FOURWORDS

ANTHONY SEBASTIAN
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Of the thousands of patients with aphasia whom we have studied in our fifty combined years of neurologological practice, one of the most interesting was a 44-year-old man, whom we refer to as Rufo, who, following a seemingly-minor blow to his head, developed a highly-specific expressive aphasia: he lost the ability to utter the word four. The logological implications of the case might interest the readers of Word Ways.

One might suppose that a single-word expressive aphasia would not be a serious disability: surely, one can compensate for the loss of a single word in one's vocabulary. In Rufo's case, when the need arose to say four, he would need only to say two plus two or another of the many expressions synonymous with four.

In fact, Rufo can utter such synonyms. But Rufo's aphasia is stranger yet. Whenever he utters a substitute for four, e.g., two plus two, his aphasia somehow "captures" it, precluding subsequent utterances of that particular substitute. No matter how hard he tries to utter two plus two a second time, he fails. After its first articulation, the substitute seems to lose its identity as distinct from four. For Rufo, four is a black hole that swallows everything that gets too close.

We have spent many hours experimenting with the "black hole effect" without much success in understanding it. The results of those experiments, however, have led to a number of new insights into the workings of the brain (Unspeak, in press).

Two additional features of Rufo's aphasia became apparent early on. Firstly, symbolic methods for expressing the concept of four, such as writing and signing, were treated like verbal substitutes and suffered from the black hole effect. Rufo could hold up four fingers to express four, but only once. He might carry in his pocket a card inscribed with the numeral 4, but after showing it once, he forgets he's carrying it.

Secondly, the black hole effect is to a considerable extent generic, in the following sense. When Rufo utters the number of legs on a horse as a substitute for four, his aphasia extends to the number of legs on a cow and to the number of feet on a horse (or cow). Apparently, the utterance of any specific instance of the generic expression number of limbs on a quadruped recalls that generic expression and links it to four, with the result that other specific instances become unutterable. The appearance of
have studied this generic effect is unpredictable, depending on how obvious the generic expression is to Rufo.

Rufo can freely utter the homophones of four, but not as a substitute for four.

It happens that Rufo's occupation depends on his ability to communicate verbally, including the ability to express the number four a small but critical number of times each day. We estimated on average a need for one or two utterances of four daily (work days). Our initial practical goal in helping Rufo was simply to provide him with a sufficiently long list of words and phrases synonymous with four, so that he would have a ready supply enabling him to continue working. Naturally, the list had to be compatible with the constraints imposed by the black hole effect. Fortunately, Rufo's job requires his interaction with individuals from the widest possible range of occupations. (The sensitive nature of Rufo's job precludes our disclosing it.) Because Rufo's job requires him to familiarize himself with the field of interest of his 'clients', we were not constrained as to sources in drawing up a list of four words.

We present below a partial list of words and phrases synonymous with four that we have compiled for Rufo's use. Many of the entries were suggestions of colleagues of the authors: Leonard Peller, Pat Douglass, Muiz Brinkerhoff, Peter Sebastian, Pat Schoenfeld and Bob Hunn. Entries in the list should be prefaced by "number of".

A's in Alabama
Alien and Sedition Acts
Aristotle's causes
B's in flibbertigibbet
base elements of the early Greeks
baseball infielders
bases on a baseball field
basic taste sensations
Beatles
beats to the measure in common time
bits in a half-dollar
bits in a nibble (half a byte)
body of humors of early physiology
bytes per word
C's in cachectic
calling birds
canine teeth
cardinal winds
cardinal virtues
cards dealt in hand of casino
centuries in a quadricentennial
chambers of the heart
compass points
components of a tetramer
coordinates of space-time
corners of the world
couples in a quadrille
cusps in an astroid
D's in muddleheaded
decayears of a quadragenarian
divisions of a quaternity
E's in peewee
eggs laid by quadriporous animals
Eiffel Tower columns
elements of a quartet
eyelids
F's in riffraff
fundamental interactions of matter
G's in huggernugger
galilean moons of Jupiter
gospels of the New Testament
H's in hysterotrachelorrhaphy
heads on Mount Rushmore
holes in a brass knuckles
Horsemen of the Apocalypse
hydrogens in a quadribasic acid
I's in inhibition
inner planets
J's in jejunolejunostomy
jokers in canasta
K's in knickknack
L's in dillydally
leaflets of clover
leaves of a quatrefoil
legs of card tables
legs of horses
letters in a quadrilateral
letters in a tetragram
letters in the word "word"
letters preceding E in the alphabet
limbs of a cross
lines of a quatrain
lobes of the liver
loudspeakers for quadraphonic sound
M's in mammogram
major human blood groups
Maxwell's equations
members of a quadrumvirate
minimum years of age of bonded whiskey
missed pitches for a base on balls
movements in a classical symphony
N's in announcement
natural wisdom teeth
no-hitters pitched by Sandy Koufax
nonsense words in kid's counting rhyme
nuCLEons in helium
O's in cookbook
P's in whippersnapper
pairs of legs on a spider
parathyroid glands
patch pockets in a bush jacket
pecks in a bushel
persons in a double date
phases of the moon
players in tennis doubles
players in a bridge game
posters on a canopied bed
primary arithmetic operators
products of quartering
products of a quadrisection
quadrants of a plane
quadriplicates
quarterly events
quarters in a dollar
quarts in a gallon
R's in refrigerator
radio station call letters
Roosevelt's freedoms
rulers in a tetracth
runs scored in a grand slam
S's in asbestosis
schools of Islamic law
seasons of the year
shooting stops in a biathlon
sides of a quadrilateral
species of nitrogenous bases in DNA
spikes on a caltrop
spouses of a quadrigamist
square of two
square root of sixteen
stars of the Southern Cross
streets bounding a city block
strokes in common auto engine
suits in deck of playing cards
Sundays in Advent
syllables in a choriamb
syllables in a quadrisyllable
tetrahedron faces
truths of Buddha
U's in tumultuous
umpires per baseball game
units of a quaternion
valence of carbon
wheels on a quadricycle
wings on a biplane
woods in a set of golf clubs
works in a tetralogy
wrestlers in a tag team match
years in a Presidential term
years in a quadrennial
years between leap-years
Z's in razzmatazz
zeros in ten thousand
Zodiac signs of six letters

As noted, this is only a portion of the list we compiled. For words beginning with the combining form quadri-, we listed only a few examples, whereas the Second (Electronic) Edition of the Oxford English Dictionary gives a long list of such words. Similarly, we list only a few words beginning with the combining form tetra-. All the legitimate quadri- and tetra- forms in the OED can be used by Rufo.

Undoubtedly there are many more interesting fourwords that can be added to this list. There might be members of the logological community whose special areas of knowledge abound with other verbal expressions equivalent to four. Readers who wish to contri-
bute should submit their suggestions, along with sources and explanations, to the editor, who will forward them to the authors, who in turn will supply them to Rufo. Possibly, in the future we can publish an expanded list along with the names of their contributors. The authors would also be interested in suggestions for different approaches to a practical solution of Rufo’s problem, and suggestions for neurologological research offered by this unique disorder.

Preliminary reports of Rufo’s case have stimulated considerable interest. We have heard of several cases of similar single-word aphasias, including one of a greatly distressed woman who lost the ability to utter the word shopping, and a man who lost the ability to utter the word dinner. Undoubtedly we will hear about other cases, and respectfully request that good taste prevail.

ADVENTURES OF A VERBIVORE

This is the title of Richard Lederer’s seventh book on wordplay, published in 1994 by Simon & Schuster’s Pocket Books for $21. A delight to read, it has three major themes:

- discussion of various classes of words: personal names, poker slang, spooky etymologies, Britspeak, prep school slang
- first-person accounts of his adventures in logology-land: the Mohonk Word Weekend, excerpts from his radio show, experiences teaching English in a Philadelphia ghetto school, expert testimony in court cases concerning the meaning of certain words and phrases, letters from his fans
- a tour of various grammatical matters: plurals, apostrophes, super-sentences, language errors in comic strips

Lest you think that former English teacher Lederer is a bluenose about rules of grammar, note that he defends split infinitives, the use of “hopefully”, “I feel badly”, and “like” as a subordinating conjunction (“tell it like it is”!)

Word Ways readers will recognize a number of pieces that first appeared here, most recently a discussion of homonyms and a quiz on the logology of US presidents.