a very great effect on the manner in which he uses his medium.

He speaks prepared words, and preparation can be an enemy to spontaneity.

His vocabulary changes from that common to colloquial speech, and the words themselves are charged with greater significance.

His phrases, following upon his line of thought, move steadily towards a climax, which, if it be anticipated, will lose its force.

Ordinary speech has no special form but any aesthetic use of the spoken word *must* have form. We speak of form in the written word and consider a sense of form essential in a first-class writer. A sense of form, and the ability to translate it into sound, is as essential to a speaker.

The easiest example to give is to instance the speaking of lyric verse, for form in Poetry is more readily recognized owing to its rhythmic pattern.

Poetry might be called verbal architecture, and the speaker of verse must be able to build, with his spoken phrases, the building planned for him by the poet-architect.

We build a little, a very little, in ordinary speech, as any study of intonation tells us. The root of the matter *is* in ordinary speech, but it needs to be developed for the purpose of speaking poetry.

Phonetics tells us that the unit of speech is the sense group; that, by our speech tunes, we make one group distinct from another to

the listening ear; that every fresh thought we introduce implies the use of a separate tune; that the range of a normal unemphatic speech tune is about an octave. Phonetics also analyses the means by which we add emphasis to spoken words, and shows us how, in colloquial speech, we use several of our emphatic devices at once, combining increased speech energy with an increase, or decrease, in the range of the speech tune and with a change in its pattern, and with increased length of certain single sounds.

A spoken poem demands from us the ability to convey form and rhythm and mood, as well as "word-sense" to our listeners. These listeners will hear form through the building up of speech tunes—rhythm in the movement and patterning of phrases and the varying length of single sounds—mood in the range of pitch through which the voice moves—and word-sense, or significance largely through the number of sense groups within the phrase.

To build with speech tunes implies conscious control of the unconscious use of the conversational octave tune, for, while the speaking voice has a possible range of at least two octaves, its highest and lowest notes are definitely associated with extreme emphasis and must, therefore, be used with real discrimination, and this leaves a range of about an octave and a half for normal use. To use an octave of this on almost every phrase is to destroy any hope of building up a climax—the effect is a succession of even contour-lines. Should a still greater range of tune be used to suggest the climax, the effect on the listening ear is that of a sudden and unexpected "peak", together with a feeling of exaggeration.

This octave tune must be kept for conversation, to which it belongs, and tunes of a much smaller range used for spoken verse.

Phrase pattern and movement ask for control of the irregular rhythms of speech—for control of articulation—for a real recognition of the sense group as the unit of speech. It is extraordinarily easy to move from word to word instead of moving *through* one sense group to the next. Such control cannot be gained without real knowledge of what it is that has to be controlled.

The expression of mood is very definitely linked with the pitch of the voice—low tones carry a significance entirely different from that carried by high tones, and here, again, comes the necessity for control of the range of speech tunes. The octave tune is just "chatty" and is devoid of real emotional value. In point of fact, we avoid its use in normal speech, if we are giving expression to any definite mood.

The significance of words, when they are used by a poet, deepens enormously. In ordinary speech words have what might be called their face value, and, since form is not necessary, we use many words and fairly long sense groups, because we are not concerned with expressing ourselves well, but only with expressing ourselves somehow. The poet, disciplined by a sense of form and rhythm, uses words with a keen sense of their significance, and often a single word bears the weight of a phrase, introduces an entirely fresh thought and even alters the "texture" of the spoken phrase.

Consequently a phrase in a lyric poem may be made up of many sense groups each with its own tune, the number of groups depending on the number of new and significant thoughts introduced by successive words. The range of these numerous speech tunes is so small that they fit perfectly into the sweep of the phrase, but small though they are, they carry significance to the listening ear, and, if they are absent, much of the significance of the words is lost.

With regard to the use of emphasis in the speaking of verse, it is obvious that, if we are to control the range of speech tunes, and the pitch of the voice, if we are to express a definite mood, we must choose between the various emphatic devices of ordinary speech—dissociate them one from another. To use a sudden increase of speech energy, for emphasis, in a lyric poem would be to shatter its delicacy; to use a sudden lift of pitch on a stressed syllable will take us out of our mood. There still remains length as a means of emphasis and a change in the pattern of the speech tune (i.e. the fall may occur before the last stress if necessary), neither of which will destroy the lyric quality, while either will give emphasis, and both can be used if necessary.

Again it must be emphasized that to dissociate the emphatic devices one from another, in the abstract, is necessary both to gain an understanding of their special values and to control their spoken use.

The acid test of good speaking is the effect on the listener. The greatest speech-artist is he who conveys most to the listener.

A lovely voice is not enough—magnificent articulation is not enough—to these must be added a thorough understanding of the *spoken* word, and a control over its expressive qualities.

To know how we want to speak is something, but to be able to speak as we know how to is much, much more, and to achieve this power over ourselves and our medium we need the knowledge that Phonetics gives us.

The papers were followed by an interesting discussion in which the following members of the Congress took part: Professors BÜHLER, CHATTERJI, HORN, ISSERLIN, MUKAŘOVSKÝ, STETSON, THUDICHUM, TRUBETZKOY, VAN GINNEKEN, Dr AREND, Dr VON KUENBURG, Miss FOGERTY, Miss PATERSON, Mr COLEMAN.

TUESDAY, 23 JULY. AFTERNOON

GENERAL SESSION

Chairman: Prof. M. GRAMMONT

23. Prof. T. O'MÁILLE (Galway): *An Irish dialect survey, and some general principles of phonetic notation.*

I took part, some time ago, in an Irish dialect survey organized by the Royal Irish Academy, at the suggestion, I think, in the first place of Prof. DOEGEN of the Lautabteilung of the Staatsbibliothek

of Berlin. The recording of the first series was done by Prof. DOEGEN and Herr TEMPEL. The second and third series were recorded by Herr TEMPEL. We made, in all, about 200 ten-inch records of Irish songs and stories, speeches, etc. from native speakers of the language.

When the records were made, it fell to my lot to write, in phonetic script, the 77 recorded in Galway. Anybody who is acquainted with Irish knows that it has an enormous phonetic range and includes nearly all the language sounds of Western and Southern Europe with quite a good many others.

This richness applies both to vowels and consonants. Even many hundreds of years ago there was a phonetic rule established, viz. *caol le caol agus leathan le leathan*, or "slender with slender and broad with broad", or, in other words, velar (or back) consonants are used with back vowels and palatals with front vowels, interdental are used with back vowels and front consonants are used with front vowels. For example, the initials in *téad* "a cord", *déad* "a tooth" are front consonants, and the final *d* is an interdental. The *d* of *dá* "two" and the *t* of *atá* "is" are interdentals and are followed by back vowels (a, o, u).

I may add here that we have an almost complete list¹ of front and interdental consonants. For example: *teas*, *deas*, *ndeas* (*neas*), *leas* (front consonants), and *tá*, *dá*, *ná*, *lá* ("day") which are interdental. As to this interdental group, the only language in which I have met with equivalent or similar sounds is the Marathi² Indian dialect. There are four different n's in Irish, not to mention voiceless forms.

As to the richness of Irish vowels, I may mention the low vowels: (1) æ in *cead* "leave", (2) æ̃ in *feair* "a man", (3) æ̃ in *feairín* "a little man", (4) ā in *fearr* "better", (5) ā̃ in *fearr* "better" (a dialect variation), (6) ā̃ in *bád* "a boat", (7) ā̃ in *báid* "boats". Other low vowels may be enumerated, because any one of them may be rounded in connexion with *b* or *m*, e.g. compare *eo* in *eolas* "knowledge", with *eo* in *m'eolas* "my knowledge", a very different sound. In addition, the vowels after different consonants may be, and often are, different, e.g. *riasp* "a moor", *riæsg*; *ciall* "sense", *kl̥iəl*³ (initial *r* classing as a "broad" consonant), or, in other words, every vowel is liable to be affected by the consonant preceding or following.

These considerations make it obvious that a very elaborate system of symbols is required to represent the niceties of sound produced by speakers of Irish. It naturally follows that such a system must fit into, or be correlated with, some international system.

I do not intend to suggest here a *Weltalphabet* or rival system to that elaborated by FORCHHAMMER (Carl Wintersbuchhandlung, Heidelberg, 1924), or to SWEET's organic alphabet which was on a much more elaborate plan. But I do hold that phonetic science, if we are to call it a science, must achieve something more systematic

¹ For further details, see my book, *Utlabhraidheacht*, p. 14.

² See *Utlabhraidheacht*, p. 25.

³ In this system of symbols I have, in the main, followed QUIGGIN's *Dialect of Donegal* (Cambridge, 1905).