BASE FOREIGN WORDS

DAVID KAHN
Great Neck, New York

As every computer programmer knows, numbers can be read in ways other than the decimal system we normally use. The decimal system is called "to the base ten" because it employs 10 digits: 0, 1, 2, ... , 9. But systems to different bases are also possible. Utopianists have proposed a duodecimal system using 12 "digits" because 12 is divisible by more factors (and hence mathematically handier) than 10. Computers use arithmetic to the base 2, because their circuitry admits of only two states -- on or off. Base 2 arithmetic employs only the digits 0 and 1.

The same combination of digits will stand for different quantities in different systems. Thus 101 in base 10 means "one hundred and one", but 101 in base 2 means "five". To distinguish the systems and prevent confusion, mathematicians and computer programmers append where necessary a small subscript numeral indicating the base being used. Thus 101_{10} means to read the 101 in base 10; 101_2 means to read 101 in base 2.

To illustrate the concept that the same group of digits can have different meanings in different bases, Jerry Garfunkel, my instructor in computer programming in the Great Neck Adult Education Program, analogized from language. He showed that the same cluster of letters can mean one thing in one language and something else in a different one, and that without some indication, such as context or subscript, the reader cannot tell what the word means. Take coin, for example. In English -- or to the base English, which we could write $coin_e$ -- it means a small metallic disc used as a form of money. But in French, or $coin_f$, it means an angle at the end of a room or enclosure: a corner.

Jerry gave us a few words with both English and foreign bases, and I later added to this list. Perhaps readers of Word Ways can extend both the lists and the concept, by finding letter groups that mean something in three or more languages.

French

$chair_f = flesh_e$	$chose_f = thing_e$	$coin_f = corner_e$
$bond_f = leap_e$	$or_f = gold_e$	$chat_f = cat_e$
$court_f = short_e$	$crayon_f = pencil_e$	$rang_f = row_e$
$sale_f = dirty_e$	$dent_f = tooth_e$	$dire_f = say_e$
$figure_f = face_e$	$pour_f = for_e$	$hurler_f = yell_e$
$laid_f = ugly_e$	$mince_f = thin_e$	$pain_f = bread_e$

German

Gift$_g$ = poison$_e$
fast$_g$ = almost$_e$
leer$_g$ = empty$_e$
die$_g$ = the$_e$
rot$_g$ = red$_e$
Schmuck$_g$ = jewelry$_e$

See$_g$ = lake$_e$
Kind$_g$ = child$_e$
ass$_g$ = ate$_e$
Tee$_g$ = tea$_e$
Wart$_g$ = warder$_e$

dies$_g$ = this$_e$
Last$_g$ = load$_e$
fern$_g$ = far$_e$
Wand$_g$ = wall$_e$
war$_g$ = was$_e$

Spanish

real$_s$ = royal$_e$
cola$_s$ = tail$_e$
cargo$_s$ = duty$_e$

actual$_s$ = present$_e$
acre$_s$ = sour$_e$
colorado$_s$ = red$_e$

bozo$_s$ = moustache$_e$
auto$_s$ = play$_e$

A NEW CROSSWORD PUZZLE DICTIONARY

Word Ways contributor Tom Pulliam is co-author (with Clare Grundman) of an important new book for logologists, The New York Times Crossword Puzzle Dictionary (Quadrangle/The New York Times Book Company, 1974). Not only were crossword puzzles combed for synonyms that are repeatedly used, but a word-for-word scanning of various unabridged dictionaries (not specified) produced an extensive list of words not yet discovered by crossword constructors. The book contains about 500,000 words (not all different, of course, since the same word can appear as a synonym repeatedly), arranged by length up to a maximum of eight letters. The flavor of the dictionary is best captured by a few examples:

HARMONICA harp syrinx aeoline panpipe armonica zampogna
ORIOLE pirol bunyah lariot loriot cacique figbird peabird firebird goldbird hangbird hangnest troupial
ALCHEMY art magic alcumy chymia spagyric
IDIOTIC daft zany idiot fatuous foolish wantwit imbecile

Readers interested in a list of corrections should send a stamped, self-addressed envelope to Tom Pulliam, 17 Sherman Circle, Somerset, New Jersey 08873.