

# DIGITAL VERSE

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The English poets have taken an ambiguous posture with regard to digital verse. On the one hand, they appear to delight in referring to the product of their craft as "numbers". Examples abound. In A Psalm of Life Longfellow wrote,

Tell me not, in mournful numbers,  
Life is but an empty dream!

Alexander Pope boasted of his poetic precocity as follows:

As yet a child, nor yet a fool to fame,  
I lisp'd in numbers, for the numbers came.

Robert Herrick wrote an entire book of verse entitled Noble Numbers.

In plain fact, however, their performance has been sadly deficient, numerically speaking. In her forty-third Sonnet from the Portuguese, Mrs. Browning wrote,

How do I love thee? Let me count the ways,

but failed to get as far as "one".

Even worse, Coleridge once produced an alleged example of hendecasyllables, a Graceo-Roman metrical form which derives its name from being constructed out of eleven syllables per line. Unfortunately, his version contains twelve syllables to the line. The error could be more easily pardoned had Coleridge not developed his lines as an exercise in translation from the German poem Milesisches Märchen, by Matthisson, who correctly wrote the original in lines of eleven syllables. (The text of both the Coleridge translation and Matthisson's original can be found on pages 140 and 616 of The Poetical Works of Samuel Taylor Coleridge, Macmillan and Co., London, 1893.)

English folk poetry is somewhat closer to the mark. From the counting-out rhymes of infancy to the cadence counts of infantry, verses well-sprinkled with digits occur in abundance:

One potato, two potato, three potato, four,  
Five potato, six potato, seven potato, more,

etc. (Many examples of children's play rhymes of this type can be found in Children's Games in Street and Playground, by Iona and Peter Opie, Oxford University Press, 1969, and in Counting-Out Rhymes, edited by Roger D. Abrahams and Lois Rankin, University of Texas Press, Austin, 1980.)

Kabbalistic incantations are a further source of examples. A classic instance, once more in German, can be found in the famous Hexen-Einmaleins, from the First Part of Goethe's Faust:

Du musst verstehn!  
 Aus Eins macht Zehn,  
 Und Zwei lass gehn,  
 Und Drei mach gleich,  
 So bist du reich.  
 Verlier  
 Die Vier!  
 Aus Funf und Sechs--  
 So sagt die Hex--  
 Mach Sieben und Acht,  
 So ist's vollbracht:  
 Und Neun ist Eins,  
 Und Zehn ist keins.

However, in each of these instances the digits act as mere filler rather than basic building blocks. Until now, a verse composed entirely of digits has been lacking. Reasons for this can of course be cited. Among them, the following come readily to mind:

1. None of the digits 0 through 9 rhymes with any other
2. A poem constructed exclusively of these digits would appear to have no semantic content
3. A sequence of digits, arranged formally in lines of text, does not superficially appear to scan
4. A sequence of digits, however arranged, would seem unlikely to sustain the interest of a reader
5. Choice of an appropriate title for such a composition appears to be a further difficulty

Some thirty years ago, I became aware that all of these apparent obstacles are in fact illusory. The realization came about quite serendipitously. While performing an extended series of calculations on an old Monroe electromechanical desk calculator one day, I grew weary of the tedious work sheets which lay before me. For amusement, I began to explore digital combinations which would produce interesting rhythmic sound patterns when multiplied or divided by the machine.

From this, I drifted into another experiment, multiplying various pairs of palindromic factors. Some of these, I found, yielded palindromic products. Among them, the most interesting was the result of squaring 1111001111. (The storage register would accommodate no more than ten-digit factors, which limited the length of my input.) The result was 1234323468643234321. (The digits of the product were

accumulated in a register of twenty-digit capacity.)

A lifelong compulsive subvocalizer, I was quick to perceive that this string of digits, when properly articulated, fell naturally into blocks of four, consisting of two trochees each, with the exception of the last three, which were metrically distinct from the rest.

When written as spoken, the result was the following all-digital palindromic verse form, with a palindromic, fully equivalent title, a single (trivially) rhyming stanza, scanning and having a formal closure cadence:

1111001111 x 1111001111

One, two, three, four;  
 Three, two, three, four;  
 Six, eight, six, four;  
 Three, two, three, four.  
 Three,  
 Two,  
 One.

It will be noted that the repetition of lines two and four creates the effect of a poetic refrain.

One sees that this example resolves the five difficulties listed previously, with the possible exception of the second. Even here, of course, it is apparent that the body of the poem is semantically equivalent to the title.

A bit more thought reveals something of far greater consequence. The poem, along with the mechanics for generating it numerically from its title, is meaningful in any base of notation greater than eight, not merely to base ten. However, the numerical value of the quantity represented by 1111001111 (which determines the semantic content of the title) varies from base to base, as does the value of the number represented by 1234323468643234321 (which is the semantic content of the poem itself). That is to say, instead of having no semantic content, this poem has an infinite variety of meanings, one for each possible value of the base of notation, chosen from the integers nine and above. No poem concocted with the aid of nondigital words has ever exhibited this property, no matter how ambiguous or subtle its symbolism.

Although it is not unlikely that other examples of digital verse can be found, I rest content with the one above. Perhaps some of the readers of *Word Ways* will continue the search, discovering examples which have different structure, which utilize the digits 5, 7 and 9 also, or which otherwise deviate from the pattern above. Logophiles may afterward debate whether the Oxford Book of Digital Verse, should one materialize, is more appropriately described as an anthology or a table.