SOME MORE QUALITY 8-SQUARES

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The following regular eight-squares are the result of a computer search using the Air Force list of words from Webster's Second New International Dictionary and from the Official Scrabble Players Dictionary (OSPD), together with some inflections from Chambers English Dictionary. There are 45,594 words in the list; 315 squares were found.

There is still scope for more research into squares of just as high quality, by the addition of all the eight-letter words in Chambers, inflections of shorter words in Webster's Second, and all words (root and inflected) in Webster's Third.

Regular eight-squares have already appeared in Word Ways articles by Borgmann (Feb 1988), Grant (May 1988) and Albert and Cole (Aug 1992). So why yet another collection of regular eight-squares, especially as regular nine-squares have been published, and many persons are seeking regular ten-squares?

To paraphrase Barry Duncan in "Assorted Palindromes" in the February Word Ways, if one has read any of the eight-squares published in recent years, one might very well conclude that it is all but impossible to make one without using at least one proper name or obscure word. This article shows that there are plenty of regular eight-squares which do not. Accordingly, I did not put capitalised terms, multi-word terms, or hyphenated or apostrophised words into the word list.

Some of Albert and Long's squares form clusters with some of mine. Their article includes the squares below which use SERJANA (a capitalised term) or TINDERED.

G	R	0	S	S	Α	R	Т					Α	С	Е	Т	Α	Т	Ε	+		+	= D	, S
R	Ε	V	Е	A	\mathbf{L}	Е	R	+	=	F,	S	С	Α	D	Ι	N	Ε	Ν	Е	+		D	S
0	V	Е	R	R	Ι	+	Ε	++		FG	ST	Е	D	Ε	Ν	т	Α	т	Ε				
S	Е	R	*	Α	Ν	Ι	*					Т	Ι	Ν	*	Е	R	Ε	D	*	=	D,	К
S	A	R	Α	В	A	Ν	D	**	=	JA,	RD	Α	Ν	Т	Ε	H	Α	L	L				
Α	\mathbf{L}	Ι	Ν	Α	S	Α	\mathbf{L}	*		Α	D	Т	Ε	Α	R	Α	В	\mathbf{L}	Ε				
R	Ε	+	I	Ν	A	+	Е					Е	Ν	Т	Ε	\mathbf{L}	\mathbf{L}	U	S				
Т	R	E	*	D	\mathbf{L}	E	\$	\$	= [D, S		+	E	E	D	L	E	S	S				

None of the squares in Borgmann, Grant or Albert and Long appear in the rest of this article. Most of the squares in those articles use terms outside the word list I used: the 201 squares which use the fertile base of Grant's all use ITINERAL (not in Webster's Second or Chambers), and most of those in Albert and Long use at least one capitalised term.

One of the squares found is entirely in Chambers (below, left). Two are entirely in OSPD (below, middle and right).

В	А	С	Κ	А	С	Η	Ε	C	А	R	В	0	R	Α	S	С	R	Α	В	W	Ι	S	Ε
Α	Ρ	Н	Е	\mathbf{L}	Ι	А	Ν	Α	Ρ	Ε	R	Ι	Ε	Ν	Т	R	Α	Т	L	Ι	Ν	Е	S
С	Н	A	R	Α	С	Ι	D	R	Ε	С	Α	L	L	Ε	R	Α	Т	L	А	Ν	Т	Ε	S
K	Ē	R	0	S	Е	Ν	Ε	В	R	Α	S	S	Ι	С	А	B	\mathbf{L}	А	S	Т	Ε	Μ	Α
Α	L	A	S	Т	R	Ι	Μ	0	Ι	L	S	Е	Ε	D	S	W	Ι	Ν	Т	Ε	R	L	Y
С	Ι	С	Е	R	0	Ν	Ι	R	Е	L	Ι	Ε	v	0	S	I	Ν	Т	Ε	R	Т	Ι	E
H	А	Ι	Ν	Ι	Ν	G	S	Α	Ν	Ε	С	D	0	Т	Ε	S	Ε	Ε	Μ	\mathbf{L}	Ι	Е	R
Ε	N	D	Ε	М	Ι	S	Μ	S	Т	R	Α	S	S	Ε	S	E	S	S	A	Y	E	R	S

Twenty-six of the squares found are entirely in Webster's Third. They do not use terms which Webster's Third marks 'usu cap' or 'cap'. One square, with top row INTERACT and bottom row TATTLERS, is found in Allen and Long; the CRABWISE square above is another.

Six squares entirely in Webster's Third are among the eleven in the following cluster. This cluster uses the following words not in Webster's Third: UNFINITE, RECANCEL.

+ L + L E N + N F S T I T I N E C I R E T S L E	T I I N C K K L L I E N	C E I T L E I N A T T O	L E D G E R			BI, I	GI, I	BU, U	CU, U	FU U											
+ R A R E C A C H C A R K N C E C I R E T S L H	A N R O L O L L I L I F E N	C E I T L E I N A T T C	L E D G E R	+ :	= (С, Т				L A S H E R	E N T C E	N * R I T	T * P L E	I R P L I N	C E I I L E I N A C	L			, S KE, EE		
P 0 2 0 * 7 S T 1 T R 1 C * 1 A G 4 R E 9	other S T C F R * E E R E H A R A * A L A G A L G A L E S S	A F G H A C L A A I X I I I	R D E R G E A S L S I A N G	**	* =	· UA,				D I R S *	I M P O T E N	E P I T H E C	R O T U N D L	E T H N I C A	S E D C A S	* S N T	*	: =	give E, E	I	elow.

O P A L E S P I M E N T A M E N D I L E N T A N E N D A N G S T I N G I C O N D E N E N G O R G * = D, S	ON NG DO ER NG SE	E P A I T A R I A L L (S P A I S A T E T A	A S S E I L P A T I L A T A I O N Y M : N D R I I Y R I N E S L E S : D	E ES N SP S PI L RE E EG S AL	S P R E A P I E G L L O D G E O N E E R D E B A T G E A T E E R T E S S S E R T	E O P S N A S G L E R E R E S T E C	N G R E E T A L E S C E V E T T E S E B I E S T T I A R I I T E R A S E E S I S E S S T I E S T
F A U C H A A I R L I N U R T I C O C L I M A X H I C A T E A N O X E M R E S E E I D R E S S A	ER SE ES ES IA NG	A P O M O N E S T S T A T E N E M I	E S T E S T E M T A N I A M E N M P M E E M E N N E N C E N T E	E AT C PR E LO N OP T MI E IN	P L O M I R O P I N O V A N D V E L I E A L E S C N I S T E D E C E N S S E R T	E E N S A G S T R E H A R E V T R E	A T H E R D G R A V E R M I N A T E I N D L E S N D G U N S A L U A T E T E N T O R R E S S E R S
R E A S S A E N C E I N A C E T A T S E T T L E S I A L I D A N T E D A I T E R A T L E S S N E	TE ES RS AN TE CES	A M A P A T P R E H I L I L L S L A	$\begin{array}{ccccc} P & H & I & S \\ R & I & L & L \\ E & L & L & A \\ C & L & U & D \\ L & S & M & A \\ U & M & I & N \\ D & A & N & G \\ E & N & E & S \end{array}$	0 C I R A C E L 0 N E N E P I S A N	A L E P A C O N I N A U D A T U D E N E D E M I A A N I S T T E A T E E D L E F	E H H E O I D R 1 L A (C E C (C R E)	H O R A C E S E L I C O P T L I G U R I A I G H T I S M C U T A N C E O R I N D O N P I S C O P E T A M E N E D

Note that Webster's Third marks CONGREET as obsolete.

Other squares, not entirely in Webster's Third, can be obtained by altering some of the above. In the GAMESTER square, replace GAMESTER by LAMESTER; in the HAPLOMID square, replace MINISTER by MINISHER.

Twenty-three of the squares are entirely within the Oxford English Dictionary. They do not use words which the OED marks as obsolete. One of these squares is the CRABWISE square above. Another is got from it by replacing INTERTIE with INTERLIE. Two of them, with INTERACT in the top row, are found in Albert and Long. Note that the OED marks the words EMITTENT and TATTLERY, used in those squares, as obsolete.

The other squares in the OED are among the following squares.

SHIKARIS ACCOLADE SECESHER SCAPULET CHARACIN EXOSTOME HUMANEST CHROMATE CALANTAS COSTUMIC IMITATOR ARETACIS ORANGIST ESTAMENE KATALASE POTENCES LANGOOTY ANALYSTS STUMBLES UMANGITE ACTIONAL HOMELYNS RETASTES LAICIZER DIASTASE EMINENCE ISOSTERE ETCETERA ENSTYLEŚ RECESSEŠ STRESSES TESSERA* * = E, L\$ = D, S\$ = D, R, S\$ = D, R, S

+ A S P I E S T	L A M P L E S S	* S C R I B E S	
A S P E R S E R	A D O L E S C E	S C L E R O M A	
S P I R A C L E	M O R A S S I C	C L I T O R A L	
P E R I S H E S	P L A Y S O M E	R E T E N A N T	
I R A S C E N T	L E S S * N E D	I R O N I C A L	
E S C H E W A L	E S S O N I T E	B O R A C I T E	
S E L E N A T E	S C I M E T A R	E M A N A T E S	
T R E S T L E S	S E C E D E R S	S A L T L E S S	
+ = G, R, W	* = E, O	* = A, E	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	O V E R B R E D V A L E R O N E E L U V I A T E R E V E N D E D B R I N G A L L R O A D A E E R O A D A B L E R O A D A B L E E N T E L L U S D E E D L E S S	S E A S I D E R E N D O S O M E A D Y N A M I C S O N A T I N A I S A T I N E S D O M I N A N T E M I N E N C E R E C A S T E R

The words RECESSER and STRESSER are not in the OED, though RECESSER is in Webster's Third.

What interesting logological properties do these squares have? With only 315 squares to choose from, the number of different letters in a square has a modest range of 10 to 17. The REASSAIL square uses only 10 letters. The FAUCHARD square is one of several which used 17. The IMPLATED squares contain the rare letters K and Z off the diagonal axis of symmetry. The EUCHROME square's diagonal from top right to bottom left is all Es.

Sometimes a task is given to 'square' a given word (make a word square whose top row is that word). What more fitting word to be squared than SCRABBLE, a word game played on a square board?

IMPLATED EUCHROME SCRABBLE MELANOMA UPHEAVES CHOLERIC PL*CATER CHATTELS ROSTRATE LACEBARK HETAERIA ALTRICES ANABOLIN RATEABLY BERIBERI TOTALIZE OVERBOIL BRACEROS EMERIZES MELILITE LITEROSE DARKNESS ESSAYLET ECESISES * = A. I

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