CRYPTOGRAMS ON THE PROWL

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One of the fundamental ways of enciphering a text for the purpose of concealing its message is to rearrange the letters of which it consists. The result is a so-called transposition cipher. If we apply its principle to individual words or names, we can achieve interesting results. For example, ECHOIC turns into CHOICE with the mere shift of its first letter to the end of the word; CLAIMED converts into DECIMAL (or into MEDICAL, DECLAIM, CADMIEL, MEDALIC, CAMELID, or MALICED); and MOUNTAINEER becomes ENUMERATION. Tens of thousands of other English words and names can similarly be transposed.

If the rearranged form of a word uses only those letters in the original word, it is usually fairly easy to recognize the original word in its transposed form. For puzzle purposes, therefore, it is expedient to add one or two letters while rearranging the original ones: the "enhanced" form of the transposal is a bit more of a challenge to decipher. Thus, instead of changing PERSIA into ASPIRE (or PRAISE, or more esoteric dictionary words such as PARIES, SIRPEA, or SPIREA), we can add a D to produce the word DESPAIR (or ASPIRED, PRAISED, or DIAPERS, or other, less common words). By then adding a second A, we transform DESPAIR into PARADISE – which is quite a trick, if you stop to think about it. (That the same letters also spell SPARIDAE, the name of a family of deep-bodied marine fishes including the porgies, isn't nearly as enthralling.) Either way, PERSIA can be detected lurking within the folds both of DESPAIR and of PARADISE.

We may choose to apply our peculiar talents to enciphering entire groups of words according to some uniform rearrangement principle. For instance, we can take the regular names of each of the integral numbers from 0 through 16 and transpose them, invariably adding two letters to the mix. The result can look like this:

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ZERO  + FN = FROZEN        NINE  + DR = DINNER
ONE   + ST = NOTES         TEN   + CS = CENTS
TWO   + HR = WORTH         ELEVEN + OP = ENVELOPE
THREE + IN = NEITHER       TWELVE + AS = WAVELETS
FOUR  + ER = FURORE        THIRTEEN + HI = INHERITETH
FIVE  + DR = FERVID        FOURTEEN + DS = UNFORESTED
SIX   + ET = EXITS         FIFTEEN + RS = STIFFENER
SEVEN + IR = INVERSE       SIXTEEN + EV = EXTENSIVE
EIGHT + AN = HEATING
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For those of you raising your eyebrows at the sight of the admittedly archaic word INHERITETH, we observe that you will find it

in black and white in the King James and the American Standard Versions of the Old Testament, in Numbers 35:8. Particularly adventuresome readers may try to extend the unbroken sequence to the number 42. For our own best results in that attempt, see Answers and Solutions at the end of this issue.

Any group of English words or names can be treated in a similar fashion. Consider, for example, the names of the 50 largest cities in the United States, according to the 1980 decennial census. Ordinary transposals convert TUCSON into COUNTS, DETROIT into DOTTIER, BALTIMORE into ARTMOBILE, and WASHINGTON into NOWANIGHTS, none of which is too difficult to figure out. Adding either one or two letters to the names of some of the cities, on the other hand, we succeed in concealing them effectively from possibly prurient eyes. Two-letter additions produce cloaking terms such as these:

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OMAHA + NN = MONAHAN
ATLANTA + ET = TANTALATE
CHARLOTTE + DP = PART-CLOTHED
CLEVELAND + ER = NEVER-CALLED
MILWAUKEE + LO = OWL LEUKEMIA
LOUISVILLE + MN = OLIVE MULLINS
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Here are another six examples, already in enciphered form. We've made them real easy by adding only one letter to each city name in the course of transposing it. How many of the cities can you identify at sight?

1. UNSAINT   3. COACHING   5. ANNOTATIONS
2. WAKENER   4. BOLD CHANGE   6. PANDIVISIONAL

Equally amenable to our special form of encipherment are the names of the chemical elements. Ordinary transposals turn ARGON into GROAN, RHODIUM into HUMIDOR, ANTIMONY into the patriotic MY NATION, and YTTERBIUM into BETTY MUIR – who may just be the girl living next door to you! Anyone familiar with the element names, however, won't have much trouble decoding these concealments. By contrast, adding two letters to each element name, as in the following samples, also adds measurably to the challenge of identifying it:

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THULIUM + DE = MULTIHUED
FERMIUM + IM = MUMMIFIER
SAMARIUM + ET = AMATEURISM
TITANIUM + DE = UNIMITATED
BERYLLIUM + GN = LUMBERINGLY
COLUMBIUM + IN = CUMULONIMBI
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Once again, it's your turn. Here are the enciphered forms of six other element names, to each of which we have added only one letter in the process of transforming it. How quickly will you restore these element names to their pristine, unsullied condition?

7. MATURITY   9. GREYHOUND   11. A-SUMMERING
8. MULLIGAN   10. MUSCADINE   12. PRIM-MOUTHED