A COLLECTION OF NINE-SQUARES

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This article shows some of the results of a computer search for regular nine-squares. My earlier article on eight-squares reported on a search confined to solid all-lowercase eight-letter words. Standards had to be lowered for the nine-square search, and I included capitalised terms, hyphenated words and multiple-word phrases. The word stock is predominantly the Air Force list of terms from Webster's Second, with many additions from the Second Edition of the OED, some British collegiate dictionaries, a couple of atlases, and some excellent terms from Chris Long's "Mathematics of Word Quality" in the May 1993 Word Ways. Many of the additions from the OED are obsolete, and even one Middle English word showed up. As I allowed obsolete words, I allowed the -est and -eth inflections of verbs. I also allowed all adjectives to inflect.

Unfortunately the Air Force list does not contain the whole of Webster's Second, so I was not able to find all nine-squares in it. For example, it does not contain CIRCUMFER which is in the square Eric Albert reported in "The Best 9x9 Square Yet" in the November 1991 Word Ways.

How am I to judge the squares? The terms in them show several sorts of blemish: capitalized terms, broken terms, obsolete terms. I have not found any nine-square free from all these sorts of blemish. Which sort is the worst? Opinions will differ, so I shall group my selection of squares into categories resulting from banning various sorts of blemish in turn. Finally, I show a remarkably large cluster of squares.

I show which terms need upper case letters and breaks (# means a space between words).

Some may consider it undesirable for no single acceptable dictionary to contain all the terms in a square. I do not understand this; if some terms are all acceptable individually, I do not see why this fact makes them less acceptable collectively. At any rate, my first category is "squares with as many terms as possible in one dictionary".

Just one of the squares lies in OED 2: the NEOPLASIA square below. Each entry is a single word (not a name). The only blemishes are that ENVEILEST and ALECIZEST are archaic inflections, and that ISING-STAR is hyphenated. Webster's Second has OVERMERIT solid; however, OED hyphenates it.

None of the squares lies entirely in Webster's Second and Third. The nearest approach is in the ICE-STORMS square below, where all terms but CANNACEAE are in OED 2 and all but ENGINE-PIT are in Webster's Third. OED 2 hyphenates ICE-STORMS but it is two words in Webster's.

In the LACE-PAPER square, all terms are in OED 2 except ALAMO VINE which is in Webster's Third. Webster's Third lacks the obsolete EMAGERIES and ENTERLENT which are in OED 2; it also lacks AVERTIBLE and AVERTIBLE which are in OED 2 and Chambers.

n	е	0	p	1	a	s	i	a	i	C	e-	-s	t	0	r	m	S	1	a	c	e-	P	a	P	е	r
e	n	v	e	i	1	е	s	t	C	a	n	n	a	c	е	a	е	a	1	a	m	of	ŧv	i	n	е
0	v	е	r	m	е	r	i	t	е	n	g	i	n	e-	ъ	i	t	c	a	Ъ	a	1	e	t	t	a
P	e	r	d	i	c	i	n	e	s	n	i	r	t	1	e	s	t	е	m	a	g	е	r	i	е	s
1	i	m	i	t	i	n	g	s	t	a	n	t	a	1	a	t	e	p	0	1	е	s	t	a	r	s
a	1	e	c	i	z	e	S	t	0	c	е	1	1	a	t	е	r	a	v	e	r	t	*	Ъ	1	е
s	e	r	i	n	e	t	t	e	r	е	p	e	a	t	е	r	S	p	i	t	i	a	Ъ	1	е	r
i	s	i	n	g.	-s	t	a	r	m	a	i	s	t	е	r	s	t	е	n	t	е	r	1	е	n	t
a	t	t	e	s	t	е	r	s	s	е	t	t	е	r	s-	t	0	r	е	a	s	s	е	r	t	s
																		*	=	a	,i					

Many of the squares use only solid-form lower-case words, but each of these needs at least one obsolete word.

```
epigrames
+atricide
               disleaved
                               pollenest
               incensory
aloemodin
                               illuminor
torsilest
               scentings
                               glutamate
resituate
                lentandos
imitabler
                               remanages
               entapisse
               asi.ninity
                               ani.maters
colubrine
ideali**s
                               menagerie
                vondsiras
disten***
                               esoteri**
               ergostats
                               stresse * *
enteres * *
               dysseysee
                               ** = st cs es
+ = m.p
**
                               **
                                   th st st
      ze
         se
           ze
              st
*** = ees ees est est tst
       se
         ts ts
               ts
```

Awkward adjective inflections such as IMITABLER are blemishes. The POD-SHAPED and ROD-SHAPED squares below have no such words, and, indeed, consist entirely of lower-case terms. Obsolete words such as DYESSESES and obsolete inflections such as POLLENEST are blemishes too. Are there nine-squares with neither obsolete terms nor awkward inflections? Yes, but now names and broken words are needed. The squares at the middle and right are examples.

Now a curiosity. A nine-square found by Chris Long in the October 1993 Enigma (reprinted in Making the Alphabet Dance) has the word ELISIONAL. So has the square on the right, but Chris's has it in the fifth row and mine has it in the eighth row. Quite a coincidence, given the large word lists needed for the nine-square!

```
s e alls e d g e s
* o d-s haped
               Ravenscar
                              endocoele
one-to-many
               adenotome
                              adactylia
dearlynge
               venenates
                              socialist
strollers
               enervates
hollaites
                              ectadeni.a
               nonvoters
                             Doyleston
amylidene
               Staatsrat
                             Gelinting
               cotterite
panetelas
                              elisional
engrenage
               ameerates
               Ress's#test
                              sea-tangle
dyesseses
* = p,r
```

Finally, here is that large cluster broken into two subclusters.

```
* * * icaler
                    ***
                        cod nod pod col com dom log top var
* * * caceae
                    *** = 01a 01a 01a 01a 01a 01a 01a Are
* * * e m e n t s
                        daz daz daz lav maz maz gaz pav rec
i,ce-waters
camar $ nes
                       o i i
acet$$est
                   $$ = os is iz
lenenesse
eatresses
Ress's#test
* * * i.c a l e r
                        fil hel tel var
* * * caceae
                   *** = Ili Eri Eri Are
* * * erents
                        lif lif lif ref
i.ce-waters
cara%ines
                   % = b.p
aceti$est
                    $ = s.z
lenenesse
eatresses
Ress's#test
```

All alternatives for the third row are solid except RE-CEMENTS. All alternatives for the fifth row are lower-case except CAMARINES.

The list below is meant not as a full glossary but as a glossary of terms which deserve further comment, such as a citation or an indication that the source given punctuates the term as I do here. Notes of inflections and part of speech are given when not obvious. Terms not mentioned here can be found in OED 2 or Webster's Third at or near their alphabetical places. Thanks to Susan Thorpe for verifying the existence and part of speech of some of the Webster's Second terms.

ALECIZEST thou-form of alecize, to dress a dish with alec sauce, a sauce of small herrings or anchovies (OED 2)

ALOEMODIN a crystalline compound found in aloes (Web 2) AMEERATES plural of ameerate, variant of amirate (OSPD)

CAMARONES plural of camarone, variant of camaron, a freshwater shrimp or prawn resembling the crayfish, as in the 1947 OED 2 citation "The boy brought them camarones, red shrimps in a saucer"; also Camarones, a place in Argentina

CARABINES plural of carabine, variant of obs. carabin, as in the 1611 citation "Carabin: a Carabine or Carbeene; an Arguebuzier armed with a morrian..." (OED 2, OSPD)

DEARLYNGE an obsolete variant of darling, as in the 1548 citation "The Quenes dearlynge William Duke of Suffolke" (OED 2 at darling n1,1b)

DISLEAVED perfect participle of disleave, a variant of disleaf: to deprive of leaves (Chambers Dict 1993, Web 3, OED 2); this verb is derived from the noun leaf and is thus regular

DISTENEES plural of distence, an obsolete variant of destiny, inferred from distyne, destenie and destance in citations from 1385-1555 (OED 2)

DISTENEST thou-form of distane, said in OED 2 to be a 16th-century Scottish variant of distain, though not in any citations

DISTENTST thou-form of the obsolete verb distent: to distend (OED 2)

DOYLESTON a place in New Zealand (Times Concise Atlas)

DYESSESES plural of dyesses, obsolete variant of diocese (OED 2)

DYSSEYSSE obsolete variant of disease, inferred in OED 2 from dysseasse and dyseysse given as variant forms, or from dysesse (disease n.,1a, quot. 1547) and disseyse (disease, n.,1b, quot. 1443) EATRESSES plural of eatress, a woman who eats (OED 2 at eater)

EMAGERIES plural of emagery, obsolete variant of imagery (OED 2)

ENGINE-PIT a pit for mechanics to work on engines (OED 2 at engine n.,11b)

ENTAPISSE to carpet (OED 2)

ENTERESSE variant of the obsolete interess, as in the 1523 citation "All rightis and enteresses that every baron had in Scotlande..." (OED 2 at interess 1a)

ENTERESTS plural of enterest, obsolete variant of interest, as in the 1555 citation "It was not thought to bee Justice, that the man o warre...should for an enterest of lone, bee throwen into prisone" (OED 2 at interest n.,10a)

ENTERLENT perfect participle of enterlend (OED 2 at enter-)

EPIGRAMES plural of epigrame, obsolete variant of epigram, as in the 1872 citation "This epigrame, as it is called, consists of sixty-four lines..." (OED 2)

GELINTING a place in Indonesia (Times Concise Atlas)

ILLUMINOR variant of illuminer (in OED 2 at illuminer 3, quot. 1824)

ISING-STAR a shining piece of isinglass or mica (nonce word, OED 2)
LENENESSE said in OED 2 to be an obsolete variant of leanness, though

no citation uses that spelling; inferred from lenenes and Lennesse in citations of c.1400 (OED 2, Long, "Mathematics of Word Quality")

LENTANDOS musical passages marked lentando (slowing) (OED 2)

MAISTERST thou-form of maister, a variant of master as in the 1864 citation "I'm your equal; I'll be maistered nae langer" (OED 2 at master, v.,5a); maister is in Web 3 but with part of speech not stated

ONE-TO-MANY a one-to-many map from set A to set B maps each element of A to possibly many elements of B (OED 2); Web 3 lacks this even though it has one-to-one with a similar mathematical meaning

RAVENSCAR a place in England (Times Concise Atlas)

REMANAGES he-form of remanage, given in Web 2 with part of speech not stated but presumably verb

RESS'S TEST Long gives this as ress's test, but I am not convinced that it is all lower-case (Long also gives edessenes but it is clearly Edessenes, plural of Edessene-see Edessene adj., Web 3 at Edessan) TORSILEST superlative of torsile: of the nature of torsion (OED 2) VARICALER comparative of varical (Web 2)

RANDOM HOUSE PUZZLEMAKER'S HANDBOOK

Only 230 pages long, this handsome paperback published by Times Books in 1995 for \$14 (ISBN 0-8129-2544-0) is crammed with useful advice for both the crossword puzzle-solver and constructor. Mel Rosen and Stan Kurzban are top-flight constructors whose advice is well worth heeding, particularly if you are determined to sell to newspapers or magazines.

In both solving and constructing, one must be aware of the seachange that has occurred the last 20 years or so, during which time crosswords have been converted from "vocabulary challenges with dollops of crosswordese" to current-culture references (see November 1996 Word Ways, p 273) and clever definitions ("cook book" clueing COMA, in reference to Robin Cook's best-seller of that name). Simultaneously, interest in British-style cryptic crosswords has dramatically increased, providing another outlet for cruciverbalistic talents. The book provides hints for competing in crossword tournaments (learn to enter letters from right to left and from bottom up, to save time), and includes style sheets for major newspapers and magazines that purchase crosswords. There's even a quick tour of the differences encountered in various foreign-language crosswords.

Although both authors have considerable experience with computers, they say relatively little about the impact of computers on crosswords (pp 136-9). A computer can relieve one of the dogwork or creating a grid and filling it with words, but much fine-tuning is needed to avoid obscure or hackneyed words--and of course it's still up to you to create interesting definitions!