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A STUDY IN LITERARY BEHAVIOR

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## THE ALLITERATION IN SHAKESPEARE'S SONNETS: A STUDY IN LITERARY BEHAVIOR\*

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Alliteration is one of the most familiar forms of sound-patterning in poetry and prose. It is said to exist when two or more syllables beginning with the same consonant occur near each other in a given passage. Examples of alliteration are frequently cited as contributing to the effect of a literary work, and it is usually implied that they represent deliberate acts of arrangement on the part of the writer. If this is true, alliteration should throw some light on the dynamics of verbal behavior and especially upon a process which may be called 'formal perseveration' or, better, 'formal strengthening.' Studies of word-association, latent speech (1), and so on, have indicated that the appearance of a sound in speech raises the probability of occurrence of that sound for some time thereafter. Stated in a different way: the emission of a verbal response temporarily raises the strength of all responses of similar form. The principal characteristics of poetry (alliteration, assonance, rhyme, and rhythm) seem to be exaggerated cases of the tendency toward formal strengthening, and they should supply useful information with regard to it.

In order to determine the existence or the importance of any process responsible for a characteristic pattern in a sample of speech, it is necessary to allow for the amount of patterning to be expected from chance. We cannot assert, for example, that any one instance of alliteration is due to a special process in the behavior of the writer rather than to an accidental proximity of words beginning with the same sound. Proof that there is a process responsible for alliterative patterning can be obtained only through a statistical analysis of all the arrangements of initial consonants in a reasonably large sample. In the case of alliteration what we want to know is the extent to which the initial consonants are not distributed at random. If the distribution turns out to be random, then no process by virtue of which words come to be arranged on a formal basis can be attributed to the behavior of the writer, even though

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selected instances still show the grouping commonly called alliteration.

If there is any process in the behavior of the writer by virtue of which the occurrence of an initial consonant raises the probability of occurrence of that sound for a short time thereafter, then the initial consonants in a sample of writing will be grouped. Methods are, of course, available for detecting a tendency toward grouping, but in the case of poetry a more appropriate technique can be based upon the use of the line as a natural unit. In any large sample of poetry certain lines will contain no occurrences of a given initial consonant, and others will contain one, two, three, and so on, occurrences. From the relative frequency of the consonant we may calculate these numbers if we assume that the probability of occurrence remains unchanged and that each occurrence is an independent event. A process of alliteration, if it existed, would violate these assumptions and yield a greater number of lines containing more than one occurrence and also a greater number of empty lines.

This paper presents some facts concerning the alliterative patterns in a block of one hundred Shakespeare sonnets. The material is drawn from a more extensive research on a number of different kinds of sound-patterns, to be reported in full later. The sonnets were first scanned according to a set of arbitrary rules, designed to prevent unintentional selection and at the same time to single out the most important syllables in each of the 1,400 lines. The average number of syllables per line thus designated was 5.036, which agrees well with the pentametric form of the poems. The range, however, was from three to eight. A tabulation of initial consonants by line was then made.<sup>1</sup> The results were expressed for each consonant separately in the form of (1) the number of lines containing no occurrences, (2) the number containing one occurrence, (3) the number containing two occurrences, and so on.

The formula for the number of lines containing 0, 1, 2, . . . occurrences of a given initial consonant involves the binomial expansion  $N(q + p)^n$ , where  $N$  is the number of lines examined, the number of syllables per line,  $p$  the probability of occurrence

<sup>1</sup>The tabulation was made by Miss Marian Kruse and Miss Janette Jones, Federal Aid Students at the University of Minnesota.