
ACOUSTIC ASPECTS OF POETRY

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De Groot (1946, 48) once made a remark about what he called one-sided positivism shown by many scholars representing experimental phonetics, who neglect the existence of a psychic background to actual phenomena. Elsewhere (1957, 399), he admitted that it seemed without doubt that the solution of several problems as to structure and recitation of poetry could only be expected from the study of the sound waves and the body movements concomitant with the production of these sound waves. The sound form of a poem, he held, comprises linguistic features only. In his opinion, recitation as such is a matter of actual sounds, not of sound form (1957, 389). In an earlier study, though, he has shown that one cannot always draw a clear dividing line between verse structure and verse recitation (1946, 80). The question may be raised, however, whether it is not the actual recitation which gives rise to the verse structure as such. Above all in those cases in which the poet recites his own work, it might be said that realization of the sound form and poetical structure are identical. This might be true from the listener's point of view as well. As L. Kaiser says: With the help of somatic factors as go-betweens, psychic factors make their appearance in acoustic structures. The ear in its turn makes it possible for these acoustic structures to create psychic phenomena in the hearer's mind (1953, 96). Now, that which is experienced by the hearer as a verse structure, is such a psychic phenomenon in its own right. In order to throw some light upon this elusive phenomenon, one might tackle those underlying acoustic structures, using the simple methods of experimental phonetics. I fail to see why this should be branded as one-sided positivism. — In the Laboratory of Experimental Phonetics of the University of Amsterdam, six young poets were asked to read some poetry of their own as well as some unpublished work by others. Moreover, they were subjected to some tests (counting till ten, Stanford, talking about pictures) which, in previous experiments, had been applied to groups of students and school children. The Stanford score resulted in an 'originality index' of 80 for the poets, 73 for the children, and 52 for the students. In the spacing of the words within the allotted period of 60 seconds, too, poets and children showed a similar picture, clearly different from that produced by the students. Finally, the poets' respiratory movements were recorded by means of a pneumograph. Differences in structure and rhythmical flow of certain poems could be traced back to striking differences in the respiratory curves of their

respective authors. --- The results of the recordings made by means of tapes and gramophone records, were then analyzed as to duration, stress, and pitch. As far as possible, the values found by means of kymograph or oscillograph recordings, were visualized by transforming them into graphs. In most cases, some standard of time was recorded at the same time in order to have a measure of duration. — As to duration, i.e. the time relation between sound unit and pause, it was found that the picture presented by the printed text (the lay-out of the poem) did not always conform to the acoustic reality. In trying to establish, as De Groot seemed intent upon doing, the correspondences between successive verses or lines of a poem, one should, therefore, consider first of all the exact definition of a verse or line. — Stress is rather hard to define. That which the listener experiences as speech intensity, as accentuation of individual syllables, does not, primarily, depend upon the absolute intensity of sound, the quantity of which can be measured by objective methods. It is rather the distribution of certain doses of energy, however weak in themselves, that gives the impression of accentuation. Moreover, an increase in energy may at the same time entail an increase in duration and pitch. It was found — a 2-syllabic word, in the same context, being spoken by 7 subjects—that the hearer's subjective impression of accentuation or stress was not directly related to the sound intensity recorded by objective methods. In the same way, looking at graphs representing both stress and pitch curves of certain lines or verses, combined with listening to the sound recordings involved, made it clear that accentuation did not always depend upon the absolute sound intensity of the syllables constituting the line. Much more important was in each case the relation to the surrounding syllables. In some cases a decrease of intensity was compensated by rising pitch and prolonged duration in such a way as to maintain nonetheless an impression of accentuation.—The syllable pitch series, forming the verse melody, did not always show a particularly striking profile. In many cases the melody curve remained within the boundaries of normal speech. Aesthetically relevant, however, proved to be the presence in the line—even within rather flat melody curves—of at least two rises in pitch, spaced at a certain distance. This was especially effective when such a structure was repeated in the next line or the next half-verse. Clearly, it is this phenomenon that is of fundamental significance for the rhythmical experience in poetry. The results of the experiments described might lead us to believe that it is the melody rather than the sound intensity which produces the nuclei of intensity from which the hearer derives his experience of rhythm.

REFERENCES

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DISCUSSION

Hannaford:

Many previous studies of poetic performance are open to the objection that they were made on very simple poetry. In these studies the most important question of how competence is related to performance is, in fact, avoided. What procedures, if any, did you follow in your experiments to test the degree to which the readers of poetry in your study 1) were performing poetry of some difficulty and 2) understood the semantic and syntactic structures of the poems they were reading?

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The poetry recorded was of a highly complex and even controversial nature, the authors belonging as they did to the post-war school of so-called experimentalists. The poets were asked to read their own poems and their performance was, on the whole, utterly convincing. Apart from this subjective impression, it was found that the pitch patterns of the individual lines were, mostly, of the convex type, which is known to convey a speaker's inner certainty.