ON TEACHING PALINDROMES

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Webster's Third New International Dictionary defines palindrome as "a word, verse, or sentence that reads the same backward as forward". As is often the case with limericks, sonnets and other highly-structured but nowadays seldom-pursued literary creations, the few frequently-anthologized examples have come to be the only examples we know. This is certainly the case with the palindrome. Most of us are exposed briefly during our early education to "Madam, I'm Adam". It is made memorable for the young learner as it is jokingly alleged to be the first words spoken in the Garden of Eden. We learn another later in school when studying the final disposition of the deposed Emperor of France. When exiled to the island of Elba for the remainder of his life, Napoleon is reputed to have made the palindromic comment "Able was I ere I saw Elba". We are confronted with the last and probably most widely-known palindrome in high school as we study the construction of the man-made canal linking the Atlantic and Pacific oceans: "A man, a plan, a canal - Panama!"

Each of these palindromes is due the recognition it receives. After all, each of them concisely and in relatively plain language states a fact or meaningful though which, in the face of tremendous statistical odds, spells the same backward as forward. But this is where we stop with exposing students to what a palindrome is. In my school, it was never even hinted to us that we might be able to make one for ourselves, or indeed that it would be worthwhile to try. However, in addition to being the products of wordplay, palindromes have the power to get us to glimpse our language in a non-rational way. They constructively and meaningfully balance two opposites — the words as they are written backwards with the words as they are written forward. This capacity to balance or resolve has always held a magical attraction for the human mind, characterized in another culture by the Yin Yang symbol:

This comparison with Yin Yang may be extended further. Not only do palindromes represent the opposite of one another in their reversal of the letters, but each, like the halves of the Yin Yang, contains an element of the other side within it: the letters of one half of a palindrome are by definition the very same letters

as those of the other half.

Another factor indicating that palindromes are deceptively interesting human creations deserving of more attention than they are presently accorded is that each one may be said to reflect the mind of its maker. The introduction of From A to Zotamorf: the Dictionary of Palindromes notes that the subject of romantic love, prevalent in, and seminal to, much of the artistic creation of Western Civilization, is conspicuously absent in the corpus of palindromes that have evolved in our English-speaking culture. However, another of our human preoccupations, religion, looms large in palindromic literature. Some examples follow:

Dennis and Edna sinned
Madam, in Eden I'm Adam
Devil never even lived
Did I do, O God? Did I as I said I'd do? Good, I did!
Evil did I dwell, lewd I did live
Eve damned Eden, mad Eve!
Dennis, no misfit can act if Simon sinned

What conclusions may we draw from this? No one knows. I am convinced, however, that more goes into the making of palindromes than the mere search for syntactical meaning among combinations of letters or words that mirror each other. Somehow, something of our unconscious selves becomes planted in the palindromes we create. By reading palindromes produced by an individual, we come, in some degree, to know that person. Clearly, the human mind does a tremendous amount of shifting and screening just to find words or letters that combine meaningfully both forward and backwards. But ultimately, the selection of those words and the sequence in which they are combined reflect more than our rational faculties. For, what is rational about making a palindrome anyway? On the surface, it is one of the most futile, pointless human activities. Yet this superficial view fails to account for why palindromes are found etched in stone or wood above old church doors all over Western Europe, why archaeologists have found them amid the ruins of Pompeii, and why (however peripherally) they are still taught to school children today. The palindromes found in Pompeii and the ones above European church doors are in Latin. Unfortunately, like Latin, palindromes have fallen onto hard times, overly-rational times, times that concede little value to an activity that is by nature so solitary and whose achievement brings neither wealth nor power, unless it is the power, offered to us by dreams, of gaining a peek into our deeper selves.

So most of us learn three palindromes as we make our way throug' school: one about third grade, one about sixth, and the other somewhere in high school. This is not due to any dearth of palindromes; the wordsmiths of our language have provided us with thousands. These are simply the only ones in general circulation. The value of this curious exercise in permutation, vocabulary, and creativity lies not in teaching more of them to students during the educational process, but in requiring students to make their own. Palindromes can be used as springboards to convey to students

the magic and the non-rational elements of our wonderful language. And, they offer students opportunities to gain greater self-awareness, for the palindromes that have the most to teach us are the palindromes we make for ourselves.

REFLECTIONS AND ROTATIONS

Words such as CHECKBOOK or CHOICE, floating on the surface of a pond, can also be read by (literate) fish glancing upwards; words such as AUTOMATA or WAX, written vertically in a mirror, can also be read by Alice after passing through. Similarly, SWIMS or pod remains invariant when turned 180 degrees. However, if one is willing to redesign letter-fonts, much more can be done with reflections and rotations: it is (almost) possible to change any letter into any other one. This calligraphic virtuosity, in effect joining palindromy with the symmetry art of M.C. Escher, was first exploited by Scott Kim in Inversions (reviewed in the November 1981 Word Ways), and now by graphic designer John Langdon in Wordplay (Harcourt Brace Jovanovich, 1992; \$18.95). Most of the several dozen words he transforms, called ambigrams, are rotated 180 degrees into themselves, although the process can be adapted to rotate Word A into Word B (such as BLACK into WHITE). If Langdon cannot rotate a word directly into itself, he writes an endless sequence of the word (or joins the ends in a circle), and rotates it into an offset sequence (such as MATHEMATICS, CHANGE or LIMITATIONS). More startling are some of his two-dimensional rotatable patterns involving the words CHOICE and DECIDE.

The one drawback to this book is the author's reflection on the philosophical meanings of the words he transforms; the spectacular calligraphy is larded with Taoist-inspired maunderings about man and his relation to the natural world. Ambigrams are startling enough in themselves; let's instead hear more about the mechanics by which they are accomplished. Other calligraphic oddities, such as interlaced words in figure-and-ground patterns, remain little explored. Much remains to be discovered and codified in this topological branch of letter-play. What distortions can be tolerated without losing the ability to recognize a letter? To what extent can redundancy - the ability to identify a word from a few of its letters - help. Langdon only hints at these issues.